Proceedings of
the 29\textsuperscript{th} Annual UCLA

\textbf{Psychology Undergraduate Research Conference}

Friday, May 1\textsuperscript{st}, 2020
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Dear Conference Participants:

Welcome to the 29th Annual UCLA Psychology Undergraduate Research Conference, sponsored by the UCLA Department of Psychology.

Our previous twenty-eight conferences proved to be meaningful and exciting forums for undergraduates from UCLA and other colleges and universities to communicate their research activities with one another, both formally and informally. We hope that the present conference will continue to foster such enjoyable and stimulating interactions among undergraduates who share an interest in and commitment to research—even in this on-line version made necessary by these extraordinary Covid19 times.

As with our previous conferences, we want this event to serve as a way of recognizing the indispensable role that undergraduate students play in the research enterprise. Not only would much less research be accomplished without your assistance, but doing research would be much less fun and rewarding for those of us who serve as your faculty and graduate student sponsors. Thus, we hope you will see this conference as a way for this department and your home departments to recognize the value of your assistance and to thank you for the vitality and enthusiasm that you bring to our shared research endeavors.

Sincerely,

Elizabeth Ligon Bjork
Professor and Faculty Sponsor
Acknowledgments

The UCLA Psychology Department expresses its deepest appreciation to the following individuals for their valuable help and creative input. Many individuals, not all of whom are listed here, made the 29th Annual UCLA Psychology Undergraduate Research Conference possible.

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Paper Talks

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Abigail Gonzalez Bejarano
Alexis Goris
Jingxuan Guo
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Caleb Kealoha
Brooklyn Morris

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Gender Differences in Exercise Motivation

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How Procedural Memory Affects the Retention of Skill Based Tasks over Time

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School and Community as Protective and Risk Factors for Minority Youth Mental Health Status

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M.A., & Anna S. Lau, Ph.D.
University of California, Los Angeles

Exercise motivation drives individuals to exercise. Kilpatrick et al. (2005) showed exercise motivation was primarily driven by weight management for females and performance and ego-related factors for males. The current study examined the impact of workout video instructor gender on exercise motivation. Participants (n = 30F/30M) were randomly assigned to watch a workout video with either a female or male instructor and complete the Motivation for Physical Activity and Exercise/Working Out Questionnaire (MPAEWQ) to quantify their exercise motivation both before and after watching the video. The difference between participant MPAEWQ scores from before and after the video were calculated. A two-way ANOVA (α = .05) confirmed a main effect of participant gender (p = .027*) indicating female exercise motivation increased after watching the video, regardless of instructor gender. There was no main effect of instructor gender (p = .624) and no interaction between participant and instructor gender (p = .913). The current study supports that a gender difference exists in strategies that produce exercise motivation and indicates workout videos are effective tools for females, but not males.

Unlike declarative memory, procedural memory (e.g., riding a bicycle) is implicit and unconsciously recalled from memory (Johnson, 2012). The aim of this study is to investigate procedural retention over time, to determine if the trajectory of procedural forgetting differs from well-known curvilinear patterns of declarative forgetting. In the current study, 30 undergraduates have completed the study so far with recruitment still in progress. The participants were trained on three procedural tasks. The first of these tasks, a mirror tracing task, has been used reliably to examine procedural memory. The other two were novel tasks using the games Toss Across and a Ball Dart game. After the training phase, participants were tested on their task performance either immediately, one day, or one week after training to assess procedural retention. Procedural performance will be regressed against time to determine the rate (e.g., linear, curvilinear) of forgetting. A comparison of the rate and pattern of procedural retention with other studies of declarative retention will contribute to our understanding of differences in retention of procedural and declarative information.

Research demonstrates that community violence exposure is related to internalizing and externalizing problems in youth (Willemen et al., 2008). However, youth with a positive perception of school bond have lower levels of behavioral problems (Maddox et al., 2003), while those with negative perceptions of school safety have higher levels of depressive symptoms (Maffini, 2016). The current study examines protective factors (i.e., school safety & school bond) and risk factors (i.e., community violence & school disenfranchisement) of the mental health status of racial/ethnic minority youth. The sample is 2172 students within an urban school district; 51.1% were male and 57% were in high school (range: 4th-12th). 63.12% were Asian-American, and 36.88% were Latinx. Aligned with hypotheses, regression analyses reveal that school bond is a protective factor (B = -1.72; p < .001), while community violence (B = 1.47; p < .001), and disenfranchisement (B = 2.62; p <.001) are risk factors to mental health difficulties. School safety was not a significant factor. Future moderation analyses will assess differences in relationship by race/ethnicity and youth education levels.
Diversification of Ideal Body Types Does Not Impact Body Image Satisfaction

Alexis T. Goris
Sierra Nevada University

Subcortical Brain Volume Alterations in Adults with Psychotic-Like Experiences

Jingxuan Guo, Mengtong Pan, Logan Leathem, Mary Rshtouni, & Katherine Karlsgodt
University of California, Los Angeles

McGurk Illusion: Encoding and Retrieving Multisensory Experiences

Xiaohan Guo, Carolyn Murray & Ladan Shams, Ph.D.
University of California, Los Angeles

‘Slim-thick’ is an idealized hourglass figure fuller than the traditional thin-ideal (Appleford, 2016). Broader beauty standards may improve female body image. Conversely, self-discrepancy theory posits if ideals differ from the self, dissatisfaction can occur (Higgins, 1987). The current study examined how different quantities (1, 3, or 7) of body types presented as ideal affected body image satisfaction. 90 female participants reviewed a pamphlet containing software-generated (MPI, 2011) graphics of ideal body types. To facilitate acceptance as desirable standards, fabricated research was included as support. Participants traced the ideal body type(s) before completing the Body-Image Ideals Questionnaire (BIQ; Szymanski & Cash, 1995). A one-way ANOVA (α = .05) showed no significant difference (p = .305) in BIQ scores among body quantity conditions. Inconsistent with either proposed explanation, diversifying ideal body types from the thin-ideal does not facilitate body image in emerging adult females. An alternative process may be operating. Replication of the current study with younger female participants who have not yet internalized the thin-ideal is recommended.

Alterations in subcortical structures have been found in individuals with schizophrenia and across the psychosis spectrum. Repeated studies have shown hippocampal volume reduction in schizophrenia patients. On the low end of the spectrum, hippocampal and thalamic volume reduction was seen in clinical high-risk individuals compared to healthy controls (Harrisberger, 2016). Our study focuses one step lower on the spectrum and examines the subcortical volumes of healthy adults who endorse having psychotic-like experiences (PLE). Using the Human Connectome Project data, 104 adults with high PLEs (endorsing >2 thought problems on Achenbach Self Report), and 437 matched controls were selected. MRI data was analyzed in FreeSurfer to obtain subcortical structure volumes. We hypothesized lower hippocampal and thalamic volume in high PLE individuals relative to controls. Preliminary analyses show no difference in hippocampal volume (p = n.s) but increased accumbens volume (p = 0.004) in high PLE individuals relative to controls. Results of this study potentially contribute to locating and understanding the emergence of subcortical volume alterations in individuals on the psychosis spectrum.

The McGurk illusion happens when incongruent visual and auditory speech cues presented synchronously combine to a multisensory percept inconsistent with either inputs. Past research has shown that multisensory stimuli are encoded into multisensory representations (Shams & Seitz, 2008), but it is not clear whether the brain stores and retrieves the combined multisensory inputs directly, or stores unisensory inputs and combines them at retrieval. In this study, we asked the participants to memorize the audio of congruent and incongruent McGurk illusion video stimuli at encoding. After a delay, participants made recognition judgements on new and old auditory stimuli, including audio consistent with the McGurk fusions and the true audio from those stimuli. We hypothesize that information from different sensory channels is not strictly unisensory or multisensory, but creates multisensory and unisensory memory representations. Preliminary results are consistent with this hypothesis. We will continue to investigate whether a direct retrieval of multisensory percepts or constructions of multisensory traces from different channels is at play based on task accuracy and reaction time.
How Hard Should I Try? 
Investigating the Role of Selective vs. Indiscriminate Praise on Children's Effort

Molly Irvin, Mika Asaba, & Hyowon Gweon
Stanford University

We are (not) in Sync: Inter-Brain Synchrony During Interpersonal Conflict

Caleb Kealoha, Macrina Cooper-White, Lucy Shen, & Matthew Lieberman
University of California, Los Angeles

Validating the Gender Gap in Domestic Violence Sentencing

Brooklyn T. Morris
Sierra Nevada University

Adults often praise children to motivate them to work hard. Though prior work has focused on the content of praise in motivating kids, less is known about how different patterns of praise (i.e., praising everything vs. praising only higher quality work) influence effort. In this ongoing, preregistered study (current N=36; target N=60), 6-7 year-olds learn about a teacher who praises indiscriminately (Overpraise) and a teacher who only praises clearly good work (Selective Praise). Before making a difficult tracing (cursive words) for one teacher, they can practice tracing letters as much as they want. We predict that children will trace more letters when their work is going to be evaluated by the Selective Praise Teacher. Finally, children are asked exploratory questions tapping into children’s own goals in interacting with these teachers: which teacher would help them get better at tracing, and which teacher would give them immediate rewards (i.e., stickers). Understanding how children conceptualize and work for Selective Praise and Overpraise can allow researchers to draw conclusions about the best ways to motivate children’s effort and performance.

In our interpersonal relationships, conflict is inevitable—and a cause for concern. Although prior literature has examined physiological and behavioral indicators of interpersonal conflict, research has yet to identify its neural underpinnings. Measuring dynamic patterns of brain activity within interpersonal interactions like conflict has become possible thanks to the advent of “hyperscanning.” By capturing simultaneous brain activity in real-time (i.e., inter-brain synchrony), hyperscanning can reveal the extent to which people are engaging cognitive processes (e.g. mentalizing) similarly. In the current study, we used functional near-infrared spectroscopy (fNIRS) to measure inter-brain synchrony within romantic couples engaged in face-to-face conversations characterized by conflict and affiliation. Inter-brain synchrony was recorded within regions of the mentalizing network—the medial prefrontal cortex (mPFC) and temporoparietal junction (TPJ)—and will be compared across conversation type. With our findings, we aim to establish baseline neural synchrony measures for different complex interpersonal interactions.

Men and women commit domestic violence crimes at similar rates, but men are 15 times more likely to be incarcerated (Starr, 2012). Research on gender and domestic abuse validates this fact under controlled conditions (Poorman et al., 2003). The current study examines this gender gap in sentencing and explores the rational for its existence. 64 participants were randomly assigned to read a fictitious police report about an identical domestic abuse crime allegedly committed by either a man against a woman or a woman against a man. Participants reviewed penalty options and victim injuries prior to indicating the number of years (0 – 10) to which they would sentence the defendant and then they provided a written rational for this decision (analyzed for emotional content). A Mann-Whitney U (Mann & Whitney, 1947) indicated men were sentenced to significantly more years than women (p = .04). There was, however, no significant difference in the amount of positive (p = .67) or negative (p = .62) emotional content in the rational. These experimental findings are consistent with previous research and suggest emotional content in the rational is not a meaningful way to explore the gender gap.
Statistical Analysis of Beck Depression Inventory in Assessing Major Depressive Disorder

Jung Woon Park, Kristian Beichmann, & Peter M. Bentler, Ph.D.
University of California, Los Angeles

With the estimated number of people diagnosed with Major Depressive Disorder (MDD) reaching 264 million by 2017 (ADAA, 2020), it is essential for clinicians to accurately diagnose MDD. The most commonly used scale in MDD diagnostics is Beck Depression Inventory Second Edition (BDI-II), which adheres to the definition from Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5). However, some specific questions in BDI-II are controversial in accurately characterizing MDD. To assess the questionnaire, statistical analysis on BDI-II was conducted using the data set collected from the Dominican Republic by Garcia-Batista et al. (2018), using classical test theory, factor analysis, and item response theory. Of 21 questions, seven were identified as detrimental to the statistical properties of the scale, and were removed to create a final scale. This scale increased reliability of the parts by 0.043, average factor loading by 0.05, and unidimensionality by 0.036, indicating inefficiency in the prior questions. This result is consistent with the study by Zimmerman et al. (2006), which provides critical evidence to support the need for an accurate diagnosis of MDD.

“It’s me”: Assessing Self-blame and Peer Victimization during the High School Transition

Nicolas Pearson, Danielle Smith, & Dr. Janna Juvonen
University of California, Los Angeles

School transitions may appear to be a fresh start, yet peer victimization peaks during transition years (Pellegrini & Long, 2002). Given that victimization is associated with anxiety and depression (Moore et al., 2017), it is important to understand what contributes to increased victimization. A promising contributor is how victims explain the cause of their treatment. Self-blame implies an internal, stable cause, and predicts victimization across the first year of middle school (Schacter, Juvonen, 2015). The goal of the study is to examine whether the tendency to blame oneself for being bullied predicts an increased sense of victimization from 8th to 9th grade, using self-reports of self-perceived victimization and characterological self-blame (CSB) from a large, ethnically diverse sample of 2,866 adolescents (55% female). CSB was assessed using hypothetical vignettes that gauge perceptions of personal fault. Preliminary analyses show that 8th grade CSB predicts increases in perceptions of peer victimization across the transition to high school, suggesting that blaming oneself for peer victimization is a risk factor that could be targeted for intervention in middle school.

The Effect of Language Experience on Spatial Relations

Emanuel Perez, Michelle Luna, M.A., & Catherine Sandhofer, Ph.D.
University of California, Los Angeles

Young children can perceptually differentiate spatial relations (i.e., where objects lie in relation to each other). Although the comprehension of spatial relations is facilitated by labels, such as prepositions, spatial categories differ cross-linguistically. For example, to express relations of containment and support, English uses “in” and “on” respectively. In contrast, Spanish categorizes these relations broadly such that “en” refers to both containment and support relations, and Korean categorizes containment narrowly such that “kkita” and “nehta” refer to objects fitting tightly or loosely. The present study examines how children learn new labels for known spatial categories. Five and 6-year-old English monolinguals saw videos of real-world objects shown in relation to each other. In the first condition, children first learned novel broad spatial categories (e.g., “en”), then they learned and were tested on narrow categories (e.g., “kkita”). In the second condition, the order switched such that children learned the narrow categories followed by the broad ones. Results will inform our understanding of the role that language experience plays in learning spatial relations.
Safety Seeking Behavior Mediated by Cholecystokinin-Expressing Neurons in the Lateral/ventrolateral Periaqueductal Gray

Ekayana Sethi, Mimi La-Vu & Avishek Adhikari, Ph.D.
University of California, Los Angeles

The periaqueductal gray (PAG) is implicated in numerous defensive responses such as analgesia, freezing and avoidance. However, which subdivisions and cell types within the PAG are responsible for these behaviors is not completely understood. Cholecystokinin-expressing neurons (CCK+) robustly populate the lateral/ventrolateral PAG, yet they remain largely uncharacterized. Our early fiber photometry recordings indicate higher activity in CCK+ l/vlPAG neurons correlates with safety seeking. To probe the role of these neurons in safety seeking, we developed a Latency To Enter assay in which a mouse is placed in a box that contains a burrow (a dark safe space), and the latency (the time taken to enter the burrow) is measured. A lower latency indicates a stronger safety seeking response. Optogenetic activation and inhibition of CCK+ l/vlPAG neurons significantly reduces and increases latency to enter respectively, indicating activity in these neurons is sufficient and necessary for safety seeking. Together, these results exhibit the role of CCK+ l/vlPAG neurons in safety seeking, mapping a specific adaptive response to a genetically-defined PAG neuronal population.

Understanding Young Children’s Capacity and Motivation to Teach

Samantha Skinner, Ellyn Pueschel, & Henrike Moll, Ph.D.
University of Southern California

Previous developmental research on pedagogical learning has heavily emphasized the role of children as learners. However, little is known about how young children understand pedagogical exchanges, including the teacher’s role. In this experiment, we investigated how 3.5-year-old and 4.5-year-old (n=24 per age group) children transmit pedagogical knowledge to a naïve adult. Children first learned about fictional animals and were then provided the opportunity to teach what they learned to an adult unfamiliar with these animals. In the learning phase, children learned information that was marked as true or false. Preliminary analyses reveal that 3.5-year-old children had difficulties teaching any information and do not distinguish between facts and false information. By contrast, 4.5-year-olds commonly and spontaneously engaged in teaching behavior and mainly conveyed true information (in 71% of the cases) when doing so. These results suggest that preschoolers between 3.5 and 4.5 years begin to show competence at teaching. Overall, the findings expand our understanding of pedagogical learning by uncovering how young children apprehend the complementary roles of teacher and learner.

The Effect of Moral Taint on Judgments toward Unethical Professionals

Sebastian Valderrama, Junho Lee, Hunter Priniski, & Keith Holyoak
University of California, Los Angeles

The rise in moral accusations against authorities (e.g., the #MeToo movement) posits a major re-evaluation of the character of powerful figures. However, people are conflicted about whether their non-moral judgments towards professionals (e.g., level of competence, accomplishment) should be devalued in light of a moral transgression. We investigated how the type of profession (i.e., scientist vs. artist) and severity of moral violation affects participants' judgments of the individual's professional accomplishments. Participants were presented scenarios that described successful professionals and their work and were asked to provide judgments about the quality of their work before and after they were presented with a moral violation. We predicted that the effect of a moral transgression would be stronger for artists than for scientists because people’s evaluation of artists is driven more by emotion. Preliminary results from UCLA students suggest a main effect of moral taint, but the types of profession did not have a strong effect. These results are interpreted through a coherence-based reasoning framework (Holyoak & Powell, 2016).
Individuals who were previously institutionalized (PI) in orphanage care are at risk for developing mental health problems like depression. Recent stressful life events may exacerbate this risk. Both institutionalization and stressful life events are associated with hypoactivation of the nucleus accumbens (NAcc; a region related to reward processing and motivation), as is depression. We examined possible links between the number of recent stressful life events (Life Events Questionnaire) and depression (Revised Child Anxiety and Depression Scale) in 15 PI and 19 comparison youth (22 females, mean age = 13.94; data collection ongoing). PI youth demonstrated significantly higher depression than comparison youth (t = -2.715, p < .05). Notably, higher numbers of recent stressful life events in the past 12 months predicted higher depression for PI youth (β = .9539, t = 2.355, p < .05), but not for comparison youth. These findings suggest that for PI youth, risk for depression increases with more recent stressful life events. Planned analyses will explore how NAcc response to happy faces may mediate this relationship.

Functional Movement Disorders (FMDs) are characterized by uncontrollable body movements or postures. Because the disease has no known neurological mechanism, its diagnosis is ambiguous and time-consuming. The lack of a sense of agency over body movements is a salient feature of FMD patients (Edward et al., 2011; Kranick et al., 2013). We developed three behavioral tasks that can quantify people's volition of movement to improve the diagnostic efficiency of FMDs. A new dot-trajectory task measures participants' sensorimotor metacognition, the Libet clock paradigm estimates subjects' awareness towards behavior initiation and execution, and the Daw two-step decision-making task assesses participants' choice of action-selection strategies. Here, we validated each task in a large amount of healthy subjects (N = 296) and hypothesized performance contrasts between FMD patients and healthy controls. By implementing this novel battery of tasks, we hope to improve both diagnosis and our understanding of the underlying pathology of FMDs.
## Posters

**Presenters:**

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Extraversion, Neuroticism and Problematic Drinking

Ahsan Ahmed
Kwantlen Polytechnic University

Approximately 1 in 12 Americans suffer from alcohol abuse or dependence and more than 88,000 deaths annually are related to excessive alcohol consumption. Being able to identify individuals who may be prone to excessive drinking could lead to more targeted intervention strategies to prevent problematic alcohol use. In the present study, we sought to explore whether the traits of neuroticism and extraversion were related to problematic drinking. A total of 101 participants (29 males and 71 females) between the ages of 18-69 completed an online survey containing demographic questions, the Alcohol Use Disorder Identification Test and the Eysenck Personality Questionnaire Revised. The results of a series of four binary logistic regressions targeting different aspects of alcohol consumption indicated that, while neuroticism and extraversion did not statistically predict problematic drinking, extraversion was predictive of someone being a drinker or not.

United as Allies Against Racial Prejudice: Shared Racial Experiences and Ally Confronting Behavior

Makayla Allen-Espinoza & Nicholas Alt, Ph.D.
California State University, Long Beach

Confronting prejudice is an effective strategy to curtail future prejudicial expressions and stereotype use (Czopp, Monteith, & Mark, 2006). Yet, individuals often choose not to confront as confronters are labeled as complainers and negatively evaluated by peers (Kaiser & Miller, 2001). The present study seeks to examine whether a shared racial identity manipulation promotes the confrontation of prejudice by allies. Participants (Asian Americans and Latinx Americans) took part in ostensibly in two different studies. First, they wrote about shared experiences with the other racial minority group, or not. Second, they were exposed to a prejudicial comment regarding immigration and were given an opportunity to confront the speaker. We hypothesized that those who wrote about the shared experience (e.g., an Asian American writing about shared experiences with Latinx Americans) would be more likely to confront the prejudicial comment, compared to those who did not have the shared experience manipulation. Results extend our understanding of ally behavior and how to promote the confrontation of prejudice across racial minority groups.

Ethnic Congruence, School Climate, and Discriminatory Stress: The Moderating Effect of Ethnicity

Celeste Alonzo, Joyce Lui, Ph.D., & Anna S. Lau, Ph.D
University of California, Los Angeles

Studies on ethnic congruence in school contexts, indicated when a student attends a school with a high percentage of peers from the same ethnic group, primarily compared whites to ethnic minorities. Less research examined variation among ethnic minoritized groups. The current study examined whether ethnic congruence influences students’ perceptions of school climate and discriminatory stress, and whether the effects are moderated by student ethnicity. The sample included 2,172 students from 4th to 12th grade who identified as Asian or Hispanic. A MANCOVA revealed an interaction between ethnic congruence and student ethnicity for school climate variables, F (4, 2095) = 16.11, p < .001, but not for discriminatory stress. Ethnic congruence was related to less positive perceptions of school climate for Asian students. In contrast, ethnic congruence was related to more positive perceptions of school climate for Hispanic students. Thus, ethnic congruence seems to be protective for Hispanic students only. Results highlight the importance of school contextual factors and encourages further exploration on mechanisms underlying different perceptions across minoritized ethnic groups.
Immigrant Status and Academic Stress: The Role of Home-School Value Conflict Among College Students

Dianna Alvarado, Lucy Gonzalez, Yolanda Vasquez-Salgado & Shu-Sha Angie Guan

California State University, Northridge

US educational institutions tend to prioritize independent ideas that conflict with interdependent values commonly practiced by immigrant families (Tseng, 2004); this may result in home-school cultural value conflict. Immigrant generation status and cultural conflict have been documented as playing a negative role in academics (Vasquez-Salgado et al., 2015). The present study expands on prior work by examining the relation between immigrant generation status and academic stress and whether home-school cultural value conflict mediates this association. Ninety-four underrepresented minority students from diverse immigrant backgrounds were surveyed during their first year in college. In alignment with our hypotheses, immigrant generation status and home-school cultural value conflict significantly predicted academic stress. However, when placed in a model, our results indicated that home-school conflict was not a significant mediator. A possible explanation for these results is the current political climate surrounding immigration. Thus, there may be other factors that explain the relation between immigrant generation status and academic stress. Implications will be discussed.

Weight Stigma by Association in Parent-Child Dyads

A. Janet Tomiyama, Ph. D., Kristen Lee, B.A., Lauren Arriola

University of California, Los Angeles

The increased prevalence of weight stigma in society negatively impacts the physical and emotional health of adults, especially females, and children. Moreover, pediatric overweight has been linked to parental neglect, resulting in the portrayal of caretakers being responsible for their child’s weight status. Studies on stigma by association suggest that lower-weight individuals experience stigma due to their relationship with someone with higher body weight. Despite the high prevalence of weight stigma in children and its negative repercussions, there is a gap in the literature studying how parents also experience stigma if their child has a higher body weight. This study tested the hypothesis that parents with higher body weight, specifically mothers, experience more stigma if their child’s weight is high. Participants recruited through Amazon’s Mechanical Turk (N=1,950) were randomly assigned to read a vignette with a picture of a parent and a child in which gender and weight were manipulated and then answered questions about parenting styles. This study is among the first to examine weight stigma by association in parent-child dyads.

Nonsuicidal Self-Injury and Coping Strategies Among Ethnic Minority Youth

Ane A. Balkchyan, Julia R. Cox, Ph.D., & Anna S. Lau, Ph.D.

University of California, Los Angeles

Nonsuicidal self-injury (NSSI) is the deliberate infliction of self-harm without suicidal intent. Studies have found that individuals who engage in NSSI engage in distraction coping strategies (e.g., participating in an hobby) more frequently and support seeking coping strategies (e.g., contacting a friend) less frequently than controls. NSSI research has been conducted with predominantly White samples and few have included racial-ethnic minority populations. The current study investigates if and to what extent adolescents who engage in NSSI endorse different coping strategies relative to their non-NSSI peers in a racial/ethnic diverse sample. We hypothesize that (1) participants who engage in NSSI use distraction coping strategies more often, and (2) participants who engage in NSSI use active coping strategies less often. NSSI predicted active coping above and beyond internalizing symptoms, F(1, 1500) = 6.26, p = .012, but did not predict distraction, F(1, 1500) = 2.01, p = .156; youth who engaged in NSSI showed less active coping. Results suggest that active coping is a particularly salient target for NSSI-focused treatment efforts.
Benevolent Childhood Experiences (BCEs) in Fathers-to-be: A Replication and Extension of Resilience Processes in Low-Income Families

Angela N. Baybayon-Grandgeorge, Jillian S. Merrick, M.A., Angela J. Narayan, Ph.D., & Elysia P. Davis, Ph.D.

University of Denver

Previous research by Narayan et al. (2017) on ethnically-diverse, low income pregnant women demonstrated that higher levels of Benevolent Childhood Experiences (BCEs) predicted lower levels of psychopathology symptoms and stressful life events (SLEs) above and beyond the effects of adverse childhood experiences (ACEs). The present study aims to extend this initial research on the BCEs scale with the evaluation of benevolent and adverse early experiences in a racially and ethnically-diverse population of fathers-to-be. We hypothesize that BCEs in fathers-to-be will show similar patterns to those in pregnant women such that higher BCEs will be associated with fewer psychopathology symptoms and SLEs during their partner’s pregnancies. Data collection is underway; 74 men are currently enrolled (target N=100) who completed the ACEs and BCEs scales, SLEs, and standardized assessments of depression and PTSD symptoms. We will test our hypotheses with three hierarchical linear regressions with SLEs, depression and PTSD symptoms as outcomes and ACEs and BCEs as predictors. Implications of assessing fathers’ childhood experiences for long-term child and family wellbeing will be discussed.

A Shared System for Music and Language Processing? A Dual-Task Exploration using Musical Rhythm

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The similarities between language and music, two domains which involve hierarchical structures, have led to investigations of the existence of a shared syntactic system underlying processing in these two domains. Previous research has demonstrated interference effects during concurrent processing tasks in these two domains, supporting the idea of a shared system. The current experiment aims to extend these investigations, while clarifying whether the effect is driven by syntactic processing or working memory resources, using a novel rhythmic processing task. In this dual-task experiment, participants read sentences while listening to musical rhythms—both of which vary in structural complexity and working memory demand—and were tested on their sentence comprehension and rhythmic perception. We hypothesized that linguistic and rhythmic processing should interfere with one another, and that this effect would be driven by syntactic processing as opposed to working memory resources.

Learning in the Internet Age: The Role of Thinking First Before Googling

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Research has shown that Internet use is ubiquitous, even when one likely knows the answer, or using the Internet is made inconvenient. Easy access to the Internet leads to cognitive offloading that may limit mental effort and critical thinking, impeding the retention of knowledge (Storm, et al., 2017). Prior research suggests that actively thinking about yet-to-be-learned material can enhance learning, even when initially generated answers are incorrect (Kornell, et al., 2009). The present within-subjects experiments examined whether contemplating a question before googling the answer improves subsequent recall of information. In Exp. 1, participants attempted to answer easy and hard trivia questions before consulting Google, or googled the answer straight away, followed by a final cued recall test. In Exp. 2, a third condition was added where the question was immediately presented with the answer. Both experiments showed significantly improved recall for hard questions that participants attempted to answer first, versus googling first. The results indicate that generating an answer before googling may mitigate a reliance on Google that weakens recall of searched information.
Effects of the Learning Assistant Experience on Student Achievement

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The UCLA Learning Assistant Program trains undergraduate students to provide pedagogical support to students in introductory STEM courses. While there is clear evidence that LA Programs are beneficial for students taking LA-supported courses (Otero et al. 2010), research has not investigated the potential benefits for LAs. Previous research shows that preparing to teach material to others (Fiorella & Mayer 2013) and learning about metacognitive strategies (Young & Fry 2008) are beneficial for learners. Evidence suggests the LA Program improves STEM attitudes (Close et al. 2016), which may in turn improve learning outcomes (Glynn et al. 2011). Accordingly, we hypothesize that serving as an LA will improve students’ metacognitive awareness (MAI Scores), STEM attitudes (SMQ scale), and overall academic performance. To assess this, we will examine scores on the SMQ and MAI pre- and post-program participation, and compare learning outcome measures like GPA between non-LA and LA students. Fall 2019 data suggest that the LA program increased metacognitive scores, $t(305) = 3.89, p < .001$. This study will shed light on the impact that LA Programs have on undergraduate student instructors.

Associations of Parent Psychopathology and Interparental Conflict on Child Internalizing Problems

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Youth internalizing problems, including depression and anxiety, are increasingly prevalent (Mojtabai et al., 2016). Given their predictions of poor social, emotional, and behavioral outcomes (Ferdinand & Verhulst, 1995), it is important to identify their early risk factors. Parent psychopathology and interparental conflict are known predictors of child internalizing problems (Buehler et al., 1997; Downey & Coyne, 1990); however, previous studies have failed to consider separate dimensions of parent psychopathology, including potential interactive associations. To address these gaps, the present study tested parental depression, parental ADHD, and interparental conflict as independent and interactive predictors of longitudinal change in youth internalizing problems from childhood to early adolescence. We hypothesized that both parental depression and parental ADHD would independently and positively predict child depression and anxiety over time. We also expected interactions involving interparental conflict to emerge. Overall, uncovering risk factors for child psychopathology is critical in providing valuable information to target effective intervention strategies.

Poor Sleep and Emotion Regulation Strategy Choices

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Sleep deprivation, the condition of not having enough sleep, is suggested to affect one’s ability to regulate his or her emotions (Zhang et al., 2018). This indicates that it could also influence the types of emotion regulation strategies one chooses to utilize. My study seeks to investigate the plausibility of this relationship and determine if it can be expanded to include sleep quality as defined by the National Sleep Foundation. In other words, taking into account sleep latency, sleep awakenings, wake-after-sleep onset, quantity of naps taken, and duration of naps taken. Analyzed participants will have worn actigraphy sleep monitoring watches for two weeks and afterwards will have completed a computerized emotion regulation choice task consisting of negative images with varying valances. It is hypothesized that participants who experienced poorer sleep will exhibit a greater tendency to both 1) choose not to regulate when viewing images with high negative valences and 2) choose to deploy a typically higher valence strategy (distraction) as opposed to a typically lower valence strategy (cognitive reappraisal) when viewing images with relatively mild negative valences.
Proper hand hygiene minimizes the spread of viral and bacterial infections (Dickie et al., 2018). Davis et al. (2013) examined hospital hand sanitizer use and found it greater when risks of improper hand sanitization were advised. Identifying factors that motivate hand sanitization facilitates design of sanitation stations promoting improved practice. The current study examined the effect of hand sanitization modeling and food recipient during a food preparation activity. 120 undergraduates were randomly assigned to the presence or absence of sanitization modeling during snack preparation for peers or elementary students. During experimental instructions, hand sanitizer use was either modeled 3 times or not at all. Participants processed (i.e., peeled oranges), counted, and sorted food into a container for presentation to their assigned recipient. The volume of hand sanitizer used was tracked. Although no significant difference ($p = .562$) existed in the volume of hand sanitizer used by modeling condition, a significant difference ($p = .001$) existed when participants prepared food for peers versus elementary students. More hand sanitizer was used for peers than elementary students.

Previous research shows that adolescent boys in urban settings report greater rates of community violence exposure (CVE) (Reingle, 2011), while adolescent girls encounter more harassment in their neighborhood (Camacho, 2018). Yet little is known about how girls and boys differ in their perception of CVE. The current study, surveyed 537 diverse urban adolescents (M age = 15.6) from the Midwest about their exposure and perception to different types of community violence. A sub-sample of 57 adolescents were interviewed to examine gender differences in perceptions of CVE in depth. Findings from the mixed-methods approach revealed there is no difference in the amount of violence adolescent girls and boys witness. However, girls experience greater rates of harassment and boys report greater personal victimization. Boys and girls perceived gender differences in the effects of violence, and both genders perceived girls' weakness and vulnerability to harassment. Future research should pay attention to the unique gender differences in experiences and perceptions of community violence.

The transition to college involves many changes such as entering a new social environment. Consequently, individuals are particularly vulnerable to loneliness, which in turn affects physical, psychological, and academic outcomes. Therefore, it is vital to understand what factors may buffer against loneliness. Relationships with parents and friends are potential protective factors against loneliness. We explored how loneliness varies depending on parent and friend relationship quality. Specifically, we hypothesized a negative association between parent and friend relationship quality and loneliness. One hundred college freshmen completed self-report measures to assess loneliness and relationship quality. Results showed that higher parent and friend relationship quality were each independently associated with lower feelings of loneliness (Parent relationship quality: $b = -0.29$, S.E. = 0.05, $t = -5.68$, $p < .001$; Friend relationship quality: $b = -0.51$, S.E. = 0.06, $t = -8.31$, $p < .001$). These results highlight the importance of close relationships and suggest that targeting relationship quality could be effective in mitigating loneliness during the transition to college.
The Influence of Hormonal Contraceptives on Baseline ImPACT Performance

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The Association between Interactant Gender and the Endorsement of Emotion Expressivity

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Leveraging Institutional Cues to Reduce Stereotypes in STEM for Women and Underrepresented Minorities

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Approximately 47% of collegiate and elite female athletes have reported the use of hormonal contraceptives (HC) (Beals & Hill, 2006). HCs provide high levels of synthetic estrogen and progesterone throughout the menstrual cycle, and have been demonstrated to improve verbal and fine motor memory tasks and increase reaction time (Garrett & Elder, 1984; Warren, 2014). The influence of HCs has yet to be demonstrated on the Immediate Post-Injury Assessment and Cognitive Test (ImPACT). The ImPACT is commonly used to return an athlete to play after a concussion. We examined the influence of HC use on pre-injury ImPACT performance. In a cross sectional study, 308 collegiate female athletes were divided into two groups based on whether they reported taking [HC+ (n=154)] or not taking [HC- (n=154) at the time of their pre-injury ImPACT. Independent t-tests were used to compare ImPACT outcome scores. HC+ participants were observed to have higher visual motor speed scores and faster reaction times. Our results suggest HCs introduce systemic error that may influence ImPACT performance. Clinicians must consider the role of HCs when interpreting post-injury outcome scores.

Displays rules are norms for emotion management and expressivity specific to culture and can vary depending on social situation (Friesen, 1972, Matsumoto et al., 2008, Hwang & Matsumoto, 2012). This study explored the association between interactant gender and endorsement of emotional expressivity in private and public settings across eight interactant types. One hundred forty-four college students in Mexico completed the Display Rule Assessment Inventory (DRAI) expressing endorsement of seven emotions. Participants completed one of eight versions of the DRAI, which differed based on order of interactant types. Analyses indicated a significant three-way effect among participant gender, interactant gender, and emotion, F (6, 134) = 3.708, p < 0.002, h2 = 0.142. Participants endorsed more happiness, sadness and surprise with female interactants and endorsed more anger, disgust and contempt with male interactants. Female participants endorsed more emotion with female interactants and male participants endorsed more emotion with male interactants. These findings provided implications that perception of gender affected endorsement of emotional expressivity.

U.S. economic forecasts suggests that STEM industries are among the most lucrative careers across the labor market. Yet, even with an increased demand for STEM professionals in the U.S., the academic landscape remains underrepresented by Latino/a/x and African Americans. Prior research has shown priming an institutional social connection has increased engagement in a diversity course (Brannon & Kinsfather) and, in turn, facilitated social identity benefits across groups (i.e. a greater sense of whole-self inclusion). The present research will investigate whether these effects can spill-over into STEM domains. Historically, STEM is associated with both cultural and ability stereotypes that create psychological barriers for underrepresented groups (e.g., women and racial/ethnic minorities). Approximately 200 UCLA undergraduates were recruited to test whether the prior experimental manipulation could reproduce the social identity benefits for participants in STEM domains. Anticipated results would indicate that participants in the key experimental condition would show a reduction in brilliance beliefs and an increase in intrinsic and altruistic motivations for careers in STEM.
Ideal affect is defined as the affective states that people value or ideally want to feel (Tsai, 2007). Research has shown that ideal affect is strongly affected by culture. Cultures that value independence also value High Arousal Positive (HAP) states whereas interdependent cultures value Low Arousal Positive (LAP) states. Prior research showed that when targets' expressions matched the participant's ideal affect, targets were liked more, regardless of gender and race (Tsai et al., 2018). However, these studies involved only White and East Asian participants and used only White and East Asian targets. Further, research has shown that White participants view Black faces differently from white faces (Friedman & Kawakami, 2018). In particular, Black male faces are perceived as more aggressive than White male faces (Blair et al., 2002). To test the effect of race on ideal affect's impact on perceptions, I replicated Tsai et al.'s (2018) study and included Black male faces as targets in addition to the White and Asian male faces. I hypothesize that White participants will not prefer Black male faces expressing HAP states over Black faces expressing LAP states.

Although continuing education programs can seem to be highly effective when learning is measured by immediate assessments, such learning can decay drastically within just a few days (Bell, Harless, Higa, Bjork, Bjork, Bazargan, & Mangioe, 2008). To examine the extent to which such forgetting might enable more durable learning, however, the present investigation examined the extent to which learning is enhanced by (a) the delay between an initial learning episode and a subsequent intervention and (b) the quality of that intervention. After learning from a perceptual-adaptive learning module (PALM) to categorize different skin lesions (Kellman & Krasne, 2018), and following a variable delay of 1-30 days, participants categorized novel exemplars of learned lesions within a practice test and reviewed other novel exemplars of other learned lesions within a restudy session. Then, after a fixed delay of 7 days, participants completed a final test to assess their learning. The results of our investigation may provide theoretical implications regarding the interactive effects of testing and spacing on learning and, moreover, may inform the improvement of continuing education programs.

Posters at conferences are vital to conveying scientific information between researchers. However, many critique the traditional format, which divides the poster into relatively equal sections (e.g., Introduction, Methods), for being text-heavy. The “better poster” was developed in response to this concern. The poster’s center is devoted to the main conclusion with other elements (e.g., statistical tests) on its sides. Though this format does reduce the quantity of text, the focus on the primary conclusion may reduce the viewer’s tendency to analyze its credibility, which is an important feature of research conferences. Advanced psychology undergraduates studied six posters presenting research from various areas of psychology using either the traditional or “better poster” format. Each poster had a major error that would affect the credibility of the conclusion (e.g., causal claim from a correlation). After viewing each, participants listed the main takeaways of the research, what it did well, and observed errors. This study has important implications for scientific communication, particularly the role of poster format in the comprehension and evaluation of scientific research.
Interest in research around human casino behavior has increased over the last decade. Spenwyn et al. (2010) examined factors that might impact gambling behavior and found red lighting paired with fast tempo music led people to play faster and bet larger. Casino blackjack tables are typically covered in felt of a single color, but there is a paucity of research about how these colors impact gambling behavior. The current study investigated whether the use of common casino table colors presented in an electronic setting led to differences in blackjack betting behavior. 90 participants were randomly assigned to a red, blue, or green blackjack table and played a series of 10 blackjack hands. Microsoft PowerPoint slides simulated an online casino with blackjack as the active game. Participants recorded the amount of each bet ($5-200). A one-way ANOVA (α = .05) showed no significant difference in average betting amount by table color condition (p = 0.61). These results indicate blackjack table color does not impact betting behavior in electronic settings. It is suggested future research examine how betting behavior is impacted by other table colors and the factor of player expertise.

Wansink, Painter, and North (2005) famously found that visual cues affect food intake. Individuals who ate from a biased (self-refilling bowl) versus an accurate (normal bowl) visual cue consumed more soup, but they estimated eating a similar amount. The study's validity has recently been called into question, prompting our direct replication. We randomly assigned 255 participants to eat soup out of normal bowls (accurate cue) or modified bowls that imperceptibly self-refilled (biased cue). In the preliminary results, ANCOVAs evaluated the effect of the visual cue on actual and estimated food intake, controlling for BMI, sex, and baseline hunger. Participants in the biased cue condition ate 22% more soup than those in the accurate cue condition [F(1, 245) = 6.29, p = .013]. However, they estimated that they consumed less in ounces compared to those in the accurate cue condition [F(1, 249) = 5.32, p = .022]. Thus we replicated the finding that a biased visual cue increases food intake over self-reported satiety. The current replication is important because the original findings have influenced policy (e.g., USDA) and consumers (e.g., 100 calorie snack packs).

Individuals with early life stress (ELS) are at a elevated risk for long-term internalizing problems such as anxiety. This trajectory may be explained in part by psychophysiological changes (e.g., increased amygdala volume and dysregulated stress hormone responses) which impair emotion regulation and lead to aberrant threat responses. Individuals with more ELS may show a delayed recovery from anxiety after acute stress exposure. Using a pre-test, post-test, follow-up design, UCLA undergraduates (N=91) were assessed for state anxiety before and after undergoing social stress induction through the Trier Social Stress Test or playing video games (control condition) and at 30-minutes follow-up. Participants also responded to validated self-report measures of ELS, trait anxiety, socioeconomic status, and depression. Multivariate generalized linear modeling revealed a significant interaction between acute stress and childhood emotional abuse at 30-minutes follow-up but not at post-test over and above the effects of trait anxiety, socioeconomic status, and depression. Results indicate that ELS may slow the recovery from stress without changing the magnitude of the stress response.
Sexual Violence Survivor Solidarity: Social Support and Policy Attitudes
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In the United States, 33% of women and 25% of men experience sexual violence (CDC, 2019). The recent rise in survivor empowerment movements like #MeToo underlines sexual violence as a systemic issue and has begun to positively shift out-group attitudes in support of survivors (Jackson, 2018). The present research examines whether exposure to positive group identity narratives from sexual violence survivors (e.g., personal stories connected to survivor empowerment movements) can increase institutional support for survivors collectively (e.g., policy change), in addition to empathy for individuals. In this experiment, perspective-taking of sexual violence survivors was held constant, and the study manipulated positive exposure to survivor group identities. We hypothesized that individual empathy would not differ between conditions. However, we expected that those exposed to the positive group identity would report increased empathy for the survivor community, lower victim-blaming attitudes, and stronger support for policies that benefit sexual violence survivors. Implications will highlight the importance of survivor empowerment movements as a vessel for social change efforts.

The Behavioral Effects of Endocrine-Disrupting Chemicals and Sexual Aggression in Female Adolescent Rats
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Endocrine-disrupting chemicals (EDCs) are persistent environmental contaminants that challenge normal functioning neuroendocrine systems. These systems influence social behavior and are subject to other external challenges, like socio-sexual stress. Using a rodent model of post-traumatic stress, Pooley and colleagues (2018) found that single prolonged stress may produce more behavioral rather than physiological changes in female rats. We previously observed no significant differences in circulating corticosterone, a stress hormone, in female rats that experienced sexual aggression during adolescence. The present study uses a crossed model of gestational EDC exposure and/or sexual aggression during adolescence (SCAR; Shors et al., 2016) to understand lasting behavioral changes in anxiety and mate preference for male aggressors in female rats. We expect higher anxiety and lower preference for aggressors in females exposed to SCAR and decreased anxiety in EDC-exposed females. Ongoing analyses of our studies will elucidate the unexplored effects of multiple uncontrolled stressors over the lifespan. This advances our understanding of neuroendocrine disruption in our everyday lives.

Does Working Memory Training Improve Metamemory?: Examining Intervention and Age Effects
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Previous studies have shown metamemory (awareness of one's own memory; MM) and working memory (WM) to be related (Konmori, 2016). Yet, only few investigate potential benefits of training WM on MM in younger (YA) and older adults (OA). In the study, YA and OA participants were randomly assigned to complete knowledge-based training or WM training. In the MM task, participants “bet” on how likely they think they will recall the words and afterwards, recall these words. We hypothesize that MM is higher for YAs than OAs regardless of training condition and that MM may be improved with WM-specific interventions. Results show that YAs make higher bets, have higher scores and recall more words than OAs. There is a significant interaction between session and age according to bets. OAs make lower bets in the second session while there is no difference in YAs, indicating that OAs decreased confidence during the second session. There was no significant difference in MM bets, score or accuracy as a function of intervention type. Our results indicate that MM performance is sensitive to age effects and furthermore, that OAs change their strategies over time, irrespective of the intervention.
Synchronized Brain Activity Across Individuals with Shared Identities

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A big part of human social interaction is the process of sharing emotional states with others, which helps us understand their intentions and guides our responses to them. There is a growing body of research that shows how networks of brain areas synchronize across participants when they are shown the same emotional stimuli (e.g. movie scenes), which suggests more convergent information processing and understanding of those stimuli. Now, we hope to ask: what modulates that convergent understanding? This study focuses on identifying a potential increase in neural synchrony among participants who share a common identity with each other. Participants’ neural activity was measured with functional near infrared spectroscopy (fNIRS) while they watched videos of a person recounting various experiences. This stimuli closely mimics the emotional information we would receive during natural social interaction. We hypothesize that there would be increased synchronization in neural activity among listeners if they share a common identity. By analyzing the collected data, we hope to demonstrate that shared identities in relation to others facilitates more convergent interpersonal understanding.

“We’re all affected by it”: A Mixed-Method Study of Familismo, CVE & PTSD in Latinx Urban Adolescents

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Within the United States, Latinx urban teens often experience high rates of community violence exposure (CVE). Yet, there is little research that ties the cultural value of Familismo—a commonly held value in the Latinx population—which may act as a protective factor in the context of CVE—with symptoms of post-traumatic stress disorder (PTSD). In this study, we examine if greater Familismo moderates the relationship between CVE and PTSD symptoms using mixed-methods. We recruited 416 Latinx teens (Mage=15.5) from the Midwest urban U.S. Quantitative results indicated that higher levels of CVE were associated with greater PTSD symptoms and higher Familismo was associated with lower PTSD symptoms. However, Familismo did not moderate the association between CVE and PTSD symptoms. Yet, while the quantitative data did not test the relationship between CVE and Familismo, qualitative data shows that teens with greater Familismo are impacted more by CVE. Instead of protecting, familialismo may intensify the relationship between CVE and PTSD. Though Familismo can be protective, our results suggest that the influence of context on Familismo is important as a potential point of intervention.

The Effect of In-Context and Explicit Grammar Formatting on Foreign Language Production Skills

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Introductory foreign language courses have traditionally utilized verb conjugation charts to teach students grammar rules. However, the efficacy of these conjugation charts in comparison to in-context grammar formatting has remained largely unexamined. Given increasing evidence indicating that “most vocabulary is acquired incidentally from context” (Hatami, 2017), this suggests that perhaps contextual formatting may also be more effective for retention and application of grammar. The present study introduces basic Spanish grammar in different formats to non-Spanish speakers to assess the effect of grammar presentation formatting - either sentences in context or explicit conjugation charts - on foreign grammar production skills. We hypothesized that the desirable difficulty produced by forcing participants to deduce grammar rules through sentences in context would result in greater recall of Spanish grammar and vocabulary compared to situations in which participants were presented with explicit conjugation charts.
The Influence of Social Media Study Breaks on Students’ Learning
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Though social media use during learning (e.g., using Facebook in class) harms memory for information (Thorton et al., 2014), little is known about the impact of “social media study breaks” on encoding and retrieval of information. Undergraduates read the first half of an educational passage, completed one of four different study breaks—social media (viewing an Instagram feed), reading celebrity interest magazine articles, solving anagrams, or no break (control)—then read the rest of the passage. After a short delay, they took a short answer test on the passage. Initial data (n = 57) reveal no significant effect of condition, indicating social media breaks may not harm learning, unlike social media use during learning. Additional data affirm that most (52%) undergraduates incorporate social media into their study breaks and 88% report using Instagram at least once a week. Our findings clearly show that social media use as a study break is popular. They further suggest that its use is not necessarily detrimental to learning, despite many educators’ beliefs. In fact, social media use may play a nuanced and motivated role during student learning.

Habits During Instrumental Learning are Associated with Impaired Selectivity for Remembering Important Information on a Separate Memory Task
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People can selectively remember important information when memory is impaired during aging, distraction or rushing. It is unclear what factors may impede this ability. We propose that individual differences in the neural systems responsible for producing habits, which are characterized by behavioral perseverance without regards to changes in the outcomes of the behavior, may similarly affect the ability of value to direct future remembering. To test this relationship, UCLA undergraduates (N = 88) performed an instrumental learning (IL) task that is known to sort people by habit or non-habit strategies and a value directed remembering paradigm in which they studied lists of words ranging in value from 1 to 10 points while completing a tone-identification task during half of the lists. Half the participants underwent acute stress induction prior to the memory task. Participants responded to validated measures of ELS and depression. Habits during the IL task, the acute stress manipulation, and depression all predicted impaired selectivity for value during subsequent recall. Results suggest the reliance on habits may reflect dysfunction of the neural mechanisms for computing value.

The Effects of Reproductive Aging on the Human Hippocampus and Spatial Navigation Strategy
Aidan Galati, Shuying Yu, & Emily G. Jacobs, Ph.D.
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Menopause is marked by a 90% decline in endogenous ovarian hormone production. Among brain regions affected by reproductive aging is the hippocampus (HC) which is responsible for encoding flexible and efficient spatial navigation. In rodents, estradiol’s influence on HC structure has been marked by changes in dendritic spine density and ultimately changes in behavior in spatial navigation (Korol et al., 2004). We aim to bridge previous findings in animals to humans in the context of reproductive aging. We collected high resolution structural HC scans from healthy young and midlife adults (and blood samples from latter group) who were later tested on a behavioral Dual-solution Paradigm, a task testing for navigation strategy. We hypothesize that reductions in estradiol levels in midlife women will result in a decrease in HC volume, which will ultimately shift women’s strategies from using a flexible HC-mediated strategy to an alternatively-mediated rigid strategy in the DSP task when compared to midlife men and younger adults. This study can delineate how reproductive aging, as opposed to chronological aging, is related to cognitive decline and sex differences in cognitive tasks.
Spontaneous Gender Attributions for Latino/Latinx

Karen Gomez, Matthew Elderkin, & Nicholas Alt, Ph.D.
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Past research describes how race and gender overlap to produce intersectional invisibility, with Black women and Asian men deemed less prototypical compared to Black men and Asian women (Johnson, Freeman, & Pauker, 2012). Indeed, Schug, Alt and Klauer (2015) found that when asked to write a story, participants were more likely to use a male pronoun when writing about a Black person, and more likely to use a female pronoun when writing about an Asian person. Yet, little is known regarding the gender prototype for category labels describing Latinx people. To examine this, participants were randomly assigned to write a story about a person labeled as—White, Latinx, Latino, Latino/a, Hispanic, or no category label provided—and we coded gender pronoun use from the story (i.e., he/she/they). Given androcentrism, we hypothesized that participants would utilize male pronouns more than chance across all categories, however we anticipated that this bias would be mitigated for the term Latinx (Vidal-Ortiz & Martinez, 2018). This research provides novel insights into gender and race intersections for Latinx individuals and the impact of category labels on ascribing gender.

Chronic and Acute Stress as Predictors of Distinct Communication Processes in Close Relationships

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Stress outside a marriage can impede effective communication within the marriage. Yet prior research contains surprising effects: positive communication sometimes leads to poor outcomes, and negative communication to improved satisfaction. These confusing findings may result from traditional methods that categorize behavior broadly as either positive or negative. In this study, we distinguish between affiliation (emotional warmth) and cooperation in an effort to identify precisely which behaviors are and are not affected by stress. In other words, does stress compromise relationship-oriented behavior, or problem-oriented behavior? Given previous findings showing that external stress can reduce intimacy, we expect that spouses with higher levels of stress will show less warmth during observed conflict, but not less cooperative behavior. To test this prediction, 216 newlywed couples were recruited for a longitudinal study. Behavior and stress were measured at baseline, and marital satisfaction data was collected at 3 subsequent time-points. Data will be analyzed using latent growth curve modeling with spouses included in the same model to account for dyadic interdependence.

Effects of Transcranial Direct Current Stimulation of Ventrolateral Prefrontal Cortex on Value-Based Memory Encoding

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Past fMRI studies found that the left ventrolateral prefrontal cortex (VLPFC) is engaged in selective encoding strategies for prioritizing valuable information to promote memory efficiency (Cohen et al., 2014, 2016). Our study used high-definition Transcranial Direct Current Stimulation to investigate left VLPFC’s causal role in supporting memory advantage for high-value items. Three groups of college participants were asked to memorize lists of words with arbitrarily assigned point values. In the first stage, all groups received sham stimulation as they encoded five lists of 30 words. Two of the lists were immediately tested with free recall. The second stage was structured like the first, but the groups differed in receiving either sham stimulation or anodal stimulation on the left or right VLPFC. The remaining lists were tested one day later. Results show that left anodal stimulation significantly increased participants’ recognition of high-value words and reduced their recognition of low-value words while the right anodal and sham stimulation did not. These results demonstrate a causal role for left VLPFC in the implementation of selective encoding strategies in verbal memory.
The Role of Communication in Neural Synchrony

Sean Guo, Feodora Roxanne Kosasih, Andrew Saleeb, Uriel de Monteverde, Shannon Burns, C. Phil, & Matthew Lieberman, Ph.D.

University of California, Los Angeles

Neural synchrony, the correlation of brain activity patterns across people, is an emerging method for exploring how teams collaborate. Correlated brain activity is suggested to underlie convergent information processing and understanding between people. Previous studies have found that the quality of communication between group members affects neural synchrony. Taking this into consideration, the current study aims to further explore the role of communication in neural synchrony. Physiological measures of the brain were obtained using functional near infrared spectroscopy (fNIRS) targeting the frontal lobe and temporal-parietal junction during a team game where four-person groups were required to collaborate to maximize their score on a joint simulated cooking task. We hypothesize that the ability to communicate within a team would result in increased neural synchrony while playing the team simulation game, as opposed to not being able to communicate during the game. Results from this study will provide more information about how communication contributes to shared information processing and understanding among team members.

Student Perceptions of Supplementary Instructional Online Videos to Improve an Engineering Course

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In an effort to improve a high-failure rate mechanical engineering course (ME 3111), a team of professors implemented a series of online instructional videos called “ME Online,” developed by the mechanical engineering department. The current project focuses on whether students feel that the videos are useful and help them pass the course. In Fall and Spring 2019, focus groups were held with 60 participants (~50% participation rate), who represented a subset of four sections of one course (ME 3111, a course which has 30 undergraduate students per section). The course failure rate was reduced by more than 30%. Data showed that students felt more confident from the videos and helped them perform better in the course. Limitations are that multiple factors may account for these positive outcomes. Our future research direction includes conducting a quasi-experiment assessing whether the videos help students perform better and contribute to the low failure rate in this course. The results have implications for professors in other departments who are considering creating online instructional videos. Such resources may help students pass challenging courses in their academic careers.

Marital Compassion in the Context of Daily Life

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Acts of compassion both raise the giver’s positive affect because they feel like a valuable presence in others’ lives (Singer & Klimecki, 2014), and they increase the feelings of closeness between the giver and receiver (Mongrain, Chin, & Shapiro, 2010). However, we know little about the contexts of daily married life that trigger these acts. In this naturalistic, multi-method study, 30 married couples were filmed in their homes and communities across four days and all instances of spontaneous compassion expressions were identified. We developed a video coding scheme to reliably detect the characteristics of the compassion giver and receiver as well as the contexts in which these compassion moments take place. By gaining a clearer picture of marital compassion in daily life, we can implement aspects of these positive interactions into interventions to help improve the mental health and relationships of individuals in both maladaptive and stable home environments. We can also further explore how these interactions between the marital couple could positively affect others in the home, such as their children.
A Processing Bottleneck in Visual Object Recognition

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We often try to multitask (e.g. texting and driving), but is it truly possible to process multiple things at the same time? At one extreme, visual information is processed in parallel in the retina and early visual areas. At the other extreme, there may be a bottleneck in visual processing; we process only one stimulus and guess about the other. In this study, we asked if people can categorize two visual objects as well as one. On each trial, greyscale object images were briefly flashed in two locations, followed by a prompt to respond whether there was an object from the given category (e.g. plants, food). Colored cues indicated that participants should respond about objects in either one or both locations. Categorization performance was much worse when participants had to respond about two objects compared to one, matching the predictions of a bottleneck in processing. This result is consistent with previous work showing that people cannot recognize two words presented at the same time (White, Palmer, Boynton, 2018). We also found that the amount by which performance decreased depended on the objects' arrangement on the screen; this result was unlike the findings with words.

Negative Feedback on Social Media and Psychopathology in Adolescents from High-Achieving Schools

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45% of American teens report being online nearly constantly, including using social media (SM) sites (Anderson et al., 2018). Frequent SM use has been positively associated with anxiety, depression (Woods et al., 2016) and substance use (Ohannessian et al., 2017) problems. One potential salient predictor is receiving negative feedback on SM. Our study explored the association between negative feedback on SM and three dimensions of self-reported psychopathology among 2,497 adolescents. We hypothesized that the frequency of negative feedback received would be positively associated with anxiety, depression, and substance use. We also explored sex as a moderator, where stronger associations for negative feedback with depression would be observed for girls and with substance use for boys. Using linear regression, the frequency of negative feedback received on SM significantly and positively predicted anxiety, depression, and substance use. Gender moderated the relationship for substance use; as negative feedback increased, so did substance use symptoms at a steeper rate for females than males. These findings expand our knowledge of how SM may be associated with adolescent development.

Mass Media and Mass Violence: How Traditional and Social Media Impacts Recovery

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With the evolution of technology and mass communication comes the rapid and continuous sharing of information through different traditional and social media platforms. Media’s role in the constant distribution and resharing of information about mass violence is unclear and may pose a risk to impacted communities. This study, funded by the National Institute of Justice, examined the impact of media coverage after catastrophic violence. Over 150 interviews were conducted from ten communities affected by one of these events. Informants included those who witnessed the event, those injured, family members of those affected, first responders, school personnel, and local community leaders. Interviews were transcribed and then coded for text segments related to media coverage using Atlas ti software. This poster will present themes on the content and impact of traditional and social media on post-violence impact and recovery. Many informants commented that repeated news reports and social media posts served to impede recovery by increasing distress among those affected. Both positive and negative views of the media and the implications of findings from this study will be presented.
Does Learning About Learning Promote the Adoption of Evidence-Based Learning Strategies?
Vanessa S. Hilo, Jordan A. Brabec, Elizabeth Ligon Bjork, & Robert A. Bjork
University of California, Los Angeles

Virtual Reality Reward Training: Autobiographical Memory Changes Correlate with Improved Anhedonia
Emmily Hovhannisyan, Christina Sandman, Anastassia Costello, Kelly Chen, Michael Sun, Halina Dour, Michael Treanor, & Michelle Craske
University of California, Los Angeles

Calories Consumed and Eating Rate Influence Memory of Eating
Selina Hsuan, Josefa Equita, Benjamin Seitz, Aaron Blaisdell, Ph.D., & A. Janet Tomiyama, Ph.D.
University of California, Los Angeles

Although testing is known to enhance learning to a greater extent than passive modes of study (e.g., re-reading), learners often resist the adoption of self-testing as a learning strategy. In this investigation, we examined the extent to which such resistance—and any associated perceptions—might be affected by (a) the provision of educational information regarding the benefits of testing and (b) the experience of self-testing. After completing a pre-assessment regarding their perceptions of learning and testing, participants studied a passage about either the benefits of testing or the benefits of walking. Next, participants re-read what they had studied, completed a free-recall practice test, or engaged in an unrelated task. Then, all participants completed a final free-recall test and a post-assessment regarding their perceptions of learning and testing. Finally, all participants were presented with a new passage and had to choose, with the false expectation of a final test, to re-read or to complete a practice test. This study addresses how the benefits of evidence-based learning tactics are best promoted, especially when learners are resistant to adopt such practices.

Anhedonia, a cardinal symptom of depression, is characterized by deficits in positive affect. Consequently, depressed individuals demonstrate impoverished positive imagery and a bias for observer (vs. field) perspective when recalling autobiographical memories. To address this abnormal recall style, participants (n=16) with anhedonia underwent Mobile Virtual Reality Reward Training (MVR-RT) in which they watched positively-reinforcing videos and completed a written recounting of positive details from the scenes. To personalize treatment, they also recounted positive autobiographical memories. Using text-analysis software, we analyzed language use in autobiographical recalls. During the first half of treatment, increased use of first-person pronouns was correlated with decreased anhedonia (p=.002), anxiety (p=.003), and stress (p=.036), suggesting enhanced field perspective is associated with improved clinical outcomes. Changes in positive and negative emotion word use corresponded with improvements in negative affect (p=.022) and stress (p=.020), respectively. Results suggest MVR-RT has potential to ameliorate anhedonia by targeting an often-neglected recall deficit in depression.

In the past several decades, there has been a growing interest concerning the relationship between memory processes and eating behavior. Several studies have demonstrated that memory of a previous meal can influence and even reduce future food consumption, but less is known about the determinants of memory of eating. The present two experiments used a novel procedure called the Memory of Eating Task to determine factors that influence memory of eating. In this task, participants watched a film while being cued to eat food on a predetermined and fixed schedule to ensure an identical eating experience for all participants. After watching the film, participants completed a distractor task and were then asked to recall the number of food items they ate. In two pre-registered studies (N1 = 159, N2 = 128), we found that higher calorie foods (M&M’s and peanuts) were better remembered than lower calorie foods (popcorn) (t(157) = 3.33, p < 0.01) and that a slower eating rate resulted in more accurate memory of eating compared to a faster eating rate. These findings provide important theoretical implications and suggest that eating interventions may be developed to target memory of eating.
Depression and Acute Stress Impair Selectivity for Learning Important Information

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Early life stress (ELS) and psychological stress have been shown to interfere with memory and decision-making. Research in rodents suggests these impairments stem from disruption of the brain regions responsible for reward and value calculations. Major depression is associated with impairment of one of these same brain regions (nucleus accumbens) in humans undergoing neuroimaging. However, there is a diverse body of research that suggests people maintain the ability to selectively remember important information in a variety of conditions where memory is impaired. The current experiment sought to determine if depression would impair selectivity for remembering important information among late adolescents. 93 participants studied lists of words that ranged in value from 1 to 10 points while completing a tone-identification task during half of the lists; half underwent acute stress induction via the Trier Social Stress Test prior to the memory task. Participants also responded to validated self-report measures of ELS, socioeconomic status (SES), and depression. Depression and acute stress significantly impaired selectivity for value over and above the effects of ELS and SES.

Semantic-Mediated False Memory Increases with Depth of Processing during Encoding

Chris Iyer, Shao-Fang Wang, & Anthony D. Wagner
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Evidence indicates that following word encoding, false memory is elevated for unstudied words (lures) that share semantic features with studied words. At the same time, the Levels of Processing (LOP) effect suggests that semantic processing in encoding leads to stronger memory. Here, we investigated the interaction of these two effects on false recognition memory across varying levels of study-lure semantic similarity (SS) and LOP at encoding. We first selected lure words; for each, we generated a list of semantically related study words based on a SS measurement from a Natural Language Processing model. Subjects then studied these lists with either a nonsemantic or semantic LOP cover task. Later, subjects made recognition decisions on studied words, unstudied lures, and unstudied new words. Our data revealed a LOP effect; \( d' \) in the semantic LOP condition was significantly higher than \( d' \) in the nonsemantic LOP condition. Further, preliminary results suggest that only in the semantic LOP condition, higher study-lure SS predicted higher false alarm rate for lures. Future analyses will explore these effects with varying levels of study-lure semantic similarity.

One Size Cannot Fit All: Perspectives on Culturally-Tailored Mental Health Services

Tasfia Jahangir & Stanley Huey Jr.
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Disparities in mental healthcare access and treatment can be eminent across communities, cultures, and countries. Cultural humility in the delivery of mental healthcare, or "culturally-tailored" services, have emerged as a potential avenue to address these disparities. This study examines lay perspectives on what may or may not be effective in providing culturally-tailored care through coded interviews with USC students (n=124). Preliminary qualitative coding and analyses found the most common themes to be "individualizing treatment", "using community members", and "culturally-relevant labels" associated with helpful, inert, and harmful practices respectively. Once complete, this thematic analysis of lay perspectives will help experts (i.e., clinicians and researchers), understand cultural-tailoring from a "consumer standpoint," which could differ from their own. Research demonstrates that general public members who do not share professionals' beliefs about influences of health are less likely to adopt professional guidelines. Thus, lay conceptualization is key for professionals to engage clients in efficacious mental health promotion and recovery.
Examining the Effects of Peer Role Model Comparison on Adolescent Academic and Adjustment Outcomes

Akanksha Jain, Dr. David Schwartz, Annemarie Kelleghan, Hannah Fritz, & Yana Ryjova
University of Southern California

Past research has uncovered a negative relationship between academic achievement in adolescence and depression. (Huang, 2015) Adolescents’ look up to their peers as a barometer of academic success. Peers who exemplify an adolescent’s desired attributes may function as their peer role models. (Graham et al., 1998) Incongruence between adolescents’ academic achievement and that of their peer role models may affect the aforementioned relationship. We hypothesize that students whose academic performance is lower than that of their peer role models’ would experience greater emotional distress. Using hierarchical linear regression, this cross-sectional study examines the extent to which peer role models moderate the relation between academic achievement and depression. A sample of 730 participants from an ethnically diverse middle school completed a peer nomination inventory identifying peers they admired, respected, and wanted to be like. We assessed depression using the Children’s Depression Inventory (Kovacs, 1985), and retrieved students’ grades from school records. These findings could have important implications for understanding adolescent psychosocial adjustment.

Collaborative Flashcard Use Improves Learning Efficiency and Metacognitive Accuracy

Inez Zung, Vaishali Denton, Donia Javidi, Megan N. Imundo, M.A., Steven C. Pan, Ph.D., & Elizabeth Ligon Bjork, Ph.D.
University of California, Los Angeles

Testing boosts long-term memory relative to restudying (Bjork, 1975). Although using flashcards is regarded as a potent form of self-testing, little is known about conditions that affect flashcards’ effectiveness. One factor may be whether one uses flashcards in pairs or alone. Participants were randomly assigned to learn difficult vocabulary individually or in pairs. In the paired condition, one participant tested the other for 20 min, after which they reversed roles. In the individual condition, participants studied alone for 20 min and then tested themselves (or vice versa). Everyone then completed a final cued recall test. Though participants in the paired condition completed fewer test/study cycles, their final test recall equaled that of the individual condition. Further, paired flashcard use yielded more accurate predictions of final test performance than the individual condition, which overestimated performance by two letter grades. Thus, paired flashcard use is more efficient and improves metacognitive judgments. These findings may be especially crucial for students preparing for high-stakes exams, for which erroneous study decisions can have devastating consequences.

Scale Development and Validation: Student Fit in a College Environment (S’FICE)

Jessamy Johnson, Anudhi Munasinghe, & Diane Mackie, Ph.D.
University of California, Santa Barbara

Despite their increasing enrollment, underrepresented (UR) students still graduate from university at lower rates than do non-underrepresented students. One proposed explanation for this difference is a sense of mismatch that UR students feel in the situational context of attending a university (Walton & Cohen, 2011). Schmader and Sedikides (2017) proposed that people experience psychological fit in an environment along three dimensions: self-concept fit, goal fit, and social fit. Adapting this model to the college environment, a new instrument known as Student Fit in a College Environment (S’FICE; Munasinghe & Mackie, 2020) seeks to assess the degree to which UR students experience self-concept, goal, and social fit in a university environment. The instrument was administered to females in STEM majors, Black students, first generation students, and Latinx students at a large Western public university and academic outcome data were collected. We predict that UR students who experience greater levels of fit as measured by S’FICE will show increased academic performance in comparison to UR students who experience lower levels of fit.
Impaired Automatic Perspective-Taking and Callous-Unemotional Traits

Callie Jones & Rebecca Waller, Ph.D.
University of Pennsylvania

Callous-unemotional (CU) traits (i.e., lack of empathy and guilt) predict risk for severe antisocial behavior (Frick et al., 2014). Understanding the etiology of CU traits is essential to inform treatments, including identifying modifiable mechanisms underlying the ability to respond to others’ feelings and perspectives. For example, typically-developing children are slower to take their perspective of a situation when another’s differing perspective is presented as well. This interference represents an unconscious mechanism to support empathy. Despite the fact that CU traits are marked by a lack of empathy, no prior studies have explored links between CU traits and automatic perspective-taking (APT; Apperly, 2010). In the ongoing study of 7-10 year old children (current, n=48), children complete an APT task (Samson et al., 2010) and parents report on child CU traits using the Inventory of CU traits (Frick, 2004). Preliminary analyses suggest that CU traits are correlated with faster reaction times and fewer errors (i.e., less other-perspective interference). These results suggest that high-CU children are impaired in their APT, providing insight into a potential treatment target.

Which Language Errors Get the Benefit of the Doubt? Noisy Channel Inferences for Low-Frequency Words

Jasmine Kay
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Communication is error prone: speakers misspeak and listeners mishear. Thus, we rationally integrate evidence of noise into our interpretation of sentences: if the literal interpretation of a sentence is unlikely (“The wise monk lent the book the nobleman”), we may assume the sentence has been corrupted and opt for a non-literal interpretation (“The wise monk lent the book to the nobleman”). Such interpretation is determined via probabilistic inference, weighing prior knowledge of plausible events against the likelihood of noise. Here, we test the mind’s noise model for low-frequency (“esoteric”) words. For an implausible sentence with such words (“The judicious friar lent the book the nobleman”), readers might either (1) be more likely to infer corruption by noise—because producing such words is taxing—and opt for non-literal interpretation; or (2) be less likely to assume so—because using such words demonstrates a stronger grasp of language—and opt for literal interpretation. To adjudicate between these hypotheses, participants read sentences matched for content but differing in word frequency (exhibited above), and answer comprehension questions to reveal their interpretations.

Differences in Students’ Personality and Background as Predictors of Achievement in AP Statistics

Casey Kim, Teresa Ober & Ying Cheng
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Students’ AP course completion and exam performance, particularly in STEM subjects, are significant predictors of their post-secondary academic performance (Ackerman et al., 2013). This study aims to determine the factors that affect a students’ performance in an AP Statistics course. We use hierarchical linear regression to examine the extent to which students’ demographic characteristics (e.g. age, gender, parental education(block 1), personality (block 2), course engagement (block 3), and teacher support (block 4) predict variability in students’ subject area proficiency. Proficiency is measured based on scores from a low-stakes computerized practice exam and a high-stakes standardized assessment (AP Statistics Exam), both aligned with the same AP Statistics test framework. Preliminary results indicate that the final model, consisting of all of the predictors, accounted for approximately 11% of the variance in the practice exam score and 14% in the actual AP exam score. The present study has implications for further understanding of how both individual and context factors influence students’ learning in an AP course.
Using the Influenza Vaccine as an Exogenous Mild Inflammatory Challenge: When does Inflammation Peak?

Natalie LeRaybaud, Arielle Radin, Kate Kuhlman, Chloe Boyle, Marcie Haydon, Emma Paine, Ethan Mondell, Arielle Shaye Mendoza, & Julienne Bower

University of California, Los Angeles

Psychological stress and chronic illnesses are associated with low levels of peripheral inflammation, which is thought to influence neural and behavioral function. Most experimental models however, elicit high concentrations of cytokines. The influenza vaccine has shown promise as a mild inflammatory challenge, but the timing of the acute immune response is unknown. This purpose of this study was to identify the timing of peak inflammation and explore psychological predictors of the immune response to vaccination. A sample of 21 healthy, young adults received the standard dose influenza vaccine and completed measures of depression, anxiety, sleep quality, and adverse childhood events. Blood samples were collected to measure concentrations of interleukin-6 (IL-6) in plasma 30 minutes prior to and 24, 48, and 72 hours post-vaccination. IL-6 peaked at 24 hours, returned to baseline levels by 48 hours, and remained low at 72 hours. Significant predictors of IL-6 change included higher anxiety levels and worse sleep quality. These findings have both methodological and conceptual implications for studying the effects of peripheral inflammation on the brain and behavior.

The Effectiveness of Self-Affirmation in Reducing Emotional Reactivity to Threatening Information

Jiani Li, Macrina Cooper-White, M.A. & Matthew Liberman, Ph.D.

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Mental disorders commonly feature emotional instability. Yet, presenting aversive information to the patient remains a crucial component of many psychotherapies. Self-affirmation (SA), a strategy that involves reflecting on one's core personal values, may be a viable solution for reducing emotional reactivity. In this study, we examined the effectiveness of SA in attenuating negative emotional response to opposing political opinions, and whether the effect can be shown neurally. Participants (N=87) provided their political views and rated their emotional receptivity to opposite political beliefs. Half of the participants completed an SA writing task, while the other half completed a control task. Then, they watched videos on gun control while having their brains scanned using functional near-infrared spectroscopy (fNIRS), after which they rated their emotional reactions. Preliminary analyses found significant interactions between SA and trait receptivity for certain ratings. Further analyses will be used to examine the association between neural synchrony and similarity in reported emotional response, and to identify brain regions associated with specific emotional reactions.

A Lemon in Yellow, A Lemon in Blue: The Fluent Processing of Congruent Color Claims

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When evaluating whether information is true, people often rely on how easy information feels to process rather than on careful consideration of content. Variables that increase processing ease, such as the presence of a photo depicting the subject of the claim, have been found to bias people toward accepting information as true. We hypothesized that a novel variable - whether a claim is presented in a color congruent with its subject (e.g., “Lemon peel is rich in pectin” written in yellow) should result in a similar boost in perceived truth. We test this hypothesis in two studies. In study 1, USC undergraduates (N = 196) rated the truth of 24 ambiguous claims, half true and half false. Half of the claims were presented in a color congruent with the subject of the claim and half were not. As predicted, we found that congruent claims were rated to be more true (M = 3.58, SD = 0.54) than incongruent claims (M = 3.49, SD = 0.48), although these results only reached marginal significance, p = 0.058. In study 2, we provide a replication in a controlled lab setting to address concerns about inconsistent color presentation (N = 200; data collection currently underway).
Learning Styles Examined: Does Modality of Information Have an Impact on Free Recall?
Sarah K. Lingg
Sierra Nevada University

The Effects of Racial Categorizations on Emotions and Inclusion
Chassidie Liu, Austin Zeng, Ashley Coventry, Melissa Canas, Saray Grande, Rammy Salem & Diane Mackie, Ph.D.
University of California, Santa Barbara

Nationality Similarity and Attitudes Toward Psychological Counseling
Zimeng Ma
University of California, Los Angeles

Debate exists as to whether various learning styles produce consistent free recall accuracy. Visual, auditory, and tactile learning styles are often discussed (Davis, 2007). Galy, Mélan, & Cariou (2010) tested free recall accuracy for a word list presented visually or auditorily and found recall was greatest when the word list was presented auditorily. In the current study, visual and auditory learning styles were examined, separately and in conjunction. 90 participants from a liberal arts university were randomly assigned to be exposed to a 25-item, high frequency, word list (Roodenrys & Quinlan, 2000) visually, auditorily, or with both simultaneously. A mathematic distractor task followed to extinguish short-term memory. Participants then completed a free recall task testing long term memory for the word list. A one-way ANOVA showed no significant difference (p = .116) in the number of words recalled among delivery modalities, indicating modality in relation to learning style does not impact free recall performance for the contents of a word list. These results validate the use of teaching strategies that involve content exposure through visual, auditory, or simultaneous means.

Racial/ethnic minorities may face the risk of being inappropriately classified or being denied the opportunity to accurately self-categorize. As a result, minorities may feel less valued as members of a society that denies these possibilities. Previous research has shown that disregarding one's preferred social representation may lead to feeling invisible (Fryberg & Townsend, 2008). This research explores whether giving Hispanic or Latino individuals the opportunity to self-categorize with their preferred racial/ethnic groups affects their emotions, feelings of inclusion as US Americans, and personal judgments of their social rank in relation to others. We predicted that being recognized as, and being able to choose, a preferred racial/ethnic identity would provide both optimal identity distinctiveness and inclusion in the superordinate American group, and thus the most positive emotions, feelings of inclusion, and self-evaluations. Results suggest that identity recognition predicts lesser feelings of anger, and greater identity choice predicts greater happiness for Hispanic or Latino individuals.

In China, despite an increasing number of young people with mental disorders, stigma of mental health and psychological treatment has imposed a barrier against help-seeking for mental issues. Since untreated mental disorders has led to social problems and economic burden in China, it is necessary to decrease those stigmatic attitudes and to encourage seeking psychological treatment. Previous studies suggest that the more similar people are to the message deliverer, the more likely they will be persuaded by the message. The researcher targets at 50 Chinese college students in Shanghai, a subgroup of China's youth, manipulates the nationality of the message deliverers, and examines the students' attitudes toward psychological counseling, a specific type of psychotherapy. The researcher expects to find that Chinese undergraduate students' messages is related to more positive views of psych-counseling, in comparison to American students' messages. The study is meaningful because its results may suggest that promoting the role of similarity in persuasive messages can potentially and promisingly stimulate positive attitudes toward mental health treatment among Chinese youth in general.
“Boys Suck.” How Gender Typicality Relates to Adolescents’ Endorsement of Gender Stereotypes

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With the onset of puberty, many adolescents come to reassess their gender identity. In the process, their gender group stereotypes may be shaped in part by how much they feel like a “typical” boy or girl (i.e. gender typicality). However, empirical evidence disagrees on whether or not gender typicality is related to endorsing same-gender favoring and other-gender derogating stereotypes. The mixed findings may in part reflect past studies’ use of a difference score between same-gender favoritism and other-gender derogation. To counter this, the current study uses separate linear regression analyses to investigate how gender typicality is related to same-gender favoritism and other-gender derogation respectively, in an ethnically diverse sample of adolescents (N=4,613; 41% Latinx, 16% Black, 26% White, 17% Asian). Preliminary findings suggest that gender typicality is related to favoring one’s same gender group and derogating the other gender group, as predicted. Analyses also reveal a novel finding: Girls high on felt gender typicality endorse negative stereotypes about boys more vehemently than boys at comparable levels of felt gender typicality do about girls.

Clinical and Neural Characteristics of Youth at Clinical Risk for Psychosis with Comorbid OCD

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Obsessive-compulsive disorder (OCD) is prevalent among individuals with schizophrenia (Buckley et al., 2009). Patients also commonly report obsessive-compulsive symptoms, which are associated with poorer cognition and prognosis (Ongur & Goff, 2005). Although obsessive-compulsive symptoms may emerge early in the development of schizophrenia (Eisen et al., 1997), little is known about the clinical and neurobiological features of youth at clinical high risk for psychosis (CHR) with comorbid OCD. Using data from a large multisite study, we examined: 1) differences in psychotic symptoms and role functioning, 2) EEG measures of cognitive dysfunction with known sensitivity to psychosis, and 3) relative risk of future psychotic disorder diagnosis among CHR youth with (OCD+) and without (OCD-) comorbid OCD. Preliminary analyses indicate that relative to OCD-, OCD+ CHR youth had more severe symptoms and poorer prognosis but intact EEG measures of cognition. OCD+ and OCD- did not differ in role function. Results revealed clinical and EEG profiles of CHR youth that differed by OCD status, suggesting that CHR youth with OCD may have distinct mechanisms underlying their psychosis risk.

Examining the Links between Racial Differences and Perceived Body Image

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Body image is the perception that an individual has of their own physical appearance. Past research has found racial differences in body image, such that Asian/Asian American individuals tend to have a lower body image satisfaction compared to other ethnicities (Gluck & Geliebter, 2002). This study aims to replicate this finding and test whether a positive body image intervention is less successful in Asians/Asian Americans. In the context of a downward social comparison manipulation (demonstrated to boost body image in prior studies), we hypothesize a main effect of manipulation on body image. Critically, we also hypothesize a manipulation x race interaction, where downward social comparison is less effective for Asian/Asian American participants compared to White and LatinX participants. Preliminary analyses show that those who engage in downward social comparison have a slightly better body image (M=5.22, SD=1.58), than the control condition (M=5.19, SD=1.38), although we are not yet powered to detect statistical significance. This study aims to extend the literature regarding racial differences in body image. This study is on-going and preliminary results will be presented.
Parenting self-efficacy (PSE) is a mother’s belief in her ability to raise a child. High PSE has been shown to be associated with decreased maternal depression and better adjustment to the parenting role (Hess, Teti, & Hussey-Gardner, 2004). Because of these beneficial outcomes, it is crucial to investigate factors associated with high PSE. Previous research has shown that increased social support, prior experience with children, more knowledge of child development, easy child temperament, happy mood, and self-reflection are correlated with better parenting outcomes. Therefore, we hypothesized that these variables would be associated with high PSE. In this study, we examined PSE correlates using responses to online questionnaire data from first-time mothers of infants. The women also completed a laboratory visit which experimentally manipulated mood to characterize the extent to which mood influences PSE. Lastly, we analyzed changes in PSE after the mothers recalled a mastery experience—a written reflection on a time they successfully completed a challenging parenting task. The present study expands our understanding of PSE correlates that promote easier adjustment to motherhood.

Infants attend to their caregivers and other social partners to gather information for learning. Research shows that infants demonstrate preferential looking, or attention-holding, to a caregiver’s face compared to a stranger’s face (Barrera & Mauer, 1981). However, it is unknown whether infants show similar biases in attention orienting, or initial selection, to caregivers. In the present study we recorded eye movements from 23 (anticipated N=50) 6- and 9-month-old infants as they viewed caregiver and stranger faces appearing in six-item search arrays. During single target trials, search arrays contained a one target face (either caregiver or stranger) and five non-social distractor objects. Dual target trials were identical except caregiver and stranger faces appeared simultaneously. We measured frequency of initial orienting (i.e., first look) as well as frequency and speed of overall orienting to target faces. Preliminary data indicates similar overall orienting to caregiver and stranger faces on single-target trials. However, infants showed biased attention orienting towards the caregiver on dual-target trials, when multiple faces compete for selective attention resources.

Exposure to early adversity is associated with learning problems later in life (Pechtel & Pizzagalli, 2010). Little research has investigated how the extent of parent-child communication affects such negative outcomes. We examine parent-child communication’s potential effect on verbal comprehension in both previously institutionalized (PI; youth who experienced orphanage care) and comparison youth. In the present study, 82 comparison and 62 PI youth (Mage=15.74) completed the second version of the Wechsler Abbreviated Scale of Intelligence to assess vocab scores. They also reported their extent of communication with their biological or adopted parents on the Inventory of Parents and Peer Attachment Revised questionnaire. On average, comparison youth (M=60.22, SD=10.48) exhibited significantly (p<.01) greater vocab scores on the WASI-II than PI youth (M=54.27, SD=8.71). No group differences were observed between parent-child communication scores (p=0.35). Additionally, no correlation was found between WASI-II vocab scores and parent-child communication (p=0.61). These results suggest that orphanage care may impair verbal knowledge later in life, but not parent-child communication.
Too Stressed to Care: Acute Stress Impairs Selectivity for Remembering Important Information Among Individuals Exposed to Early-Life Stress

Ghada Morad, Simi Panda, Henri De Guzman, Stacy De Florencio, Alexander L Gordon, Tara K Patterson, Ph.D. & Barbara J. Knowlton, Ph.D.

University of California, Los Angeles

Effects of Alcohol Administration On the Urge to Use Marijuana

Jessica Morales, Ted'Dryonna Moges, Adam Buch, Kriseira Lamas-Krauletz, Alyssa Brostowin, & Lara A. Ray, Ph.D.

University of California, Los Angeles

Examining the Effect of Early Life Adversity on Emotion Identification and Executive Functioning

Joey Narez, Genevieve Patterson, Kaitlin Cummings, Jiwon Jung, Nana Okada, Mirella Dapretto, Ph.D., Susan Y. Bookheimer, Ph.D., Nim Tottenham, Ph.D., & Shulamite Green, Ph.D.

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People recall important information and maintain this ability despite memory impairment by aging, distraction or rushing. Early-life stress (ELS) is associated with atypical development of three brain regions likely involved in memory: the hippocampus (Youssef, 2019), amygdala (Tottenham, 2010) and nucleus accumbens (Go, 2013). Assuming exposure to ELS amplifies the effects of acute stress (Kuhlman, 2018), we predict high ELS will impair selectivity for remembering important information. Of 93 undergraduates at the University of California, Los Angeles, half underwent acute stress induction via the Trier Social Stress Test, in which participants delivered a speech and performed mental arithmetic for an audience. Participants studied lists of words with arbitrary point values assigned to them. Evidence of impaired selectivity for remembering important information during acute stress was shown among individuals who had ELS. This impairment may reflect a sensitization to acute stress and the perturbation of the neural machinery of reward and value calculations among individuals exposed to ELS. Future work using fMRI will assess the neural mechanisms responsible for these effects.

Previous research has demonstrated that concurrent use of alcohol and cannabis is highly prevalent and is associated with a host of negative consequences. The current study examined the effects of alcohol administration on the urge to use marijuana and sex differences in a sample (N = 37, 46% females) of non-treatment-seeking heavy drinkers who reported marijuana use in the last six months. Alcohol was administered intravenously. Participants rated their urge to use marijuana at baseline and at brACs .02, .04, and .06 g/dl on a 10-point Likert Scale. The Time Line Follow Back, AUDIT, and CUDIT were assessed to determine alcohol and marijuana problems. Analyses revealed a significant Sex × Alcohol interaction (β=1.19, SE=0.59, t=2.03, p <.05), as well as a main effect of sex (β=−1.62, SE=0.74, t=−2.18, p <.05) and a main effect of alcohol (β=−1.15, SE=0.41, t=−2.78, p <.05). These findings revealed that craving for marijuana escalated for males when alcohol increased relative to females. If these results are supported by future studies, they may elucidate unique mechanisms by which men may be more vulnerable to the effects of alcohol as a trigger to use marijuana.

Early adversity (EA), such as abuse and neglect, can impact the brain and alter cognitive, sensory, and socioemotional functioning. Children with EA show neural alterations in emotion face processing (Moulson, et al. 2015). They also show difficulties with learning and planning, which may contribute to higher rates of academic and adjustment issues (Pechtel and Pizzagalli, 2011). We aimed to examine neural signatures of face processing in youth exposed to EA through being adopted from foster care (AFC) during an emotion identification task. 18 AFC and 24 typically developing (TD) youth completed the task in an fMRI scanner; they were shown faces that changed from neutral to fully expressive happy or angry and asked to accurately and quickly identify the emotion of each face. Midway through the task participants were primed by watching their own faces making happy and angry expressions. AFC showed more prefrontal activation while completing the task compared to TD who showed more visual cortex activation. AFC also showed higher prefrontal activation than TD after the prime. Correlations between brain response and executive functioning measures will be discussed.
Can Children Remember What You Say Although It Is Not Directed to Them?

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Parenting Behaviors: A Moderator for Parental Depression and Child Anxiety

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Examining the Effects of Working Memory Training and Spacing on Memory Outcome

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Children show better retention and generalization of novel objects when objects are presented spaced out in time and tested after a delay. However, retention and generalization have only been examined in direct conversations. It has been found that less than 25% of the time a child interacts with a caregiver is in direct conversations. Moreover, previous research has shown that children can successfully acquire novel words in overhearing contexts. The current study examines whether monolingual, 24- to 35-month-olds are able to retain novel object exemplar labels in an overhearing context. Children sit off to the side while two experimenters teach each other novel object-label pairs in either a massed, objects are presented in immediate succession, or spaced, each object is presented after a 15-second delay, presentation. Then, children are asked to identify the novel exemplar in a forced choice test after a two-minute delay. Preliminary results (N = 12) suggest that children in both conditions are struggling to retain object exemplar labels. In addition, we will discuss the relationship between overt attention during the task and children’s task responses.

An estimated 31.9% of adolescents have a diagnosis of any anxiety disorder which has been linked to poor social functioning (NIMH, 2004). Although several independent risk factors have been identified (e.g., parenting behaviors and parental psychopathology), the extent to which these risk factors may simultaneously influence subsequent anxiety and social functioning have been left largely unstudied (Breaux, Harvey, and Lugo-Candelas, 2014; Siqueland, Kendall, and Steinberg, 2010). This study aims to investigate parenting behaviors as a moderator for parental depression and its association for later anxiety and social functioning in children. It is hypothesized that higher parental depression and negative parenting behaviors will be associated with higher child anxiety and lower social functioning. Utilizing a prospective, longitudinal sample over six years, the present study is well positioned to understand the dynamic relationship between parenting behaviors, parental depression, and subsequent child anxiety or social functioning which allows us to identify at-risk adolescents who would benefit from treatment and early intervention.

Cognitive training over the past years has increased in frequency and variability to measure working memory and its capacity; however, training in younger adults is to be investigated. Adapted from a study by Buschkuehl and Jaeggi (2008) on older adults, this study examines the relationship between cognitive training distribution and condition on working memory performance of younger adults from spacing and transfer effects. 98 younger adult participants completed 10 sessions training on either a working memory or general knowledge task. We also varied training distribution (i.e. whether participants trained every other day, every day, or twice a day) and compared participants' performance scores at the pre- and post-test using non-trained working memory and long-term memory measures. Preliminary results show that participants improved their performance in all outcome measures, and in addition, the working memory training group outperformed the control in one of the working memory measures. There was no effect of spacing in any of the outcome measures, indicating that training distribution has no impact on memory outcome, which is consistent with earlier findings in older adults.
Discrimination and Heart Rate Change from Day to Night in Young Black Adults

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This pilot study seeks to explore the relationship between interpersonal-level discrimination and heart rate (HR) in 11 young (ages 18-21), Black adults. Participants completed the 6-item stigmatization subscale of the Perceived Ethnic Discrimination Questionnaire-Community Version (PEDQ-CV). HR was assessed across a 24-hour monitoring period via an ambulatory watch and chest band. HR change from day to night was captured. An unadjusted Spearman correlation revealed an inverse association between stigmatization and HR change (r=-.655, p=.029). Specifically, increased stigmatization is correlated with a decreased difference in day to night HR change. This suggests greater stigmatization may be linked to more limited HR fluctuations across the day, a cardiovascular disease (CVD) risk factor. These findings provide insight regarding day to night fluctuations in HR as related to discriminatory experiences. Previous literature has examined the impact of interpersonal-level discrimination on ambulatory blood pressure which prospectively predicts CVD. However, the relation of discrimination to HR change from day to night, is understudied.

Resilience Factors Against Internalizing and Externalizing Disorders in Latinx Youth

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Resilience against mental illness in Latinx youth is poorly understood. This study examined individual, relational, and contextual sources of resilience in this population (n = 519; Mage = 15.74; 51% males). Multiple regression analyses showed that after statistically controlling for age and sex, educational context (β = -1.24, p < 0.001), psychological caregiving (β = -0.79, p < 0.001), social (β = -0.71, p < 0.001) and personal skills (β = -0.51, p = 0.01) were associated with internalizing symptom reduction. As for externalizing symptoms, educational context (β = -1.17 p < 0.001) and psychological caregiving (β = -0.71, p < 0.001) led to symptom reduction. Cultural resilience was associated with increases in both internalizing (β = 0.60, p = 0.01) and externalizing (β = 0.37, p = 0.01) symptoms. Consistent with previous studies, emotional support from parents and a positive school environment are robust protective factors against mental illness. Individual factors seem to be only protective against internalizing disorders. This study highlights potential psychosocial variables at different ecological levels that can be leveraged in mental health interventions for Latinx youth.

The Role of Motivation in Predicting Changes in EF Following a 12-week Intervention for Adolescents

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Attention-deficit/hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder among youth (Polanczyk et al., 2007). Although executive functioning (EF) deficits characterize ADHD, behavioral intervention efforts aimed at improving EF are scarce. Given the need for behaviorally targeted efforts, the thinkSMART program was created to teach skill-based strategies to adolescents with EF challenges. The current study examined the efficacy of this novel educational intervention and sought to identify possible moderators for EF improvement. In a sample of 23 adolescents aged 12-18 (Mean=14.1), thinkSMART was found to improve parent-rated EF in the following areas (p<.05): shifting, emotion regulation, initiation, working memory, planning, organization and self-monitoring. Additionally, we examined if individual differences in motivation were associated with greater improvement. Regression analyses indicated that greater motivation predicted increased improvement in overall EF and multiple subareas. Further analyses will examine how baseline motivation might be related to EF improvement. These results can inform future research exploring non-medicated intervention options.
The Ontogeny of Context-Dependent One-Trial Methamphetamine Sensitization: Role of Sex and Age in Sprague-Dawley Rats

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Behavioral sensitization occurs when cocaine or methamphetamine (METH) are given repeatedly, and is apparent as an enhanced behavioral response. This heightened response is expressed even after a single administration (referred to as one-trial sensitization). One-trial METH (2 mg) sensitization has been demonstrated in 17- and 19-day old rats (juvenile), but not in 25 or 35-day old rats (adolescent). Curiously, juvenile rats exhibit context-independent sensitization (i.e., sensitization evident regardless of the environment that the METH was paired with), but adult rats demonstrate context-dependent sensitization (i.e., sensitization that only develops if the drug is administered in the same environment). This study investigated the ontogeny of one-trial context-dependent sensitization using low doses of METH (0.1 or 0.3 mg/kg) in 29-, 39-, and 69-day old male and female rats. One-trial sensitization was only evident in adolescent rats (29- and 39-day old) in a context-dependent manner. Interestingly, sex differences emerged in 39-day old rats, suggesting that gonadal hormones may play a role in modulating the effect. In contrast, adult rats failed to exhibit METH sensitization.

Mapping Social Cognitive Changes to Functional Connectivity in Pre-Clinical bvFTD

Gema Ortiz, Anthony Chesebro, Hannah E. Silverman, Gayathri Cheran, Masood Manoochehri, Seonjoo Lee, Christian Habeck, Sarah Cines, Timothy Lynch, Henry Paulson, Edward Huey, Adam Brickman & Stephanie Cosentino

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Behavioral variant frontotemporal dementia (bvFTD) severely impairs social cognition. Altered functional connectivity (FC) of the default mode (DMN), measured with resting fMRI, may contribute to social cognitive decrements such as impaired perspective-taking and knowledge of social norms. Twelve preclinical MAPT mutation carriers and 32 familial non-carriers underwent neuropsychological assessment and structural and functional neuroimaging. The current study examined social cognitive measures from the National Alzheimer’s Coordinating Center FTD module: Social Norms Questionnaire (SNQ), Interpersonal Reactivity Index – Perspective Taking, and Revised Self-Monitoring Scale and FC in the DMN. ANOVA examined group differences in social cognition and FC, and regressions examined FC as a mediator of MAPT status on social cognition. All social cognitive scores were lower in carriers than non-carriers (p<.05). FC did not differ between groups. Within the entire sample, FC of the DMN was inversely associated with SNQ (r=-0.42, p=0.02). In a regression with DMN FC and MAPT status as predictors, FC predicted SNQ (R2=.232, p=0.04) and overrode the effect of MAPT status on SNQ (p=0.16).

The Relation between Subjective Social Status and Adolescent Wellbeing

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Subjective social status (SSS) has been related to adverse mental and physical health outcomes in adults, but little is known about its correlates in adolescence. The present study examines how SSS is associated with social anxiety, loneliness, and somatic symptoms in middle school, and explores whether negative social cognitions (self-blame) moderate these associations. Relying on a large, ethnically diverse sample of 6th grade participants (N = 5,991), students indicated their SSS on a ladder ranging from 1 to 12 and responded to self-reports of social anxiety, loneliness, and somatic symptoms. A hypothetical vignette involving peer mistreatment was used to assess tendency to self-blame. Consistent with the hypotheses, the regression analyses indicated that adolescents who report lower SSS experience worse social-emotional (but not health) outcomes when they tend to blame themselves for peer mistreatment.
Academic Performance and Executive Functions in Undergraduate Students with Psychotic-like Experiences

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Recent research suggests that psychotic disorders exist along a spectrum. Within this framework, some research has shown that low level psychotic-like experiences (PLEs) are prevalent in the general population (Hanssen, 2005; Barber, 2017). However, there is relatively little research on how PLEs impact functioning in undergraduate and therefore, this study aims to investigate the effect of PLEs on school performance among college students. A total of 139 participants completed a baseline survey, and 42 completed three follow-up surveys, approximately 10 weeks apart. A mediation analysis shows that PLEs have a negative effect on confidence in school performance, which is mediated by executive functions (ACME=0.13; P<.001, 95% CI 0.07-0.22). Repeated measures ANOVA indicates that the poorer executive functions in the high PLE group persist across follow up (P<.001). We conclude that PLEs have a negative impact on school performance, partly through reduced executive functions, and this impact remains stable over time. These findings may help us better understand how PLEs affect college students and may contribute to development of potential intervention methods.

Cognitive Effort, Subjective Valuation of Rewards, and Personality

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Many of the methodological tools used to assess cognitive effort have lacked the precision needed to index the cost of mental labor. Furthermore, although prior work suggests strong associations between personality traits and motivation and achievement, it is unclear if such individual differences can explain underlying differences in the propensity to engage in cognitive effort. Therefore, the main goal of the present study was to measure the subjective value of motivational incentives and their subsequent impact on task performance in a manner that was sensitive to individual differences. To accomplish this goal, we developed a novel task paradigm that combined economic decision-making with an effortful cued task-switching paradigm, in which participants were required to respond fast and accurately to presented stimuli while integrating the diverse incentive types (liquids, money) offered on each trial. The results demonstrate that as motivational value increased, task performance improved, suggesting greater exertion of cognitive effort; however, there were no reliable associations between personality traits and task performance.

The Effect of Relocation on Social Activity Level of the College First Year Students

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In the past 50 years, about 3% of the world population relocates annually (UNDP, 2009), despite predictions that relocation increases loneliness, depression, interpersonal conflicts, and loss of social networks. While adolescents are especially vulnerable to relocation and its social impacts, previous research has not investigated how relocation influences their social behaviors. This study recruited 161 college first-year students from UCLA dormitories and assessed their social activity level over the course of four weeks. Surveys used four verified scales to measure how often students engaged in social events and interactions, along with how emotionally connected they are with their peers. Furthermore, we measured students’ loneliness and categorically recorded prior residential information: Southern California, Northern California, out of state, and international. We hypothesized that students whose university is closer to prior residence will display lower social activity and perceived loneliness, while students who relocated further will have higher levels of both. This study will reveal the social implications of relocation, furthering efforts to reduce its negative impacts.
Physiological Responses to Aversive Sensory Stimuli in Youth with Autism and Anxiety Disorders

Karishma Patel, Jiwon Jung, Kaitlin Cummings, Genevieve Patterson, Nana Okada, Tomislav Zbozinek, Ph.D, Mirella Dapretto, Ph.D, Michelle Craske, Ph.D, Susan Y. Bookheimer, Ph.D, & Shulamite A. Green, Ph.D

University of California, Los Angeles

Mindfulness as a Protection Against Cultural Mismatch Among Peers During the Transition to College

J. Zak Peet, Hector Silva Benitez, Yolanda Vasquez-Salgado, Ph.D., Thomas Chan, Ph.D., & Shu Sha Angie Guan, Ph.D.

California State University, Northridge

Associations Among Sense of Belonging and Health Among Underrepresented Minority Students: The Moderating Role of STEM and Gender

J. Zak Peet, Karina Barragan, Shu-Sha Angie Guan & Yolanda Vasquez-Salgado

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Individuals with Autism Spectrum Disorder (ASD) and anxiety disorders (ANX) often display sensory over-responsivity (SOR), an extreme aversive response to sensory stimulation (Jones et al. 2003). While prior studies have reported that anxiety and SOR symptoms are highly correlated (Green et al. 2010), the way they interact or overlap in different diagnostic groups is not well understood. This study used skin conductance response (SCR) and heart rate (HR) to investigate whether SOR and anxiety contribute uniquely to physiological responses to aversive sensory stimuli in ANX compared to ASD. Participants were 50 ASD, 17 ANX and 31 typically developing (TD) youth aged 8-18. They experienced 6 15-sec blocks of aversive tactile, auditory, and tactile+auditory stimuli during SCR and HR measurements. ASD and ANX groups both had high SCR compared to TD. ASD youth with high SOR showed higher mean HR than ASD-low-SOR and ANX groups. SCR may capture higher overall arousal in ASD and ANX, whereas HR may be more sensitive to SOR specifically. These findings expand our understanding of how sensory reactivity contributes to biological arousal in common and distinct ways across diagnostic groups.

Research has documented that first-generation college students experience cultural mismatch between their interdependent values learned at home and the independent practices of their peers in a college setting; cultural mismatch plays a negative role on academics (Burgos-Cienfuegos, et al., 2015). Research has also found that mindfulness can reduce stress (Nezlek, et al., 2015). We sought to examine whether mindfulness serves to protect underrepresented minority students against cultural mismatch, academic stress and their association. Ninety-four underrepresented minority students were surveyed during their first year in college. Independent samples t-tests revealed that students with higher levels of mindfulness reported significantly lower levels of peer-peer cultural mismatch and academic stress (p < .05). In addition, correlation analyses revealed that higher levels of mismatch related to higher academic stress. However, when examined separately across low and high mindfulness groups, this finding was only present among those with low mindfulness. Our findings suggest that mindfulness may protect students against cultural mismatch, academic stress and their association.

Establishment of a strong sense of belonging has been reported in the literature as a significant factor that contributes to academic success, especially for underrepresented minority (URM) students that enter STEM (Walton & Cohen, 2011). However, studies examining the role of sense of belonging on health is currently lacking. The purpose of this study was to extend the literature by examining how sense of belonging relates to health (mental, physical, biomarkers) and whether this is moderated by STEM and gender. Ninety-four URM minority students were surveyed during their first year of college and biomarkers of health were assessed via an in-person session. Bivariate correlations revealed that lower levels of belonging were associated with more mental and physical distress as well as worse biomarker outcomes. However, when analyses were ran separately across STEM X Gender groups, significance only emerged among STEM females. Our findings suggest that sense of belonging is a psychological lever that widens academic and health disparities for URM students. Our findings illuminate the importance of improving the conditions for URM students in STEM.
Addressability of Emergent Life Events: Does Assigned Protocol Matter?

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Emergent life events (ELEs) are unexpected stressors disclosed by clients in therapy sessions. Prior research suggests that most ELEs are addressable (i.e., effectively managed) using strategies from the modular evidence-based treatment MATCH which assigns depression, disruptive, anxiety, or conduct protocols to clients. The current study examines whether addressability differs depending on what type of protocol is used and if the addressability of the ELE predicts the level of treatment used in session. Data were drawn from 75 ELEs reported by 34 low-income Latino (85%) youth (ages 5–15) seen by 18 therapists in the MATCH community effectiveness trial. Preliminary analysis revealed that 55% of all ELEs were identified as addressable by assigned protocol, with greater ELE addressability for those assigned to depression or disruptive protocols. Findings suggest that strategies for depression and disruptive protocols may be used to design solutions to address ELEs. Using multilevel analysis, we will explore the association between ELE addressability by assigned protocol and level of treatment used. Findings will extend our knowledge of ELEs and their impact on treatment.

Examining the Links Between Sleep Quality and Treatment Outcomes in Depression

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Ongoing sleep disturbances have been connected with more severe depression (McGlinchey & Portillo, 2016), such that intensity of depressive symptoms is associated with individuals experiencing worse sleep quality. This study examined the relationship between participant sleep quality at baseline, as measured by total score on the Pittsburgh Sleep Quality Index (PSQI), and change in depression symptoms after participants completed a six-week, internet-based cognitive-behavioral therapy (iCBT) program. Data from 19 UCLA undergraduate and graduate students who were diagnosed with mild to moderate depression and completed the iCBT program were examined. A repeated-measures ANOVA demonstrated a significant decrease in depression severity after the iCBT program \[F(1,17)=7.30, p<.05\]. Additionally, there were no observed differences in sleep quality or treatment outcomes across genders or student status. Future studies may examine the efficacy of a new, targeted component of iCBT to improve sleep quality and potential benefits on reducing depression.

Disentangling the Contributions of Reactive and Proactive Cognitive Control to Impulsivity

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Impulsive individuals are thought to lack cognitive control, i.e, the ability to behave according to one’s goals. Cognitive control has been found to operate via two distinct modes: reactive control (i.e., goal information is triggered by a stimulus) and proactive control (i.e., goal information is sustained over time) (Braver 2008). Recent work indicates that goal representation in the lateral prefrontal cortex (LPFC) relies on distributed multivoxel neural activity patterns (Waskom 2017). However, the extent to which reactive and proactive modes of cognitive control contribute to individual differences in impulsivity is unknown. In this study, participants (N=36; 18-30 y old, 56% female) performed an event-related Affective Go/No-Go task in the fMRI scanner, and completed the Barratt Impulsiveness Scale. We hypothesize that more impulsive individuals have weaker representations of proactive control (as indexed by LPFC multivoxel background connectivity patterns), compared to reactive control (as indexed by trial-wise LPFC multivoxel patterns of rule representation). The present study provides novel insight into cognitive control mechanisms underlying impulse-related disorders.
**True-False Pretests Enhance Learning**

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Despite their reputation as suboptimal learning events, recent evidence has shown that true-false tests can enhance learning and be optimized to promote both retention and transfer (Brabec, Pan, Bjork, & Bjork, under review). The present investigation examined whether true-false tests might also function as effective pretests. Before reading two educational passages, participants completed a conventional true-false pretest regarding one of the passages. On a final cued-recall test, and relative to control performance, the evaluation of true items (e.g., T/F? Rhea has its own ring system.) enhanced the extent to which participants recalled tested information (e.g., Which moon has its own ring system?), and the evaluation of false items (e.g., T/F? The Cassini Division is the area between Saturn's A Ring and F Ring.) enhanced the extent to which participants recalled related information (e.g., What is the area between Saturn’s A Ring and B Ring?), a pattern consistent with our hypotheses. Although future work should examine whether and how true-false pretests might be further optimized, these findings lend further credence to the utility of true-false tests as learning devices.

**Reducing Carryover Effects in Within-Subjects Designs**

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Within-subject designs have increased statistical power and require fewer participants than between-subject designs, but this method presents its own detriments. Carryover effects, such as practice and fatigue effects, may confound the observed effects in within-subjects designs. The present study aims to remedy these confounds by presenting participants with split-halves of the same psychometric scale, with participants never encountering the same item more than once. Since each participant receives separate, randomized halves of a scale, analyses can avoid having item presentation order as a covariate—thus increasing power. We used 2 studies which were exactly the same except a scale was randomly split for 1 study. The effects of split-half implementation will be evaluated using measures of scale and item reliability—Cronbach’s Alpha, McDonald’s Omega, individual item difficulties on a latent trait, and predictive ability. We expect that when items are randomized, carryover effects will be reduced. We also hypothesize that scales comprised of items with similar latent trait discriminations will yield the most consistent reliability—thus avoiding carryover effects.

**Examining the Links Between Maternal Depression and Child Behavior Regulation**

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The Ohio State University

Maternal depression is known to have an impact on children’s regulation of emotions, which is crucial for cognitive and emotional development (Morris 2007). However, less is known about how pervasive the severity of maternal depression is in respect to children’s self regulation. This longitudinal study examines children’s problem solving skills and passive waiting in regulating negative emotions. Participants were 126 3-year-old children and their mothers. Maternal depressive symptoms were measured using Beck’s Depressive Inventory (BDI) when children were age 3. Children were instructed to use a set of keys to open a transparent box that housed a desirable toy, but none of the provided keys worked. Observations were recorded and coded for behavior. Maternal BDI significantly reduced children’s passive waiting (β=-.213, t=-2.146, p=.034). Both children’s sex and children’s previous passive waiting were unrelated. Maternal BDI significantly increased children’s problem solving skills (β=.303, t=1.437, p=.070). Both children’s sex and children’s problem solving skills were unrelated. These findings expand our understanding of the long-term effects of impaired mental health.
**Math Class Climate on Math Identity and Interest Among Middle School Latinos**

Maydely Remigio & Jessica Morales-Chicas, Ph.D.

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Research suggests that students who perceive ineffective math teaching, report more negative beliefs about math, which negatively impacts their science, technology, engineering, and math (STEM) success (Kearney & Garfield, 2019; Wang, 2013). However, little is known about whether the math class climate teachers create, predict Latino middle school students’ math identity and interest. The present study examines these associations using data from a longitudinal study about STEM experiences. Baseline data of Latino middle school students (n=202) assessed perceptions of Math Teacher Class Climate, Math Interest, and Math Identity. Control variables included: sex (e.g., male or female), grade (6th, 7th, 8th), and math grade. Results from regression models showed that positive math class climate significantly predicated higher math interest and identity. Lower grades in math also predicted worse math interest and identity. While grades matter, these findings also highlight the importance teacher’s play in constructing students’ feelings about math.

**What is a Slut? Using the Implicit Association Test to Define Slutty**

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Despite the prevalence of the term “slut, no consensus has been reached about what it means to be slutty. A woman can be labeled slutty for multiple reasons, most common of which are appearing or behaving sexually deviant (Tanenbaum, 2015). While no one definition exists, the slutty label almost exclusively derogates the referent in an act known as slut-shaming (Papp et al., 2015). For the purpose of the current study, the implicit association test (IAT; Greenwald et al., 1998) was adapted to assess whether the appearance- or behavior-based definition of slutty was more readily associated with shame based on response latencies. 60 participants (30M, 30F) completed one of two IATs wherein slutty acted as a procedural variable and was manipulated to be represented by appearance or behavior. Although a two-way ANOVA (α = .05) indicated no significant main effects or interaction between the procedural variable and gender, it is noteworthy all participants showed a positive D measure. This finding suggests an association between both definitions of slutty and shame. Also, across gender, men and women do not discriminate by appearance or behavior when labeling an individual as slutty.

**Ethnic Discrimination and Internalizing Symptoms: The Mediating Role of Ethnic Self-Esteem**

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Asian Americans are at elevated risk of internalizing symptoms due to increased experiences of ethnic discrimination, yet the mechanisms of this relationship are unclear. The current study aimed to address this gap by examining the mediating roles of three constructs of ethnic self-esteem (ESE), public, private, identity, on the relationship between ethnic discrimination and internalizing symptoms in a sample of 709 Vietnamese or Vietnamese American adolescents (M=15.53 years). Public ESE is defined as one’s self-esteem relative to how they perceive outgroup evaluations of their ethnic group. Using mediational analysis, we found that ethnic discrimination significantly predicted internalizing symptoms (β=1.85, p<.001) and public ESE (β=-.12, p<.05), while public ESE significantly predicted internalizing symptoms (β=-1.07, p<.05). There was a significant indirect effect, such that public ESE mediated the relationship between ethnic discrimination and internalizing symptoms (β=.13). No other ESE types were significant mediators. Future directions include research on strategies for bolstering public ESE to prevent internalizing symptoms when ethnic discrimination is a concern.
Effect of Basolateral Amygdala Inactivation on Novel Aversive Learning Decision-Making Task

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The amygdala is a well-studied structure in the brain responsible for emotional learning, especially that of fear learning. More specifically, many studies have shown that the basolateral amygdala (BLA) is a key component in acquiring and expressing fear conditioning. A previous experiment from our lab showed that hm4Di inactivation of the BLA during contextual fear learning reduced freezing during a subsequent memory retrieval session. Our lab is now using this same inactivation method of the BLA within a novel aversive learning decision-making task. Rats are trained to retrieve sucrose pellets by running between two reward locations with two paths available: one short (2.5m) and one long (5m). After rats learn to selectively take the short path, rats are administered CNO, and a shock is applied along the center of the short path. Rats immediately show a choice preference switch towards the long path, which we predict will be blocked in the hm4Di expressing group during later retrieval sessions. These results will allow us to understand if the BLA is necessary for the acquisition of this aversive learning within a decision-making task.

Bilingual Memory Retention in Overhearing Contexts

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Previous research shows that cognitive advantages found in bilingual children, such as the ability to inhibit irrelevant cues and generalize object labels, help them learn words (Brito & Barr, 2014; Morales et al., 2013). Other research with only monolingual children found that spaced presentation of object exemplars helped word learning (Vlach et al., 2012). Research has also shown that monolingual children learn words from overheard speech (Akhtar et al., 2001). The current study aims to examine if there is a bilingual advantage in 24- to 35-month-old bilinguals' ability to generalize and retain novel words in an overhearing context. Children are randomized into a massed or spaced presentation condition where they sit to the side while two experimenters teach each other novel object-label pairings. Children are asked to identify the correct novel object exemplar in a forced-choice test after a two-minute delay. Children in the monolingual sample (N = 12) are showing no evidence of retention of the object-label pairing in either condition. Upon further data collection, a bilingual sample will be matched to the monolingual sample in order to compare task responses.

The Relationship between Gratitude, Inflammation and Socioeconomic Status in Adolescence

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Chronic inflammation has been linked to a myriad of negative health outcomes like cancer and Alzheimer’s disease (Redwine et. al, 2016). Researchers are working to identify inexpensive ways to buffer against stressors that lead to inflammation. One such buffer is gratitude (Mills et al., 2015). A grateful disposition, or the tendency to respond to life events with grateful emotion, is linked to positive affective traits and decreased inflammation (McCullough et al., 2002). Few studies, however, have examined the relationship between gratitude and inflammation in adolescents. As part of the Study of Family Health, 350 adolescents completed the Gratitude Questionnaire-Six-Item Form and provided blood samples to measure C-reactive protein, a biomarker of inflammation. We hypothesize that adolescents with higher levels of gratitude will have lower inflammation. Individual differences in socioeconomic status (SES) will be examined for potential moderating effects, as a follow-up to Hartanto et. al’s (2019) finding that gratitude moderates the link between SES and inflammation. These findings may shed light on a practice that could have a positive impact on adolescent physical health.
Visual Perception and Numeric Estimation of Race in Crowds

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We efficiently and rapidly categorize individuals into social groups (e.g., race, gender, age) based, in part, on visual cues of the face and body (Macrae & Quadflieg, 2010). Our social world, however, is occupied not just by individuals but also by individuals in groups. Extending person perception research to understand people or group perception, the present study examines bias in our judgments of large 100 person groups composed of Black and White faces. Specifically, participants judged 90 groups that varied in race ratio (10 Black:90 White-90 Black:10 White, in increments of 10) as either majority White or majority Black. Using these judgments, we calculated the point at which participants perceived groups to be equally Black and White (i.e., point of subjective equality, PSE). We hypothesized that high Social Dominance Orientation (Ho et al., 2015) individuals would over-estimate the number of Black compared to White individuals in groups (e.g., have higher PSEs), suggesting a threat response. This study is one of the first to examine race and people perception, with consequences for associations between racial bias and our perceptions of multi-racial groups.

The Effect of Parental Criticism on Child Hostile Attribution Biases

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Hostile attribution bias (HAB), the tendency to interpret ambiguous behaviors of others as hostile, is believed to be a key factor in the development of aggression, narcissism, and conduct disorders in children (Castro et al., 2002). To prevent negative outcomes associated with HAB, it is important to understand the factors that contribute to these biases. Previous research has revealed a link between parental physical punishment and child HAB (Weiss et al., 1992), however the role of verbal parental criticism in the development of HAB is unknown. To address this gap in the literature, data from a longitudinal study of over 100 parent-child dyads was collected. At baseline, parental criticism was measured via direct observation of parent–child interactions. At a two year follow up assessment, child HAB was measured by coding children’s interpretation of ambiguous vignettes. It is hypothesized that higher parental criticism will predict increased levels of HAB in children. Importantly, these findings will help elucidate the role of parenting behavior in child HAB and in effect aid in the development of effective parenting interventions to buffer the development of HAB.

Thinking About Women as Similar to Men: Implications for Perceptions of Masculine Workplace Cultures

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Thinking that women are very similar or different from men may affect how we judge masculine work culture and whether women fit well in such places. In study 1, participants (N= 703) primed with gender-similarities showed that women would fit relatively well in a very masculine work culture compared to those primed with gender-differences. In study 2, we used the minimal group paradigm to test whether group-similarity beliefs would affect how much people perceive a non-inclusive culture to be problematic. Those primed with group-similarities turned out considering the culture significantly less problematic. A mediation analysis showed that the perceived fit mediates the relationship between similarity beliefs and judgments about the culture. In study 3, participants (N=260) showed that thinking about women as very similar to men affects people to perceive a masculine culture to be less problematic for women, and the problematic perception highly correlates with how much people support efforts to change the culture. The findings generate meaningful insights and future investigations to create more welcoming workspaces for different genders.
Learning from Lectures: The Impact of the Classroom Learning Environment

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Antipsychotic-Induced Dopamine Supersensitivity and Psychotic Relapse Risk in Schizophrenia Patients

Daniell Sullivan, Kenneth Subotnik, & Gerhard S. Hellemann

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Influence of Caregiver Involvement on Patient Satisfaction, Regret, and Conflict in Lung Cancer Treatment Decision-Making

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Although linguistic diversity is common in university classrooms, the language background of students and teachers is often not considered when designing instructional materials. Prior work has suggested that students learn better from slides with less text, but these studies have only been conducted with instructors who speak English with a North American accent (Mayer, 2017). The present study aims to explore whether more text on slides is beneficial to student learning when the lecture is taught by an instructor with an unfamiliar accent. To test this, American, English-speaking undergraduate students watched two lectures – one containing slides with minimal text and the other with slides containing lots of text – spoken either by an American-accented speaker or a Mandarin-accented speaker. After the lectures, participants were tested on the material. In line with prior research suggesting that text can facilitate accent adaptation (Janse & Adank, 2012), we expect that when the instructor speaks with a non-native accent, more text on slides will be beneficial. This work sheds light on ways to maximize student learning from instructors who speak with a variety of accents.

It has been established that poor adherence to prescribed antipsychotic medication can result in psychotic relapse in schizophrenia. However, there is wide variability in how soon psychotic symptoms will return after medication discontinuation. Patients who relapse exceedingly quickly after medication discontinuation might have developed dopamine supersensitivity psychosis (DSP): a type of antipsychotic-induced psychosis resulting from overstimulated dopaminergic pathways. This can result from medication discontinuation after regularly taking high doses of antipsychotics. The present study aimed to identify patients who have DSP determined by various indicators, including the presence of extrapyramidal symptoms and low Brief Psychiatric Rating Scale (BPRS) scores. It was found that patients who exhibited symptoms of DSP were significantly more likely to relapse than patients who were asymptomatic in a sample of 54 first-episode schizophrenia patients ($\chi^2(1) = 4.96, p = .026$). This may help us refine our understanding as to why some patients relapse much more quickly after discontinuing medication and why some patients have breakthrough symptoms while on medication.

Caregivers play an essential role in supporting cancer patients through their experiences, but little research explores caregiver involvement in treatment decision-making. Research demonstrates lower caregiver involvement is associated with higher regret and conflict among cancer patients, though this research primarily has been qualitative (Lee & Knobf, 2016). This study seeks to examine the relationship between caregiver involvement in treatment decisions and patient-related decisional outcomes of satisfaction, regret, and conflict. We hypothesize that a greater level of caregiver involvement in treatment decision-making will be associated with patients’ greater satisfaction and lower regret and conflict. Patients receiving treatment for lung cancer ($N=40$) reported their caregiver’s involvement in lung cancer treatment decision making, which was then coded (low, moderate, high involvement) from semi-structured patient interviews. Patient decisional outcomes were measured using the Satisfaction with Decision Instrument, Decision Regret Scale, and SURE test of decisional certainty. Sociodemographic and treatment-related variables were assessed for inclusion as covariates.
Intervention to increase Identification with Computer Science among High School Girls

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Hispanic women make up only 2% of the computer science workforce (National Science Foundation, 2017). Negative stereotypes are one of the many factors that can influence career decisions, and these stereotypes can discourage young women from pursuing computer science. We designed a longitudinal study to assess the effectiveness of an afterschool high school coding club we created called CodeQueens. Across eight North County San Diego high schools, 248 girls (70% Hispanic) learned coding skills and participated in activities designed to increase computer science self-efficacy, identity, and career interest. Survey data were collected at three times during each of the four 10-week sessions (pre, mid, and post). We hypothesized that participating in the program would increase computer science identity, self-efficacy, and career interest. Results varied across each session. However, we observed a robust increase in computer science identity across each of the program sessions. This study highlights the potential of interventions such as CodeQueens to engage young women in computer science.

Functional Connectivity of the Executive and Default Networks in High Trait Worry

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Worry is a cognitive characteristic of anxiety disorders such as generalized anxiety disorder (GAD). Decoupling of executive control (ECN) and default mode networks (DMN) has been observed in individuals with GAD (Xu et al., 2019) and proposed as a mechanism contributing to impaired cognitive control (Sylvester et al., 2012). Abnormal connectivity between ECN and DMN may support cognitive dysfunction in trait worry (Berggren & Derakshan, 2013). Using fMRI data, the present study will evaluate a top-down mechanism wherein trait worry predicts functional connectivity between ECN and DMN such that worriers exhibit decreased ECN-DMN connectivity, which in turn predicts executive dysfunction assessed via performance in a cognitive control task. Decoupling of ECN and DMN is hypothesized to predict worse performance (longer reaction times) on the color-word Stroop task, reflecting dysfunction in this mechanism of inhibitory control. Characterization of these functional networks and their role in worry-related dysfunction will bridge gaps in our understanding of worry and associated disorders to inform targeted interventions that work upon this neural mechanism to treat anxiety.

Training Change Detection and its Effects on Visual Processing Skills

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Since visual processing holds much relevance to our daily lives and activities, research has often sought to improve visual processing skills by training on each skill directly. However, not much research has been done to see whether training cognition will lead to transfer improvements in visual processing. In this study, participants were assigned to either train on the change detection task, a visual working memory task, or a general knowledge task for seven sessions. Our outcome measures in the pre- and post-tests assessed visual search, contrast sensitivity, and contour integration. We hypothesize that participants training on the change detection task will improve more in the outcome measures compared to participants in the general knowledge group. The present study builds on and extends previous work (Buschkuehl et al., 2017), investigating whether training in this paradigm leads to improvements in other areas besides working memory. Data collection is in the beginning stages and will continue throughout next quarter.
**Study Habits Are Related to Value Sensitivity in Memory**

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Effective studying at the college level involves prioritizing important information. We examined the relationship between self-reported study strategies and selectivity on a value-directed remembering task. In this task, the importance of to-be-remembered information is varied by random assignment of point values to a list of items that are later recalled. Participants (N = 63) viewed 6 lists of 20 words that ranged in value from 1-10 points and were instructed to maximize their score on free recall tests given after each list. For each participant, a selectivity index was calculated as a measure of the ability to recall high-value items given one’s memory capacity. Following this task, an academic strategy score was calculated for each participant using 10 Likert-scale questions about their studying habits. These questions focused on how strategic participants were in terms of regulating their studying. We found a significant correlation between selectivity index and academic strategy score (r(61) = .454, p < .001), suggesting that the ability to prioritize valuable information in a memory task is associated with the use of methods of studying that rely on selective encoding.

**Threatening Social Interactions Are Encoded More Efficiently in Visual Working Memory**

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Visual Working Memory (VWM) has been shown to increase encoding efficiency by storing interactive actions as “chunks”. However, it is unclear whether social meanings (e.g., valence) of interactive actions affect the efficiency of VWM encoding. In two experiments, participants studied a memory array with actions that were either involved in threatening or non-threatening interactions. All studies were shown in a point-light display with disconnected joint movements. After studying the array, participants were asked to judge whether a single probe action had appeared in the memory array. We found that participants were better at recognizing actions involved in interpersonal interactions over individual actions. Importantly, participants showed greater sensitivity for identifying actions involved in threatening interactions than in non-threatening interactions. When presented with four pairs of interactions, VWM capacity for encoding threatening actions increased by 27% compared to non-threatening actions with high memory load. Our findings support that VWM is tuned to more efficiently encode threatening actions, and prioritizes stimuli with salient social meanings of valence.

**Adult Attachment in Couples Predicting Relationship Quality**

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This secondary data analysis investigates how adult attachment styles are associated with multiple measures of relationship quality. Previous research has related attachment to independent relationship aspects but often through single measures that don’t capture adjacent constructs that comprise relationship quality. Couples completed measures of attachment anxiety and avoidance and participated in two separate discussions about personal concerns and relationship problems. Participants also completed various measures of different facets of relationship security. Attachment avoidance was seen to predict greater relationship uncertainty (r = .52) and lower commitment (r = .42), satisfaction (r = .47), support effectiveness (r = .41), and perceived partner responsiveness (r = .53). Attachment anxiety predicted lower satisfaction (r = .48), support effectiveness (r = .54), and perceived partner responsiveness (r = .57). Actor-partner effects will also be analyzed for cross-partnership attachment/quality associations. These findings may help illustrate the relative effect magnitudes that each attachment dimension has on predicting constituent elements of relationship quality.
Reasonable suspicion is a legal standard used in criminal proceedings in the United States for law enforcement stops and searches. Among the reasonable suspicion cases appealed to the Supreme Court, most of the cases that are purely based on a statistical explanation are overturned (Ornelas v. United States), while most cases that have a non-statistical explanation are upheld (Terry v. Ohio). It seems that there is a link between the types of explanation attached to law enforcement’s reasonable suspicion and the admissibility of the evidence derived from these searches. The primary goal of our study is to examine beliefs regarding the threshold for justifying reasonable suspicion and the differences between the two types of explanations for the stop. We address this question in terms of the "reasonable person" standard, and in terms of potential jurors’ acceptance of evidence obtained from a stop based on reasonable suspicion. We predict that perceptions about whether a stop involving reasonable suspicion is justified are contingent on whether the suspicion is based on a statistical or non-statistical reasoning.

Early life adversity has been shown to impact learning and memory in youth (Callaghan & Tottenham, 2016). However, few studies have examined the effects of early life caregiving adversity on long-term memory retention in children and adolescents. Animal models have indicated that exposure to early life adversity (maternal separation) is associated with accelerated development of the associative memory system, resulting in longer lasting memories for threat associations in young rats (Callaghan & Richardson, 2011). The aim of the present study is to examine whether exposure to early caregiving adversity is associated with better long-term memory retention of threat associations in children and adolescents. Data collection for the study is ongoing (current N = 30). Presented data will include preliminary analyses on the current sample. In line with previous work, we hypothesize that adversity-exposed youth will have better long-term threat memory than non-adversity exposed youth. These results will help us understand the mechanisms linking adversity and emotion regulation later in life, with clinical and educational implications for intervention.

There are major structural and processing changes in the brain from birth to adulthood. Due to the challenges of studying newborn neuroanatomy, many of these changes are poorly understood. Qualifying the anatomical development in newborns can help us to better understand these changes and where they stem from (Armstrong, 1995). In this study, undergraduate researchers are responsible for segmenting MRI data collected from newborns and infants in order to determine gyriification throughout development. MRI data collected in lab and from the Human Connectome Project are processed and segmented using programs FreeSurfer and ITK-SNAP in order to create 3D models of the brains for analysis. Preliminary data analysis of newborn, 3 month and 6 month old baby brains has shown that major sulci and gyri of the adult visual cortex are present in infant brains, which indicates their importance in early processing. This research can serve as a basis for further conclusions on non-genetic influences that impact development of tertiary sulci and what effect this has on neurocognitive development (Rosenke, 2019). Future analysis can provide a system for quantifying the depth and thickness of gyri.
Developing a Measure of Suicidal Ideation in Children Under 12
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Suicide is currently the second leading cause of death for children in the United States between 8 and 12; yet there are still no evidence-based resources to measure or treat this major health concern. The primary objective of this study was to develop a measure for identifying suicidal ideation in children under 12. The study was conducted by developing a questionnaire consisting of 11 depression items and 9 suicidal ideation items. The questionnaire had three primary goals: (1) to measure if children under 12 ideate on suicide, (2) if so, how much, and (3) to identify whether this ideation is separate from depression. The questionnaire was given to 113 children from third through fifth grade (ages 8-12) at a school in Wisconsin. Over 50% of the subjects indicated experiencing some level of suicidal ideation. Factor analysis suggested the depression and suicidal ideation measures captured separate phenomena. Bivariate analysis showed that children who live with both parents were less likely to be depressed or ideate on suicide. With further development this brief measure for suicidal ideation in children under 12 can be used to identify suicidal ideation in young children.

Equinumerosity and Counting
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An important concept is numerical equality—numerosities are equal if they are in one-to-one correspondence (Hume, 1739). What do kids know about the relationship between one-to-one correspondence and equality, and is it related to their number word meanings acquisition? Piaget (1965) addressed this through his conservation task and found that kids could not conserve number until after mastering the count routine. Subsequent work found that their failures may be due to pragmatic (McGarrigle & Donaldson, 1975) task demands instead of lack of number knowledge. The age at which kids conserve has not been resolved or brought into alignment with modern number acquisition theories (Carey, 2004; Sarnecka & Carey, 2008; Wynn, 1990). Our study examines when kids understand one-to-one correspondence as the basis of equality. We tested 80 kids on Piaget’s conservation task and tasks measuring number knowledge. Kids’ conservation was unrelated to their number knowledge in Piaget’s conservation task. When we highlighted the importance of exact number, kids with greater number knowledge’s performance increased with age, suggesting that pragmatic task demands may obscure kids’ number knowledge.

The Impact of Test Format and Test Order on the Benefits of Collaborative Tests
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Multistage collaborative exams, in which students retake a test in groups after individual testing, have been shown to benefit classroom learning (Cooke et al., 2019). However, little is known about the specific factors affecting the benefits of collaborative tests, such as test format. Research has shown that multiple choice (MC) and short answer (SA) tests differently facilitate learning (Little et al., 2012). The current study investigated if collaborative testing enhances learning beyond the effects of re-testing in a controlled setting. It further examined if the benefit of a collaborative test is influenced by test format or order of individual and collaborative tests. Participants studied a passage and either took only individual or both individual and collaborative tests. They then either tested with MC, or with a mix of MC and SA, questions. Two days later they took a final SA exam. We found no significant differences between any conditions in performance on the final exam, suggesting that there may not be a benefit of collaborative tests in a controlled setting, and that test order and format may not notably impact the efficacy of these assessments.
Gender and Emoji: Cultural Differences in Social Impression of Emoji Use

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Studies have shown that text messages with friendly emojis were judged as equally appropriate and even more likable when they were believed to be sent by a man compared to a woman (Butterworth et. al., 2019). Taking cultural variation in gender role belief into account, the current research investigates whether people's cultural background will influence their attitudes towards emoji usage of males vs. females. In this study, participants will complete two memory-span tests instructed by male and female voices with or without emojis in the written instructions. Then, they will complete questionnaires to evaluate the test conductors. The evaluation and memory performance are the dependent measures. It is hypothesized that instructions with emojis by a male voice will not negatively impact target judgments and their memory performances among Americans. In contrast, instructions with emojis by a male voice will negatively impact judgments and performance among Chinese participants who may hold a more essentialized view of masculinity. This research aims at enriching the understanding of cultural attitudes toward emoji usage and intercultural communication.

Using Predictive Cues to Shift Attention Between Object Features

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The ability to flexibly categorize objects by different features (i.e., size or texture) is an important aspect of word learning. Although 3- to 4-year-olds typically succeed at categorizing objects by one feature, they often struggle to switch between multiple relevant features. This inflexibility is most evident in the Dimensional Change Card Sort (DCCS) task, in which preschoolers often fail to switch from sorting bidimensional cards by shape to sorting by color (or vice versa). Past studies have found that cues are useful in guiding children’s attention when they are predictive - that is, the cues correlate with each type of categorization. In the current study, we modified the traditional DCCS to train children either with predictive cues (i.e., one set of cues correlated with sorting by shape and a second set correlated with sorting by color) or non-predictive cues (i.e., no correlation between cues and sorting). In doing so, we examined if predictive cues helped shift preschoolers’ attention to switch between features while categorizing objects. Results from this study inform our understanding of the relation between attention and word learning.

Culture and Risk Perception: The Effect of Risk Framing on Financial Deception

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Previous studies have shown that East Asians differ from Americans in cognitive styles. Americans tend to perceive more personal control than East Asians do in explaining social events (Nisbett et al., 2001). The current study aims to investigate how Americans and East Asians respond to different types of risk framing in their decision about performing dishonest behavior. American and Chinese participants play a business simulation game. After being instructed about a bogus tax-auditing system (systematic vs. random selection of audit targets), participants compete with alleged online competitors. Participants report tax on their profits via self-reporting tax form where a cheating could go unnoticed unless they were audited. Participants' reported tax amount is the dependent measure. We hypothesized that Americans would cheat more when the auditing is systematic (presumably with a formula that one may figure out and beat) because they tend to believe in personal control, whereas the Chinese would not differ between the conditions. This study extends previous work (Andreoni et al. 1998) and may reveal cultural differences in cheating behaviors under different situations.