



April 28, 2016

DEPARTMENT OF PSYCHOLOGY
RESEARCH POSTER PRESENTATION

(36 posters, 46 students)

#	Presenters	Advisors
1	Hazal Muhtar **	P. Rodriguez Mosquera
2	Lucy de Souza	P. Rodriguez Mosquera
3	Lucy de Souza	C. Wilkins
4	Elizabeth Shackney, Mikaela Reyes, Jessica Park	C. Wilkins
5	Juliana Manrique **	C. Wilkins
6	Chase Knowles *	C. Wilkins
7	Sheri Reichelson	C. Wilkins
8	Sheri Reichelson	H. Barth
9	Aime Arroyo-Ramirez, Maxine Lai, Sheri Reichelson, Ali Zax ^	H. Barth
10	Praise Owoyemi	H. Barth
11	Jordan Feingold-Link	H. Barth
12	Sarah Corner, Kerry Brew, Ilana Ladis	H. Barth
13	Ilana Ladis	C. Shepherd
14	Kayla Schlenz	C. Shepherd
15	Alyssa Glanzer	C. Shepherd
16	Samantha Hellberg	C. Shepherd
17	Samantha Hellberg *	M. Robinson
18	Aarit Ahuja *	M. Robinson
19	Alison Denzer-King *	S. Carney
20	Binghui Zheng	J. Cooper
21	William Mendoza **	L. Dierker
22	Tanya Horwitz *	B. Juhasz
23	Celia Joyce *	B. Juhasz
24	Micaela Kaye, Akila Raoul	B. Juhasz
25	Sofia Zaidman *	M. Kurtz
26	Matthew Siegelman *	M. Kurtz
27	Harim Jung *	P. Loui
28	Wy Ming Lin, Kellyn Maves	P. Loui
29	Emily Przysinda ^, Kellyn Maves, Cameron Arkin, Tima Zeng	P. Loui
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31	Claire Wright *	J. Morawski
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RESEARCH POSTER PRESENTATION

33	Elizabeth Arslanoglou, Brittany Curran, Elizabeth Weinstein	K. Schmidt
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35	Rilwan Babajide	K. Schmidt
36	Stephanie Blumenstock *	A. Shusterman

- * Psychology or NS&B BA student – thesis presentation
- ** Psychology BA/MA student – thesis presentation
- + Honors in General Scholarship student
- ^ Research Associates & Research Assistants
- ^^ Post Doctorates



Poster # 1

Fear of Happiness

Author: Hazal Muhtar **

Advisor: Patricia M. Rodriguez Mosquera

Fear of happiness—the belief that happiness leads to bad consequences—has a negative impact on life satisfaction and well-being. Study I (Asian American: n = 29; European American: n = 49) and Study II (Asian American: n = 118; European American: n = 147) investigated fear of happiness across Asian Americans and European Americans and looked for any correlations between fear of happiness and other variables. In both studies, participants completed the following scales: *Fear of Happiness* (Joshanloo, 2013), *Satisfaction with Life* (Diener et al., 1985), *Subjective Happiness* (Diener et al., 1999), *Cultural Orientation* (Triandis et al., 1998), *Big 5 Personality* (John & Srivastava, 1999), *PANAS-X* (Watson & Clark, 1994) and *FAD-Plus* (Paulhus & Carey, 2011). In Study II, *Perceived Social Image* (Rodriguez Mosquera & Imada, 2013) was also included. In both studies, fear of happiness had a negative correlation with life satisfaction and/or subjective happiness in both cultural groups. Study II also found that in both cultural groups, fear of happiness had a negative correlation with horizontal collectivism, agreeableness and conscientiousness, and a positive correlation with vertical individualism, fear, hostility, guilt and sadness, fatalistic determinism, scientific determinism.

Poster #2

Culture and Humiliation

Author & Presenter: Lucy De Souza

Advisor: Professor P. Rodriguez Mosquera

Humiliation is an emotion that is experienced in various social contexts and relationships (Klein, 1991). Previous research has however not systematically examined the role of culture in humiliation. This study investigated the role of culture in the situations that elicit humiliation. Using the situation sampling method, European-American (n = 203) and Latin@/US Hispanic (n = 190) participants were asked to describe situations in which they felt put down or devalued by others. Participants also completed the honor scale (Rodriguez Mosquera et al., 2002) and the importance of social image scale (Rodriguez Mosquera & Imada, 2013). As expected, Latin@/US Hispanic participants valued honor and the protection of social image more than European-American participants did. In line with these value differences, European-American participants should make more self-focused references (e.g., how the situation affected them) whereas Latin@/US Hispanic participants should make more socially-focused references (e.g., social image-related concerns) in their situation descriptions.

Poster #3

Title: Self-Affirmation Effects on Men's Evaluations of a Self-Identified Feminist

Author & Presenter: Lucy De Souza

Advisor: Clara Wilkins

Stigma against feminists may arise due to the perception that they desire to seize power from men. However, self-affirmation has been shown to assuage threat, decreasing the degree to which individuals negatively evaluate members of a stereotyped group. These studies test the hypothesis that self-affirmed men will more positively evaluate a feminist target. In Study 1, participants completed either a self-affirmation or control task and read either a feminist or control target description. Afterwards, all participants evaluated



the target via a personality trait measure and completed a zero-sum beliefs scale. There were no significant differences between conditions. However, across conditions, there were significant correlations between participants' feminist identity, zero-sum beliefs, and personality evaluations of the target. Study 2 replicated Study 1, but used a stronger target description and additionally measured perceptions of gender inequality. As in Study 1, affirmation did not have a significant effect on personality evaluation, zero-sum beliefs, and perceptions of gender inequality. Nevertheless, correlations found in Study 1 remained significant and there were additionally significant correlations between perceptions of gender inequality and participants' feminist identity, zero-sum beliefs, and personality evaluations. These results may be helpful when discussing ways to effectively promote feminist ideals and reduce feminist stigma.

Poster #4

Guilt Trips and Hardships: Responses to being Confronted with Privilege

Authors & Presenters: Elizabeth Shackney, Mikaela Reyes, Jessica Park

Advisor: Clara Wilkins

Two studies examined how high (Study 1: men) and mixed-status individuals (Study 2: White women) respond to confrontations of group privilege. We expected that in an effort to minimize their personal privilege, participants would claim greater personal life hardships, identify more strongly with their low-status group, or perceive greater bias against their low-status group. Participants in both studies read a paragraph about male (Study 1) or White (Study 2) privilege, and those in the control condition read a neutral paragraph. Our manipulation check revealed that privilege manipulations were unsuccessful, so we examined correlations between measures. In Study 1 guilt was positively correlated to claims of personal hardships, affirmative action support, and greater perceptions of discrimination against women. Furthermore, greater perceptions of male privilege were positively associated with support for affirmative action and perceptions of bias against women. In Study #2, perceptions of White privilege were positively associated with perceptions of bias against women. Results suggest that education on topics of privilege can impact privileged individuals' receptiveness to policies that support marginalized groups.

Poster #5

Terrorism is Skin Deep: How Crime Shapes Perceived Appearance, Police Violence, and Citizenship Status of White and Arab Suspects

Author & Presenter: Juliana Manrique **

Advisor: Clara Wilkins

Do individuals see ambiguous-race faces associated with terrorism as being darker or more "Arab-looking" than individuals suspected of other crimes? To what degree do individuals justify the use of police force? In two studies, White participants read about a White or Arab victim of police brutality that was either found with marijuana or explosives. Irrespective of the target's race, participants had more negative reactions and believed violence was more justified toward terrorist suspects than toward drug offenders. In Study 1, the type of crime committed also affected participants' memory of the suspects' appearance. Drug suspects were viewed as Whiter than terror suspects. Furthermore, White suspects were remembered as having a more stereotypically Arab appearance when they were accused of terrorism than when accused of a drug crime. In Study 2, violence was perceived as more justified toward terror suspects than drug suspects. Additionally, violence toward White suspects was perceived as more justified



when they were accused of terrorism than when accused of a drug crime. Implications for perception of link between race and crime among Arabs are discussed.

Poster #6

Redneck or White Trash? The Influence of Labeling on Perceptions of White Subgroups

Author & Presenter: Chase Knowles *

Advisor: Clara Wilkins

This research explored stereotypes associated with labels for White people: *whites*, *white trash*, and *redneck*. It also examined how these labels affect attitudes toward white subgroups. Participants described *whites* as dominant, elite, middle-class, and privileged. *Rednecks* and *white trash* were described with stereotypically negative characteristics, such as poor and uneducated. *White trash* were more likely to be characterized as dirty than *rednecks*, whereas *rednecks* were more likely to be characterized as prejudiced and country/Southern than *white trash*. Furthermore, I found that *whites* were perceived most positively, followed by *rednecks*, and *white trash* were perceived most negatively. Participants exposed to the labels *white trash* and *redneck* were less likely to endorse mainstream values than participants exposed to the label *whites*. These findings demonstrate that labels, such as *white trash* and *redneck*, negatively influence perceptions of low-status whites. Specifically, the labels *white trash* and *redneck* may be used to elicit classist and prejudiced views of low-status whites.

Poster #7

Predictors of Anti-Christian Bias

Author & Presenter: Sheri Reichelson

Advisor: Clara Wilkins

Perceptions of discrimination have been studied in many contexts. Previous research suggests that perceptions of discrimination differ between high-status and low-status groups and that perceptions of discrimination by high-status groups increase with the social progress of low-status groups. In the present study, we examined predictors of anti-Christian bias in the United States. We examined whether perceptions of anti-Christian discrimination were related to religiosity, political identification, perceptions of societal political correctness, perceptions of freedom of speech in the US, religious multiculturalism, LGBT rights, abortions, and contraception. We found that perceptions of anti-Christian bias were significantly correlated with decreasing perceptions of freedom of speech, greater perceptions of social progress, lower perceptions of religious freedom, greater conservatism, and stronger religious identification.

Poster #8

Does the Arbitrary Grouping of Physical Options Influence Children's and Adults' Choices?

Authors: Sheri Reichelson, Hilary Barth, Ilona Bass, Jessica Taggart, Ellen Lesser, & Andrea Patalano

Presenter: Sheri Reichelson

Advisor: Hilary Barth

The partitioning of options into arbitrary categories is reported to influence adults' decisions about how to allocate resources or choices among those options; this phenomenon is called "partition dependence." In three studies, we asked whether children and adults exhibit partition dependence when choosing from a menu of options (physical bowls of candy). We did not observe partition dependence in children,



and failed to replicate previous findings of partition dependence in adults using closely matched methods.

Poster #9

Impact of Paired Numbers on Numerical Estimation

Authors & Presenters: Aime Arroyo-Ramirez, Maxine Lai, Sheri Reichelson,
Ali Zax ^

Advisor: Hilary Barth

Previous research suggests that Arabic numerals are mapped to a representation of the entire magnitude in the brain, rather than the number being digitally processed. This predicts that during number line estimation tasks, estimates should be roughly the same for similar target numbers. However, a speeded number line task demonstrated that adult's and children's estimates were affected by the specific target values presented when they fell on either side of a hundreds boundary: e.g., estimated positions for 598 and 601 on a 0-1000 number line were very different. To test whether these results were due to strategies evoked by the speeded nature of the previous task, we created a non-speeded version using the same stimuli. Preliminary results suggest that even under non-speeded conditions, adult participants appear to estimate paired values in ways similar to those in the previous task. Ongoing data collection will determine whether these results are significant and whether the same is true for children. These findings will be important for two reasons. First, number line estimation is frequently used to assess children's numerical understanding, but the influence of specific target numbers on estimates is rarely considered. Second, they suggest that whole magnitude representations may not be accessed when making estimates in number line tasks, as is often assumed.

Poster #10

Allocating Resources: How Option Presentation Affects Decision Making

Author & Presenter: Praise Owoyemi

Advisor: Hilary Barth

This study focuses on a phenomenon known as Partition Dependence. Partition Dependence occurs when the arrangement of options presented influences how individuals decide to choose or give resources. Previous studies have shown that there is a tendency for people to distribute their resources evenly across the categories they see. However, by presenting the categories in different ways, people's resource allocations vary depending on how the options are partitioned. The current study will first attempt to replicate prior findings that people's hypothetical financial aid distributions to varying income levels change based on how the income groups are presented. In this study, I will also examine how exposure and involvement with the options presented affects one's susceptibility to partition dependence. The original study looked at participants who were not affected by nor familiar with their school's financial aid practices, which eliminated any personal biases or knowledge participants would have concerning the task. However, by also studying participants who have some knowledge about their school's financial aid policies, we can see if awareness limits partition dependence. Finally, by investigating the effects of explicitly stating vs. implicitly showing the randomness of the categories given, we can determine a better way to reduce demand characteristics.



Poster #11

Who is in the Room? Observation in the Minimal Group Paradigm

Author & Present Jordan Feingold-Link

Advisor: Hilary Barth

The minimal group bias, wherein individuals show bias towards in-group members even when the group is arbitrary and novel, has been rigorously demonstrated in adults. More recent research has replicated this result in children. Children are deeply influenced by social context. There is evidence that children also attempt to manage their reputations by changing their behaviors. Furthermore, the group membership of an observer also affects behavior. This poster aims to suggest two possible experiments which explore the role that observation plays in the minimal group bias in children.

Poster #12

Demand Characteristics in Child Minimal Group Experiments

Authors & Presenters: Sarah Corner, Kerry Brew, Ilana Ladis

Advisor: Hilary Barth

"Minimal groups" are arbitrary groups with no broader social or current competitive significance. Even such arbitrary group assignments can induce in-group preferences in both adults and children. Many previous studies have assigned children to minimal groups (e.g. by shirt color) and found that they prefer their minimal in-group in a variety of ways, from explicit attitudes to resource allocation. Demand characteristics (unintentional, often subtle cues that influence the way participants behave; e.g. Durgin et al., 2009) may have played a role, however, in many prior studies of minimal group effects. For example, if children reason that they are given a shirt to wear because the experimenter expects them to prefer people wearing the same color shirt, their in-group preferences may be affected. There are two aims to the proposed study: first, we intend to replicate basic findings from a prior minimal group experiment. Second, we aim to conduct a control study that will assess the potential effects of demand characteristics on minimal group manipulations.

Poster #13

The Relationship between Central Coherence, Eating Pathology, and Body Image Distortion

Author & Presenter: Ilana Ladis

Advisor: Caitlin Shepherd

Previous studies suggest an association between eating disorders, body distortion, and neurocognitive deficits, in particular weak central coherence. The purpose of the current study is to further investigate this association in a non-clinical sample of college-aged women. Forty-nine female undergraduate students were assessed for ED symptoms and body distortion with Eating Disorder Examination Questionnaire (EDE-Q) and the BIAS-BD figure scale. Participants completed two online measures of neurocognitive functioning from the online software, CogState. The Groton Maze Learning Task (GMLT) and Identification Task (IDT) measured participants' local and global processing abilities. Significant correlations were found between EDE-Q and central coherence measures, suggesting that higher eating pathology is associated with better local processing and worse global processing. Independent samples t-tests revealed that participants with higher eating pathology performed worse on the GMLT. Multiple linear regression analyses revealed a significant interaction between body image distortion and eating pathology with regard to consistency in local processing performance. Findings from this study provide further support for the association between neurocognitive deficits and



eating disorder symptoms. Information from this study can be used to inform eating disorder prevention and treatment programs.

Poster #14

Title: Instagram and Eating Disorders, Is there a Relationship?

Author & Presenter: Kayla Schlenz

Advisor: Caitlin Shepherd

Past research has indicated that cultural influence and media consumption are two major factors that can influence eating disorder behavior. With our society now using social media fronts, it is important to understand what forms of social media, if any, may have an affect on eating disorder pathology and behavior, to help with prevention and treatment plans as well as to better understand the disease. This research looks specifically at how Instagram influences eating disorder pathology. In this experiment, we asked participants about their eating pathology and behavior through the Eating Disorder Examination Questionnaire (EDE-Q). We also asked them if they had an Instagram account and, if they did, we asked them more detailed questions about their Instagram use. Our initial analysis found no significant differences between EDE-Q scores of Instagram users and non-Instagram users, but we did find a positive correlation between how many times a day an individual checks Instagram and the EDE-Q Eating Concern sub-scale ($r=.409$, $p=.011$) as well as some trends between Instagram use and EDE-Q sub-scales. More research is needed to examine these trends as well as why certain factors of Instagram have a relationship with eating disorder questionnaire scores.

Poster #15

Bullying Involvement and Disordered Eating Behaviors

Author & Presenter: Alyssa Glanzer

Advisor: Caitlin Shepherd

Many negative consequences of bullying involvement, including low self-esteem, anxiety, and depression, are also associated with eating disorders (Costin, 2006; Libbey et al., 2008; Bucchianeri et al., 2014), suggesting a link between bullying and eating disorder etiology. The goal of the present study is to investigate the relationship between adolescent bullying involvement and later disordered eating behaviors. More specifically, we aim to determine if the role one played in their past middle school bullying experiences, as a victim, bully, bully-victim, or uninvolved, is associated with the likelihood of the later development of disordered eating behaviors. Additionally, this research seeks to address if past experiences with social, verbal, and physical bullying predict the development of disordered eating differently. Participants, consisting of female undergraduate students ($N = 61$), completed two measures: the Eating Attitudes Test, assessing eating behaviors, and the Adolescent Peer Relations Instrument, measuring bullying experiences. Results indicate a positive relationship between social bullying and dieting. These findings can be used to inform prevention efforts aimed at reducing the prevalence of eating disorders among young adolescents.

**Poster #16****Subtypes of Eating Disorders: Roles of personality, comorbid disorder symptoms, and cognitive control**

Author & Presenter: Samantha Hellberg

Advisor: Caitlin Shepherd

Transdiagnostic subtypes in eating disorders (ED) have been proposed based on evidence for the clinical significance of personality traits in clinical outcomes for ED. Here, we investigated the relationships between personality, comorbid disorder symptoms, and cognitive control across these proposed subtypes. Wesleyan undergraduate students completed an online survey packet and cognitive task using Qualtrics. Participants first completed the Stroop task, a cognitive paradigm used to measure cognitive control. Then participants completed measures for personality traits associated with these eating disorder subtypes, including impulsivity, compulsivity, and perfectionism. All participants also completed measures for symptoms of ED and related disorders, including obsessive compulsive disorder, obsessive compulsive personality disorder, and substance use disorders. Our preliminary findings on the relationships between personality, comorbid disorders, and cognitive control will be discussed. Additionally, we will share our current findings on the possible mediating role of personality in common comorbidities in eating disorders. Implications of our findings will be discussed with an emphasis on future research directions to understand the high prevalence of comorbidity and related risk factors in eating disorders.

Poster #17**Effects of adolescent ethanol exposure and anxiety on motivation for gambling-like cues**

Authors: Samantha Hellberg * and Jeremy Levit

Presenter: Samantha Hellberg

Advisor: Mike Robinson

The frequent co-occurrence of gambling disorder with alcohol use and anxiety disorders has implicated shared underlying mechanisms. Recent research suggests that reward uncertainty may powerfully enhance the value of gambling cues. As such, when lights and sounds are repeatedly associated with unpredictable monetary rewards in a casino, they may trigger or maintain compulsive gambling behavior. It remains unclear whether alcohol use or anxiety in adolescence may confer high risk for gambling disorder by enhancing sensitivity to reward-related cues. Here, we studied the effects of adolescent ethanol exposure and anxiety on the desire for a cue associated with uncertain reward. Our results show that reward uncertainty may shape compulsive gambling behaviors by enhancing attraction to reward cues. Further, high anxiety may increase vulnerability to the motivating effects of reward uncertainty. Additionally, gender differences were seen in ethanol intake and anxiety after ethanol exposure. Cues associated with uncertain rewards may serve as powerful reinforcers of compulsive gambling behavior. Chronic alcohol use may heighten anxiety, while high anxiety may sensitize attraction to reward cues in gambling. The present study therefore highlights specific mechanisms that may contribute to the frequent co-occurrence of high anxiety, heavy alcohol use, and vulnerability to problematic gambling in adolescence.



Poster #18

Calling the Slots: A Study on Risky Choices in Gambling

Author & Presenter: Aarit Ahuja *

Advisor: Mike Robinson

We make hundreds of decisions on a daily basis, many involving a choice between two or more alternatives. These decisions are often complicated when they are infused with an element of uncertainty, and not all outcomes of our potential choices are fully known. Over time, our brains have evolved various mechanisms that help us assess uncertain alternatives and make decisions that are informed by weighing risk versus payoff in a beneficial manner. However, when these mechanisms go awry, it is possible for our decisions to become increasingly irrational and risky, as is often observed in the case of patients suffering from Problem Gambling (also known as gambling disorder). Past research with humans has shown that visual cues in our environment can play a role in affecting our preferences for risky or safe alternatives by priming past memories. Other studies have implicated specific brain regions such as the Anterior Insular cortex (AIC) and the Orbitofrontal cortex (OFC) in the process of evaluating risk. In the present study, we report that, like humans, rats appear to indicate sensitivity to priming cues, becoming more risky following exposure to cues that are associated with past wins, and less risky following exposure to cues that are associated with past losses. We also report that optogenetic inhibition of the AIC seems to either increase or decrease risk preference, depending on when during the task said inhibition is administered. Inhibition of the OFC, on the other hand, returned inconclusive results. These observations contribute to the literature on risky decision-making by investigating the effects of environmental cues on risky choices, and by building upon our knowledge of the neural mechanisms behind the process.

Poster #19

Effects of Stereotyped Representation in Television on Female and People of Color Viewers' Self-Esteem

Author & Presenter: Alison Denzer-King *

Advisor: Sarah Carney

Previous research has indicated a negative correlation between hours spent watching television and viewer self-esteem, particularly for women and people of color. Drawing theoretical support from cultivation theory and research on stereotype threat, this study hypothesizes that this negative relationship is due to negative or stereotyped portrayals of these groups. Seventy-eight undergraduate students at Wesleyan University participated in one of three conditions featuring positive, neutral, or negative representation of women in television. After viewing the television content, participants filled out a measure of self-esteem and also answered open-ended questions about their gender and racial identities. Quantitative results were nonsignificant for self-esteem scores. However, self-esteem means varied by gender, race, and condition in the hypothesized, although not statistically significant, direction. Qualitative evaluation of the responses to open-ended questions revealed several different themes for participant discussion of their gender and racial identities. The frequencies of these themes also varied by gender, race, and condition, although they were not tested for significance. Based on these results, it is likely that the limitations of the study prevented significant self-esteem results.

**Poster #20****Learning Statistics from Videos: Students' Qualitative and Quantitative Responses**

Author & Presenter: Binghui Zheng

Advisor: Jennifer L. Cooper

Educational videos are increasingly being used as instructional aids to supplement lectures. Cognitive theories of multimedia learning emphasize the importance of connecting instructional ideas through both visual and verbal information, while minimizing distracting effects that can overwhelm an individual's processing. However, while these theories offer one approach to developing video lessons, the effect of format on students' motivation and engagement is also relevant. In this study, undergraduates ($n = 74$) viewed a ten minute lesson on the chi square test and null hypothesis testing; the video format was either a traditional lecture style or a more "fun" video which used additional relevant and irrelevant visuals and more advanced video editing. After completing multiple choice measures assessing learning and memory of the video's context, participants viewed a shortened segment of the video from the other condition, allowing participants to evaluate the videos on a comparative basis. While students' statistical performances were related to their previous statistical experience and knowledge, accuracy was not affected by condition. Memory for contextual details of the lesson was related to students' evaluations of the videos' interestingness, but not condition. Students' ratings of the two videos are also presented along with their comments about the videos.

Poster #21**Marijuana Abuse and Dependence Symptoms among Recent Onset Adolescent Marijuana Users**

Author & Presenter: William Mendoza**

Advisor: Lisa Dierker

This study examined prevalence of marijuana abuse and dependence across different levels of marijuana exposure within a nationally representative sample of recent onset marijuana users aged 12 – 21 years (mean 16 years). We assessed whether the relationship between level of marijuana use and experiences of abuse and dependence symptoms were similar for individuals from different sociodemographic groups (i.e. gender, age group, ethnicity, and family income). Logistic regression analyses indicated increasing rates of each abuse and dependence symptom with increasing marijuana exposure that differed most between the highest levels of recent marijuana use frequency (5 – 10 days and greater than 10 days in the past month). After controlling for marijuana use frequency in the past year, adolescents aged 12 – 15 years, female adolescents, and adolescents from income groups higher than \$20,000 a year were more likely to experience marijuana use disorder symptoms and diagnoses at higher levels of use while male adolescents were more likely to experience marijuana use disorder symptoms and diagnoses at lower levels of use. Recognizing early symptoms of marijuana abuse and dependence may assist in early identification and intervention among those at greatest risk for problem use in the future.



Poster #22

The Effects of Age-of-acquisition on Lexical Decision and Naming Times

Author & Presenter: Tanya Horwitz *

Advisor: Barbara Juhasz

Many studies conducted recently have demonstrated that age-of-acquisition (AoA) is important for determining how quickly and accurately a word will be read or recognized later in life (see Johnston & Barry, 2006; Juhasz, 2005). Psycholinguistic variables such as frequency, orthographic neighborhood, imageability, and familiarity, are likely also predictive of word recognition performance (e.g., Ferrand, Bonin, Meót, Augustinova, New, Pallier et al., 2008; Yarkoni, Balota, & Yap, 2008; Pérez, 2007). The current study collected data on age of acquisition, imageability, and familiarity. The collected scores were then compared to age-of-acquisition scores obtained through the use of norms implemented in a study conducted by Kuperman and colleagues (Kuperman, Stadthagen-Gonzalez, & Brysbaert, 2012). This study used newly-developed norms for calculating orthographic neighborhood and word frequency (Yarkoni et al., 2008; Brysbaert & New, 2009). Furthermore, results were compared to those amassed in the literature, and lexical decision and naming accuracy and reaction times reported in the English Lexicon Project (Balota, Yap, Cortese, Hutchison, Kessler, Loftis et al., 2007) were examined for a set of words taken from the original set of words that were matched for psycholinguistic variables. A significant difference between naming time z-scores for early- and late-acquired words was observed.

Poster #23

Individual Variability in Reading Processes: The Compound Remote Associates Test

Author & Presenter: Celia Joyce *

Advisor: Barbara J. Juhasz

Among skilled readers, there is a considerable degree of variability in specific sub-skills and processing proficiency. The Compound Remote Associates Test (CRAT), designed in 2003 by Bowden and Jung-Beeman, examines participants' ability to identify English compound words. That study was designed to examine problem-solving aspects related to insight and conscious analysis. The purpose of the current study is to determine if a modified version of this test can be used as a measure of variability in reading profiles.

Participants (N= 70) completed four separate assessments of reading sub-skills; a modified CRAT, the vocabulary and reading comprehension portions of the Nelson-Denny Reading Test (NDRT), and a spelling dictation task. Results revealed that 20.9% of the variability in CRAT performance could be predicted by the other test measures. Multiple regression analyses revealed that when performance on all assessments was accounted for, spelling was a significant predictor of CRAT performance and vocabulary a moderate predictor. Additionally, a marginal effect of solution type emerged whereby Type 2 solutions were most readily completed. Together, results suggest that the modified CRAT is a useful tool for determining individual differences in reading, and may be indicative of variability in lexical expertise and morphological awareness.



Poster #24

Word Frequency Effects in Lexical Decision Task Performance and the English Lexicon Project

Authors & Presenters: Micaela Kaye and Akila Raoul

Advisor: Barbara Juhasz

Word frequency measures the prevalence of words in language. Frequency trajectory compares word frequencies from grade one to college. A high-high (HH) frequency word means it is seen frequently both in first grade and college literature (e.g. *person*). High-low (HL) frequency words are those frequently seen in childhood but become rare in adulthood literature, such as *prince*. There are also low-high (LH) words (e.g. *brain*) and low-low (LL) words (e.g. *opera*). This study utilized the Lexical Decision Task (LDT), which involves participants making judgments about whether letter strings were English words. We found significant effects for child and adult frequency in relation to response times. LL words had significantly slower response times and more errors in the LDT compared to all other conditions. In a follow-up experiment, data from the English Lexicon Project (ELP) (Balota, et al., 2007) was used to further examine the role of word frequency and frequency trajectory. The ELP is a database of lexical characteristics for over 40,000 words gathered from lexical decision and naming tasks. In the ELP analysis, we found significance for grade 1 frequency and frequency trajectory slope.

Poster #25

Pilot Testing CogSmart: A novel, compensatory program of cognitive remediation for psychosis

Author & Presenter: Sofia Zaidman *

Advisor: Matthew Kurtz

Abstract: Cognitive and social cognitive deficits affect nearly all individuals diagnosed with schizophrenia and have been shown to be a valid predictor of functional outcome. Cognitive remediation therapy (CR) has proven to be a reliable means of treating cognitive deficits in schizophrenia. In strategic CR programs, clients are encouraged to become aware of cognitive deficits, set goals for improvement, and use strategies to compensate for impairments. In this pilot study, we aimed to assess the effectiveness of CogSMART, a strategic cognitive remediation program developed by Dr. Elizabeth Twamley at UCSD, in improving cognitive deficits for clients at the Gilead Community Services Social Rehabilitation Center in Middletown, CT. Five participants were initially enrolled in the study; however, two dropped out of the protocol at different time points and were excluded from our analysis. Changes in cognition, social cognition, and symptoms were assessed using a standardized battery of measures before and after completion of the program. We saw overall trends toward improvement and large effect sizes in the domains of verbal learning/memory, verbal fluency, attention/concentration, processing speed, working memory, social cognition and executive functions after completion of the CogSMART program. These results are encouraging and support continuation of the CogSMART program at Gilead and potentially beyond.

Poster #26

Title: Construction of an Effort Discounting Task (EDT)

Author & Presenter: Matthew Siegelman *

Advisor: Matt Kurtz

The negative symptoms of schizophrenia (SCZ) are disabling, poorly understood, and weakly responsive to current treatments. Increasing evidence suggests that motivational



deficits specifically represent a substantial problem within the negative symptom domain. Thus treating or minimizing the harmful effects of amotivation could have major therapeutic benefits. Unfortunately, a lack of clinical measurement approaches has limited research as to how amotivation in schizophrenia relates to disease pathology, functional outcome, or treatment options. One successful approach has been the use of computerized behavioral tasks designed to translate subjective human decision-making into an objective measure of motivation. This study utilized a computerized Effort Discounting Task (EDT) to assess motivational differences between SCZ patients and healthy controls. While prior studies have employed similar tasks to investigate reward valuation, this study uniquely included a newly programmed loss aversion EDT (L-EDT) task in addition to a gain seeking EDT (G-EDT) in order to dually examine participants' motivation to either earn or prevent the loss of a monetary reward. Deficits in the SCZ group and a greater sensitivity to losses in both groups were observed, as evidenced by task performance. EDT results were also associated with survey measures related to negative symptoms and motivated behavior in the SCZ group. These results suggest that separate gain and loss EDTs could be used in future work to identify clinically meaningful motivational differences between SCZ and healthy populations. The reliability of the L-EDT was lower than expectation and requires further investigation.

Poster #27

Electrophysiological Correlates of Rhythm and Syntax in Music and Language

Author & Presenter: Harim Jung **

Advisor: Psyche Loui

Music and language are human cognitive and neural functions that have been shown to share neural resources in syntax processing (Patel, 2003) as well as temporal processing (Large & Jones, 1999). Although recent studies have investigated the sharing of neural resources for music and language, little is known about how music and language processing interact as syntax unfolds over time. The current electroencephalography (EEG) study investigates the relationship between rhythmic expectancy and musical and linguistic syntax by presenting sentences, broken down into segments, paired with musical chords (adapted from Slevc et al., 2009). Linguistic syntax violations appeared in a garden-path design, and musical expectation violations, presented as out-of-key chords, and rhythmic expectancy violations, through early and late temporal perturbations. Participants read sentence segments and listened to the musical chords, and answered questions about the sentences while their EEGs were recorded. Results show that musically irregular chords and linguistically unexpected garden-path sentences elicited an early anterior negativity (EAN), but tend to diverge over time, with a posterior positivity for musically irregular chords (P3a) and a late positive component (LPC) for linguistically unexpected sentences. Results also indicate interactive effects between the processing of rhythmic violations with musical and linguistic syntax violations. This suggests that the interaction of music and language syntax processing depends on rhythmic expectancy, which in turn affects attentional entrainment.



Poster #28

Size Matters: An ERP Study of Interval Size Judgments in Audiovisual Integration

Authors: Wy Ming Lin, Kellyn Maves, Janani Iyer

Presenters: Wy Ming Lin and Kellyn Maves

Advisor: Psyche Loui

Interval size can be defined by the distance between two objects or events. Little is known about how the brain determines interval size and whether the neural mechanisms for doing so are similar or different between unisensory and multisensory modalities. In this experiment, participants performed an audiovisual interval size judgment task while EEG was recorded. Auditory stimuli were small or large pitch intervals (1-2 or 9-10 semitones respectively) and visual stimuli were small or large distances traveled by dots on a screen. Trials were either unimodal (audio-only or visual only) or multimodal (audiovisually congruent or incongruent). Behavioral data showed above chance performance overall. ERPs comparing audio and audiovisual events showed enhancement of the P50, P200 and P300 components when the visual modality was added, while ERPs comparing audiovisual small and large events showed enhancement of the N1/P2 complex and the P300 in the large condition. An interaction between interval size and congruency was also observed beginning at 200 ms. ERPs for the incongruent small wave were more positive than those of the congruent small wave, but the relationship was reversed in the large condition. Results suggest that interval size processing involves early (perceptual), middle (categorization), and late (response selection/decision-making) components, and that audiovisual congruity acts upon the middle categorization processes.

Poster #29

Psychophysical and Electrophysiological Measures of Imagination and Creativity in Jazz Musicians

Authors & Presenters: Emily Przysinda[^], Kellyn Maves, Cameron Arkin,
Tima Zeng

Advisor: Psyche Loui

Musical improvisation requires imagination, expectation, and creativity. Here we examine the results of a scale imagery task, an EEG expectation task, and a Divergent thinking task that are all part of a battery we developed to measure creativity and imagination in jazz improvisers. The scale imagery task had participants to listen to a scale and judge whether the last note was modified in pitch. Trials were presented in a perceptual condition, where all notes play, and an imagery condition, where some of the notes are left out. Cross-sectional comparisons to date showed that a steeper slope of the psychometric function for Jazz musicians compared to non-musicians. The EEG expectation task asks participants to rate how much they like chord progressions of different expectancies. Behavioral data shows that Jazz musicians like the slightly unexpected chords better than the expected chords and the dislike the highly unexpected chords less. ERP data shows larger right-lateralized components in response to highly unexpected chords for the Jazz musicians, suggesting that Jazz musicians are more sensitive to unexpected musical events. The Divergent Thinking task (Torrance 1968) was used as a domain general measure of creativity, which asked participants to respond to a prompts in a creative manner. There was a main effect of group for four out of the six questions in measures of fluency and originality, with Jazz musicians scoring higher than nonmusicians. Together, results suggest that musical experience, especially in jazz, confers an advantage in auditory imagery, musical expectancy, and domain general creativity.



Poster #30

Using Sonification for the Detection of Seizure Onset in Epilepsy

Authors & Presenters: Keith Spencer, Maxime Bouvagnet

Advisor: Psyche Loui

People with epilepsy have seizures, episodes of abnormal electrical activity in the brain that can be detected by electroencephalogram (EEG) recordings on the scalp. While the conventional way to identify seizures involves visually reading EEG recordings, the sonification (conversion to music) of EEG data offers a new approach that might afford some new possibilities for identifying seizures and other types of abnormal electrical activity in the brain. Previously (Loui et al, 2014) we had shown that by sonifying EEG data, humans can rapidly learn to distinguish seizures from baseline EEG activity by listening alone. Here we extend this work towards detection of the onset of a seizure. EEG recordings of people having seizures and baseline EEG activity were extracted in MATLAB. Different channels of EEG data were mapped onto sinusoidal modulators and summed and normalized across channels. The resulting audio wave files were thresholded in Max/MSP and converted into distinct patterns of MIDI pitches to represent abnormal and baseline EEG activity. Results from MTurk testing indicate above-chance performance on seizure onset identification. Detecting seizure onset by sound alone will help refine our algorithms for data sonification, and can also move us closer towards real-time biofeedback solutions for epilepsy patients, as well as portable solutions that can aid in the management of seizure onsets by caregivers.

Poster #31

Title: Pathologizing Survivors: The Globalization of PTSD

Author & Presenter: Claire Wright *

Advisors: Jill Morawski, Elise Springer (FGSS)

This study considers the implications of using the Western diagnosis of Post-Traumatic Stress Disorder (PTSD) to treat survivors of sexual violence, specifically in postcolonial societies. To do so, this study analyzes the validity of the diagnostic approach, the implications of using the disorder, and postcolonial analysis of PTSD-focused aid. As a result, medical, social, and political concerns regarding the implications of PTSD-focused aid for survivors will be raised.

Poster #32

Individual Differences in ERP Correlates of Delay Discounting

Author & Presenter: Sydney Lolli **

Advisors: Andrea Patalano and Chuck Sanislow

Delay discounting is a well-established phenomenon and denotes the decrease in subjective value of a reward as a function of how much time individuals are forced to wait for it. Past work has shown that an individual's willingness to wait for the future option is dependent on a number of factors, including emotional state, personality traits, and past experiences. In this thesis, we observed relationships between state emotion, personality, choice behavior, and ERP correlates in a delay discounting paradigm. We identified variations in ERP processing associated with these individual differences, including pre-decisional attentional resource allocation and post-decisional error processing. We found that P3 amplitudes, reflecting the former, are negatively affected by attentional impulsivity, state anxiety, and rumination, but positively affected by gratitude. Variations in error processing were observed in the discounting task: ERN (unconscious) results suggested that unconscious error categorizations reflect choice



behavior tendencies, and more impulsive individuals experience more substantial conscious error processing when choosing the immediate option. These results provide evidence that individual differences and state affect influence attentional resource devotion to a task, as well as the process by which an individual evaluates their performance.

Poster #33

How the Race of the Shooter and Number of Victims Impact Perceptions of Shooting Events.

Authors & Presenters: Elizabeth Arslanoglou, Brittany Curran, Elizabeth Weinstein
Advisor: Kathleen Schmidt

In 2015 alone, more than 300 mass shootings occurred in the United States (“Mass Shootings,” n.d.; “Mass Shootings in 2015,” 2015). Understanding public perceptions of gun violence and its perpetrators is crucial for future prevention, education, and intervention strategies. The objective of this study was to assess how people interpret a shooting incident when the shooter’s race (Black, White, or Middle Eastern) and the number of fatalities (1, 4, or 11) in a mock police report are varied. Participants were asked to read the shooting scenario, complete a filler task, respond to questions related to their interpretation of the shooting incident and gun control laws, and complete an Implicit Association Test. Results indicated that when the incident resulted in four or eleven fatalities, the shooter was more likely to be perceived as mentally ill ($\eta_p^2 = 0.043$) and incident was more likely to be rated as premeditated ($\eta_p^2 = 0.045$). Additionally, the shooter’s motivations were perceived to be political when the incident resulted in four or eleven fatalities ($\eta_p^2 = 0.033$) and the race of the shooter was Middle Eastern ($\eta_p^2 = 0.005$). Lastly, participants were more likely to attribute the shooting incident to gang activity when the race of the shooter was Black ($\eta_p^2 = 0.007$).

These findings offer a necessary comparison point that may inform gun control policy and efforts to reduce prejudicial interpretations of gun violence.

Poster #34

Attributions of success and failure of male and female CEOs.

Authors & Presenters: Paul Andrick, Yvette Yun
Advisor: Kathleen Schmidt

Previous work has suggested that successes of male leaders are more likely to be attributed to internal causes than successes of female leaders (e.g., Stevens and DeNisi, 1980). The objective of this study was to examine how participant implicit and explicit gender bias and gender identification influence their attribution of the successes and failures of male and female leaders. Participants were asked to read a profile of a company that sells stereotypically male or female products with a male or female CEO, answer questions about potential causes of the CEO’s success or failure, and hypothetically invest money in the company. Participants also responded to items assessing their attitudes and stereotypes about men and women and completed a Gender Career or Gender Identity Implicit Association Test. Contrary to hypotheses, CEO gender, product type, and company success did not interact in predicting attributions or investments. However, participant individual differences including gender and implicit bias predicted several outcome variables. This research provides further understanding of how gender identification and stereotypes influence evaluation of male and female leaders.

**Poster #35****Ideological Individual Differences Predict Racial Biases**

Author & Presenter: Rilwan Babajide

Advisor: Kathleen Schmidt

Research using the Implicit Association Test (IAT) and other implicit measures has provided insight that many people demonstrate implicit negative attitudes and stereotypes towards certain racial groups, despite egalitarian beliefs or efforts to mask biased beliefs explicitly (e.g., Nosek et al., 2007). Using data from visitors to the Project Implicit website, we investigated the relationships between implicit and explicit racial biases and ideological individual difference scales. Bayesian Racism, Social Dominance Orientation, and Right-Wing Authoritarianism significantly predicted both implicit and explicit biases against people of color on the Race, Skin Tone, and Race-Weapons implicit and explicit measures. However, these effects were quite small. Further understanding of the ideological underpinnings of racial prejudice and stereotyping may provide a basis for interventions to combat these widespread biases.

Poster #36**Kindergarten Kickstart: Outcomes of a Research-Based Summer Pre-K Program**

Author: & Presenter: Stephanie Blumenstock *

Advisor: Anna Shusterman

Preschool helps prepare students with the cognitive and social skills they need to be successful in school. However, many children, especially those from low-income families, do not have access to high-quality preschool programs. This thesis evaluated the outcomes of Kindergarten Kickstart, a research-based summer pre-K program targeting children from low-income families with little to no prior preschool experience in Middletown, Connecticut. In Study 1, Kindergarten Kickstart students ($n = 65$) were tested at the beginning and end of the program on a broad assessment of school readiness and on assessments of numeracy and executive function. Results indicated that Kickstart students made significant gains on all measures. In 2015, Kickstart students ($n = 14$) exhibited significant growth on school readiness and executive function compared to students attending a different local preschool ($n = 7$). Study 2 used semi-structured interviews to examine the perspectives that Middletown community members ($n = 14$) held about Kickstart. Participants held overall positive views of the program, reporting that it helped students and their parents transition to kindergarten. These findings suggest that Kindergarten Kickstart has had positive effects on its students and their families, and provide evidence for the efficacy of a short-term, research-based preschool program.