

Student Research and Creative Inquiry Forum

April 17, 2019

College of Liberal Arts

Project #76

Title: Analyzing the United Nations Environment Program in terms of the Chesapeake Bay Watershed, Geochemistry, and Civic Engagement

Student: Kathleen Hohweiler

Faculty mentor: Dr. Alison McCartney (Political Science)

Abstract: The main topics of this research will be to understand the inner workings of United Nations Environment Program (UNEP), identify, explain, and rate the effectiveness of several 21st century UNEP programs, identify criticisms, and relate these identified global environmental issues to issues that the Chesapeake Bay Watershed area is facing today in terms of freshwater pollution. The most important aspects of the paper will come in the form of drawing a connection to my current Geochemistry work and the research that the Towson University Biogeochemistry Laboratory is conducting to study the health of the Chesapeake Bay. The paper will also focus heavily on the scientific aspects of freshwater pollution and ecosystem management in the Chesapeake Bay Region. Research will be completed in analyzing the scientific solutions offered by the UNEP and understanding their recommendations in terms of the watershed region

Poster #88

Title: Post-Conflict Reconstruction & Gender Relations: Empowering Women in Darfur's IDP Camps

Student: Fatime-zara Beri

Faculty mentor: Dr. Paul McCartney (Political Science)

Abstract: This scholarship aims to explore the nature and extent of women's participation in the internally displaced person camps in Darfur. Community leaders and committees play key roles in the implementation of humanitarian assistance in Darfur; but women, who constitute much of the population in the camps, are often underrepresented in community participation and leadership. This research intends to stray away from the narrative of women being limited to the roles of victims during and post-conflict. By doing so, I will analyze the potential offered by conflict to transform traditional gender roles and emphasize the importance of ensuring that humanitarian response international NGOs acknowledge the often-ignored role of traditional female community leaders and support women's leadership opportunities more broadly. This paper argues that the solution to ensure that Sudanese women will be productive participants in society once the War in Dar is over is to supply them with valuable resources right now in the displacement camps. I will conduct interviews throughout the writing process to gain primary accounts of what is occurring in Darfur from survivors themselves and high-profile people engaged in post-conflict reconstruction.

Poster #89

Title: Exploring Gender Dynamics among Migrants: A Focus on West African Migrant Women along the Western Mediterranean Route

Student: Chenise Calhoun

Faculty mentor: Esther Wangari (Women and Gender Studies)

Abstract: Looking at the existing literature on sub-Saharan women migrating across borders, one would note that much of existing academia pertaining to migrants revolves around statistics, estimated numbers, and route theories. The faces behind said numbers are rarely discussed, while the few outlets which seek to humanize the issue concentrate on migrant men. The discourse represents very few women migrating while portraying those that do as exceptional cases. These narratives feed the belief that women do not need to be accounted for in the discourse due to their lack of presence in the media and academic papers; however this narrative is far from the truth. This thesis seeks to tell the stories of women who migrate on the Western Mediterranean route to Europe. In doing so, it investigates the reasons why women migrate, what occurred in the home country that is pushing women out, or what is pulling them towards Europe.

It also investigates the the political, economic, historical, and social aspects of the home countries from which women are leaving and whether there are any patterns to be drawn between countries with similar infrastructure and economies? The countries of concentration are Senegal and Ghana.

Poster #90

Title: D-Serine Selectively Enhances The Consolidation of Recently Acquired Place Memory Without Affecting Cue-Response Competition In the Water Maze

Students: Francisco Canales, Noah Kamsheh

Faculty mentor: Bryan Devan (Psychology)

Abstract: Evidence indicates that D-Serine (DS) acts as a co-transmitter at the N-methyl-D-aspartate receptor (NMDAR) complex, a key therapeutic target in age-related memory decline and dementia. Previous research from our laboratory has shown that DS enhances spatial behavior over a 24-h retention interval in the water maze (Stouffer, Petri & Devan, 2003; Behavioral Brain Research), suggesting a possible cognitive enhancement of memory consolidation. In the present study, 23 male rats were trained on a concurrent cue-place task. DS and a control (100 mg/kg) were administered 40 minutes preceding a competition test where the visible platform was moved diagonally and opposite to the previous quadrant, spatially dissociating cue and place information. Day 2, a probe test where the platform was removed was done to determine the retention of newly acquired place information from the original place representation. Although DS did not influence competition test behavior, probe test results revealed enhancement of spatial behaviors as well as new platform representation retention. This has been demonstrated in similar studies (Bado, Madeira, Vargas-Lopes, Moulin, Wasilewska Sampaio, Maretti, & Panizzuti, 2011). These findings support the possibility that DS may be a valuable therapeutic agent for treating forms of age-related memory loss related to NMDAR signal transduction.

Poster #91**Title:** The Rise of Social Media: Exposure is the Ticket to the Top**Student:** Jalon Dixon**Faculty mentor:** Barbara Benitez-Curry (Mass Communications)

Abstract: This focuses on the ideal ways that social media in the forms like Instagram following, twitter mentions, YouTube mixtapes, etc. have an influence on our ability to enter our career of choice. More than ever, jobs look at things like social media footprints to determine the qualifications for jobs as well as contributes to whether or not individuals are even exposed to employers. With the ability to grow a following as well as follow those you aspire to be, social media has provided a platform for individuals to market themselves, display their talents, and creatively show off their personality. Through this research project I will display my methods of networking as well as show the progression of social media and how as technology and online communication has become more prominent within our society, it has also become a very significant factor in reaching our career goals. Lastly I will primarily focus on how as a aspiring writer/author (English Major) and sports journalist, social media has and will continue to be my primary ticket to me specifically reaching my goals. This project will contain statistics, examples and personal experience to truly illustrate just how significant social media is.

Poster #92**Title:** Resting Heart Rate Variability and Executive Function**Students:** Sarah Elsayed, Xavier Fernandez, India Eady, Alexis Scudder, Morgan Pearce, Ememebong Sunju-Abbey**Faculty mentor:** Dr. Jared McGinley (Psychology)

Abstract: Heart Rate Variability (HRV) which is a metric of parasympathetic activity, refers to the variability in the amount of time between successive heart beats (Goldberger, 1991). High HRV has been demonstrated to buffer stress reactivity. Research suggests that executive function may be impaired in stressful situations. Higher performance on cognitive inhibition tasks have been associated with individuals with high HRV; this is likely a result of the ability for these individuals to self-regulate in the face of a threatening environment due to high vagal tone (Thayer, Hansen, Saus-Rose, & Johnsen, 2009). The current study was designed to test the relationship between resting HRV and performance on a series of cognitive tasks. Seventy eight undergraduate students had HRV measured for five minutes prior to engaging in three cognitive tasks (i.e. the Stroop task, the Flanker task, and the Simon task). The results of the current study will provide insight into the role of HRV as a marker of executive function.

Poster #93**Title:** The Effects of Justice Sensitivity and Information about Food Waste on the Acceptance of Food Waste Ban as a Viable Way to Solve the Food Waste Problem in the United States**Students:** Julissa Fernandez, Julissa I Fernandez**Faculty mentor:** Dr. Geoffrey Munro (Psychology)

Abstract: Worldwide statistics show people have been negligently wasting food in large quantities. The current study investigated the effects of morality and education on the approval of a food waste ban. The sample consisted of 30 participants who answered three questionnaires which measure knowledge about food waste, attitudes toward the food waste ban, components of justice sensitivity (JS), food waste behavior and attitudes toward this behavior. Independent samples t-tests revealed no significant difference in the approval of a food waste ban. However, there were significant weak correlations between the participants' perceived behavioral control and their shopping routines, intentions not to waste and food waste amounts. By educating the population on how to effectively address their wasteful habits, their perceived behavioral control will increase, and their food waste quantities will be reduced.

Poster #94**Title:** Analyzing the World Health Organization's Intervention in Crises: The Rohingya Crisis**Student:** Claire Hageman**Faculty mentor:** Alison McCartney (Political Science)

Abstract: Providing health services in developing countries during times of crisis is more complicated than providing the same services in developed countries. Developing countries are often not equipped to deal with the consequences of severe crises like natural disasters and political unrest. Being efficiently prepared for these disasters requires money, large scale organization and plans, and man power that many developing countries do not have access to.

The Rohingya crisis is being described as one of the worst humanitarian emergencies that we will see in our lives. Nearly a million people have fled Rwanda to the district of Cox's Bazar in Bangladesh in a little over a year. The Rohingya refugees are already a vulnerable population who had to flee their homes and are now living in an extreme poverty situation alongside previous Cox's Bazar residents and all are struggling to access basic health services. The influx of refugees and increased strain on health services in Cox's Bazar has forced action from the Ministry of Health and Family Welfare and the World Health Organization to coordinate efforts to assist the people living on Cox's Bazar.

Poster #95**Title:** Ethnolinguistic Nationalism in Eastern Europe**Student:** Finn Hasson**Faculty mentor:** Dr. Paul McCartney (Political Science)

Abstract: This work considers the role of language in influencing the national movements of Poland, Lithuania, and Belarus in the nineteenth and twentieth centuries. As previous research largely considered language merely as a communicative tool, it does not adequately reflect linguists' latter twentieth century advances in understanding language's effect on cognitive processes. Contrary to earlier understandings, contemporary linguistics scholarship considers the native language with significantly greater complexity, as it is the only tool with which human beings can navigate and understand abstract concepts, such as those that drive nationalist movements. This work seeks to apply new understandings of language as it relates to cognition and the creation of group identity to historical political events in order to deepen understanding of nationalist movements.

Poster #96**Title:** "Colours" In Brazil**Student:** Brittany Jenkins**Faculty mentor:** Alan Marcus (Department of Geosciences)

Abstract: "Colours" in Brazil is a regional analysis on the complexities of race in one of the most diverse countries in the world. With a self-identifying census, as well as a population that can trace their origins from over five sources, it becomes evident why understanding race in Brazil may come across as too ambitious for some. So what is Race? How does it differ in Brazil compared to the U.S.? And why is it important as a member of society that we acknowledge its role and attempt to understand it? We provide insight into the significance of race in Brazil from a cultural, historical, and socioeconomic standpoint and how it is used as a powerful tool to shape everyday social relations.

Poster #97

Title: Scopolamine Induced Model of Alzheimer's Disease in Rodents and the Role of D-Serine and D-Cycloserine in the Morris Water Maze

Students: Noah Kamsheh, Francisco Canales

Faculty mentor: Bryan Devan (Psychology)

Abstract: D- Serine (DS) and D-Cycloserine (DCS), both that act as agonists on the NMDAR system (specifically on the glycine site), are looked at as the primary mediators of learning and memory. Current research in the field determined that DS is a mediator of cell migration and communication, synaptic transmission and plasticity, long-term potentiation (LTP), and long-term depression (LTD) (Scolari & Acosta, 2007). While, DS mediation has shown to improve cognition in DCS has been able to show improvement both in impaired as well as normal subjects (Monahan, 1989, Gabriele & Packard, 2010), DCS has been shown as a benefit in spatial and working memory in aged rats (Baxter et al. 1993). The primary factor in Alzheimer's-Dementia (AD) is the degradation of the hippocampus. Therefore, this present study aimed to investigate whether DS and/or DCS could offer cognitive benefit to those with AD. The Scopolamine (SCOP) model in rats was used to test this theory via the utilization of Competitive Place Tasks (CPT) water-maze. The CPT in combination with DS and DCS offer the opportunity to explore the nature of the striatum and hippocampus as competing memory system and the degree to which each of these drugs is influencing them.

Poster #98

Title: Barriers to student self-efficacy and motivation in college: The potential protective role of involvement on campus

Student: Jacob Lester

Faculty mentor: Monika Conrad (Psychology)

Abstract: The study evaluates the impact of self-reported barriers and involvement on-campus on college students' self-efficacy and motivation. Students (N=384) completed a demographic questionnaire, the Motivation Scale – College Version and the College Self-Efficacy Inventory at the beginning of the semester. The studied students were representative of the demographic makeup of the college. Positive correlations were seen between amotivation and financial issues ($r=.11$, $p=.03$) as well as drug/alcohol use ($r=.15$, $p<.001$) and amotivation. Significant positive correlations were seen between involvement on campus and social efficacy ($r=.17$, $p<.01$), as well as total efficacy ($r=.13$, $p=.01$). Involvement on campus had a negative correlation with extrinsic external motivation ($r=-.11$, $p=.04$), while holding a job had a positive correlation with extrinsic introjected motivation ($r=.12$, $p=.02$). Amotivation was significantly negatively correlated with all subscales on the self-efficacy measure, including total ($r=-.19$, $p<.01$), social ($r=-.12$, $p=.03$) and course efficacy ($r=-.21$, $p<.01$). Results suggest that financial barriers may play a role in student academic motivation, as could drug and alcohol use, however, while significant, the correlation coefficients were relatively small. Current data suggests that involvement may play a crucial role in creating higher levels of self-efficacy around relationships on campus, which may be linked to motivation and retention.

Poster #99**Title:** We're Having Technical Problems: Current Issues in African American Historiography**Student:** Katie Lowe**Faculty mentor:** Andrew Diemer (History)

Abstract: The study of African American history prior to the late nineteenth century is limited in ways which extend beyond the common problem of limited evidence. This limitation is derived from the existence, extent, and echoes of slavery which have silenced generations of voices. Historians continue to engage those sources which have survived regardless, attempting to balance the conditions which predicated their creation with the need to glean whatever can be from shipping manifests, plantation records, and slave narratives (often revised by well-meaning editors). The evidence created by African American communities present their own challenges, as they reflect and engage with the struggles in their larger world, but not always directly. The end result is sometimes that the history of African Americans prior to the twentieth century is defined almost entirely in terms of slavery. Millions of voices are thus still lost.

In recognition of these complications, the field must position itself to re-engage with these older bodies of evidence, and create fuller understandings of the complexities of both enslaved and free African American communities. In addition, the promise of new digital tools and projects to allow more dynamic use of archival sources should be welcomed.

Poster #100**Title:** Effect of Instagram Social Comparisons on Women's Body Image and Affect**Students:** Erica Maroney, Nicole Libbey nlibbe1@students.towson.edu, Krystyna Griswold kgrisw1@students.towson.edu, Gina Rinaldi grinal1@students.towson.edu**Faculty mentor:** Justin Buckingham (Psychology)

Abstract: A previous study by Tiggeman and Zaccardo (2015) found that fitspiration images on Instagram can cause poor body image in women. In this study, we examined how Instagram social comparisons affect women's body image and affect. To study this, we tested a sample of 249 female college students. We gave them baseline measures of body dissatisfaction and affect before randomly assigning them to one of four conditions that manipulated the types of Instagram images displayed. Conditions included (1) a threatening comparison where they looked at Instagram model-like women, (2) a non-threatening comparison where they looked at images that were more like the average college student, (3) a non-threatening comparison with a similarity focus - which was similar to the previous condition except participants were prompted to focus on similarities, and (4) a control condition of neutral landscapes. The images were followed by a post-test measurement of body dissatisfaction and affect as well as a trait measure of the tendency to engage in appearance social comparison. We found that the threatening comparisons led to significant increases in negative affect and body dissatisfaction, but only for women who scored high on a trait measure of appearance social comparison.

Poster #101**Title:** Measuring Civic Engagement in Public Education**Student:** Connor McNairn**Faculty mentor:** Alison McCartney (Political Science)

Abstract: In the United States, citizen participation in governance is the foundation of our republic. According to Founding Father James Madison, the U.S. system was built upon the general interest of an active polity. For a democratic republic, which relies wholly on the interplay between citizens and representatives, to achieve prosperity, it must have a civic-minded populous. However, in the United States today, levels of civic participation, as measured by multiple studies, are abysmal. Diagnosing the causes of low political participation is crucial for success of local, state, and national government in order to prescribe remedies to a system suffering under widespread political apathy among the citizenry. To discern such a remedy, I focus specifically on one case study measuring the civic habits of students and teachers within the Maryland state public education system. Analyzing curricula, gauging frequency of civic discussion in the classroom, and measuring motivations of teachers and students within the classroom are all paramount considerations within my research. Through measuring and evaluating the current situation in the public education system as it pertains to civic education and political participation, I hope to gather evidence to support potential policy changes in educational practices that can reinvigorate youth political engagement.

Poster #102**Title:** Measuring Civic Engagement Education in Public Education**Student:** Connor McNairn**Faculty mentor:** Dr. Alison McCartney (Political Science)

Abstract: In the United States, citizen participation is the foundation of our republic. According to Founding Father James Madison, the U.S. system was built upon the general interest of an active polity that could operationalize its ideas through the work of elected representatives. For a democratic republic, which relies wholly on the interplay between citizens and representatives, to achieve prosperity, it must have an active and civic-minded populous. However, in the United States today, levels of civic participation, as measured by multiple studies, are abysmal. Diagnosing the causes of low political participation is crucial for success of local, state, and national government. I focus specifically on one case study measuring the civic habits of students and teachers within the Maryland state public education system; such habits are a primary means of developing civic skills for all U.S. residents. Analyzing curricula, gauging frequency of civic discussion in the classroom, and measuring motivations of teachers and students within the classroom are all paramount considerations within my research. Through measuring and evaluating potential strengths and weaknesses within the public education system as they pertain to civic education and political participation, I hope to gather evidence to support potential policy changes in current educational practices.

Poster #103**Title:** The Geopolitical Influence of the IMO**Student:** Jonathan Ocadiz**Faculty mentor:** Alison McCartney (Political Science)

Abstract: This research project shall examine the International Maritime Organization (IMO) and will analyze its respective power in addressing maritime issues, ranging from piracy, port security and maritime pollution. These issues have been recognized by the IMO for constituting as risks against the wellbeing of not only both mariners and the maritime environment, but also maritime trade. The project will concentrate on the geopolitical influence of the IMO towards its member states in resolving these maritime issues. The project will examine the various methods that the IMO utilizes, ranging from legislative efforts to regional agreements, in influencing member states to collectively collaborate on these issues. In order to effectively examine the global influence of the IMO and its respective policies in addressing these issues, the project will utilize relevant publications and resolutions published by the IMO and the United Nations. In addition, the project will also examine reports and academic publications on the economic, human and environmental costs of these maritime issues, from various organizations ranging from the European Union to the International Chamber Commerce. It is critical to examine the influence of the IMO in resolving these maritime issues because they transcend beyond the territorial boundaries of IMO-member states.

Poster #104**Title:** Measuring the Effectiveness of the International Development Association**Student:** Matthew Phillips**Faculty mentor:** Alison McCartney (Liberal Arts)

Abstract: Since its inception in 1960, the International Development Association has provided \$369 billions of investments for 113 states. Currently, 35 states have developed past the economic threshold to qualify for IDA assistance, referred to as graduating. Although, there has be 44 states that have graduated and nine of those graduates have relapsed into the program as they fell below the threshold.

The development and poverty level of a state is a determining factor for the influence of that state in the international community. The international influence of a state is a major indicator of the state's power. Power allows greater representation and inclusion for a state in the international community. This research will examine if the International Development Association has been effective in graduating beneficiary states from its lending programs. The IDA's goal is to reduce poverty and increase development, which relates to a state's influence and power on the international level. An analysis of the IDA and its effectiveness to graduate states by reducing poverty and increasing development will examine if, and to what extent, the IDA is helping poor states achieve influence and power in the international community.

Poster #105**Title:** n/a**Student:** Krystal Ragin**Faculty mentor:** n/a (n/a)**Abstract:** n/a**Title:** Analyzing Trust and Emphasizing Inclusive Partnerships in Rural Guatemalan Reproductive Healthcare Systems**Student:** Sarah Rowan**Faculty mentor:** Dr. Alison McCartney (Political Science)

Abstract: The country of Guatemala has historically struggled in several aspects of healthcare development, particularly in the areas of infant and maternal mortality and access to reproductive healthcare and education services. Guatemala also has the highest fertility rate in Latin America. These disadvantages primarily affect the country's large rural indigenous populations. The country's indigenous populations experience barriers to healthcare services and education such as strict class system divisions, ethnic and linguistic discrimination, and lack of access to healthcare resources. In addition, Guatemala has been slow to support and implement intercultural healthcare practices and education, leading to a feeling of exclusion and lack of trust by members of indigenous communities seeking effective healthcare. This project aims to analyze whether local and global organizations are effectively working together or not to ensure that reproductive healthcare and education services in Guatemalan rural indigenous communities remain culturally inclusive in their practices.

Poster #106**Title:** Self-injury through self-blame depending on abuse type: A path analytic approach**Students:** Ryan Robertson, Ryan Robertson, Stephanie Lietzau, Elena Massetti, Rebecca Cossaboom, & Jonathan Mattanah**Faculty mentor:** Jonathan Mattanah (Psychology)

Abstract: Although several studies have examined how the presence of childhood abuse increases the likelihood of self-blame and non-suicidal self-injury (NSSI), few studies have assessed whether self-blame mediates the effect of trauma on NSSI. The present study examined the effects of interpersonal trauma during childhood on self-blame and NSSI incidence using a path analytic approach. A sample of 390 undergraduate students (79.6% female) completed an anonymous survey assessing the degree of life trauma experienced, specifically different forms of abuse (i.e., physical, emotional, sexual touching), coping style (e.g., self-blame, humor), and incidence of NSSI. Experiencing childhood emotional abuse had direct, positive effects on tendency to engage in self-blame ($\beta = .270, p < .001$), and NSSI incidence ($\beta = .133, p < .05$). Additionally, engaging in self-blame demonstrated direct, positive effects on NSSI incidence ($\beta = .228, p < .001$). Moreover, emotional abuse had an indirect effect on NSSI incidence through self-blame ($\beta = 0.062, p < .05$). The results suggest a unique role of emotional abuse compared to other forms of abuse during childhood. Those who are emotionally abused may see fault with themselves for having been abused and may engage in self-punishment through NSSI incidence to regulate the overwhelming emotions.

Poster #108**Title:** Qualitative Analysis of Queer Identity Marking**Students:** Philip Taylor, Zoe Kolker**Faculty mentor:** M. Paz Galupo (Psychology)

Abstract: Recent research has considered how individuals mark, or make, their sexual identity known to others. Previous research has specifically considered sexuality marking of heterosexual and bisexual individuals. The current study will address how queer identified individuals mark their sexual identity. Participants will include self-identified queer adults living with in the U.S. recruited online through SurveryMonkey. Results will include a thematic analysis of participants responses to an open-ended question asking them to describe a setting or situation in which they would choose to use the term queer to self-identify their sexual identity. A team of three researchers will discuss themes through multiple meetings to identify themes that best capture the data. Researchers will then pick quotes that best represented the themes that are displayed. It is anticipated that queer identified individuals will choose to use the term queer strategically with different motivating factors across social situations. Discussion will focus on the way that queer marking is unique from the way other individuals with other identities mark their sexual identity.