Risk and Reward in Financial Decision-Making: The Roles of Probability, Magnitude and Stress

Nataly Aguirre
Faculty Mentor: Dr. Anthony Porcelli, Psychology

Considerable research suggests acute stress influences decision-making. There has, however, been a lack of research examining the possibility that separable components of the stress response may influence decision-making differently: the sympatho-adrenomedullary (SAM) and hypothalamic-pituitary-adrenal (HPA) axes. In the current pilot study, participants engaged in a gambling task where they made choices between decisions of varied probability and magnitude for potential gains of money after being exposed to acute stress (via a variant of the cold pressor task). Further, the timing of the stressor was varied to allow examination of SAM and HPA effects separately. Cortisol and skin conductance were measured. The task was in the gain frame only, in support of past research on framing results indicated that individuals made significantly more conservative or risk-averse choices in the gambling. Farther, risk-taking scaled to the expected value of a decision. Males made more risk seeking choices as compared to females. Divergent from the original hypothesis, however, stress of neither type had an effect on individuals’ risk-taking overall, nor as a function of probability or magnitude. This suggests that decisions framed as potential gains may not be influenced by stress as readily as decisions framed as potential losses, and that stress may not alter how people perceive the probability or magnitude associated with a decision. Methodological flaws highlighted by the pilot study which may have contributed to the lack of a stress effect will also be discussed.

The Role of KCNQ Potassium Channel in PCP Mediated Cognitive Deficits

Aisha Bano
Faculty Mentor: Dr. Behnam Ghasemzadeh, Biomedical Sciences

For centuries, studies are being conducted to treat the positive and negative symptoms and cognitive deficits of schizophrenia. While research has allowed us to treat the positive symptoms through regulation of dopaminergic neurons and dopamine pathways, we still remain unknowing to the negative symptoms and cognitive deficits. The reason it cannot be treated is that the biochemical starting point is unknown and it is that which manifests itself in the behavior of the animal. Over the years, there have been multiple proposed hypotheses regarding the starting biochemical point and drugs created to regulate variety of pathways in the brain only to have failed. Under the mentorship of Dr. Ghazemzadeh, experiments are being conducted by regulating a potassium ion channel, precisely by blocking it, to reverse the negative symptoms and cognitive deficits of schizophrenia. The experiments are being conducted through administering phencyclidine to induce schizophrenia like effect and soon after that, with a drug that would block that very potassium channel and observe the behavior of these animals. The assumption is that it would reverse the cognitive and negative symptoms of schizophrenia significantly. Much of the fundamental information is derived from journals such as American College of Neuropsychopharmacology, Elsevier and Schizophrenia bulletin.
The Man Behind the Mask: The Progression of Masculinity in African American Male Characters as seen in films Awarded the NAACP Image Award for Outstanding Actor in a Motion Picture

Aaron E. Bledsoe
Faculty Mentor: Dr. Pamela Nettleton, Journalism and Media Studies

This qualitative study will examine the way in which the masculinity of African American men is portrayed in films through a textual analysis of the leading male character in movies that have been awarded the NAACP Image Award for Outstanding Actor in a Motion Picture. I’ll be performing a textual analysis of the following movies: “Flight”, “Book of Eli”, and “The Great Debaters.” Through the analysis of the main character, I discuss the following: types of marginalization experienced in the film, interactions/relations with (African American) women, as well as the importance that his education and/or occupation will play in his identity as a man. Using these factors, I argue that these characters are able to preserve their masculinity as a means of escaping theemasculating created in a society that marginalizes men of color in film. Donald Bogle points out that in the past, Black men have been portrayed as either “childlike, docile or happy as the role of a servant,” or as an extremely violent threat to society. Using the studies of Stuart Hall, I’ll be able examine the extent to which representation affects the portrayal of a cultural group and how organizations like the NAACP Image Awards help in providing a more positive acknowledgement of people of color in the media.

Sensorimotor Adaptation of Vowel Production in Stop Consonant Contexts

Brittany A. Bernal
Faculty Mentor: Dr. Jeffrey Berry, Speech Pathology and Audiology

The purpose of this research is to measure the compensatory and adaptive articulatory response to shifted formants in auditory feedback to compare the resulting amount of sensorimotor learning that takes place in speakers upon saying the words /pep/ and /tet/. These words were chosen in order to analyze the coarticulatory effects of voiceless consonants /p/ and /t/ on sensorimotor adaptation of the vowel /e/. The formant perturbations were done using the Audapt software, which takes an input speech sample and plays it back to the speaker in real-time via headphones. Formants are high-energy acoustic resonance patterns measured in hertz that reflect positions of articulators during the production of speech. The two lowest frequency formants (F1 and F2) can uniquely distinguish among the vowels of American English. For this experiment, Audapt shifted F1 down and F2 up, and those who adapt were expected to shift in the opposite direction of the perturbation. The formant patterns and vowel boundaries were analyzed using TF32 and S+ software, which led to conclusions about the adaptive responses. Manipulating auditory feedback by shifting formant values is hypothesized to elicit sensorimotor adaptation, a form of short-term motor learning. The amount of adaptation is expected to be greater for the word /pep/ rather than /tet/ because there is less competition for articulatory placement of the tongue during production of bilabial consonants. This methodology could be further developed to help those with motor speech disorders remedy their speech errors with much less conscious effort than traditional therapy techniques.

Beliefs on Sexual Orientation to Treatment of Sexual Minorities

Brett Christensen
Faculty Mentor: Dr. Ed de St. Aubin, Psychology

This study follows Weiner’s attribution theory of controllability to examine relationships between the beliefs about the causes of sexual orientation and anti-gay sentiment in a sample of college students (N=848). Past research explains that negative attitudes towards homosexual are more common when sexual orientation is perceived as controllable. However, when the cause of sexual orientation is perceived as uncontrollable, there is an increase in positive affect towards homosexuals. In this study, cause of sexual orientation was scored on a 5 point scale with (1) as fully environment/social determinants to (5) representing only genetic/biological factors, and (3) in the center as a full integration of both. The environmental/social factors represented a level of perceived controllability while genetic/biological factors possessed no controllability. This study did not attempt to discover what the true cause of sexual orientation is, rather to examine how the beliefs relate to views of homosexuality. Other important factors examined in relation to attribution style and anti-gay sentiment were political orientation and religiosity. Results were consistent with the literature as participants who chose perceivably controllable factors of sexual orientation (environmental/social) were those who reported significantly more anti-gay attitudes. Moreover, Christianity and conservative political orientation, compared to agnosticism and liberalism, attributed sexual orientation to environmental/social influences and were associated with increased anti-gay sentiment. On the other hand, those who attributed orientation to uncontrollable causes (genetic/biological) showed less anti-gay sentiment, less faith salience and religiosity, and were more liberal in political orientation.

An Empirical Analysis of How Purchase Decision Makers arrive at a Fair Price for Subscription-Based CRM

Toni M. Conley
Faculty Mentor: Dr. Scott Rex, Marketing

Internet-based technologies have been the critical driving force behind the rise of subscription-based Customer Relationship Management (CRM) applications. In recent years, we have seen a dramatic increase in the use and deployment of subscription-based CRM solutions. This upsurge has caused IT executives to actively investigate the most effective way to deploy CRM solutions for their businesses. These investigations have called for an incisive consideration and observation of the role of price. Cost comparisons between providers and deployment types are business executive’s most challenging responsibilities these days. This research is an analysis of how purchase decision makers evaluate the price of subscription, cloud-based CRM solutions. In the case of subscription-based solutions, service providers own, maintain, and upgrade the software applications on their servers at their locations. The ownership and upkeep costs of these subscription-based solutions have generated a need for a detailed analysis of all anticipated costs over the expected life cycle of the solution. To find out how companies are leveraging the cost of both models over the long term, we interviewed five executives all with marketing or IT titles. These executives have facilitated recent deployments of CRM solutions for their businesses. In the interviews we were able to grasp a better understanding of the role of price in their decision. Findings and theoretical applications of the study are discussed.
Objective: Aggression in adolescent romantic relationships occurs at a substantial rate and has negative effects on victims. This study will investigate risk factors that may anticipate a person’s role as a victim or perpetrator of aggression in dating relationships. Also, this study will examine whether males or females are more likely to perpetrate or be victimized by dating aggression. Expanding research on relationship aggression is important because TDV can cause significant mental and physical health problems (e.g. distress, physical injuries, and panic attacks). We focused on risk factors in four general categories: family, cognitions, emotions, and alcohol use. Some of these risk factors include: exposure to relationship violence, whether between the child and a parent or between parents, internalizing cognitions and behaviors, depressive symptoms, alcohol use, and hostility. Methods: Participants were undergraduate students from a private institution. Data was collected through a number of questionnaires completed online. Results: We found that majority of the predictors were common to both victimization and perpetration, such as alexithymia, callous, interparental and parent-child conflict. We also found unique predictors of both victimization and perpetration, which were alcohol use, and relationship quality with one’s partner. Also, attitudes accepting and justifying dating aggression uniquely predicted perpetration only. Conclusion: Our findings suggest that each unique predictor should be considered when developing strategies to reduce or prevent aggression in romantic relationships. Our study implies that couples should use alcohol moderately, find satisfaction in one’s relationship partner, and evaluate one’s beliefs about dating aggression in order to avoid TDV.

Distinguishing Between Risk Factors for Aggression Perpetration, and Victimization in Dating Relationships

Ericka L. Daniels
Faculty Mentor: Dr. John Grych, Psychology

Ericka Daniels is a senior majoring in Psychology. She enjoys traveling, reading, shopping, and swimming. Ericka is a Sande Robinson Emerging Leader, as well as a McNair Scholar. After graduation in December 2014, she plans to pursue a PhD focusing in clinical psychology.

Multidrug-Resistant Tuberculosis in India: Solving the Problem by Reconstructing the Public Health Infrastructure

Maribel Gamon
Faculty Mentor: Dr. Linda J. Laatsch, Clinical Laboratory Science

Mycobacterium tuberculosis, commonly referred to as TB, is responsible for causing about 630,000 cases per year of infectious diseases worldwide. Recently, multidrug resistant tuberculosis (MDR-TB) has become an alarming public health concern. In addition, many developing countries lack effective treatment programs. India is one of those countries with a high prevalence of TB, seemingly affected by disconnectedness in their public health infrastructure. India, although a developing country, is still burdened with both chronic and infectious diseases, and there is a reactive public health system that must place focus on long-term effects of emerging resistant strains of TB. It is important to develop rapid drug susceptibility testing for quick diagnosis and treatment of monitored TB levels. According to a 2013 article published by Lancet, countries with well-developed health programs, supported by early diagnosis and access to quality drugs, have better treatment outcomes and compliance. Compliance must be maximized in developing countries to prevent the continuing emergence of MDR-TB. India’s public health infrastructure must be reshaped and empowered with implementation of treatment programs and surveillance frameworks similar to those seen in countries with low rates of MDR-TB levels. It is important that India strengthen their framework for combating MDR-TB, with emphasis on increasing health literacy among community leaders, informing government agencies of the necessity of research and surveillance, strengthening rapid TB diagnostic systems, and providing culturally-appropriate TB treatment programs. Using intervention strategies from other communities may help India develop an appropriate solution for decreasing the prevalence of MDR-TB.

Hispanic Views on Authoritative Parent Survey and FUN Parenting Modules

Maritza Contreras
Faculty Mentor: Dr. Marilyn Frenn, Nursing

During early childhood, parents tend to serve as role models and have the biggest impact on their children’s eating habits and physical activity. Childhood eating and exercise habits are then transferred into adulthood. These habits affect the child’s weight and overall health. Poor habits may put children in an “at-risk” category for obesity and other chronic diseases throughout their adulthood including, but not limited to metabolic syndrome, type 2 diabetes, sleep apnea and diseases of the bones and joints (Barlow, 2007). It is important to identify the parent’s perspective and its impact on the child’s feeding and physical activity practices. Our overall purpose is to gain an inside perspective on Hispanic views on the Adolescent Feeding Practices Questionnaire – Parent Version and the FUN parent teaching modules. This will allow for a more adequately acculturated and comprehensive development of the teaching materials. Using qualitative content analysis we will be looking at how culturally adaptable the teaching materials are amongst a convenience sample of seven Hispanic parents with children ages 9-15. This was achieved through one-on-one guided interviews.

Some of the major themes for a more culturally appropriate survey and teaching materials included rephrasing, change in format, and request of additional information particularly on carbohydrates. The topic of a ‘diet’ was generally reported to have a negative cultural connotation due to it being closely associated with limiting food portions rather than healthy eating. The survey has prior estimates of reliability and validity. This research study will aid in further examining the face validity of the parent survey and FUN modules’ face validity. The culturally adaptable teaching materials can allow Hispanics to become active participants in their family’s nutrition and physical activity practices.

Mass Incarceration and the Midwestern Latino Community: How Drug Laws Oppress Minorities

Ricardo L. Diaz
Faculty Mentor: Dr. John Su, English

Michelle Alexander, in The New Jim Crow, argues that the American legal system is a racial caste system maintained by unequal drug laws, what she terms, “The New Jim Crow” laws. This essay explores the limits of her thesis in relation to Latino/a population in the United States. Specific attention is paid to the Latino/a population in Wisconsin where racial disparities in the penal system are the greatest in America. Analysis of government data suggests that Alexander’s research reproduces the tendency of the American legal system to define race in binary terms: black and white. In effect this leaves Latino/a Americans without accurate representation within the American legal system.

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Family Ties: Exploring Familial Relationships for Individuals with a Felony Conviction
Vanessa Lopez
Faculty Mentor: Dr. Darren Wheelock, Criminology and Law Studies

This qualitative study touches upon the difficulties released prisoners and their families encounter through the reintegration process. The reentry process into society is a challenge for both released prisoners and their families to overcome, since the social stigma of a criminal conviction creates barriers. The challenging component of the social stigma essentially prevents individuals with a criminal conviction from sustaining themselves financially and finding a place to live. Besides the stress of overcoming the barriers of judgments created by society; many of these individuals must obtain the acceptance of their children, partners, and extended kinship groups. Existing literature has focused on how families provide help and assistance to released prisoners without recognizing ways in which families can also be harmful. Little is known about how gender shapes the ways in which individuals experience the reentry process with their families. This analysis, which includes 30 in-depth interviews of Milwaukee residents; explains that both genders maintain a different relationship with their children. Women who are ex-convicts can quickly reintegrate themselves into their children’s lives because of the emotional bond combined between a mother and her children. Unlike women, a role reversal was seen amongst the men and their children. The results demonstrated that men were not fulfilling their role as a parent. Instead, children were the individuals carrying out the paternal role. Additionally, the study demonstrates that families can provide financial, emotional and motivational support. However, relationships with family members can also adversely impact an individual’s reentry in a negative way.

Emotional Motivators that Influence Teacher Activism: Chicago Public School Strike and School Closing
Darielle Mitchell
Faculty Mentor: Dr. Sharon Chubbuck, Educational Policy and Leadership

Recent education reform efforts, such as school closings, have encouraged teachers to mobilize in protest. Various emotions will motivate activism, accompany activism, and evolve during the activism itself. Dr. Michalinos Zembylas’ (2006) theory on the politics of emotions describes how emotions influence the power relations, resistance, and transformation of education. Zembylas (2010) theory of spaces for coping aimed to “identify the spatiotemporal politics of emotional relations and understanding of teachers’ responses to educational reform.” This qualitative study seeks to examine the emotional influences that shape how teachers from the Chicago Public School (CPS) district define, become involved in, and respond to activist efforts. The sample consists of four teachers, ranging in age from 28-57 years old, who participated in voluntary in-depth interviews. The interview questions focused on their personal definitions of activism, their involvement with activism efforts in Chicago, and the emotions that motivated and changed their activism in response to the CPS teachers’ union’s strike and school closings. Preliminary results support Zembylas’ theories on the “politics of emotions” and “spaces for coping,” further indicating that emotions are not only essential to the evolution of activism among teachers but they are socially and politically charged. Three main themes emerged from the collected data: (1) Anger & Fear, (2) Joy & Unity, (3) Hopelessness & Resignation. This study is not generalizable to all CPS teachers; however, it identifies some emotional motivators that may be key to understanding the mobilization and educational reform efforts of teacher activism.

African American Women’s Birth Stories as Told to African American Women Interviewers
Tamiah McCoy
Faculty Mentor: Dr. Lisa Hanson and Dr. Leona VandeVussee, Nursing

A woman’s birth story allows each woman to tell her own perspectives about her experience of bringing a child into the world. As healthcare providers, it is always important to value listening to and learning from our clients. Researchers systematically analyzing birth stories can yield insights on ways to improve birthing experiences for women. This is especially important for African American women, who differentially encounter the most numerous health disparities of any racial group, with twice as much infant mortality than other groups. This study examined birth stories of African American women in order to gain insights from them to better meet their needs. In this way, healthcare providers may learn strategies to address health disparities.

A secondary analysis of five African American birth stories was conducted. Three themes were identified from the women’s stories: (a) desire for continuous labor support, (b) preference for certain characteristics of healthcare providers (e.g., CNMs/RNs over MDs and women more than men), and (c) reliance on spirituality for coping. These findings highlight the importance of listening to and learning from women. Healthcare providers can likely improve the care of their patients by incorporating these themes into their methods of care. Understanding and taking action towards the unsaid needs of African American women experiencing childbirth can ultimately help health disparities get addressed.

Blaming the Victim: A Look at Sexual Assault Adjudication in the Milwaukee County Courthouse
Amber J. Powell
Faculty Mentor: Dr. Heather Hlava, Criminology and Law Studies

Even though several studies explore common themes in victim-blaming strategies amongst adult sexual assault cases, very few address how these techniques are used to blame and discredit adult sexual assault victims. Therefore, this study compared the cultural narratives used by defense attorneys to blame adult and child sexual assault victims in the courtroom. The study sample consisted of 18 sexual assault cases (5 adult victims and 13 child victims) in three branches of the Milwaukee county courthouse in Milwaukee Wisconsin. The defendants and victims in these cases represent various ethnicities, ages, and social economic backgrounds. Employing a mixed-methods approach, this study used ethnographic observational data, archival research, and secondary data analysis to compare victim-blaming strategies during jury trials and sentencing hearings. Observational data was collected between May and June 2013, while secondary data was collected between September 2011 and May 2012. Archival data was provided by Consolidated Court Automation Programs (CCAP) and shows records of cases in the Wisconsin Circuit Courts. Jury trials and sentencing hearings play an important role in comprehending victim blaming because defense attorneys often use those times as an opportunity to discredit the victim. Results show that the narratives utilized work to hold adult and child victims as unbelievably across a variety of themes relating to consent, reliability, and corroboration. A narrative of rebelliousness was also invoked particularly as it pertained to child victims. The importance of these findings is elaborate in the discussion.

Vanessa Lopez is a senior majoring criminology with a minor in Health Studies. Vanessa is a recipient of the Urban Scholarship. After she graduates in May of 2014 she plans to pursue her master’s in public health. She is interested in health care issues and would like to work with other public health professionals to improve the public health within national and international communities.
How do the Changes in Campaign Finance Law Affect the Retirement of Senators?

Rafael Torres, Jr.
Faculty Mentors: Dr. Julia Azari, Political Science

The U.S. Supreme Court decision in the case of Citizens United v. the Federal Election Commission raised concerns about how unlimited contributions by associations would influence the democratic process. These concerns have been expressed through media and politicians alike, but research on the subject is conflicting. One side argues that protecting unlimited contributions as free speech gives a disproportionate amount of speech to non-voting entities. On the other side, speech does not directly influence elections and it is ultimately the voter's decision to choose a candidate. My research is aimed at testing this conventional wisdom. I will be studying the 108-113th Congresses to determine if there is a difference in Senate departures before and after the decision. The connection between campaign finance and voluntary Senate departures is that a change in the law will affect election outcomes, causing more Senators to depart from Congress in anticipation of a contentious election. The differences in retirement will be determined by changes in the rate of departure and the profiles of voluntarily departing Senators. Understanding how the court's decision influences changes in membership is important because departures are a main means of change in the Senate makeup. The study found slight differences before and after the Citizens United ruling based on age, the number of years of service in the Senate, and win margin of the last election. The paper will also discuss the implications of the findings on future voluntary departures and how it will affect the makeup of the Senate.

Trauma Exposure Reported by Women who have Been Recently Deported from the U.S. to Mexico

Christian Villanueva
Faculty Mentor: Dr. Ruth Ann Belknap and Dr. Robert Topp, Nursing

In 2012 the U.S. deported approximately 200,000 individuals to Mexico; a significant proportion of these individuals were women. The combined effect of previous traumatic experiences with that of being deported to Mexico is detrimental to women's health. The trauma suffered through this process results in high levels of stress that lead to a variety of mental and physical health problems for Mexican women, disproportionately compared to men, who entered into and are deported from the U.S. The purpose of this study is to describe the life history of trauma exposure of women who have recently been deported from the U.S. to Mexico. The results of this study will inform the development of interventions to improve the health of these women being deported to Mexico. Data concerning life trauma exposure was recently collected quantitatively from 25 women who have been newly deported from the U.S. to Mexico at Casa Nazaret in Nogales, Mexico. These descriptive quantitative data were collected using The Life Stressor Inventory—Revised (LSC-R). This instrument operationalized the life history of trauma exposure of the sample of women. The responses on this instrument were translated to a Likert scale, in order to create numerical ranks for the responses given by the women. The data were then cleaned for missing responses. Qualitative responses on the LSC-R instrument were translated to an SPSS spreadsheet. These data were then used to address the research questions.