



DEPARTMENT of PSYCHOLOGY

L. Starling Reid



**Undergraduate Psychology
Research Conference**

Accepted Abstracts

May 2020

L. Starling Reid

Lyne Starling Reid was born on March 15, 1920 in Greenville, MS. He received his B.A. (1943) and M.A. (1943) from the University of Mississippi. After an interruption by service in the United States Navy, his higher education culminated with award of the doctorate from the Ohio State University in 1949.

In the same year he was appointed to the Psychology faculty at the University of Virginia, where he remained until his premature death on April 19, 1978. He served as chairman of the Department from 1960 to 1972 and during 1977-78, periods during which the Department moved into new areas of psychology and 17 new faculty members were recruited.

The range of his scholarship was broad. From his master's thesis until 1960 he was involved in studies of animal learning and motivation. His original interest in human learning and memory developed during the years at Ohio State, and this became a major focus of his research during the final two decades of his life. Dr. Reid guided the writing of a number of dissertations on the topic, some of which continue to be widely influential. He invented a new method for studying the immediate memory span; this made possible its continuous monitoring. First presented in a paper with two students in 1960, it has become such a standard procedure in the investigation of memory that the detailed citation of its origin is now considered almost superfluous.

The wide respect that Professor Reid's original work inspired led to his appointment to editorial positions for several distinguished psychological journals. He served with marked success as program chairman of the Eastern Psychological Association. His professional stature was recognized by membership in the Society of the Sigma Xi and by fellowship status in the Division of Experimental Psychology of the American Psychological Association and in the American Association for the Advancement of Science. Additional recognition included his election to the Council of the AAAS Section on Psychology.

Many aspects of University life, beyond the classroom and the laboratory, profited from his considerable energy and broad competence. He was for many years secretary of the Assembly of Professors, and was for several years chairman of the Athletic Advisory Committee and was elected for a term as president of the Atlantic Coast Conference.

His most lasting contributions to the life of this University came from his extended tenure as Chairman of the Department of Psychology. As the number of faculty tripled during his dozen years as Chairman, the centrifugal forces of specialization could easily have fragmented a group that had always enjoyed a remarkable degree of cohesiveness and interaction. It is to his everlasting credit that such an outcome was avoided, and the solid underpinning for the presently diversified Department was preserved and strengthened.

Dr. Reid's leadership was unobtrusive but steady, farsighted and at the same time responsive to daily needs. He was consistently responsive to daily needs, quietly patient and yet persistent in his strivings for the betterment of the entire Department.

In 1983 a memorial lecture series was established to recognize his contributions to the Department and the University. The Annual L. Starling Reid Undergraduate Psychology Research Conference began in 2007.

Alternative Conference Format

As a result of the coronavirus pandemic and the restrictions to limit COVID-19 transmission, the in-person Reid Conference, originally planned for Friday, April 17, 2020, was canceled. As an alternative, we have compiled and published this collection of accepted abstracts.

Additionally, participating students are invited to publish their talk or poster through the Center for Open Science “OSFMeetings” online platform. OSFMeetings is a free poster and presentation sharing service for academic meetings and conferences. Please visit the following site to access participating talks and posters for the L. Starling Reid Undergraduate Psychology Research Conference 2020:

<https://osf.io/meetings/Reid2020/>

Participating Institutions

Christopher Newport University

College of William & Mary

George Mason University

Mary Baldwin University

Rochester University

University of North Carolina at Chapel Hill

University of Virginia

University of Washington

Accepted Abstracts

The Long-Term Implications of Childhood Adversity and Adolescent Trait Anxiety: Risk Factors for Emotional Abuse

Audrey Alexander

University of Virginia

Advisor: Joseph P. Allen, PhD

This study examined the effect of Adverse Childhood Experiences (ACEs) and adolescent trait anxiety as potential risk factors for increased rates of emotional abuse towards one's romantic partner in adulthood. This intensive multi-method, multi-reporter longitudinal study followed a diverse community sample of 151 individuals. Of these individuals, we also received reports from 87 of their romantic partners. This study utilizes 4 time points: Childhood – Ages 0-18 (retrospectively); and ages 16, 27 and 30. Perpetration of emotional abuse was measured via the romantic partners' reports of the target participants' emotional and physical abuse, blame, and coercion towards their partners. The partners also reported on the target participants' psychological aggression, their overall negativity in the relationship, and the overall amount of conflict in the relationship. Results supported the hypothesized effect, with higher exposure to ACEs and higher levels of trait anxiety predicting more perpetration of emotional abuse in adulthood. We also investigated trait anxiety as a mediator between exposure to ACEs and perpetration of abuse, but our results did not support this effect. The results of this study provide insight into childhood adversity and adolescent trait anxiety as unique risk factors for perpetration of emotional abuse that continues well into adulthood.

Exploring Psychological Richness through Photographs

Jun Seok Bae

University of Virginia

Advisor: Timothy D. Wilson, PhD

A psychologically rich life revolves around cognitively stimulating experiences, direct or vicarious, that broaden an individual's worldview. Previous research has shown that greater degrees of perceived cognitive change from novel events leads to a more psychologically rich experience. In the current study, we attempted to experimentally manipulate the psychological richness of an experience by maximizing the degree of cognitive change in presenting novel information. Specifically, we examined if the incorporation of a surprise factor leads to substantial richness that promotes changes in deeply held attitudes such as issues regarding firearms. We initially assessed 284 university students' relations to the psychologically rich life and preliminary attitudes on guns followed by an introduction of a seemingly neutral photograph containing underlying information about the Columbine High School massacre. We randomly assigned participants to receive either prior information about the photograph or no prior information with delayed revelation of the critical details. Afterwards, students reported the perceived richness from the experience, its impact to their preconceptions, and their concluding views on gun ownership. We found that the surprise factor induced by the delay in information revelation did not predict an increase in the students' ratings of the experience's richness or perceived impact to preconceptions, but that higher ratings of perceived cognitive impact from the experience was associated ($r = 0.14$) with stronger concluding attitudes towards regulating gun ownership. These results suggest that a rich experience may lead to greater attitude change, but a stronger manipulation may be required for generating richness.

Relationship Between Substance Abuse and Trauma

Mary Grace Beatty

Rochester University

Advisor: Robyn Siegel-Hinson, PhD

It has been suggested that there is a relationship between past trauma and an individual's likelihood of using unhealthy substances. Love and Torgerson studied individuals who have experienced PTSD and how that correlated with a history of abusing substances (2019). Twelve-step recovery programs for alcoholism have examined the relationship between childhood trauma and an individual's success in recovery. In addition, Martin, Eljdupovic, McKenzie, and Colman studied trauma, mental health, substance abuse, and crimes resulting in youth criminal charges as they interacted with later behavior (2007). This project utilized the CRAFFT (Car, Relax, Alone, Forget, Family/Friends, Trouble) questionnaire, a scale of 10 questions regarding what role alcohol and other drugs plays in an individuals' life, and the Life Events Checklist (LEC) questionnaire. This scale was used to assess the stressful and traumatic life events that one may experience throughout life. It was predicted that a Pearson correlation would reveal that the greater the number of traumatic events one has experienced (as measured by the LEC), the more likely one is to use unhealthy substances (including cigarettes and opioids). The hypothesis was shown to be correct. Among the most interesting findings, in particular, was that those who reported sexual assault (rape, attempted rape, made to perform any type of sexual act through force or threat of harm) were significantly more likely to have family and friend who noticed their drug or alcohol use and asked them to cut down.

Calming Effects of Mantra Recitation for Individuals with Autism

Rachel Corney

University of Virginia

Advisor: Rose Nevill, PhD

Reciting mantras has been shown to lower cortisol activity, slow breathing, and minimize mental chatter in people struggling with mental illness. Previous studies show reduced levels of anxiety by continuously repeating a secular mantra and may also apply to individuals with autism. Anxiety disorders are common in people with autism and may manifest as aggressive behavior, stimming, and poor concentration. We will be conducting a proof of concept pilot study with UVA students self-identifying with autism. The pilot will be composed of a preparatory course, computer-based mantra exposure, and pre and post-test questionnaires. Each participant will watch and listen to a brief video displaying one secularized mantra continuously appearing on the screen. A sound recording of the mantra will be played simultaneously. The student will be asked to watch the video multiple times a week for a month. Based on the results of the pilot study, we will adjust the procedure to accommodate children with autism. Child participants will be from The Virginia Institute of Autism (VIA) and range in age from 6-18, depending on level of functioning. Each participant will have a present caregiver, who knows the individual well, complete pre and post-test measures assessing the child's levels of internalizing and externalizing behaviors. We predict that the continuous exposure and recitation of the mantra will lead to decreased reports of anxiety and stress in individuals with autism. We also predict that reciting the mantra out loud along with the video will yield equal results as silently watching the video.

The Impact of Instructions on Jury Selection

Raina M. Daniels

Mary Baldwin University

Advisor: Robin Hopkins, PhD

When examining court proceedings, there is an issue of racial biases that affects convictions and sentencing decisions. Studies have shown that racially-proportionate juries help combat the effects of racial biases and result in fairer trials, thus having a racially diverse jury is important. The present experiment examines whether juries can be made more racially proportionate through the jury-selection process called Voir Dire, which is when attorneys question potential jurors prior to trial and excuse them if they feel it reduces the chance for a fair trial. This experiment examines whether including instructions about not using the juror's race impacts the racial makeup of the jurors selected. Participants were informed about the Voir Dire process and then received either instructions that simply asked for them to keep the best juror of the pair, or specifically stated that race should not be used in their decision. Four pairs of comparable jurors were presented to all participants, and race of the jurors was randomly counterbalanced. The proportion of black jurors kept was submitted to a one-way ANCOVA, with participant's race as the covariate. The results showed that instructions discouraging the use of race in the decision ($M = .56$) did not have a significant effect on the proportion of black jurors kept compared to when the instructions did not mention race ($M = .45$), $F(1, 34) = 2.40$, $p = .132$. Perhaps people must be made fully aware of their implicit bias before discouraging use of race can effectively change jury composition.

The Effects of Sensory Exposure to Nature on the Cognitive Symptoms of Depression

Hannah Eder

Mary Baldwin University

Advisor: Jenna Holt, PsyD

The purpose of this experiment was to determine if exposing an individual to a single sensory element from the environment would have a positive impact on cognitive symptoms of depression. The sensory element we looked at was audio. This study split the participants into two separate groups, one to receive the sensory element exposure, and the other to act as a control group. Both groups went through a series of tests, given both pre-exposure and post-exposure, which measured three different cognitive symptoms of depression: processing speed, directed attention, and working memory. Analyses were completed to ascertain any differences between the scores pre-exposure and post-exposure. No statistical significance occurred. The current study does produce a launching point for future research. Even though we were unable to distinguish a significant change, more research could direct us in either a different sensory element or combination of sensory elements that could produce a significant result. Depression is one of the most commonly diagnosed mental illnesses, so developing another treatment or coping skill for a client to use would be beneficial. Sensory exposure could be introduced both as a component of a client's treatment plan and as a skill they can use outside of a clinical setting to try and find relief for some symptoms of their mental illness.

Correlates Between Neuroticism and Themes of Death Anxiety in College Students

Scott Fiedor

Christopher Newport University

Advisor: Sherman A. Lee, PhD

The purpose of this study was to investigate the different reasons that individuals fear death and the correlations between death anxiety and the personality trait neuroticism. Some aspects of death anxiety include the fear of pain, fear of the unknown, fear of the afterlife, helplessness, and fear of causing emotional pain to loved ones. A sample of undergraduate students ($N = 310$) completed a neuroticism scale, rated how afraid they were of dying (not at all to extremely), and then they wrote a brief explanation of their ratings. Pearson's r correlation analyses revealed a positive correlation between neuroticism and the fears of death and the unknown, but a negative relationship was found with acceptance of death due to natural reasons. There was also a negative correlation between neuroticism and the fear of the inability to achieve life goals.

Moderators of the Relationships Between State and Trait Anxiety and Depersonalization

Noah J. French

University of Virginia

**Advisors: Bethany A. Teachman, PhD, and
Jeremy W. Eberle, MA**

Depersonalization is a ubiquitous yet little-studied psychiatric symptom marked by a sense of unreality and detachment from oneself and one's surroundings. Depersonalization is common in anxiety disorders, but little is known about the factors that influence co-occurring anxiety and depersonalization. We investigated trait moderators of the relationship between state and trait anxiety and depersonalization to better understand their comorbidity and to identify potential points of intervention. In an online study, 303 participants (age: $M = 34.56$, $SD = 9.80$; 65.4% male, 33.3% female, 1.3% other gender identity; 66.3% white) completed two exercises designed to increase variability in state anxiety (imagining an upcoming anxiety-provoking event) and depersonalization (staring intently at a dot), with intermixed self-reports of state anxiety and depersonalization, followed by a series of trait-level questionnaires. As hypothesized (preregistration: <https://osf.io/xgazd>), anxiety positively predicted depersonalization at both a state level, $\beta = 0.43$, 95% CI [0.39, 0.47], and trait level, $\beta = 0.60$, 95% CI [0.51, 0.70]. Moreover, as hypothesized, the trait anxiety-trait depersonalization relationship was strengthened by greater anxiety sensitivity, $\beta = 0.25$, 95% CI [0.17, 0.34], distress intolerance, $\beta = 0.15$, 95% CI [0.05, 0.25], negative interpretation bias for anxiety sensations (inverse transformed), $\beta = -0.21$, 95% CI [-0.30, -0.13], and negative interpretation bias for depersonalization sensations (inverse transformed), $\beta = -0.27$, 95% CI [-0.35, -0.19]. These findings suggest that on a trait level, anxiety and depersonalization more frequently co-occur when people catastrophically misinterpret their symptoms.

Negative Interactions with Peers and Parents Predict Adolescent Depression

Alexandra Gray

University of North Carolina at Chapel Hill

Advisors: Eva H. Telzer, PhD, and Emily S. Bibby, BA

Rates of adolescent depression are rising at alarming rates and have serious consequences, including suicide (Miller & Prinstein, 2019). Although many studies have noted the predictive quality of parent and peer influences on adolescent depression, there have been conflicting findings on whether one group is more important to adolescent mental health (Stice, Ragan, & Randall, 2004; Pfeiffer, Heisler, Piette, Rogers, & Valenstein, 2011). The present study sought to examine parent influence and peer influence separately to determine which is the strongest predictor of adolescent depression. Participants included 146 adolescents of low socioeconomic status from a rural county in the Southeast United States. Participants ranged in age from 12 to 15 years ($M = 13.2$; 52% female) and constituted a diverse sample. Participants completed questionnaire measures that included family conflict, peer conflict, parent relationship quality, and peer relationship quality. Notably, the relationship quality measure can be divided into positive interactions and negative interactions. Multiple regression analyses revealed that only negative peer interactions ($b = .294$, $p = .002$) and negative parent interactions ($b = .252$, $p = .029$) were significantly predictive of adolescent depression, suggesting that negative interactions in any of an adolescent's close relationships influence their mental well-being. This study highlights the strong evidence that parent and peer influences on adolescent mental health are not completely separate from each other and one is not solely predictive of adolescent depression.

The Effect of Low-Level Stimulus Properties on Temporo-Dynamic Variability in EEG

Christopher Hall

University of Virginia

Advisors: James Morris, PhD, and Meghan Puglia, PhD

Random variability, or “noise,” complicates and obscures signals that are useful for making decisions in everyday life. In brain imaging studies, signal noise is often considered an artifact to be filtered out. However, recent studies suggest that temporo-dynamic variability is a meaningful property of brain signals found in this noise, and should be measured and studied (Garrett et al 2013). This variability is a factor of increasing interest showing predictive results in many psychopathologies and descriptive correlates with many aspects of development. However, the effect of low-level properties of stimuli on temporo-dynamic variability has not been properly researched. The present study seeks to understand the effect of stimuli on temporo-dynamic variability as measured by multi-scale entropy in EEG. A 1-back task with clean (original, unfiltered image), noisy (image filtered with a Gaussian smoothing kernel), or mixed face matches was completed by 26 subjects (20 female) ages 18-23. We show that difficulty is the same for the two types of mixed matches. Despite this, the mixed matches concluding in noisy images have significantly higher levels of MSE than the mixed matches concluding in clean matches. These findings suggest that, in addition to task performance or internal sources of noise, stimulus differences contribute to temporo-dynamic variability. Because of this, researchers will need to account for stimulus noise in the design and interpretation of future studies utilizing temporo-dynamic variability.

Examining the Robustness of the N170 and N250 Event-Related Potentials in Face Recognition Experiments

John Hissong

University of Virginia

Advisor: James Morris, PhD

Face recognition has long been a field of interest in psychology and neuroscience. For many decades, psychologists and neuroscientists have researched the social and evolutionary functions of face recognition, and the neural pathways which facilitate this valuable ability. Studying the mechanisms through which face recognition occurs in the brain can lead to a more advanced understanding of how humans process face information. The current study investigates two Electroencephalogram (EEG) components, namely the N170 and the N250, which are associated with face recognition and face identification. The presence of the N170 has been widely documented as an indicator of the identification of a face. The N250 is commonly found when an individual sees a familiar face or other object. Participants were shown a series of pictures of faces and flowers and were told to indicate which pictures had been presented more than once. While completing this task, participants were connected to a 32-channel BioSemi EEG to record neural activity in relation to face and object recognition. Analyses are currently underway; however, we expect to find the N170 component in the EEG data when participants were presented with an image of a face, and not when they were presented with an image of a flower. Additionally, we expect to find the N250 when the participant was presented with a picture that had been presented at least once earlier in the series of pictures.

Life Satisfaction among Chinese International Students of Diverse Sexual Identities

Xinyu Hou

University of Virginia

Advisor: Charlotte J. Patterson, PhD

The study examined the association between life satisfaction and depressive symptoms, social support, and acculturation among Chinese international students of diverse sexual identities studying in the United States. 272 Chinese international students participated in this study, of which 210 self-identified as heterosexual ($M_{age} = 23.09$; $SD = 3.37$) and 62 self-identified as non-heterosexual ($M_{age} = 22.82$; $SD = 3.43$; 10 lesbians, 15 gay men, 31 bisexual, 6 pansexual). Data regarding their demographics, life satisfaction, depressive symptoms, social support, and acculturation to the American culture were collected in the form of a self-reported survey via Qualtrics Portal. ANOVA analyses results showed that there was no difference in life satisfaction, depressive symptoms, social support, and acculturation between heterosexual participants and non-heterosexual participants. Regression analysis was conducted to test whether life satisfaction can be predicted based on depressive symptoms, social support, and acculturation. Results revealed that depressive symptoms and social support significantly predicted their life satisfaction, while there was no predictive effect of acculturation on life satisfaction. More social support was associated with higher life satisfaction, whereas more severe depressive symptoms were associated with lower life satisfaction. The results suggest that social support and mental health but not acculturation to the American culture are crucial for the subjective well-being of Chinese international students of diverse sexual identities.

Losing a Pet Dog: Psychiatric Symptoms and their Relation to Functional Impairment in Bereaved Pet Owners

Mary C. Jobe

Christopher Newport University

Advisor: Sherman A. Lee, PhD

According to the American Pet Products Association, 67% of all U.S. households own at least one pet (2019). The lives of pet owners, the bonds they share with their beloved living pets, and the positive psychological impacts of those relations have been previously researched (McConnell, Brown, Shoda, Stayton, & Martin, 2011; Siniscalchi, Stipo, & Quaranta, 2013; Horowitz & Hecht, 2016; Sable, 2013). However, examining how these human-animal bonds are affected by the loss of the pet are just as relevant. Our study serves to examine this relationship, specifically how psychiatric symptoms of grief are related to bereaved pet owners' functional impairment. We conducted an online MTurk study and collected data from 279 participants in return for \$.50 completion compensation. For the variable psychiatric symptoms, which was analyzed through the Persistent Complex Bereavement Disorder (PCBD), as found in the Diagnostic and Statistical Manual of Mental Disorders, we had a moderate-strong positive correlation between psychiatric symptoms and dysfunction as well as a very strong correlation between psychiatric symptoms and separation anxiety. These two facets of functional impairment--dysfunction and separation anxiety--show that there is a significant relationship between PCBD psychiatric symptoms and impairment for grieving pet owners. Overall this study's findings help add to the literature on life after losing a pet as well as help pet owners and mental health professionals better understand the pet loss grieving process.

The Impact of Inequality on Children's Helping Behavior

Jenna Marzougui

University of Virginia

Advisors: Amrisha Vaish, PhD, and Meltem Yucel, MA

Wealth inequality is increasing across the globe, and yet little is known about its effect on children's wellbeing. We analyzed how experiencing inequality affects children's helping behaviors. Sixty 5 to 6-year-old participants ($M = 70$ months, 11 days; 30 girls) were randomly chosen to receive either fewer resources (Disadvantageous Inequality), more resources (Advantageous Inequality), or the same number of resources (Equality) as a hypothetical child in another room. The participants were then measured on their physical and verbal helping behavior across four different tasks, each designed to elicit help. The study found that children in the Disadvantageous Inequality, Advantageous Inequality, and Equality conditions did not differ in the physical help they provided $F(2, 57) = 0.20, p = .817$. Likewise, there was not a significant effect of condition on verbal help $F(2, 57) = 0.64, p = .530$. Although brief experiences of inequality did not change children's helping behaviors in this study, further research is needed before drawing any conclusions about the effects of inequality. Future work could consider ways to increase the strength or recurrence of the experimental manipulation of inequality to more accurately represent inequality in the real world. The negative results notwithstanding, this study is a stepping stone for future experimental research examining the ways in which social inequality shapes development.

Young Children's Evaluations of Remorseful, Intentional Transgressors

Carolynn McElroy

University of Virginia

**Advisors: Amrisha Vaish, PhD, Janine Oostenbroek, PhD, and
Caroline Kelsey, MA**

Cooperative relationships play a fundamental role in holding together large-scale human societies. Therefore, when these relationships are damaged by transgressions, mechanisms must exist to ameliorate the damage. One way in which relationships can be restored is through the expression of remorse from the transgressor. Previous research suggests that young children are more forgiving of remorseful than unremorseful transgressors after an accidental transgression. However, little is known about how remorse may restore relationships after an intentional transgression has been committed. We investigated whether young children are more forgiving of accidental or intentional transgressors when both transgressors display remorse. In a pre-registered study, five- ($n = 20$) and six-year-olds ($n = 20$) watched videos of transgressors causing accidental or intentional harm. Children were then asked to evaluate the transgressors. In line with our hypotheses, 6-year-olds were more likely to negatively evaluate the intentional transgressor compared to the accidental transgressor. In addition, 6-year-olds gave more resources to the accidental transgressor. However, 5-year-olds did not significantly differ from chance level on their evaluations of the two transgressors. Overall, these findings point to the remarkably early emergence of intentionality understanding in children and provides insight into how they respond to displays of remorse.

Keywords: Intentional transgressions, children, remorse

Adolescent-Parent Discussions: Context Predicts Parental Socialization Responses

Zoe Nelson

College of William & Mary

Advisor: Janice L. Zeman, PhD

Parents use supportive and unsupportive emotion socialization strategies (e.g., reward, magnify, neglect, override, and punish) to respond to children's emotional expressivity. Reward and magnify are supportive responses, whereas neglect, override, and punish are unsupportive. In comparison to fathers, mothers are more likely to socialize their child's negative emotions in ways that enhance, rather than suppress or deflect their child's emotional expression. Investigating parental emotion socialization is important because parents are the first socializers of children's emotions. Research indicates that parents respond to their children's emotional expressivity in different ways depending on their child's gender. However, scant research exists addressing whether the specific content of a problem an adolescent brings to their parent is predictive of parents' supportive or unsupportive responses. Participants in this study were 132 adolescents (M_{age} = 16.60 years, SD = 12.96, 53.2% girls, 79.1% Caucasian, middle-class) and their parents (87.1% mothers). With a parent, adolescents discussed a positive and negative event that had occurred with a good friend in a videotaped interaction task. Positive events (i.e., relationship quality, gifts, quality time, food, academics) and negative events (i.e., relationship quality, quality time, academics, and athletics) were coded to examine whether context was predictive of parents' response. The results of four linear regressions illustrated that discussing positive events related to quality time and academic events significantly predicted parents' supportive responses to emotions, whereas disclosing positive events related to relationship quality, gifts, and food were not significantly predictive.

The Moderating Effect of Risk on the Relationship between Adolescent Autonomy and Adult Job Competence

Rafael Fontinha Olivos

University of Virginia

Advisor: Joesph P. Allen, PhD

The degree of autonomy a parent grants their adolescent child has been linked to the risk level of the environment in which the child is raised and is considered a reflection of what parents think provides the best outcomes for their child. Parents who raise children in high-risk environments tend to use more authoritarian practices which limit the children's autonomy whereas parents in low-risk environments tend to grant their children higher levels of autonomy. The purpose of this study was to examine the prediction from adolescent autonomy to adult job competence as moderated by family income, a common measure of risk-level, at time of adolescence. A diverse community sample of 136 adolescents, initially aged 17 to 21, and their mothers were assessed via questionnaires. Mothers were assessed on their parental behavior in the initial stage and adolescents were assessed on self-perception multiple times in subsequent years up to the ages 30 to 32. The longitudinal results demonstrate minimal correlation between adolescent autonomy and self-reported adulthood job competence for individuals raised in low-risk environments but the highest self-reported job competence for those granted more autonomy in high-risk environments. Thus, the findings suggest that autonomy levels previously considered optimal for low- or high-risk environment do not predict the best outcomes for self-perception of job competence.

Identity, Self-Presentation, and Substance Use: Exploring Sexual Minority Students' Experiences in Social Fraternities

Cole Price

George Mason University

Advisor: Blake Silver, PhD

Many students are drawn to fraternities for their social benefits and opportunities for service. However, research shows that fraternities and sororities can reinforce sexism and heteronormativity on college campuses, through both exclusionary single-gendered membership and the culture surrounding them. In fraternities, a large part of this culture revolves around homophobia and the rejection of any performance of femininity. Social fraternity membership is also highly correlated with increased rates of heavy drinking. Additionally, sexual minorities -- independent of fraternity membership -- experience higher rates of binge drinking and substance abuse disorder, one theory for this being that the effect of heterosexist and homophobic experiences on an individual makes him or her more susceptible to the use of alcohol and/or drugs as a coping mechanism. My research considers the overlap of these two phenomena. In the context of social fraternities, which have traditionally reinforced attitudes of homophobia and hegemonic masculinity, my project draws on a series of in-depth interviews to explore how gay members internalize the ideals of hegemonic masculinity and navigate substance use and abuse.

Gender Norms in the Classroom

Sophia Ritt

University of Virginia

Advisor: Angeline Lillard, PhD

In the classroom, students may be subjected to harmful gender norms. Research shows conforming to gender norms has detrimental effects on children, including increased rates of mental illness and limiting their career aspirations. Classrooms may vary in how these gender norms are conveyed. The present study focuses on conventional versus Montessori classrooms. We theorize that pedagogical differences make Montessori classrooms more gender-neutral and hypothesize that Montessori students will experience less pressure to conform to gender norms. Participants were in conventional (two female, three male, Mage= 10.98 years, SD = 1.08, age range = 10.14-12.42 years) or Montessori (three female, nine male, Mage= 11.47 years, SD = 0.72, age range = 10.45- 12.59 years) schools and completed a survey measuring felt pressure to conform to gender norms (Egan & Perry, 2001) and their career aspirations (Liben et al., 2001). This paper presents preliminary results as data collection has currently been halted due to the COVID-19 pandemic. We found no difference between the level of students' felt pressure or career aspirations between gender or classroom type. A regression between felt pressure and career aspirations suggests students under higher levels of felt pressure aspire to non-gendered ($p = .003$) and masculine ($p = .04$) jobs. This is the first study to recognize this potential difference between school types and by doing so we can make more informed decisions on how to limit exposure to these harmful gender biases.

Confidence and Eyewitness Memory: Car and Face Recognition Ability and the Confidence-Accuracy Relationship

Frederick T. Schubert III

University of Virginia

Advisor: Chad Dodson, PhD

There are many cases in the judicial system of highly confident eyewitnesses mistakenly identifying an innocent suspect leading to a wrongful incarceration. However, mounting research shows that eyewitness confidence can be a strong predictor of face recognition accuracy (Wixted & Wells, 2017). One factor that influences eyewitness accuracy is face recognition ability, which differs greatly from person to person. Weaker face recognizers are much more vulnerable than stronger face recognizers to make high confidence errors and, generally, confidence is less predictive of accuracy for weaker than stronger face recognizers. This study seeks to better understand this relationship between confidence and accuracy. Specifically, do good face recognizers show a strong confidence-accuracy relationship that is specific to faces or do they show a strong confidence-accuracy relationship for all different kinds of objects? To address this question, 100 participants completed standardized tests that measured their face and car recognition abilities. They then watched four videos of mock-crimes, each involving a different car and a different perpetrator and completed a series of four car and four face lineup tests. Each lineup test required participants to identify either a previously seen car or perpetrator and to rate their confidence in their selection. Significant positive correlations were found between (a) measures of lineup identification accuracy and standardized recognition ability, (b) standardized car recognition ability and high confidence accuracy in identifications of cars, and (c) standardized face recognition ability and high confidence accuracy in identifications of faces. No significant correlations were found between car recognition ability and face high confidence accuracy or between face recognition ability and car high confidence accuracy. Our findings suggest that strong confidence-accuracy relationships are present in good car recognizers as well as good face recognizers but that the confidence-accuracy relationship is specific to faces or objects and that recognition ability for one is not related to a strong confidence-accuracy relationship for the other.

Parent Meta-Emotion Philosophy and Marital Adjustment in Families of Children with Pediatric Cancer

Katie Malloy Spink

University of Washington

Advisors: Lynn Fainsilber Katz, PhD, and Laina Keim, MS

When a child is diagnosed with cancer, it puts strain on the whole family, including the marital relationship. This study examines the relationship between parental emotional styles and marital adjustment in the first year following a pediatric cancer diagnosis. Primary caregiver (PC) and secondary caregiver (SC) dyads (N=48) were recruited 1 month after a child was diagnosed with cancer. Caregivers completed interviews of Parent Meta-Emotion Philosophy (PMEP) at 3 months post-diagnosis, measuring their Awareness, Expression, Acceptance, and Regulation of negative emotions. Discrepancies scores were calculated by taking the absolute value of the standardized difference between PC and SC PMEPE. Caregivers also reported on dyadic adjustment (Dyadic Adjustment Scale; DAS) at three timepoints across the first year post-diagnosis. Multi-level modeling (MLM) tested whether 1) the caregiver's PMEPE scores and 2) the discrepancy in PMEPE with their partner predicted A) the rate of change in dyadic adjustment and B) the level of dyadic adjustment at 1 year post-diagnosis. Growth models for PC report of adjustment showed significant variability in both the final level at 1 year post-diagnosis and the rate of change over time. For PCs, larger discrepancies in awareness with their partner predicted lower dyadic adjustment at 1 year ($b=-12.45$, $p=.05$). Additionally, higher awareness ($b=-7.17$, $p=.03$) and larger discrepancies ($b=-6.87$, $p=.01$) predicted trajectories of decreasing dyadic adjustment over time. Higher discrepancies in PC and SC acceptance also predicted lower PC-reported dyadic adjustment ($b=-17.11$, $p=.01$). Initial data suggests that concordance in PMEPE following a pediatric cancer diagnosis predicts dyadic adjustment over time.

Impairment of memory consolidation through seizures

Smriti Subedi

University of Virginia

Advisors: Jaideep Kapur, MD, PhD, and Aijaz A. Naik, PhD

Memory is a delicate and complex process of encoding, storing, and retrieving information. Memory consolidation is the process of stabilizing and transforming short-term memory into long-term memory. When seizures occur, they disrupt the process of consolidation; thus, the memory of the event prior to the seizure cannot be retrieved. This is called retrograde amnesia. The engram theory of memory suggests that there are neuronal circuits called “engrams” in the brain involved in storing memories. We studied the dentate granule cells (DGCs) engrams. We mapped the activated neuronal ensembles in dentate gyrus (DG) following spatial learning and induced retrograde amnesia using a convulsant, pentylenetetrazol (PTZ). Using transgenic mice that express tdTomato (tdT) under an immediate early gene, we tagged neurons activated following learning and after seizure. Separate cohorts of mice were studied after training on rewarded alternation task in T maze on days 1, 2, and 3 and learning occurred after day 2. The number of tdT+ve DGCs significantly increased from day 1 to day 2 in T maze group mice representing learning associated ensemble. A single PTZ seizure also induced large scale activation of tdT+ve DGCs compared to that in saline injected controls. Finally using dual labelling with Arc and tdT+ve, we checked whether there was any overlap amongst the DGCs activated by learning versus by seizure. We found only 2% overlap in the DGCs between seizure and T maze. We speculate that the collision of engrams might occur in other brain regions that may support seizure-induced retrograde amnesia.

Paradigms in Paying: A Cross-Cultural Examination of Behavioral Tax Response

Emmet Sullivan

University of Virginia

Advisor: Eileen Chou, PhD

Cultural binaries such as individualism and collectivism have been shown to influence individuals' thought processes in a variety of domains. Theories of each type of culture make general predictions about how these culturally-based mindsets may influence economic decisions, but few studies have sought to operationalize these paradigms in a behavioral measure. Using TurkPrime samples from both the US (individualistic society) and India (collectivistic), the present research shows that the cultural norms present in each country have behavioral manifestations as measured by differing levels of willingness to continue working under a redistributive income tax. We show that members of a collectivistic society are significantly less opposed to redistributive taxes in general, and more willing to continue working when such a tax is imposed on their income. The study attributes this difference to collectivistic societies viewing an accumulation of wealth as larger responsibility to give back to society than do individualistic societies. The experimental findings are then further corroborated by archival analysis of questionnaire responses from each country.

Investigation of Dopamine-sensitive cells in appetite centers of the Hypothalamus

Tarun Vipra

University of Virginia

**Advisors: Ali Güler, PhD, Peter C. Brunjes, PhD, and
Filip Loncke, PhD**

Obesity is a well-described risk factor for a variety of health complications, including Type II diabetes, heart disease, certain cancers, and other chronic conditions. This research project is based on the idea that the mechanisms that make food rewarding, may include the same dopaminergic circuit that makes drugs rewarding. The present study investigated how activation of dopamine receptors can modulate cells in the hypothalamus and also sought to identify novel connectivity in the cells in the feeding circuitry of the hypothalamus. To visualize activation of dopamine-1 receptors, we first injected heterozygous D1R:Cre mice with either a dopamine-1 agonist (SKF) or a control substance. Mouse brain slices were prepared from the nucleus accumbens, arcuate nucleus of hypothalamus, and ventromedial hypothalamus regions. Next, we used a c-Fos antibody stain to detect the presence of activated neurons. Then, we used a wide field fluorescent microscope to perform imaging. Cell counting was consequently performed using FIJI/ImageJ software. Results showed no significant difference in dopamine-1 receptor activation between agonist treated slices and control slices across all brain regions. However, further investigation with a larger sample size may be necessary to observe any significant differences in dopamine-1 receptor activation between conditions. Interestingly, we observed a sex-dependent effect in activation, with lower dopamine receptor activation for female mice.

Mere Completion Effect in Goal Pursuit and its Relation to the Need for Closure

Emma White

University of Virginia

Advisor: Benjamin A. Converse, PhD

Research in the field of goal pursuit has become increasingly popular in the past few decades and has led to the discovery of many different psychological factors that impact the way in which people pursue goals. The phenomenon we are interested in examining through our research is the prioritization of goals that are perceived as more finishable over those that are potentially more important or hold higher value; this pattern of behavior is referred to as the mere completion effect. We are also studying the potential relation between prioritization of finishable goals and the need for closure one may experience, with the prediction being that people who experience higher levels of need for closure are more likely to prioritize goal completion over the value of achievement. Our study involves participants choosing between simple tasks; one task has a higher payout value but is not finishable, while the other task has a lower payout value but is finishable. Participants will also complete questions after the task to gauge the level of need for closure they experience. Data collection has not been completed, but will include approximately 200 Mturk participants who will receive monetary compensation. We predict that participants that experience higher levels of need for closure will be significantly more likely to choose the task with the lower payout that is finishable.

Speaking and Listening: The Science of Being Well-Liked in Conversations

Sarah Eliana Woolf

University of Virginia

Advisor: Timothy D. Wilson, PhD

A commonly held theory suggests that people should listen more than they speak in order to be well-liked in conversations (e.g., Carnegie, 2007). We conducted two studies to investigate this hypothesis. The first forecasting study, which surveyed lay beliefs among 95 undergraduate research participants, supported the idea that people believe that allowing others to speak is the best strategy to make a positive impression. We found, however, that forecasted speaking time varied depending on whether people's goals were to be well-liked, appear interesting, or enjoy oneself (people said they would speak 43.4%, 57.5%, and 48.3% of the time, respectively). While these conversational goals may at first seem synonymous, the discrepancy suggests that people conceptualize common social motivations (to be interesting, to be well-liked, to enjoy oneself) as distinct categories and believe that they are achieved by differing behaviors. This is relevant because the prior literature examining impression formation in conversations used inconsistent terminology to assess peoples' outlook on the experience. Next, we used an experimental design to explore the accuracy of people's forecasts — we manipulated how much time participants spent speaking versus listening to see if this impacted the degree to which they were liked by their conversation partner. The results showed that people who most enjoyed the conversation actually talked the least. At the same time, participants who spoke the least appeared to project their own enjoyment onto their conversation partner — assuming that their conversation partner enjoyed the conversation the most. Keywords: person perception, impression formation, forecasting