

Undergraduate Honors Projects – 2004-2005

Will Backner

Reciprocal Affect During Peer Interaction Tasks: Differences Between Normative and Antisocial Teens and Between Genders

Advisor: Dr. Thomas Dishion

Friendships influence both children and adult's development. This makes the study of friendships important to the way that children develop and to the way adults see the world and change as they grow older. In this study, data taken from videotapes of a teen and their same sex friend interacting will be used to examine the way that teens respond to the affect of their friends. The data is comprised of affect codes and time stamps that records a teen's affect throughout the peer interaction. Statistical analyses will be done to determine whether the teens reciprocate the affect of their friends and the way that this reciprocation may differ between genders and between antisocial and normal teens. It is hypothesized that females will reciprocate affect at a higher rate than males, and that normal teens will reciprocate more than antisocial teens. If these hypotheses are supported, it will lend insight to what makes friendships "good." It may also give us insight into why antisocial people have difficulties with relationships throughout their lives.

Sara Banks

Spatial perception and spatial working memory in schizotypy

Advisor: Dr. Patricia White

Deficits in spatial perception (Hardoy et al., 2004) and in spatial but not object working memory impairment (e.g., Tek et al., 2002) have been found in schizophrenic patients relative to controls. Recent research suggests that some cognitive deficits observed in patients with schizophrenia also can be found in individuals diagnosed with schizotypal personality disorder, although spatial perception and spatial working memory were not tested (Matsui, Sumiyoshi, Kato, Yoneyama, and Kurachi, 2004). This study used the brief form of the Benton Judgment of Line Orientation task (BJLO) to assess spatial perception and spatial working memory in nine subjects psychometrically assessed with schizotypal personality disorder versus 15 control subjects. In standard administration, BJLO assesses spatial perception while delaying response to a spatial template forces subjects to retain spatial relationships in working memory. Right and left hemifield responses were grouped separately under both standard and delayed administration to test for laterality deficits known to be present in schizophrenia, but not yet tested in schizotypy. In comparison of standard to delayed stimulus presentation, a trend for delayed response x laterality was observed in schizotypal but not control subjects. During the delayed response task, which tapped spatial working memory, deficits in the right hemifield performance were observed in schizotypal subjects, suggesting deficits in left hemisphere function for spatial working memory but not standard administration or spatial perception. This finding is consistent with research showing deficits in spatial working memory tasks in schizophrenia and suggests another possible link in neurocognitive performance between schizotypy and schizophrenia.

Kindra Carroll

Stressful Disruption of Attentional Networks in Schizotypy?

Advisor: Dr. Patricia White

Schizotypy is considered to fall within the schizophrenia spectrum, (e.g. Kendler, Gruenberg, & Strauss, 1981) and schizotypal subjects possess some attentional impairments relative to controls (for a review see Raine, 1995) although components of visual attention are not yet well studied. In normal subjects, at least 3 networks play a role in visual attention, alerting, orienting and executive control (Fossella, Posner, Fan, Swanson, & Pfaff, 2001). In this study, visual attentional networks were assessed during baseline and stressor conditions in 9 psychometric schizotypal and 15 normal comparison subjects using the Attentional Networking Task (ANT). Stress was manipulated by instructing subjects that performance was being videotaped for review by a panel of experts. Reaction times during stress showed a significant delay across groups for the alerting network but not orienting or executive function. This finding is consistent with the relationship of noradrenalin to alerting observed in previous research and also serves as manipulation check for the efficacy of the intended stressor. When right and left-handed responses were grouped separately and compared across tasks, schizotypals tended to differ from controls in responses to the executive control network only. During baseline and stress, controls showed greater difference between congruent and incongruent targets (measure of executive control) in left than right-handed responses, while schizotypals failed to show laterality differences during baseline but not stress. While preliminary, these results may suggest altered executive control in schizotypy and possible dysfunction of the dopamine neurotransmitter which is associated with the executive control network.

Nicole Chiapella

Disorganization in the adult attachment interview: Physiological differences between the secure and unresolved classifications

Advisor: Dr. Jennifer Ablow

The unresolved classification in the Adult Attachment Interview is indicative of the worst outcomes for children including psychopathology, clinical anxiety and depression. This classification is characterized by brief periods of disorganized speech and lapses in monitoring and discourse. It was hypothesized that during the periods of disorganization present in women classified as unresolved would be heightened physiologically when compared to women classified as secure. Physiology is indicative of behavior as well as a person's ability to regulate themselves using their autonomic nervous system. The measures of heart rate and respiration sinus arrhythmia (RSA) were compared between the two groups. An independent samples t-test found that women classified as unresolved showed a significant increase in RSA during periods of disorganization when compared to when women classified as secure were discussing loss during the course of the interview. This result supported the hypothesis that physiology would be heightened for women classified as unresolved.

Barbara Cichosz

Perceptions of Diversity in the Self and Others

Advisor: Dr. Sara Hodges

The current study seeks to capture individuals' diversity, their perceptions towards identity features and the ways these perceptions interact with their knowledge of others. Participants were 70 undergraduates at the University of Oregon. A three-part questionnaire asked participants to identify themselves on a variety of social identity features within the "ADDRESSING" model (Hays, 1996, 2001) and to rate the valence and strength these features had on their lives currently. Participants also indicated their knowledge of the social identity features in three other people in their lives now. Contrary to hypothesis, there was no significant difference between modal and non-modal participants' knowledge of others. Results also suggest that participants whose identity features made them non-modal within the sample rated the features that made them non-modal as having a less positive influence on their lives than did participants who were modal for these features.

Alicia Craven

Infants' Segmentation of Dynamic Action: The Effect of Familiarization to Novel Stimuli

Advisor: Dr. Dare Baldwin

Every day, infants observe and make sense of the complex, dynamic actions of the people around them. One strategy both adults and infants use to make sense of this action stream is segmenting the ongoing act into its smaller-level intentional component (i.e. — cleaning a kitchen is processed as reaching for a towel, picking up a dish, etc.). This study investigated the extent of 10- to 11-month-old infants' action segmenting skills (N=16), and how these skills are effected by infants' previous level of familiarity to an action sequence. After an initial period of familiarization to a video of continuous, everyday action, infants were shown a series of eight test trials (4 of which involved the movie seen during familiarization, and 4 of which were entirely novel to the infant) that highlighted either the completion of intentional acts (endpoint test videos), or moments that occurred in the midst of intentional acts (midpoint test videos). Infants showed a crossover pattern of results such that they looked longer at endpoint test videos when the stimuli were novel, and longer at midpoint test videos when they'd had previous exposure to the stimuli. These findings demonstrate that infants actively engage in online segmentation of dynamic action, and that their action processing strategies change depending on their familiarity with the action they're viewing. Implications for autism are also discussed.

Natalie Davis

Demand Characteristics and Response Biases on the MMPI-2

Advisor: Dr. Jason Quiring

The current study was designed to measure the effect of artificial demand characteristic instructions for inducing response biases and measuring the effects of those biases between two subject groups: (1) subjects who were instructed to lie that everything was going well for them, and (2) subjects who were instructed that they had many problems in life including many mental health problems. An overall significant difference was found between subjects who were directed to 'lie bad' and those directed to 'lie good.' Results suggested that the MMPI-2 successfully detected a difference in people presenting in an overly healthy or unhealthy way. This study adds to the discussion about how institutional demand characteristics may elicit patients' response biases on measures of psychopathology; and, understanding these effects is important for our ability to accurately diagnose, medicate and treat patients with psychopathology.

Wanda Dixon

Rule Compliance in Individuals with High-Functioning Autism and Asperger Syndrome

Advisor: Dr. Debra Eisert

The American Psychiatric Association (APA) recently accepted high-functioning autism (HFA) and Asperger's Syndrome (AS) as disorders on the Autism Spectrum. There is an ongoing debate and continuing research on whether these two disorders are distinct conditions. This study looks at rule compliance in these two groups to determine if there is a difference in how they understand and comply with rules. A total of 18 parents, of adolescents aged 11 to 18 and identified with either HFA or AS, answered a 37-item questionnaire regarding rules compliance by their teens. The results demonstrate that the two groups differed significantly overall in their compliance with AS adolescents being more resistant to compliance.

John Downes

Gender, Affect and Decision Making

Advisor: Dr. Ellen Peters

A series of two studies related decision making to affect and gender. In Study 1, participants responded to a series of questions measuring the attractiveness of a \$9 bet in a Loss and a No loss condition and affect to that \$9 bet (ie, how “good or bad” they felt about it). In Study 2, they rated their perceived risk of nuclear power when “nuclear power” was written in either a nice font or an ugly font. Findings were mixed when considering the hypothesis that women may use more affect in the decision making process. On the attractiveness scale men found the bet more attractive, in both the Loss and the No loss conditions. On the affect scale of “good/bad” men also felt more affect to the \$9. Lastly, women rated the perceived risk of nuclear power higher than men on its own but the risk ratings of men were higher in the ugly font versus nice font condition while women’s ratings were not influenced by the font. This gender difference may have been due to the ceiling effect for women’s risk ratings.

Scott Fraundorf

Betrayal trauma and attention: Emotional processing systems affect response to trauma related information

Advisor: Dr. Michael Posner and Dr. Mary Rothbart

This study examined the influence of an emotional set on processing of negative words related to trauma. Participants who were high or low on a scale of trauma experiences were randomly assigned to complete either an emotional writing task or a neutral writing task, designed to establish either an emotional or a more neutral processing set. Following this task all participants pressed one of four computer keys to indicate the color of words presented by computer. Each word was either emotionally neutral or trauma related. Data will be collected during April and early May 2005 and presented in terms of reaction time differences between neutral and trauma words. The results are expected to support the hypothesis that participants who experienced trauma respond more slowly to the trauma words than the neutral words when primed with the emotional task but respond to both categories at the same speed when primed with a neutral task. Participants who have not experienced trauma are hypothesized to respond at the same speed regardless of prime. These results would suggest that an individual’s response to trauma related information depends on whether he or she has been set to use an emotional or neutral processing system.

Christina Gamache Martin

The Relationship of ADHD Symptomatology and Teachers’ Perceptions of Maltreatment Effects on Children’s Learning and Behavior

Advisor: Dr. Jennifer Freyd and Lisa Cromer

Stimulant medication sales increased 500 percent between 1991 and 1999 (U.S. Drug Enforcement Agency, 2000). Has ADHD become an epidemic: Or, has there been a massive increase in the over-diagnosis of ADHD (Leslie, 2004)? Weinstein et al. (2000) reported that ADHD presentation in children resembles trauma symptoms. Further, maltreated children are often diagnosed with both ADHD and PTSD (McLeer et al., 1994). ADHD (Forness & Kavale, 2001) and maltreated children (Trocmé & Cauce, 1995) are also largely represented in special education. Nearly one-third of children in special education are maltreated (Sullivan & Knutson, 2000). Similarity between ADHD and trauma symptomatology calls etiology into question. Because of teachers’ important roles in children’s lives, this study examines teachers’ perceptions of maltreatment effects, beliefs about stimulant medication and the causes of ADHD, and motivations for special education referral. Teachers (N = 156) completed an internet survey. As predicted, teachers’ described maltreated children as exhibiting many ADHD symptoms. However, teachers believing ADHD to be biological were not more likely to support stimulant medication use, and teachers who supported stimulant medication use were not more likely to refer students for special education. Implications for maltreated children identified as having ADHD are discussed.

Mary Gray

Betrayal Trauma, Acculturation and Historical Grief among Native Americans

Advisor: Dr. Jennifer Freyd and Lisa Cromer

Since European contact, Native Americans have experienced loss of life, land, and culture causing intergenerational trauma and unresolved grief (Yellow Horse Brave Heart & DeBruyn, 1998). Not surprisingly, identification with Native American heritage has been found to be affected by the individual's level of acculturation in, or resistance to, dominant white culture, as well as ownership of traditional customs and beliefs (Garrett & Pichette, 2000). Acculturation studies in the extant literature report ways to measure acculturation and discuss the relationship between acculturation and psychological health. They do not however, examine the relationship of acculturation to intergenerational trauma. The current research documents prevalence rates of historical grief and betrayal trauma to better understand how these relate to Native American identity and acculturation. Native Americans in Oregon (N = 46) participated in the study. Participants completed the Historical Losses Scale (Whitbeck et al., 2004) Native American Acculturation Scale (Garrett & Pichette, 2000) and the Brief Betrayal Trauma Survey (Goldberg & Freyd, under review). As predicted betrayal trauma is negatively correlated to acculturation $r = -.256$, $p < .05$, meaning that Native Americans who are less acculturated to dominant white culture experience more trauma. Results are discussed in relation to historical losses and Native American diversity.

Andrea Hopkins

Activation asymmetry of prepulse inhibition in high and low trait anxious females during stress

Advisor: Dr. Patricia White

The startle blink (muscle reflex to loud sounds) is reliably reduced in humans and other species when preceded by a weak pre-stimulus (Dawson, Schell, Swerdlow, & Fillion, 1997). This pre-pulse inhibition (PPI) is hypothesized to reflect an automatic pre-attentive inhibitory process that protects initial processing of the auditory prepulse by dampening effects of startling stimuli (Dawson et al., 1997) indexing sensory filtering. PPI is disrupted in schizophrenia and other psychotic disorders (Filion, Dawson, & Schell, 1998) although PPI has not been well-examined in anxiety disorders other than PTSD. Possible laterality shifts associated with anxiety were assessed using a dichotic listening task and bilateral eye recording during baseline and stress conditions in 8 high trait anxious and 12 low trait anxious right-handed females. Examination of startle blink amplitudes suggest that high trait anxious participants fail to show habituation of the startle blink during baseline relative to low trait anxious participants, while both groups show reduced habituation in startle blink amplitude during stress. PPI is reduced in high trait anxious participants during baseline conditions but effects of stress differed for binaural and monaural delivery. With regard to activation asymmetry, at a pre-attentional probe during baseline and across probes during stress, high trait anxious subjects show reduced PPI in the left eye/left ear, suggesting right hemisphere difficulties with auditory filtering. This finding is consistent with the more general literature reports of right hemisphere over-activation in trait anxiety in studies of spatial EEG.

Logan Johnston

Impact of Ethnic Diversity and Familiarity on Similarity Judgments

Advisor: Dr. Holly Arrow

Studies of person perception have found that people routinely categorize others according to observable surface characteristics such as gender and ethnicity (Stanger, Lynch, Duan, & Glass, 1992). Less information is available on the degree to which such categories influence perceptions of self-other similarity among interacting dyads, although some theorizing suggests that the impact of these surface characteristics should decline over time as people get to know each other better (Moreland & Levine, 1992). Data from 30 five-member self-organized task groups was used to investigate the degree to which both ethnic similarity or difference and familiarity (inferred from length of acquaintance) affected self-other judgments of similarity and difference for dyads embedded in these groups. Some

members were interacting for the first time, while others had known each other for months or years. Greater familiarity was predicted to increase both similarity and difference ratings based on the reasoning that people who knew each other better would discover both more ways in which they were similar and more dimensions of difference. People who had known each other longer rated one another as more similar and less different than those who had known each for a shorter period. Similarity and difference ratings were negatively correlated. An unexpected gender effect was found with regards to judgment discrimination. Women appear to be more discriminating in their judgments of similarity. In dyads that are different along both gender and ethnic composition lines, women saw the least similarity between themselves and the other dyad member. This effect was not seen in any other combination of ethnic and gender composition.

Diana Kerr

Parental Support, Validation, and Positive Affect: Relationship Quality with Adolescents and Antisocial Behavior

Advisor: Dr. Thomas Dishion

The parent-adolescent relationship has been shown to influence adolescents' development of interpersonal problem solving skills and association with deviant peers. The present study attempts to answer how positive parent-adolescent relationship quality (PPRQ) characterized by parental validation and positive affect differentiates between normative and high-risk youth, African American and European American youth, and between male and female youth. The study was a secondary analysis of a sub-sample of 133 participants' observational data, coded with the Simple Affect Coding system (SACS) from a study called Project Alliance. It was hypothesized that normative youth would have a higher mean score of (PPRQ) compared to high risk youth, African American youth would have a lower mean score compared to European American youth, and that males would have a lower mean score compared to female youth. Results showed significant effects of risk group and ethnicity on (PPRQ) and supported the research hypotheses. A significant interaction effect of risk group and ethnicity on mean scores of (PPRQ) showed normative European American youth to have higher mean scores compared to African American youth, but no difference in mean scores between high risk European American and African American youth. Non-significant effects of gender or the interaction of gender, ethnicity, and risk were found. The findings provide implications for parental intervention and prevention research and indicate a need for further replication of the study with the consideration of socioeconomic status.

Angela Lansing

The Effects of Parenting Environment and Child Theory of Mind on Preschoolers' Well Being

Advisor: Dr. Kirby Deater-Deckard and Katy Cahill

This study evaluates the link between the interaction of child theory of mind and parent child mutuality as a moderator of child well-being. Parent-child mutuality and cognitive ability have been shown to have an effect on child well-being. Yet, there is a limited body of knowledge about the interactions between parenting and cognitive ability in relationship to child self-concept. The present study is designed to examine these relationships as they pertain to preschool age children. Families with fraternal (DZ) and identical (MZ) twin pairs were evaluated on parenting environment (PARCHISY) child theory of mind (Stanford-Binet cognitive ability score) and child self-concept (Eder puppet interview). Results are hypothesized to predict the effects of parenting environment and child theory of mind on child well-being.

Brittni Lauinger

Selective Auditory Attention and Socioeconomic Status in Young Children: An ERP Based Study

Advisor: Dr. Helen Neville and Dr. Lisa Sanders

This study examined the relationship between selective auditory attention in children and socioeconomic status (SES) through an event-related potential (ERP) based paradigm. Selective auditory attention is the ability to pick out which sounds you want to hear and which you want to ignore, also known as the “cocktail party effect” (Cherry, 1953). SES is a factor of interest because it is very strongly related to cognitive ability in children (Noble, Norman, & Farah, 2005). SES was measured by the Hollingshead Four-Factor Index, a composite based on the child’s mother’s and father’s occupation and level of education (Hollingshead, 1975). The subject population was defined as normally developing children, ages 3.5 – 7.5 years old, and representing a continuum of SES levels (N = 46). The current study uses a paradigm in which linguistic and nonlinguistic probes are embedded in two simultaneous narratives to measure the auditory attention effect by means of ERPs. The attention effect is the difference in the ERP response to probe stimuli embedded in the attended versus the unattended stories. The first hypothesis was that 3.5 – 5 year old children in general would show similar attention effects to those of 6 – 7.5 year old children. The second hypothesis was that, when broken down by SES, children from high and low SES families would show different attention effects. Analyses of the data showed that the 3.5 – 5 year old children did show attention effects similar to those seen in 6 – 7.5 year old children. Also, when age groups were combined and divided (by median split) into two age-matched SES groups, differences were found. Although both high and low SES groups showed significant attention effects, only the high SES group showed a significant difference by probe type, an effect that has been shown in adults (Coch, Sanders, & Neville, in press). This may suggest that subjects from high SES families may be better at attending specifically to the story and therefore the linguistic probes on the attended side are also attended. The low SES group may be attending to anything coming from the attended story.

Paul Monson

The Role of Event Plausibility in Autobiographical Memory Suggestion

Advisor: Dr. Jennifer Freyd and Lisa Cromer

Research in memory suggestion has found that adults are susceptible to suggestion of an impossible event: meeting Bugs Bunny at Disney (Braun, Ellis & Loftus, 2002). The present study attempted to manipulate event plausibility in order to investigate the role of event plausibility (Pezdek, Finger & Hodge, 1997) in memory suggestion. Participants were University of Oregon undergraduates (N = 58) participating for credit in psychology courses. Participants read an autobiographical advertisement about an event in Disneyland that varied on event plausibility and possibility. It was hypothesized that event plausibility, and not possibility, would affect memory suggestibility. Specifically, it was predicted that events low in plausibility would be less suggestible than events high in plausibility. Results were not significant. Directions for future research are discussed.

Camilla Nermon

Perspective-Taking and Perceived Overlap Between Representations of Self and Other

Advisor: Dr. Sara Hodges

This experiment investigated the effects of different perspective-taking instructions on perceived overlap between the self and other. Participants were assigned to one of three conditions: the “imagine target” condition, where they were instructed to imagine how a videotaped target felt; the “imagine self” condition, where they were instructed to imagine how they personally would feel in the target’s situation; or the control condition, where they were given no perspective-taking instructions and were asked only to focus on factual information about the target. To measure perceived self-other overlap, participants adjusted two circles on a computer screen until the overlap of the two circles (or the distance between them) represented how close they felt to the target. With a preliminary sample collected (N = 56), the three groups did not differ significantly in terms of perceived self-other overlap. However, there was a trend for participants in the “imagine target” condition to perceive more overlap with the target than participants in the “imagine self” and control conditions, suggesting that imagining how another person feels evokes

stronger feelings of closeness with that person than imagining how one would feel in the person's place or objectively observing that person.

Chiew Woon Ng

The Effect of Negative Emotions on Mere Exposure Effect

Advisor: Dr. Paul Dassonville, Dr. Sanjay Srivastava, Katie Burns

Mere exposure effect is a robust phenomenon in which the mere exposure to a particular stimulus will enhance an individual's attitude toward it (Zajonc, 1968). Additional research found that this enhanced preference for the exposed stimulus also extends to novel, but similar, stimuli (Zajonc, 2001). Murphy (2001) suggested that the repeated exposures might be sufficient to create a positive mood state and result in positive evaluations of the exposed stimulus. This study will investigate the impact of a negative mood state on the mere exposure effect. Participants will be randomly assigned to one of two conditions, "no mood induction" or "frustrated mood induction" and asked to perform a subtraction task orally. Those in the "no mood induction" condition will perform the subtraction task without interruptions, whereas, those in the "frustrated mood induction" condition will be continuously interrupted throughout the task. Participants in both conditions will then be exposed to 15 nonsense words subliminally flashed at different exposure rates. After the exposure period, they will be asked to rate the words for both liking and familiarity. It is predicted that the frustrated mood induction will impede the necessary positive mood state from developing and the mere exposure effect will not occur.

Yvette Pederson

A Comparative Analysis of Adolescent Language

Advisor: Dr. Thomas Dishion

Comparisons of vocabulary in conversation between at risk and normative adolescents were examined to determine if language has the potential to promote problem behavior within the at risk group. All volunteers for this secondary analysis were males aged 14 to 18 and of African American, Latino, Asian American or Caucasian descent. Their conversations about drugs and alcohol were transcribed and analyzed by the Linguistic Inquiry and Word Count Program, which designates each word of conversation into 1 of 74 categories, calculating a percentage for each. Preliminary review suggests at risk youth expressed a higher percentage of swearwords, the pronoun "I," along with words indicating negation and negative emotion. Language, a common denominator within groups, could prove to be a valuable predictor for early detection and intervention of problem behavior with further linguistic assessment.

Giuseppe Pellegriti

Schizotypal Gender Differences on Trail Making Performance

Advisor: Dr. Patricia White

Numerous studies report executive function deficits in schizophrenia patients. For example, schizophrenic subjects have been found to produce slower scores on both motor speed (TMT-A) and executive function (TMT-B) trailmaking tasks compared to controls (Woelwer & Gaebel, 2002). In contrast, schizotypals report similar but milder symptoms and show executive function (TMT-B) but not motor speed (TMT-A) deficits relative to controls (Keefe, Silverman, Roitman, & Harvey, 1994). This project compared performance of psychometric schizotypals (n = 9) to controls (n = 12) on the traditional TMT tasks and an expanded version of TMT with 5 tasks, the CTMT, during baseline and stress conditions. In this preliminary and very small sample, results were mixed. Group differences were not found on either motor speed or executive function TMT tasks, but were found on two of the

four tests of the CTMT. On CTMT 2 (which includes distractor stimuli) schizotypal males but not females tended to complete the task more slowly across baseline and stress conditions. On CTMT 4, which alternates word and numeric representations of numbers, male schizotypals were slower during stress than male controls, while female schizotypals were slower than female controls during baseline but not stress. Due to the extremely small sample size and failure to replicate previous TMT-B deficits among schizotypals, these preliminary findings are viewed with caution but suggest that gender may play a possible role in stress effects on executive function in schizotypy; data will continue to be collected.

Melissa Pistono

Recovered Memory: Scientific Research and its Implications for the Justice System

Advisor: Dr. Jennifer Freyd

The recovered memory debate has had an impact on more than just the scientific community; its effects can also be seen in the court room. Recovered memories; How do they occur? Why does it happen? What are the mechanisms involved? How frequently does it occur? Are recovered memories accurate? And how does the justice system use scientific research to evaluate the validity and reliability of recovered memory cases presented in a courtroom? This paper reviews the research on recovered memories and examines how the judicial system utilizes scientific research when determining the admissibility of testimony regarding recovered memories.

Scarlet Rappl

Sleep and Memory Inhibition: Investigating the Effect of Sleep on the TNT Paradigm

Advisor: Dr. Michael Anderson and Ben Levy

Previous research using the Think/No Think (TNT) paradigm has demonstrated that people are able to intentionally suppress the memory of specific words (Anderson and Green, 2001). The current study examines the possible relationship between sleep and memory inhibition, as measured by the TNT paradigm. Participants were randomly assigned to sleep either 4-5 hours or 9-10 hours on the night before the experiment took place. The day of the experiment, each participant completed a computerized TNT task designed to measure their ability to inhibit the memory of specific words. After completing the task, participants completed two detailed questionnaires, one regarding the mental techniques they used to complete the TNT task, and the other surveying their sleep habits. Preliminary findings do not suggest a difference in performance between sleep-deprived and non-sleep-deprived individuals on the TNT task as hypothesized.

Santiago Garcia Rodriguez

Effect of Surface- vs. Deep-level Diversity on Self-Other Similarity Judgments

Advisor: Dr. Holly Arrow

The current study examines the effects of diversity on the evolution of judgments of similarity within task groups. Literature on social psychology sustains that in the initial stages of group development, members pay more attention to surface-level traits, such as gender or ethnicity, when evaluating others. As the group interacts, group members shift their attention to deeper-level attributes, such as values and beliefs, to make their judgments (Moreland & Levine, 1992). Data on 44 five-person task groups that met for three consecutive weeks, and whose members were of same or different ethnicity, were used to investigate the evolution of similarity judgments. Results showed that males followed the expected pattern with higher ratings of similarity for same-ethnicity than for different-ethnicity members, but with means converging over time. However, female groups showed unexpected results giving higher ratings of similarity for ethnically-different than for ethnically-alike group members keeping means constant over time.

Cassandra Tyson

Context, Induced Motion, & Spatial Localization: An Induced Motion task comparing real and illusory contours.

Advisor: Dr. Paul Dassonville

The visual system uses an abundant number of contextual cues in order to process incoming information about the environment. Although usually reliable, occasionally cues are inaccurate, leading to the experience of visual illusions. The perceptual system is vulnerable to illusion, and can easily be misled by the context of a visual scene into misperceiving object characteristics such as size, orientation, location, and movement. The context of a large frame offset to one side in an otherwise impoverished visual environment will cause the subjective sense of straight ahead to drift toward the center of the frame, known as the Roelofs effect (Roelofs, 1935, Brogsole, 1967, Dassonville & Bala, VSS 2002). A stationary target presented inside a moving frame will appear to move in the opposite direction, a phenomenon known as Induced Motion (Dunker, 1929). The motion induced in the stationary target can best be explained by the Induced Roelofs effect (Bridgeman & Klassen, 1983) in that the shifted frame causes the target mislocalization. What it is about the context of the frame that leads to the mislocalization of the target is unresolved; is it the low level physical characteristics of the stimulus, or higher level processing? To examine this question, we compared the magnitude and time course of the illusion of a real frame with one created using illusory contours. Illusory contours are created by differences in luminance, texture, or color and result in the perception of figure against ground where no actual boundaries exist. In the current experiment, the effect of an illusory rectangle (Kanizsa type) was compared to that of a real rectangle during a stroboscopic Induced Motion task. The first experiment examined the magnitude of the illusion. The second experiment sought to determine whether or not there was a significant difference in the time course of the illusion comparing real and illusory conditions. The Kanizsa figure evoked a small but significant Induced Motion effect, however there was no difference in the time course detected by the current experiment.

Diana Woodworth

Comparing the observed emotion in adolescent-parent interaction

Advisor: Dr. Thomas Dishion

The study is a secondary analysis using the 117 adolescent-parent, video-taped interactions that have been coded using the Simple Affect Coding System (SACS). The objective of this study was to compare the RPMs and durations of positive affect, validation, distress, anger and neutral states between at-risk and normative subjects, between African-American and European-American subjects, and between female and male adolescent subjects. Comparisons derived from the coded emotion of the adolescent-parent interactions revealed the following: 1) significantly higher RPMs and durations of anger among at-risk adolescents and moms than among normative adolescents and moms, 2) significantly higher RPMs and durations of positive affect among at-risk moms than among normative moms, 3) significantly higher RPMs and durations of validation among European-American moms and adolescents than among African-American moms and adolescents, and 4) significantly higher positive affect among at-risk adolescent girls than among at-risk adolescent boys.