Tenth Annual Psychology Undergraduate Research Conference

- April 18, 2012
- East Faculty Lounge Purdue Memorial Union
- 11 AM to 1 PM
Welcome to the Tenth Annual Psychology Undergraduate Research Conference. This event showcases independent research projects conducted over the last year by our undergraduate majors. The conference originated in concert with the department's Research-Focused Honors Program in which students spend three semesters learning about all facets of the research process: developing testable hypotheses, reviewing background literature, implementing the project, collecting and analyzing data, presenting their findings at an open forum, and summarizing their work in a form suitable for publication. Participation in this yearly event has since been broadened to include other talented undergraduates who have conducted independent research with the guidance of a faculty mentor.

Congratulations to all of this year's participants. As you'll see, their presentations cover a wide variety of topics, reflecting the diverse research interests within psychological sciences. These students have worked long and hard on their projects and on preparing for today's presentation. They will be delighted to talk with you about their work – please engage them in discussion.

We thank them and their faculty sponsors for their efforts and for giving us the opportunity to showcase the accomplishments of these outstanding students. Thank you for joining us.
Program

Poster Presentations .................... 11:00 am

Introduction and Opening Remarks
Professor George Hollich .............. 11:30 am

Closing Remarks ......................... 1:00 pm
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**The Racial Glass Cliff**

The "glass cliff" (Ryan & Haslam, 2008) refers to situations where women are differentially promoted over men to leadership positions when companies are performing poorly, with subsequent negative consequences if the company ultimately fails. The present research explores whether a racial glass cliff also occurs, and specifically whether race and skin tone are also factors that affect who is hired into leadership positions in poorly performing companies. 143 students enrolled in an Introduction to Psychology course read descriptions of an organization with either improving or declining performance. They were then asked to evaluate and rank candidates for a leadership position from a selection that varied in race, skin tone, and/or qualification-level. Results show that the Black candidates, when compared with qualified-White candidates, were significantly lower on multiple evaluation measures. Light-skinned Black candidates, as opposed to dark-skinned Blacks, were evaluated more negatively when compared to qualified-White candidates.

**Does Matching Materials and Retrieval Activities to Students' Learning Styles Improve Meaningful Learning?**

Many people believe that it is important to match instructional practices to students' learning styles. For example, "visual learners" might learn best with visually-oriented instruction, while "verbal learners" might learn best with verbally-oriented instruction. Despite widespread belief in this idea, there is little evidence that matching matters. Many studies have not been designed to permit appropriate inferences about matching, and many well-designed studies do not support the matching hypothesis. In the present research, we identified students as "visual" or "verbal" learners using popular measures of learning styles. Students then studied materials that included identical science content presented as diagrams (visual) or texts (verbal). Students then practiced retrieval by drawing a diagram (visual) or free recalling (verbal). Neither matching materials to learning style nor matching retrieval practice format to learning style mattered for learning. Practicing retrieval enhanced learning regardless of format of materials, activity, and students' learning styles.
Psychological Distress Among South Asian STEM and Non-STEM Students by Gender

The nature of Science, Technology, Engineering, and Mathematics (STEM) disciplines, along with unavailability of culturally compatible personal support in STEM environments, may generate high levels of psychological distress for students from underrepresented populations. South Asian international students (n=198) completed self-report measures of depression and self-esteem. Participants reported their major, number of roommates, number of South Asian roommates, and GPA. Contrary to hypotheses, STEM students experienced less distress than their peers, and number of roommates (total and South Asian) was significantly negatively correlated with depression for STEM women. Multiple regressions confirmed that a Major X Number of South Asian roommates interaction significantly incremented prediction of depression. Exploration further revealed a positive relationship between GPA and depression for women, a negative relationship between GPA and depression for men, and no relationship between GPA and self-esteem for STEM students. Results suggest that STEM disciplines may support men's performance and the level of cultural support provided by roommates, although these may exacerbate distress among STEM women.

Treatment Seeking Factors in College Students at Risk for Depression and Bulimia Nervosa

Approximately 50% of the population will qualify for a mental disorder, but only a fraction of these individuals will seek treatment. In the current study, we examine several possible predictors of treatment seeking, focusing on bulimia nervosa and depression. Bulimia nervosa and depression are highly prevalent, highly comorbid, and have various negative impacts within society. Individuals with these disorders run into multiple social issues and obtain a reduced quality of life; yet, many persons with these disorders do not seek the treatment they need. In order to discover why a low number of persons seek appropriate care, it is important to understand the factors affecting treatment seeking. This study will extend on previous research by focusing on both individual characteristics and environmental factors associated with treatment seeking in a college student sample of individuals at risk for bulimia nervosa and depression. Findings will be discussed with regard to promoting treatment acceptability and treatment type matching.
Han Kang  
*Mentor: Kipling Williams, Ph.D*  

**Ostracism is Lost in Translation:**  
*When Being Ignored and Excluded Does Not Matter*

How do you feel when people around you start conversing in a language you do not understand? In addition to feeling ostracized, you may also wonder if they are talking about you. 122 undergraduates were assigned to a 2 (ostracism/inclusion) x 3 (English/English-Chinese/Chinese) between-S design. The Chinese-only condition had no effect on needs. Participants experienced greater distress when being ostracized than included by English only, while they found inclusion more distressing than ostracism by English switched to Chinese. In fact, there were more paranoid attributions made by participants who were included than ostracized, as well as when Chinese was adopted compared to English only. Participants also reported more prosocial thoughts when English was the only language spoken instead of Chinese, and more antisocial thoughts when they were included than ostracized.

Clinton Marks  
*Mentor: Janice Kelly, Ph.D*  

**The Effect of Masculinity Threat on Perceptions of Homosexual or Heterosexual, Masculine or Feminine Targets**

The current study examined the effect of threatening a male's masculinity on judgments of targets who vary in sexual orientation and gender role. 211 male students took a personality test. 104 participants received false feedback that they had a “feminine” personality. 107 received feedback that they had a “masculine” personality. Participants read vignettes describing a heterosexual masculine, heterosexual feminine, homosexual masculine, or homosexual feminine male target, embedded among three other vignettes to minimize suspicion. The participants rated targets on likability, competence, and positivity/negativity. In line with previous research, participants whose masculinity was threatened liked heterosexual targets more, perceived heterosexual targets as more competent, and responded more positively to heterosexual targets than homosexual targets. Participants who were high in homophobia and had their masculinity threatened showed a preference for masculine heterosexual targets. Thus, homosexuals may be at particular risk of being negatively judged, especially among men whose masculinity has been threatened.
The conditional reasoning test for aggression (CRT-A; James, 1998) is built upon the assumption that individuals rationalize their behavior. The CRT-A is an indirect test that uses inductive reasoning problems to access the respondents’ implicit aggression by tapping into the justification mechanisms associated with the motive to aggress (e.g., Hostile Attribution Bias). The CRT-A items each contain an aggressive answer and a non-aggressive answer that are equally inductively valid. Individuals with a high motive to aggress choose the aggressive answer because they find it logical. The purpose of this study was to determine whether or not respondents could identify the purpose of the test. Participants were given both the CRT-A and a self-report measure and were asked what they believed each test was designed to assess. Overall, results from 155 participants support our hypothesis that the CRT-A is not transparent to participants.

The present study examined the effects of collaborative retrieval practice on long-term retention. Subjects read educational texts and either recalled individually, recalled collaboratively with another subject, or engaged in no activity in a control condition. One week later subjects were given a final short answer test, either individually or collaboratively. The questions required students to make inferences, apply knowledge, or remember concepts directly from the text. Results showed collaborative inhibition during initial performance, as groups recalled less than individuals. Subjects who practiced retrieval initially, either individually or collaboratively, performed better on the final test than subjects in the control condition. However, there was no difference in the effectiveness of individual or collaborative retrieval practice conditions. These findings are beneficial for future pedagogical tools pertaining to retrieval practice in groups.
Benjamin J. Sanders  
Mentor: Susan South, Ph.D  
Grandiose Versus Vulnerable Narcissism: The Source of Ego Threat as a Factor in Predicting Level of Reactive Aggression  

Previous research has demonstrated that a distinguishing characteristic of narcissism is the propensity for aggression in response to an ego threat. However, no research to date has investigated differences between narcissism subtypes (grandiose and vulnerable) in reaction to ego threat as a function of relationship to source of threat. The current study investigated level of aggression in response to being ostracized as a function of narcissism subtype, relationship to rejecter, and relationship to target of aggression. Participants, recruited from an introductory psychology course, completed narcissism measures, Cyberball to induce a rejection experience, and a variant of the White Noise Aggression Paradigm to measure level of reactive aggression. It was hypothesized that individuals with higher levels of grandiose narcissism would demonstrate higher levels of aggression only when the rejecter and target of aggression was a peer, whereas individuals with higher levels of vulnerable narcissism would demonstrate higher levels of aggression only when the rejecter and target of aggression was a romantic partner. This research improves our understanding of the interaction between personality and interpersonal relationships on threat perception and response to that threat.

Elias Theodosis  
Mentor: Jeffrey D. Karpicke, Ph.D  
How Reflecting on Previous Recall Affects the Efficacy of Later Restudy Periods  

Practicing active retrieval during learning by alternating between reading and recalling material (study, recall, restudy, recall, etc.) is an effective strategy for promoting meaningful learning. We examined whether it would be effective to enhance restudy periods by highlighting information that students had missed in previous recall attempts. To accomplish this, we used a computer-based scoring algorithm, called QuickScore (Grimaldi & Karpicke, 2012), to score students’ recall responses on the fly. Students studied educational texts during study periods and freely recalled them during recall periods. Then, during restudy periods, one of three things happened: (1) students read a text in which parts they had not recalled were highlighted by the computer, (2) students thought back to their previous recall period and self-highlighted ideas they thought they had missed, or (3) students read the text with no highlighting (a standard condition used in most experiments). On a final recall test one week later, students in the computer-highlighted and self-highlighted conditions recalled fewer ideas than students who simply read the text. This suggests that highlighting missed concepts from past test episodes during study periods may disrupt encoding.
Dr. John Millard Hadley was a Professor in the department from 1946 until 1970. Professor Hadley was the first Director of Clinical Training at Purdue and later served as the second Head of the Psychology Department. It was under his leadership that the Purdue program in clinical psychology was to reach national prominence in research, clinical training, and service. The award that bears his name is given each year to a senior Psychology major at Purdue who has demonstrated excellence in research activities. Since 2003, the award is given to the senior presenting the best research at the Undergraduate Research Conference. Winners are recognized by having their names inscribed on a plaque that hangs in the department, a letter of recognition, and a cash award of $300.

Past Hadley Award Recipients:

- 2003 Alma Haas
- 2004 Ashleigh Maxcey
- 2005 Emily Gurry
- 2006 Amanda Kilavos
- 2007 Bethany Edwards
- 2008 Nicole Weatherman
- 2009 Megan Smith
- 2010 Judith Asem
- 2011 Caroline Johnson

Special Thanks To:

- Professors Jeffrey Karpicke, Ximena Arriaga, Kipling Williams, Howard Weiss for conducting the Honors seminars.
- Peter Urcuioli for his service as Undergraduate Director.
- The faculty mentors for their support of undergraduate research.
- Christopher Agnew, Head of Department, for the financial support of undergraduate research and this yearly event.