

Undergraduate Honors Projects – 2006-2007

Hannah Banagale

Neural Basis for Mothers' Responses to Infant Distress

Advisors: Dr. Jennifer Ablow and Heidemarie Laurent

A mother's responsiveness to her child's cues on a neurobiological level is an important consideration in our understanding of the effect of psychopathology on mother-infant relationships. Previous studies have suggested that maternal responsiveness to infant cries is correlated with factors associated with a secure infant-mother attachment. However, research into the neural mechanisms that precede maternal behavior in response to infant cry is limited. Limitations of previous work on this subject prompted further research into the effects of depression on impaired maternal responsiveness. The current case-study examined two mothers' (a control participant and a depressed participant) neural activations in response to their own infant's cry compared to a control noise. Consistent with the hypothesis, the control mother produced neural activation typical of maternal response while the depressed participant showed no significant activation.

Martha Bose

The Influence of Siblings on Theory of Mind.

Advisor: Dr. Lou Moses

Heather Brule

Using Outdoor Adventure to Improve Perceived Control in People with Histories of Trauma and Oppression

Advisor: Dr. Anne Simons

Justine Calcagno

The Experience of Stigmatized identity: Variation in Trait and State Characteristics

Advisor: Jonathan Cook

This study explores how characteristics of stigmatized individuals and characteristics of their conversation partners affect the experience of stigma in social interactions. African American and gay and lesbian participants reported about their thoughts and feelings after social interactions over the course of a week. Individuals with higher levels of trait stigma consciousness tended to have higher levels of identity centrality, suggesting that expecting to be stereotyped may be a feature of group identification. When interacting with out-group members stigmatized individuals tended to feel more stereotyped than when interacting with in-group members, suggesting that inter-group interactions elicit negative feelings in stigmatized individuals, but in-group interactions do not. This project

adds to the growing body of literature documenting how the effects of stigma are variable across stigmatized individuals and their interaction partners.

Stephanie Hyde

A Study of Brain Organization for Language Using Complimentary Methodologies

Advisors: Dr. Helen Neville and Eric Pakulak

Timothy Matthews

Context Matters: Measuring Self-Other Overlap

Advisor: Dr. Sara Hodges

The current study investigated contexts of Inclusion of Other in Self (IOS) measures. The study compared Aron's original IOS paper measure to a newly developed "dynamic" IOS scale displayed on a computer screen. Both measures used overlapping circles as a way for participants to objectify perceived closeness. Furthermore, the study looked at relationship context (i.e. relationships with acquaintances versus relationships with romantic partners). It was hypothesized that if a person is asked to rate the closeness of his/her acquaintance first, then the ranking of closeness for the romantic partner will increase. The sample population consisted of sixty participants (20 male and 40 female) that were currently in a romantic relationship of six months or more. The study found that Aron's IOS measure does provide (while also limiting) possible answers for participants. In addition to finding that the "dynamic" scale is tapping the same construct as the original IOS, the "dynamic" IOS showed that participants move the 'other' circle more than the 'self' circle. The study also indicated that perceived closeness of a romantic partner significantly increases when participants are asked to complete an IOS measure for an acquaintance first.

Cristen McLean

Sexual Assertiveness in Sexual Decision-Making: Predictors, Consciousness, and Outcomes

Advisors: Dr. Jennifer Freyd and Bridget Klest

Previous research has indicated that sexual assertiveness is an important factor in sexual health (Morokoff, Quina, Harlow, Whitmire, Grimley, Gibson, & Burkholder, 1997). Here we studied sexual assertiveness by evaluating the person's implicit (unconscious) and explicit (conscious) decision rules about sexual initiation and refusal of sexual behaviors. We present evidence that childhood sexual abuse is associated with dissociation, which is disintegration between normally cohesive aspects of an experience (Bernstein & Putnam, 1986). Also we found that mental processes, including self-esteem and dissociation, do not have the same impact on implicit and explicit decision rules. Likewise implicit and explicit decision rules are predictive of different adult sexual outcomes. Our results indicate that implicit sexual decision-making impacts the person's sexual experiences in general, e.g. whether, overall, his or her sexual behaviors are satisfying, whereas explicit sexual decision making impacts discrete behavioral outcomes, such as specific risk-related behaviors or incidents of adult sexual victimization. The present research project builds on and elaborates a previous investigation by Zurbriggen and Freyd (2004). This present research was examined within the framework of mental mechanisms, Consensual Sex Decision Mechanisms (Freyd, 1996), and Consensual Sex Decision Rules (Zurbriggen and Freyd, 2004). The need for future and further research is discussed.

Rose McMahon

Infant Emotion Regulation as Predicted by a Mother's Accuracy at Interpreting Infant Facial Expressions

Advisor: Dr. Jennifer Ablow

Previous research has shown that how contingently a mother responds to her infant can influence her infant's recovery after an emotional stressor. Maternal responsiveness, however, may be influenced by a mother's ability to accurately interpret her infant's expression of emotions. Depressed mothers have longer delay times before responding to their infants emotional bids, which may reflect less accurate interpretation of their infants' expressed emotions. In this paper, we proposed that women's prenatal ability to accurately interpret infant expression of emotion would predict their own babies' ability to regulate their emotions during a stressful situation 5 months post partum. It also was hypothesized that mothers who reported higher depressive symptomatology would have infants who would be less successful at regulating their emotions. One hundred and five first time expectant women of low SES were recruited prenatally to participate in an ongoing longitudinal study. Prenatal women's ability to interpret infant expressions of emotions was investigated through her responses to 30 pictures of infant facial expressions. Women's prenatal levels of depression also were assessed through administration of the CESD. When the infants were 5 months old, mother-infant dyads visited the lab to participate in the still face procedure. Infant's ability to regulate their emotions was investigated through this paradigm and coded during the reunion episodes of the still face paradigm using a global coding scheme. Correlational analysis revealed trend level associations in the expected directions between the predictor variables and the infants' reengagement behaviors.

Kim Miller

Motor Imagery with Virtual Feedback Activates Primary Sensory-Motor Hand Representation

Advisor: Dr. Scott Frey

With the assistance of mirrors in movement exercises, studies show improvements in both phantom limb pain and stroke patient limb mobility. The mirror provides the illusion of movement in the absent or immobile limb by reflecting the healthy limb. However, it is unclear how the brain interprets and responds to this sensory input. Does it engage regions of sensory-motor cortex that represent the impaired and stationary limb? Do such effects depend on whether the impaired hand is dominant or non-dominant? This study uses functional magnetic resonance imaging (fMRI) techniques to examine brain activity within primary motor and sensory areas in healthy right- and left-handed adults during unilateral hand movements performed with and without mirror feedback and motor imagery. Specifically, we address how these conditions influence activity in sensory-motor cortex contralateral to the static hand (ROI-CS). The results indicate that hand dominance does not significantly affect responses of ROI-CS under these conditions. Combining data across groups, however, reveals a significant increase of activity in ROI-CS when motor imagery is combined with mirror feedback. This condition is significantly different from movement alone and movement combined with mirror feedback. We conclude that using a mirror to provide virtual feedback for imagined movements creates an effective stimulus for sensory-motor representations and could play a role in rehabilitation.

John Myers

Early Parental Presence and Self-Other Overlap: An Empirical Examination of Chodorow's Theory of the Reproduction of Mothering

Advisor: Dr. Sara Hodges

This study was inspired by Nancy Chodorow's (1978) Theory of the Reproduction of Mothering (TRM). The study empirically scrutinized Chodorow's hypothesis that male dominant, father absent societies in which women do most of the parenting for children of both sexes reproduce themselves by creating dissimilar atmospheres in which young girls and boys develop their gender identities. According to Chodorow, these disparate atmospheres make women view themselves in relationship to others while making men view themselves as separate from others. Ninety college students completed a battery of pen and paper measures that included, among other things, measures of self-other overlap and parental egalitarianism. TRM was not supported. However, parental egalitarianism was correlated with increased perceptions of self-other overlap with both parents in males and females. Furthermore, parental egalitarianism was associated with decreased perceptions of self-other overlap with close others in males.

Melissa Olson

Emotions and Children's Theory of Mind

Advisors: Dr. Lou Moses and Seraphine Shen

Kathryn Spaventa

Why Don't Kids Tell? Gender and the Disclosure of Abuse: Rates and Reasons of Gender Differences for Nondisclosure of Child Sexual, Emotional and Physical Abuse

Advisors: Dr. Jennifer Freyd and Shin Shin Tang

Boys are assumed to be more reluctant to disclose sexual abuse than girls, but empirical evidence is lacking. In addition, reasons for not disclosing CSA may differ. Previous qualitative research by Alaggia (2005) suggests that typical nondisclosure reasons for females are related to confusion about who was responsible for the abuse and feelings that she will be blamed or not believed, whereas males have a fear of being labeled homosexual (Alaggia, 2005). We investigated potential gender differences in likelihood of disclosure and evaluated reasons why males and females decided not to disclose their child sexual, physical and emotional abuse. Gender differences as well as gender similarities in reasons for nondisclosure of child sexual, emotional and physical abuse were found in responses to a questionnaire completed by a sample of college students.

Cara Swain

Trait Anxiety and the Efficiency of Attentional Networks

Advisors: Dr. Michael Posner and Brad Sheese

This study examines how trait anxiety is related to the efficiency of attention in adults. Previous research has shown that different levels of trait anxiety are related to differences in attention when individuals are presented with affect inducing stimuli. However, there is little empirical literature on how trait anxiety differentially affects attention assessments that are affectively neutral. While high levels of anxiety may be detrimental to performance on attention tasks, moderate levels of anxiety may facilitate task performance. Research has shown that moderate levels of anxiety can produce higher performance in learning tasks (Yerkes & Dodson, 1998). The current study

examines how differences among individuals in trait anxiety are related to task performance. To test this hypothesis, 19 participants completed a self-report questionnaire assessing trait anxiety. Participants scoring high, medium, or low in trait anxiety completed the Attention Networks Test (ANT) assessing the efficiency of the orienting, alerting, and executive attention networks. Overall performance on the ANT showed an influence of trait anxiety in which greater anxiety led to faster reaction times and more errors. There was also some evidence that the influence of anxiety was exerted through the alerting and orienting networks. A curvilinear relationship was found between anxiety and performance on the alerting network.

Eva Sylwester

Religious Housing Co-operatives and their Correlations with Religious Belief in Young Adults

Advisor: Dr. Robert Gordon

This study will investigate the effects of living in religious housing co-operatives on young adults. Residents of the co-operatives will be compared to a control group of University of Oregon students in other living arrangements. The hypotheses are that residents of the co-operatives will score lower than the control group on scales of religious maturity and higher than the control group on scales of general mental well-being.

Joshua Tabaldo

Kids, Verbs, and Intentions: How Children Use Intentionality in Verb Learning

Advisors: Dr. Dare Baldwin and Eric Olofson

Attempts to discern how children learn language have tended to focus on nouns, while fewer studies (Tomasello & Merriman, 1995) have examined the acquisition of verbs. While some investigators (e.g. Markman, 1989) have argued that children have assumptions about the referents of novel nouns, this approach to the study of verb learning is rare. This study hypothesizes one tool for verb acquisition uses intentionality cues, in which one assumes novel verbs refer to intentional actions. To test this hypothesis, we presented children (22- to 26-month olds) with a dual display of action videos, one being accidental and the other intentional. Children were asked to indicate which video depicted a novel verb, e.g., *blicking*. Preferential pointing toward the intentional action would suggest that children draw a link between intentional actions and novel verbs. Contrary to our predictions, however, children pointed to the intentional and accidental actions equally often.

Akina Umemoto

Implicit Knowledge about Target Location Guides Encoding into Visual Working Memory

Advisors: Dr. Edward Awh, Dr. Edward Vogel, Miranda Scolari

Explicitly cued information has been found to facilitate voluntary control over what is encoded into working memory. However, less is known about the effect of implicit knowledge about what information enters the system. The current study examined whether implicit knowledge about probable target location guides encoding into visual working memory. We used a change detection task where a sample array and a test array appeared on

each trial separated by a brief delay, and subjects determined whether the two arrays were identical or different in terms of a single color change. We manipulated the probability of change trials so that a specific quadrant (dominant quadrant) contained more changes than the other remaining quadrants (nondominant quadrants). Accuracy was significantly higher in the dominant quadrant, although subjects did not have explicit knowledge about the probability manipulation. This result was not due to a reduction in the response threshold for detecting changes in the dominant quadrant or a speed-accuracy trade-off in the nondominant quadrants. We suggest that the encoding of information into working memory can be influenced by statistical regularities in the observer's past experience.