

# Celebration of **SCHOLARSHIP**



**THURSDAY, APRIL 21, 2022**

**Oral Presentation Program**

**IWU'S ANNUAL UNDERGRADUATE RESEARCH CONFERENCE**

SPONSORED BY THE JOHN WESLEY HONORS COLLEGE

# ORAL PRESENTATION SCHEDULE

Zoom: <https://indwes.zoom.us/j/98946773920?pwd=L0d3SmZlY2NkOTRlZHZSZkNrWUJsdz09>

Henry West Banquet Hall		
8:20am	Sophia Sanguedolce <i>Natural Sciences</i>	Isolation of Novel Salt-Tolerant Bacteria from Don Juan Pond, Antarctica
8:40am	Hannah Miller <i>Natural Sciences</i>	Monocarboxylate Transport Mediates ATP Induced Extracellular Acidification of Mammalian Astrocytes
9:00am	Mary Bonanno <i>Natural Sciences</i>	Examining structural and biochemical features of metabolic enzymes from thermophile <i>H. modesticaldum</i>
9:20am	Mallory Wolford <i>Nursing</i>	Certificate of Holistic Medicine
9:40am	Sterling Simek <i>Nursing</i>	Pouring from an Empty Cup: A Call to Restore Spiritual Care in Nurses
10:00am	Annaliese Schlotterback <i>Nursing</i>	Human Sex Trafficking Awareness
10:20am	Hannah Bethay <i>Nursing</i>	Racial Disparities in Maternal-Infant Outcomes
10:40am	Emma Wirth <i>Nursing</i>	Race and Short Term Missions
11:00am	Alyssia Vanderlaan <i>Modern Language and Lit.</i>	Color-Coded: Micro Memoirs
11:20am	Isabel Bostick <i>Modern Language and Lit.</i>	A New Lost Generation: Jazz-Age Echoes of Cultural Trauma and Disillusionment in Contemporary Literature
11:40am	Katy Hamilton <i>Social Sciences</i>	"She's no girl. She's a Grrrl." - Remembering Riot Grrrl
LUNCH		
12:40pm	Morgan Keller & Isabel Baker <i>English and Illustration</i>	The Playground in the Forest: A Short Film ( <i>Located in The Globe Theater</i> )
1:00pm	Clay Crofford <i>Theology and Ministry</i>	Reading Blind: The Urgent Need for Christians to Understand the Bible ( <i>Located in The Globe Theater</i> )
1:20pm	Clay Crofford (cont.)	
2:00pm	Priscilla Aram Youn <i>Theology and Ministry</i>	Honoring Culture & Call
2:20pm	Christina Magers <i>Theology and Ministry</i>	A Theological and Practical Perspective on Church Involvement in Sustainable Food Production Within Rural Communities
2:40pm	Ella Williams <i>Theology and Ministry</i>	Adoption Theology and its Impact on Adoption and Language in Christian Communities
3:00pm		
3:20pm		
3:40pm	Kyla Foley <i>Behavioral Sciences</i>	The World As It Could Be: Fairy Tales and Childhood Trauma
4:00pm	Abigail Johanningsmeier <i>Behavioral Sciences</i>	The Attractiveness Project
4:20pm	Caroline Jones <i>Behavioral Sciences</i>	Parenting Style and the Impact on Child's Faith
4:40pm	Daniel Baker <i>Sports Management</i>	Hometown Advantage: The Influence of The Birthplace Effect and Hometown Demographics in College Soccer Players
5:00pm		

# ORAL PRESENTATION SCHEDULE

Zoom: <https://indwes.zoom.us/j/92879672393?pwd=dFBXZmw0a3pEeXpwK1hZc2NmK0Vpdz09>

Bedford Banquet Hall		
8:40am	Megan St. Pierre <i>Behavioral Sciences</i>	Predicting Relapse and Growth in Recovery from Substance-Use
9:00am	Elizabeth Roach, Hannah Avila, Bryana Housley, Clarisse Umubyeyi, Kaylee Stants, Gardy Paul <i>Behavioral Sciences</i>	International Students' Lived Experiences at IWU
9:20am	Lauren Rainey, Kristina Standish, Lauren Stroud, Natalie Watson <i>Behavioral Sciences</i>	Spirituality Affecting College Students' Mental Health
9:40am	Thomas Lyon, Kinsey Price, Kenzie Millar, Hailey Miller, Brooke Kurtz <i>Behavioral Sciences</i>	A Quantitative Study on Eating Disorders among male, female, athletes and nonathletes in Indiana Wesleyan University Students
10:00am	Kylee Hoffman, Lindsey Bilkey, Luke Abston, Ava Howard, Audrey Douglass <i>Behavioral Sciences</i>	Mental Health among Male and Female students at Indiana Wesleyan University
10:20am	Evan Brown, Alex Cartwright <i>Natural Sciences</i>	Inhibition of Endosomal Acidification Prevents Zoledronate-Induced Viability Loss in Human Gingival Fibroblasts
10:40am	Ashley Rice <i>Behavioral Sciences</i>	Role of Fusion Protein Endocytosis in Cedar Virus Particle Assembly
11:00am	Ryan Cooney <i>Social Sciences</i>	The Economics of Prohibition: A Study into the Effect of State Marijuana Legalizations on Incarceration Rates
11:20am	Dru Denney, Emily Dexter, Hannah Heilman, Hannah Hubley, Quinn Miersma, Emily Baker, Jonathan Balance, Sarah Gray, Ashlyn Hastings, & Sophia Madl	Collaborative Project between novel writing course (WRI 354) and the Illustration (ART 436)
11:40am	Hoshea Nixon, Katherine Reed, Alyssia Vanderlaan, Jerah Winn, Emily Bays, Aliya Moss, Abigail Seese, Makenna Steimel, Avery Walker, Hannah Slota	Collaborative Project between novel writing course (WRI 354) and the Illustration (ART 436)
LUNCH		
12:40pm	Sarah Buresh, Jaxson Savieo, Logan Fritz <i>Health and Human Performance</i>	Efficacy of Reflexive Performance Reset
1:00pm	Anna Stevens and Christine Martin <i>Health and Human Performance</i>	THE EFFECT OF ATTENTIONAL FOCUS IN DYNAMIC STABILITY IN INDIVIDUALS WITH KNEE LIGAMENT INJURIES
1:20pm	Leah Maher; Lizzy Leggett; Ben Vongunten <i>Health and Human Performance</i>	Comparison of Co-contraction Ratios of College Athletes After Knee Injury During a Lateral Step-up
1:40 pm	Liz Richards, Ethan Stump, Kori Stump <i>Health and Human Performance</i>	The Relationship Between Y-Balance Test Performance and Hip Extensor Strength
2:00pm	August Hubbard, Emily Tripp, and Lindsey Schroeder <i>Health and Human Performance</i>	The Impact of Plated Running Shoes on Physiological and Psychological Variables
2:20pm	Emily Carter, Lauren Turner, Aaron Harris <i>Health and Human Performance</i>	Assessing Leg Muscle Disparities Between ACL-Reconstructed College Athletes and Healthy College Athletes Using Isokinetic Dynamometer
2:40pm	Abigail Collins, Ariana Glass, Emily Neese, Melissa Cook <i>Health and Human Performance</i>	The Effect of a Chlorophyll Placebo on Psychological and Physical Outcomes in Treadmill Exercise
3:00pm	Seth Honeycutt, Alex Lampman, Matt Lavin, Kloe Muntz, and Samara Schlabach <i>Health and Human Performance</i>	The Effect of Mindfulness Meditation on Pressure Pain Threshold among College Students
3:20pm	Maddie Bigham <i>Communication</i>	Re-Signing Harry Potter
3:40pm	Hayleigh Turner <i>Communication</i>	The Evolution of Diversity and Inclusion in Print Advertisement
4:00pm	Katy Wilhelm <i>Social Sciences</i>	Accent Insecurity in ESL Students

## 2022 SENIOR DESIGN PRESENTATIONS

### Visual Communication and Graphic Design & Design for Social Impact

April 21, 2022 | 3:00 – 5:40 | Beard Arts Center: Lecture Hall 150

Virtually: <https://indwes.zoom.us/j/8900988967>

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3:00 - 3:10	<b>HANNAH BIRKHOLZ</b> <i>Design with Dignity</i>
3:10 - 3:20	<b>LANDIN BROWN</b> <i>MESH</i>
3:20 - 3:30	<b>ANA COLLAR</b> <i>Neighborhood Revitalization</i>
3:30 - 3:40	<b>SILVER EDOSIO</b> <i>Uplift</i>
3:40 - 3:50	<b>OWEN FINK</b> <i>No Secrets</i>
3:50 - 4:00	<b>MARK FISK</b> <i>Development Exchange</i>
4:00 - 4:10	<b>AUDRA FRIEDEN</b> <i>Dismantling Stigma by Design; empowering combat survivors to overcome trauma</i>
4:10 - 4:20	<b>BRIANNA HAESSIG</b> <i>Designing Color Blind Accessible Navigation for a Better Retail Experience</i>
4:20 - 4:30	<b>JESSICA MOORE</b> <i>Sustainability as Worship</i>
4:30 - 4:40	<b>DATHAN TIPPEY</b> <i>Connecting Students to Nature</i>
4:40 - 4:50	<b>KHESED RITCHIE</b> <i>Dynamics of Thread</i>
4:50 - 5:00	<b>KEATON SCHENCK</b> <i>Doing, Loving, Failing, Becoming Keaton</i>
5:00 - 5:10	<b>REBECCA SCHRAD</b> <i>Interior Design and Holistic Health</i>
5:10 - 5:20	<b>GRACE STOTTEMYER</b> <i>Empathetic Hospital Design</i>
5:20 - 5:30	<b>JARED STRAND</b> <i>The Importance of Pre-Existing Architecture</i>
5:30 - 5:40	<b>LILY VERMILYA</b> <i>Tracing Roots: Cultivating Hope and Resilience through Family History</i>

## **Isolation of Novel Salt-Tolerant Bacteria from Don Juan Pond, Antarctica**

Sophia Sanguedolce, *Natural Sciences*

Two bacterial strains (designated DJP-L and DJP-S) were isolated from Don Juan Pond, which is located in the south fork of Upper Wright Valley, Antarctica and represents the saltiest and coldest body of water on Earth. Its waters contain approximately 40% salt, which exists mostly as  $\text{CaCl}_2$ . In the winter, this shallow pond reaches  $-50^\circ\text{C}$ . From this pond, two bacterial isolates were obtained by primary enrichment culturing on agar plates. Sequencing and phylogenetic analysis of the 16S ribosomal RNA (rRNA) gene was performed and revealed that strain DJP-L belongs to the genus *Virgibacillus*, and that strain DJP-S resides within the Bacillaceae family, most closely related to the genus *Paraliobacillus*. Strain DJP-L is an endospore former, as confirmed by microscopic observation, and although no endospores have been observed for strain DJP-S, it is also suspected to form endospores based on its taxonomic affiliation. Both species are halotolerant, showing growth from 0% to up to 25% salinity and growing optimally between 5-10% salinity. Preliminary temperature tests indicate psychrotolerance for both isolates, with growth of both strains occurring from  $0^\circ\text{C}$  to  $25^\circ\text{C}$ . These strains represent the first microorganisms isolated from this hypersaline and permanently cold aquatic system

## **Monocarboxylate Transport Mediates ATP Induced Extracellular Acidification of Mammalian Astrocytes**

Hannah Miller, *Natural Sciences*

There has been heightened interest in determining the role of glial cells in synaptic transmission. Culturing primary rat astrocytes provides an approachable model for understanding glia's role in the nervous system. Previous studies of retinal Tiger Salamander Müller cells revealed an ATP dependent extracellular acidification influenced by intracellular calcium, purinergic receptors, and altered regulation of sodium-hydrogen exchange (NHE) in the cell. This study shows how NHE plays a similar role in the ATP-mediated acidification of rat astrocytes cultured from the cortex or hippocampus. The study also reveals an additional contribution of a monocarboxylate transporter (MCT), which suggests how lactate transport activity promotes the ATP-induced extracellular acidification. These findings reveal the importance of MCT and NHE in astrocyte cell signaling (See central model). Similarities observed between organisms suggest that this mechanism is fundamental to brain function.

## **Predicting Relapse and Growth in Recovery from Substance-Use**

Megan St. Pierre, *Behavioral Sciences*

Substance abuse and addiction is a growing crisis within the United States. In order to better understand the processes of addiction and recovery, we conducted two studies examining measures of recovery and growth in individuals residing in a sober-living home (n=28). In Study 1, we sought to examine potential predictors of relapse. Surveys were conducted using Qualtrics and included assessments measuring impulsivity and perceived social support, both of which were found to be significant predictors of relapse. In Study 2, we sought to examine post-traumatic growth (PTG), or growth through and following difficult life-events, which has been linked to addiction recovery. In addition to surveys, we utilized smartphone-based sampling to examine within-person experiences of stress and impulsivity in relation to in-the-moment PTG factors. Our results showed that perceived social support, spiritual well-being, and codependency predicted three subscales of PTG. Additionally, we found that, in daily life, these PTG subscales predicted stress and impulsivity. These findings hold implications for growth-oriented addiction recovery treatment that incorporates skills to reduce impulsivity, increase healthy relationships and deepen a sense of social support.

## **Examining structural and biochemical features of metabolic enzymes from thermophile *H. modesticaldum***

Mary Bonanno, *Natural Sciences*

Our research has centered around *Heliobacterium modesticaldum*, a thermophilic bacteria native to the hot springs of Iceland. These bacteria have an optimal growth temperature of 52°C and are likely to express proteins that maintain thermal stability at elevated temperatures. *H. modesticaldum* is closely related to *Heliorestis convoluta*, which is a mesophilic and alkaliphilic bacteria that expresses homologous proteins. The goal of this study is to compare the thermal stabilities of homologous proteins from these two bacteria and determine what aspects of protein structure could contribute to higher thermal stability. This is accomplished through three major steps: cloning into *E. coli*, expression and purification of the target proteins, and stability analysis using custom FTIR and Fluorimeter setups.

**International Students' Lived Experiences at IWU**

Elizabeth Roach, Hannah Avila, Bryana Housley, Clarisse Umubyeyi, Kaylee Stants, Gardy Paul, *Behavioral Sciences*

This study seeks to understand the lived experiences of international students at Indiana Wesleyan University. This phenomenological qualitative research study used individual interviews to investigate international students lived experiences. The results of the study have not yet been finalized; however, the researchers expect to find commonalities in the international students' experiences of transitioning to the culture of Indiana Wesleyan University.

**Certificate of Holistic Medicine**

Mallory Wolford, *Nursing*

In this presentation I will be explaining what Holistic Medicine is and why it is an important topic of education to be provided for those going into health care. I will then go over a course list and guidelines of what it would look like for Indiana Wesleyan University to create a certification in this field.

**Spirituality Affecting College Students' Mental Health**

Lauren Rainey, Kristina Standish, Lauren Stroud, Natalie Watson, *Behavioral Sciences*

Mental health has been a frequent topic among young adults. As the college aged population is going through many major life changes and transitions, it is important to keep ones' mental health as a high priority. In a slight contrast, spirituality does not seem to be as frequently discussed among this demographic. Due to the lack of information and conversations, the purpose of the study is to provide a quantitative analysis of a relationship between spirituality, religiosity, and mental health within the context of college-aged students. Researching the potential correlation would be a development in the area of mental health as a whole. This relationship would allow for another way to improve and maintain a healthier mental health state through the various transitions of life. A survey will be distributed among various college students, to have them rate their own mental health as well as their spirituality. Once the surveys are completed they will be collected and analyzed to discover if a correlation is present between these two important areas of life.

## **Pouring from an Empty Cup: A Call to Restore Spiritual Care in Nurses**

Sterling Simek, *Nursing*

The popular saying, “You cannot pour from an empty cup,” depicts the crisis that registered nurses face each time they walk onto their hospital unit to begin an overwhelmingly exhausting 12-hour shift. To attain the overall goal of holistic patient well-being, registered nurses are trained to care not only for their patients’ physical and mental health, but also their spiritual needs. With the recent COVID-19 pandemic highlighting the intense “burnout” that registered nurses face daily, there is a need for nurses to have access to resources that allow for their own spiritual well-being and growth, too.

My research testifies to the emotional, mental, and spiritual strife that registered nurses carry in their hearts and minds. To rectify this problem, I have curated an e-book of poems, devotions, and prayers, written by myself and others, for the purpose of providing a resource for nurses to feel seen and heard. My hope is that this e-book will not only lead nurses into deeper spiritual engagement practices, but that it will also bring wider attention to the profound (and often unspoken) spiritual care deficit that healthcare providers endure.

## **A Quantitative Study on Eating Disorders among male, female, athletes and nonathletes in Indiana Wesleyan University Students**

Thomas Lyon, Kinsey Price, Kenzie Millar, Hailey Miller, Brooke Kurtz, *Behavioral Sciences*

The purpose of this quantitative research study is to analyze if there is more of a prevalence of eating disorders between male/female athletes and non-athletes enrolled at Indiana Wesleyan University. Students at IWU completed a survey from Mental Health America called, The Sanford-Washington University Eating Disorders Screen (SWED). The test is meant to measure if an individual is at potential risk for an eating disorder or not. Eating disorders are not an uncommon thing among college students, they’re generally at a higher risk. The focus of the research study was to understand students’ attitudes towards their body image and if they took drastic measures to maintain a certain weight. The information collected from this study will not only help educate college students on the issue but also the administration and coaches on campus so they can better support their students/athletes.

**Human Sex Trafficking Awareness**Annaliese Schlotterback, *Nursing*

For my final project, I created a Human Trafficking Awareness Conference for senior nursing students. The goal of this project was to bring awareness to the rapidly growing industry of sex trafficking. This topic is not currently discussed in the nursing curriculum at Indiana Wesleyan University. This presentation included statistics on sex trafficking, questions regarding the topic, stories from survivors of sex trafficking, and what nurses could do to help this vulnerable population. After presenting in two of the senior level classes, the nursing department is discussing adding this presentation into the course curriculum at the senior level. This decision should be made by the end of the semester.

**Mental Health among Male and Female students at Indiana Wesleyan University**Kylee Hoffman, Lindsey Bilkey, Luke Abston, Ava Howard, Audrey Douglass, *Behavioral Sciences*

Mental health is an issue that affects all different kinds of people in a variety of different ways all around the world. Recently, an increase in anxiety and depression issues among college students has been shown. In this study, male and female college students were asked to fill out a survey to measure their mental health, using the Beck's Depression Scale and a General Anxiety Scale. To obtain the data, 100 were distributed surveys among equal numbers of male and female Indiana Wesleyan University students. The focus of this research was to see if there is indeed a difference between male and female college students in terms of how they deal with mental illness using an Independent samples t-test.

**Racial Disparities in Maternal-Infant Outcomes**Hannah Bethay, *Nursing*

Racial disparities in maternal-infant health outcomes place Black mothers and infants in a continuous health disadvantage, with Black mother's experiencing a maternal-mortality rate approximately three times higher than their white counterparts. With traditional maternal risk factors failing to adequately explain these racial disparities, one must look further into evaluating the social context of race in this country. This project explores how racial disparities in maternal-infant outcomes are a manifestation of systemic and interpersonal racism and discrimination

that have historically placed Black mothers and their babies in a reproductive disadvantage. By critically evaluating the legacies of slavery and racism within present healthcare systems and policies, one may recognize the role healthcare workers have in perpetuating racial disparities. This project highlights the crucial need to advocate for healthcare reform that does not address race through a lens of colorblindness, but one that recognizes the life or death consequences of institutionalized racism on Black women's health.

10:20 am Bedford

### **Inhibition of Endosomal Acidification Prevents Zoledronate-Induced Viability Loss in Human Gingival Fibroblasts**

Evan Brown, Alex Cartwright, *Natural Sciences*

Medication-related osteonecrosis of the jaw (MRONJ) is a serious intraoral side effect of bisphosphonate, antiangiogenic, and denosumab treatments. Individuals affected with MRONJ are unable to heal from dental procedures, leading to painful oral lesions that involve exposed bone and unhealed soft tissue. Previous findings from our lab demonstrated the ability of 10 microM Dynasore, a dynamin inhibitor, to completely prevent viability loss in human gingival fibroblasts (HGFs) treated with 50 microM zoledronate (ZOL, a potent bisphosphonate). Among its various dynamin-dependent and dynamin-independent activities, Dynasore reduces membrane ruffling, a necessary step for macropinocytosis, and inhibits the vesicular H<sup>+</sup>-ATPase needed for endosome acidification. Earlier results from our lab showed through confocal fluorescence microscopy that Dynasore failed to prevent entry of ZOL into HGFs. Consequently, the study presented here addressed the ability of Dynasore to prevent endosomal acidification in HGFs as cytosolic entry of bisphosphonates requires acidification and maturation of endosomes. HGFs were treated with either 30 microM Dynasore or with vehicle, followed by incubation in the presence of 1 microM LysoSensor Green DND-189, a pH-sensitive probe specific for endosomes. Subsequent live capture of HGFs via confocal fluorescence microscopy was followed by a blinded, unbiased measurement of corrected LysoSensor Green total cell fluorescence (CTCF). Results indicated that Dynasore decreased CTCF by 2.4-fold compared to vehicle control ( $p < 0.005$ ). These results suggest that inhibition of endosome acidification may be of importance in preventing the adverse tissue effects observed in MRONJ lesions. Additional studies are warranted to investigate whether fluorescently-labeled ZOL fails to localize to mature endosomes in the presence of Dynasore. This work was partially funded by an Indiana Academy of Science Senior Research grant and a University Scholar Award from Indiana Wesleyan University.

### Race and Short Term Missions

Emma Wirth, *Nursing*

I will be explaining the story of my senior project, a discussion-based study done while I was overseas in Zambia, Africa with the school of nursing. I led discussions and explored ideas of race and how it relates to cross-cultural and missions work, influencing the way that Americans, especially white Americans, view missions in developing countries.

### Role of Fusion Protein Endocytosis in Cedar Virus Particle Assembly

Ashley Rice, *Natural Sciences*

Hendra Virus (HeV) and Nipah Virus (NiV) are deadly henipaviruses that currently lack treatments and vaccines for humans. This warrants investigation into their mechanism of virus particle assembly. Recently, Cedar Virus (CedV) was discovered as a non-pathogenic henipavirus, thus serving as a great model to study henipavirus particle assembly. Henipavirus fusion relies on a tetrameric attachment protein (glycoprotein, G) to bind to the host receptor and a trimeric fusion protein, F, to fuse the host and viral membranes. F reaches the surface of an infected cell as an inactive precursor (F<sub>0</sub>) where it must undergo endocytosis and proteolytic cleavage in an endocytic compartment in order to reach maturation before being recycled to the plasma membrane. A YxxΦ motif present in the cytoplasmic tail of CedV F is one of the signals for endocytosis. To better understand the role of F-trafficking and processing on the mechanisms of CedV particle assembly, a recombinant CedV containing the mutation Y524A at this YxxΦ motif in the cytoplasmic tail was rescued. The goal of this project is to evaluate differences in viral protein incorporation between CedV-Wt and CedV-Y524A particles. Furthermore, differences in localization of G between CedV-Wt and CedV-Y524A will be explored. Together, these aims will help to elucidate henipavirus particle assembly, thus facilitating the development of vaccines and treatments.

### Color-Coded: Micro Memoirs

Alyssia Vanderlaan, *Modern Language & Literature*

In this collection of micro-memoirs, I tell stories and memories focused around color. These memories are not chronological but span from childhood all the way through this past year. Some are good warm memories, some

are bad, and some simply exist. The micro-memoir format better allows for this wide range in topic and timeline: each piece can stand alone, but all work together to tell a larger story. I chose to organize and focus my micro-memoirs on various colors because I realized that a specific color often stood out when thinking about a certain memory. Some pieces have minimal mentions of the color while others are more centrally focused on the color. In addition, color description can be vivid and challenging at the same time. I hoped to conquer that challenge while bringing vividness and life to my memories through specific colors.

11:00am Bedford

### **The Economics of Prohibition: A Study into the Effect of State Marijuana Legalizations on Incarceration Rates**

Ryan Cooney, *SAH*

This study examines the effects of state-level marijuana restrictions on the incarceration rate. Past scholarship has been primarily theoretical in its approach, with few studies empirically analyzing this relationship at the state level. Each of the 50 U.S. states, plus D.C., were coded as exhibiting either restrictive or nonrestrictive policy on marijuana consumption and possession. Additionally, multiple socioeconomic control variables were included, and the empirical model was estimated using OLS regression. The findings indicate no statistically significant relationship between marijuana restrictiveness and incarceration rate. However, as one state moves from restrictive to nonrestrictive, there is an estimated reduction in incarceration rate by 50.7 per 100,000 people, indicating that the findings are consistent with the economic theory of prohibition

11:20am Henry West

### **A New Lost Generation: Jazz-Age Echoes of Cultural Trauma and Disillusionment in Contemporary Literature**

Isabel Bostick, *Modern Language & Literature*

This essay compares contemporary, Millennial writers to the Lost Generation writers in the context of trauma theory. After an exploration of individual and cultural trauma theory, a brief analysis of Lost Generation works such as Fitzgerald's *The Great Gatsby* and Stein's *The World is Round* provides an example of cultural trauma emerging from the writers' survival of World War I and reveals three major themes: identity, nostalgia, and uncertainty. The essay then analyzes three contemporary novels: Ottessa Moshfegh's *My Year of Rest and Relaxation*, Marieke Nijkamp's *This Is Where It Ends*, and Ocean Vuong's *On Earth We're Briefly Gorgeous*. Each novel explores the Columbine shooting and the September 11 attacks as sources of cultural trauma for Millennial

writers, either explicitly or implicitly. Literary analysis proves these contemporary novels also share the themes of identity, nostalgia, and uncertainty. Because the disillusionment of the Lost Generation writers after WWI is just as prevalent one hundred years later in Millennial writing, the essay concludes that a “New Lost Generation” may be found in contemporary literature.

11:20 am Bedford

### **Novel Writing & Illustration 1**

Dru Denney, Emily Dexter, Hannah Heilman, Hannah Hubley, Quinn Miersma, Emily Baker, Jonathan Balance, Sarah Gray, Ashlyn Hastings, & Sophia Madl, *Modern Language & Literature/Art + Design*

This presentation is a collaboration between the students in ART 436 Computer Illustration and WRI 354 Writing the Short Story. Students have partnered for a collaborative project--the illustration students will illustrate a "cover" for a story written by a Writing student. At the presentation, the writing student will read a short excerpt from their story and the illustration student will "unveil" their illustration and discuss their process

11:40 am Henry West

### **“She’s no girl. She’s a Grrrl.” - Remembering Riot Grrrl**

Katy Hamilton, *Social Sciences*

While Nirvana's "Smells Like Teen Spirit" dominated the charts in 1991, women within the punk rock scenes of Olympia, Washington and Washington D.C. began protesting the marginalization, abuse, and dismissal of girls within the scene. Through zines, music, performance art, and word-of-mouth meetings, young women across America began organizing small chapters of a wider movement that would come to be known as Riot Grrrl. Riot Grrrl was created by and for women and sought to create a space for the dignification of girls' art, stories, and experiences within the white-male-dominated punk rock music community. Though short lived (the original movement only lasted from 1991 to '93), this movement completely transformed how female artists are considered within the music industry. In recent years, however, as people remember Riot Grrrl, accusations of exclusivity, racism, and classism have been made against its members and the movement as a whole. Some former members have claimed Riot Grrrl only catered to the needs and experiences of upper-class white girls and that women who were not white had no place within the movement. But this is an incredibly reductionist view of this incredibly diverse, disjointed, and distinct cultural revolution. This project identifies and elevates the ways women who were not white founded, participated in, led, and critiqued the Riot Grrrl movement. These women's stories are not caveats or footnotes to the wider history, as some scholars have treated them in recent journals; this

project recreates the history of Riot Grrrl with an inclusive lens and considers the experiences of non-white women as central to understanding the purpose, reach, and ultimate conclusion of this short lived but necessary movement within Punk Rock. This paper concludes with a critique on how society has remembered the Riot Grrrl movement alongside how we can remember this movement well.

11:40 am Bedford

### **Novel Writing & Illustration 2**

Hoshea Nixon, Katherine Reed, Alyssia Vanderlaan, Jerah Winn, Emily Bays, Aliya Moss, Abigail Seese, Makenna Steimel, Avery Walker, Hannah Slota, *Modern Language & Literature/Art + Design*

This presentation is a collaboration between the students in ART 436 Computer Illustration and WRI 354 Writing the Short Story. Students have partnered for a collaborative project--the illustration students will illustrate a "cover" for a story written by a Writing student. At the presentation, the writing student will read a short excerpt from their story and the illustration student will "unveil" their illustration and discuss their process

12:40 pm Globe Theater

### **The Playground in the Forest: A Short Film**

Morgan Keller and Isabel Baker, *Interdisciplinary*

The Playground in the Forest is the product of a collaboration between four academic divisions in the university. This presentation includes a screening of the animated short film as well as a behind-the-scenes look at the process of creating an original short film.

12:40 pm Bedford

### **Efficacy of Reflexive Performance Reset**

Sarah Buresh, Jaxson Savieo, Logan Fritz, *Health and Human Performance*

Purpose: This study was designed to put Reflexive Performance Reset's (RPR) impact on athletic performance to the test. Due to how new this phenomenon is, there is little evidence supporting these claims. It is said to have a positive impact on strength, agility and power. RPR is being utilized on multiple platforms across the globe. Coaches, trainers and athletes alike are implementing this technique into their training regime. Coaches like Mike Clark (3x NFL Strength Coach of the Year) and Brandon Aiken (AD/Head Strength Coach at University of South

Carolina-Aiken) tout reflexive performance reset's (RPR) efficacy in this area, and while the literature is sparse, effectively activating the nervous system may positively impact athletic success.

Methods: Thirty-one participants (12 males & 19 females; 16 athletes & 15 nonathletes) were selected from the Indiana Wesleyan University student body to conduct a series of three tests — broad jump, handgrip dynamometer, and cone agility drill — all of which are commonly used to measure athletic performance. The participants performed a series of two trials. In the first trial, the participants performed each of the aforementioned drills and their scores were recorded. After at least forty-eight hours, the participants conducted their second trial. In the second trial (intervention), the participants self-administered RPR and then underwent the same tests as the first trial. The data was analyzed using a paired T-test to find statistical significance.

Results: There were statistically significant increases in broad jump ( $p < 0.000$ ), right hand grip strength ( $p < 0.013$ ), and cone agility ( $p < 0.001$ ) second trial (intervention) but not left hand grip strength ( $p = 1.000$ ).

Conclusion: The data suggests that RPR trends towards being able to significantly increase athletic performance as measured by broad jump, handgrip strength, and cone agility. Although there are many factors to consider, it seems clear that RPR did positively impact athletic performance.

1:00pm Globe Theater

### **Reading Blind: The Urgent Need for Christians to Understand the Bible**

Clay Crofford, *Theology & Ministry*

"We're often told how important the Bible is for our lives, but actually reading it leaves many of us with just more confusion and unanswered questions. Why do even the people who follow Jesus struggle to understand the Bible? And even if we could, is it actually worth the trouble? My story was just like so many other Christians. I didn't have good answers, so I asked questions."

1:00pm Bedford

### **THE EFFECT OF ATTENTIONAL FOCUS IN DYNAMIC STABILITY IN INDIVIDUALS WITH KNEE LIGAMENT INJURIES**

Anna Stevens and Christine Martin, *Health and Human Performance*

Knee ligament injuries are common in sports that require cutting and rapid agility movements. With the utilization of balance tests in post-injury rehabilitation, along with attentional focus of instruction, one can decrease the chances of a secondary injury. PURPOSE: To identify the impact of attentional focus cues during dynamic balance

tests in individuals with knee ligament injuries. METHODS: Twenty collegiate athletes (10 male and 10 female) volunteered for this study. All participants were at least one year post surgery and had a previous knee ligament injury. Each day, two dynamic stability tests were conducted: star excursion balance test (SEBT) and vertical drop jump (VDJ). The difference between each day was the instruction given: internal focus or external focus. For the SEBT, the internal instruction given was “focus on keeping the stationary knee from bowing in” and the external instruction was “hold the bar with one hand and focus on keeping it horizontal the entire time throughout the movement”. For the VDJ, the internal instruction was “land with 2 feet on the platform. Focus on your knees not going over your toes. This instruction asked them to focus on their body movements. Then, the external instruction was “land in line with the cones in front of you. This instruction asked them to focus outside of their body movements. Testing occurred on two days, with at least 24 hours between testing days. RESULTS: There is no significant difference between either attentional focus in dynamic stability tests performed by those with a knee ligament injury,  $t(19) = -.818, p > .424$  (VDJ),  $t(19) = 1.26, p > .223$  (ESE), and  $t(19) = .678, p > .506$  (ISE). While there was no significant difference between the two types of instruction amongst the participants, additional analyses were run to compare between the two genders. This revealed that certain trials of the SEBT had better outcomes in males than females with external focus. CONCLUSION: There was not an attentional focus (external or internal) of instruction that exhibited better outcomes in either dynamic stability tests, despite prior research that has shown an external focus produced better results.

### **Comparison of Co-contraction Ratios of College Athletes After Knee Injury During a Lateral Step-up** Leah Maher; Lizzy Leggett; Ben Vongunten, *Health and Human Performance*

The knee is the most commonly injured joint in the body. After serious knee injuries like a torn ACL or MCL, there is evidence to suggest that permanent muscular imbalances exist in the hamstring and quadriceps. PURPOSE: To determine differences in the lower extremity muscle activation following a major knee injury, specifically in the simultaneous contraction of the quadriceps and hamstrings during a lateral step-up. METHODS: Seventeen knee injured individuals ( 9 Female, 8 Male,  $20 \pm 1.23$  years) and nineteen healthy control individuals ( 9 Female, 10 Male,  $20 \pm .98$  years). Subjects had two 4-slot sensor adhesive interface electrodes attached to their previously injured or dominant leg. The electrodes were placed on the semitendinosus and vastus lateralis muscles. Subjects then performed three lateral step-ups on this leg. Electromyographic activity of the two muscles were measured during each rep and maximum amplitude of the semitendinosus and vastus lateralis were taken. The maximum amplitudes were then averaged and inserted into the co-contraction ratio equation, which represented indication of muscular imbalances. RESULTS: There was not a statistically significant difference in the co-contraction ratio

between the injured and non-injured control group ( $p = .869$ , injured mean ratio = 1.238 mV, non-injured mean ratio = 1.206 mV); however, the injured group had a higher average contraction of their quadriceps (injured group = .5402 mV, non-injured group = .4244 mV). CONCLUSION: There is not concrete evidence to support that significant knee injuries cause muscular imbalances in the quadriceps and hamstrings. Further research and testing is required to determine the scope and significance that knee injuries have on long term lower extremity health.

1:40pm Bedford

### **The Relationship Between Y-Balance Test Performance and Hip Extensor Strength**

Liz Richards, Ethan Stump, Kori Stump, *Health and Human Performance*

Risk of injury is an important factor to assess for all individuals, regardless of athletic status. Lower limb injuries occur in both athletic and general populations. These injuries emphasize the need to assess all participants' potential risks. Therefore, studying the general population's risk for injury fills the gap, benefitting clinicians and exercise participants. This study compared hip extensor strength values to anterior reach scores on the Y-Balance Test (YBT) to explore a correlation for lower extremity injury in a general population. Thirty-six students (9 males and 27 females) at Indiana Wesleyan University participated in this epidemiological surveillance. The hip extensor strength test protocol was borrowed from Wilson et al (2018). The dynamic reachability procedure was based on the testing standards provided by Fusco et al (2020). In one session, the participants performed the hip extensor strength and Y-Balance tests. There was no statistically significant correlation between right leg YBT scores and isometric strength values. However, a relationship in the left leg YBT score was moderately correlated with isometric strength value. A paired t-test determined there were no statistically significant differences in YBT scores in right and left legs. The authors of this research found varying results on the relationship between the Y-Balance Test and hip extensor strength. These results suggest that hip extensor strength cannot replace the Y-Balance Test for injury prevention in a general college population.

2:00pm Henry West

### **Honoring Culture & Call**

Priscilla Aram Youn, *Theology & Ministry*

Honoring Culture and Call is a study that explores the various challenges Korean American women face from their Korean culture, as they discern and live into their call to ministry. As a Korean American woman called to ministry,

it's my hope and desire to share the ways it is possible to both honor my call and honor my Korean culture. I approached this study through using a qualitative research technique, involving open-ended questions to gather data on different or similar experiences from Korean American women in ministry all throughout the United States. This research is compiled by interviews and dialogue from five different Korean American women who serve in various ministerial positions. The interviews were either one on one or two on one, allowing the interviewees to have their own space to process or giving others the opportunity to bounce off of one another. Another part of this research consists of secondary resources that provide insight on the history of Korean churches in the United States, Korean cultural norms vs. American cultural norms, the specific challenges Korean women face in the United States, and the process of Korean American women living out their call to ministry. This project concludes by providing ways to further apply this to different people groups: Korean women affirming themselves, Koreans affirming Korean women, and Non-Koreans affirming Korean women."

2:00 pm Bedford

### **The Impact of Plated Running Shoes on Physiological and Psychological Variables**

August Hubbard, Emily Tripp, and Lindsey Schroeder, *Health and Human Performance*

**PURPOSE:** The aim of this research was to determine if midsole materials of plated shoes (PS) and traditional shoes (TS) impact physiological and psychological components of energy expenditure when running. Each of the variables examined are strong indicators of fatigue. The researchers hypothesized there would be a significant decrease in energy expenditure in plated shoes compared to traditional shoes. **METHODS:** The subjects were 11 cross country and track athletes from Indiana Wesleyan University and 10 recreational runners. Each participant completed 2 running tests for 5 minutes each, one with PS and the other with TS. Each participant ran at an individualized calculated speed. The variables examined with a metabolic cart were volume of oxygen consumed (VO<sub>2</sub>), volume of carbon dioxide produced (VCO<sub>2</sub>), and calories (kcal), along with rating of perceived exertion (RPE), and heart rate. A post-test survey was administered to record the subjects' opinions of how each shoe felt. **RESULTS:** A Wilcoxon test examined the results in terms of RPE in PS and TS. A significant difference was found in the results (Z=1.96, p=.04). A paired t-test examined the results in terms of VO<sub>2</sub>, VCO<sub>2</sub>, kcal, and heart rate in PS and TS. Significant differences were found for VCO<sub>2</sub> (p=.05) and kcal (p=.04). **CONCLUSION:** Plated shoes have significant physiological and psychological effects on energy expenditure. The insignificant findings in this study trend in the direction of significance. Research with additional subjects is needed to further support these conclusions for the significant and insignificant variables.

## **A Theological and Practical Perspective on Church Involvement in Sustainable Food Production Within Rural Communities**

Christina Magers, *Theology & Ministry*

Christianity is centered on the goal of rightly ordered relationships between God, self, others, and the broader creation, yet the relationship between humans and creation is often neglected from proper consideration and application within the context of the Christian church today. This presentation will explore how the church's involvement in the promotion of more sustainable, healthier methods of food production in the local community can help to address the broken relationship that exists between people and the land as a result of today's globalized and industrialized food system. The need for improvement in this area is especially relevant for rural communities in which food and agriculture related problems abound. Developing a more rightly ordered relationship between people and the land – by fighting against globalized, industrialized food production methods – fulfills Biblical mandates to care for creation as well as care for the vulnerable and the poor. Fortunately, many opportunities and examples exist for churches wishing to utilize their own land and resources, as well as partner with existing organizations and efforts in the community, to support local, sustainable food production in rural communities and other settings today.

## **Assessing Leg Muscle Disparities Between ACL-Reconstructed College Athletes and Healthy College Athletes Using Isokinetic Dynamometer**

Emily Carter, Lauren Turner, Aaron Harris, *Health and Human Performance*

70 percent of ACL injuries occur in non-contact settings, opening up the endless possibilities of the sports or activities that this injury may occur in. Particular muscle imbalances in the lower extremities may be correlated to susceptibility of injury. PURPOSE: To compare muscle strength patterns in the hamstrings and quadriceps between Anterior Cruciate Ligament Reconstruction (ACLR) and healthy control groups. METHODS: A total of thirty-two participants, 16 ACLR and 16 healthy matched controls (HMC), participated in this study (14 Male, 18 Female). Flexion/Extension ratios and individual leg deficit were recorded using the HUMAC isokinetic dynamometer. To compare differences in the flexion/extension muscular strength ratio between ACLR and HMC group, the ACLR leg was matched with the HMC leg according to dominance. Independent T-tests were run to identify a difference in the ratio of hamstrings (flexors) to quadriceps (extensors) in addition to muscular deficit between the ACLR group and the HMC group. A paired-sample T-test was conducted to determine the muscular differences between the injured and uninjured sides in the ACLR group. RESULTS: There were no significant

differences in the hamstring to quadriceps ratio or the muscular deficits between the ACL and HMC group ( $p>.05$ ). The paired T-test demonstrated nearly significant differences ( $p=0.054$ ) between the right and left flexors at a speed of 180deg/sec. CONCLUSION: The results reveal that there were no significant findings when comparing the ACLR group to the HMC group. Nearly significant data was found between the differences of flexor strength in the injured and non-injured limb of the ACLR group, showing slightly weaker average peak torque values in the ACLR limb. Limitations included small sample size, possible exercise or practice prior to testing, and type of reconstructive surgery. Further research is still needed to determine the best methods for finding trends related to muscle deficits in ACLR athletes in order to best prehab and rehab an ACL reconstruction.

2:40pm Henry West

### **Adoption Theology and its Impact on Adoption and Language in Christian Communities**

Ella Williams, *Theology & Ministry*

Adoption theology and church language negatively and positively impact adopted persons and their experiences in churches and Christian communities. This project seeks to provide resources teaching proper adoption language and bringing awareness to microaggressions adopted persons often experience. Through drawing on orthodox adoption doctrine, expounding on previous data and research about adoption, and conducting qualitative studies of adoptees and adoptive parents; this project provides a theological and practical exploration of adoption. The research concluded that the metaphor of adoption in Christian spaces often simultaneously harms adopted individuals while connecting them to the story of God. Adopted persons reported that reactions and words of others surrounding adoption are often paradoxical, communicating adoption as inherently good, while also an inherently deficient way to be a part of a family. From this research one learns what language surrounding adoption is hurtful, marginalizing, and triggering; and how to support the adopted community through advocacy and individualized care.

2:40pm Bedford

### **The Effect of a Chlorophyll Placebo on Psychological and Physical Outcomes in Treadmill Exercise**

Abigail Collins, Ariana Glass, Emily Neese, Melissa Cook, *Health and Human Performance*

Lack of adherence to exercise is an increasing problem that leads to cardiovascular disease, diabetes, cancer, depression, anxiety, etc. Exercise is a combination of mental and physical components manipulated through external factors. While the use of a placebo can complement the physical health benefits of exercise, it is

unknown whether a chlorophyll placebo can directly affect performance outcomes during physical activity.

**PURPOSE:** To evaluate the difference between potential effects of a chlorophyll placebo and a chlorophyll supplement on perceived exertion during untrained treadmill exercise. **METHODS:** Two groups of 15 male and female non-treadmill experienced runners (18-23 yrs) completed two trials. Each trial was 10 minutes long, the speed of the participant was self-regulated, and researchers recorded heart rate (HR), RPE, and speed (S) for each minute using a K5 metabolic backpack and heart rate monitor. Energy expenditure (EE) and total distance (TD) traveled were recorded after 10 minutes. After the first trial, participants from group one received a 3-day supply of a chlorophyll supplement, and group two received a chlorophyll placebo. Participants were blind to their group placement, speed, distance, and all other recorded data. **RESULTS:** HR, RPE, S, TD, and EE increased during the second trial; however, the data did not show a significant increase (HR = .194, RPE = .644, S = .464, TD = .772, EE = .572). **CONCLUSION:** Yielding a result of no significant difference between the two trials or groups, further research is needed to establish whether a chlorophyll placebo affects the physical and psychological outcomes of treadmill exercise.

3:00 pm Bedford

### **The Effect of Mindfulness Meditation on Pressure Pain Threshold among College Students**

Seth Honeycutt, Alex Lampman, Matt Lavin, Kloe Muntz, and Samara Schlabach, *Health and Human Performance*

A survey from the National Institutes of Health (NIH) revealed that the number of Americans who suffer from any type of daily pain (acute or chronic) is around 25.3 million. To help combat this immense problem of pain, non-medicinal methods like mindfulness meditation have become a popular practice. Previous research shows a connection between mindfulness meditation and pain reduction. **PURPOSE:** The purpose of this research study was to confirm the correlation between mindfulness meditation and increased pressure pain thresholds in college students. **METHODS:** 20 subjects (14 females; 6 males) volunteered for this study. The subjects were randomly assigned to a 20-minute mindfulness meditation (MM) or resting group. Pressure pain threshold (PPT) was assessed for each subject using a 30-kilogram (kg) capacity dolorimeter before and after their assigned session. The average of three trials was used as the final PPT score and recorded in kg of pressure. Paired samples t-tests were used to assess the difference in PPT within groups while an independent t-test determined the difference in PPT between the MM and resting group. **RESULTS:** Neither the resting session ( $t(9) = -0.154$ ,  $p = 0.881$ ) nor the meditation session ( $t(9) = 0.361$ ,  $p = 0.726$ ) elicited a statistically significant increase of pressure pain threshold. The mindfulness meditation ( $M = 0.102$ ,  $SD = \pm 0.875$ ) did not produce a statistically significant difference in PPT from the control group ( $M = -0.052$ ,  $SD = \pm 1.070$ ),  $t(18) = -0.348$ ,  $p = 0.732$ . **CONCLUSION:**

Subjects in the MM group did not exhibit a significant increase in PPT compared to the resting group, despite showing an increase in mean PPT from the pretest scores. Because mean scores increased for the meditation group, but decreased for the control group, it appears that there is a relationship between a state of mindfulness and PPT. Further, Cohen's  $d$  effect size within the MM group ( $d = 0.762$ ) suggested a greater effect than the resting group ( $d = 0.573$ ).

3:20 pm Bedford

### **Re-Signing Harry Potter**

Maddie Bigham, *SAH*

I will examine and analyze Harry Potter and the Deathly Hallows Part 2 as my communication artifact. I will demonstrate how the characters and storylines of the film reflect the battle between good and evil and the sacrificial love that is present in the Gospel. I will use the semiotic theory, structuralism, to highlight the different elements of the story that contribute to the meaning that the film is trying to convey.

3:40pm Henry West

### **The World As It Could Be: Fairy Tales and Childhood Trauma**

Kyla Foley, *Behavioral Sciences*

The purpose of this qualitative study is, through an interdisciplinary approach uniting literary criticism and behavioral sciences, to draw conclusions concerning the effectiveness of fairy tales as a coping mechanism for children who are experiencing or have experienced trauma. Including all types of child abuse (emotional, verbal, sexual etc.) and neglect, as well as any adverse experience that occurs during childhood, childhood trauma represents the presenting problem for the majority of adults receiving clinical services in the United States.

Likewise, fairy tales represent an excellent coping mechanism regarding childhood trauma due to their core tenets, relatability for children, and portrayal of themes. This study further develops the connection between childhood trauma and fairy tales as a coping mechanism through individual 60-minute retrospective interviews with adults who have experienced childhood trauma.

### **The Evolution of Diversity and Inclusion in Print Advertisement**

Hayleigh Turner, *SAH*

This research takes a look into the evolution of diversity and inclusion in print advertisement. Analyzing the most popular clothing brand from 2000 to 2021, 44 print advertisements were collected and analyzed using a qualitative coding system developed through research. The ads were then individually analyzed and given a total score that was then plotted on a graph. The final graph tracked trends of inclusivity and diversity in popular brand advertisements since the start of the new millennium.

### **The Attractiveness Project**

Abigail Johanningsmeier, *Behavioral Sciences*

Physical attractiveness has been found to play a keen role in one's ability to stay healthy and avoid potentially harm. Living in a worldwide pandemic has changed many of the ways society goes about life, including perceiving attractiveness while social distancing. This study focused on two hypotheses: if the participant finds someone attractive, then they are more likely to stand close to them (regardless of Covid-19) and if the person is older, then the participant will stand further away. In this study, participants (N=22) were sent a survey asking them to rank the distance they would stand from a hypothetical person with Covid-19. The results of the study were able to support the second hypothesis but not the first.

### **Accent Insecurity in ESL Students**

Katy Wilhelm, *MLL*

The phenomenon of accent insecurity is prevalent in the ESL students of today. Many students face discrimination as a result of their foreign accents that causes them to develop a sense of insecurity and lack of confidence in relation to their native accents. In the United States in particular, the typical "American" accent has been established as the standard and anyone whose accent does not match this standard is likely to face discrimination. This study investigates the motivations that current ESL students have to erase or change their native accents in favor of adopting an American accent. It also investigates how the experiences that ESL students have had in the American education system impact their insecurity in their accents and their motivation to

modify their accents. It was discovered that people with foreign accents living in the United States face discrimination at work, in school, and in society in general. In addition, accent erasure pedagogy and its connection with English language teaching was also investigated. Once this research was completed, an empirical study was carried out by conducting six interviews with current ESL students. The data from these interviews were transcribed, coded, and analyzed. The data were then compared with the findings of the literature review. The results of the study and the analysis showed that participants identified discrimination at work and school as a significant motivator for changing their native accents. The results also reflected that the participants seem to have developed a comedic perspective towards the bullying and teasing they experienced based on their foreign accents. In addition, the majority of the participants reflected a desire to maintain their native accent, rather than adopt an American accent. Finally, the interview data revealed that accent erasure pedagogy does not appear to be used frequently in ESL classes, despite its online popularity. It can be concluded that the ESL students of today are motivated by social discrimination to change their accents, although many prefer to keep their native accents. Additionally, it can be concluded that the absence of accent erasure pedagogy in ESL curriculums today has led ESL students to develop a more positive outlook on their own accents. After a more in-depth analysis of the results of this research, recommendations for ESL students and teachers will be presented.

4:20pm Henry West

### **Parenting Style and the Impact on Child's Faith**

Caroline Jones, *Behavioral Sciences*

Children's views are highly malleable in their adolescent years. Their views and beliefs are often mostly shaped by those they spend the most time with, which is usually parents or caregivers. Parenting style has shown to have a huge effect on many aspects of a child's psychological and spiritual development. This study was conducted to look into the effect that parenting style has on a child's faith, specifically their view of God. A survey was sent out to Indiana Wesleyan Students and received over 100 responses. The data shows significant, positive correlations between children's perceived love of parents and love of God as well fear of parents and fear of God. Authoritative parenting style was also positively correlated child's perception of God as being angry, punishing, and ignored by God. These results were even more true for children raised in Christian households. This data provides insight for the ways that parents may be shaping their child's spirituality through the parenting style the choose to employ.

## **Hometown Advantage: The Influence of The Birthplace Effect and Hometown Demographics in College Soccer Players**

Daniel Baker, *Sports Management*

This project aims to further define and specify the nature of the birthplace effect in elite athletes. The birthplace effect is the theory that specific community populations are more conducive to elite athletic development than others. I will address the possible role of the birthplace effect in top-level college athletes and identify specific factors that contribute to the effect's influence. Based on the methodology of previous studies, specifically Côté et al., 2006, I will be running statistical analysis to specify the relationship between female NCAA Division I soccer athletes in the Big Ten Conference and the population, income, and racial demographic data of their hometown. I will collect data from the 2010 US Census, as it most accurately represents the developmental environment of college athletes as adolescents, and university athletic department websites to create the data sets. The population, financial, and demographic identities of college athletes' birthplaces were compared to data from the US Census. Through Chi Square tests relationships between various demographic factors were discovered.