

# Duke Colloquium Schedule | April 19, 2024

## Morning Sessions

### Yates 221

9:00 Yates 221

#### **The Right of the Citizens to Vote: Should Pre-Clearance be Reinstated as a Safeguard Against Voter Suppression?**

Joseph Tetlow

*Advisor: Dr. David Lisenby*

In 2013, the US Supreme Court struck down a specific provision of the Voting Rights Act of 1965. This provision, termed "pre-clearance," required specific states with an unreasonable history of voting rights infringements to submit to federal checks on new voting legislation. The purpose of pre-clearance was to provide federal protection for minority voters in states with a long history of racial discrimination. However, federal intervention in state-level voting affairs might be viewed as federal encroachment, especially considering that pre-clearance was only applied to specific states. In this case study, I will thoroughly examine the perspectives of both critics and advocates of the "pre-clearance" tenet. Additionally, I will offer a personal perspective on the impacts of restrictive voting legislation, obtained through practicum work with the Kansas City chapter of the League of Women Voters. In doing so, I hope to provide a balanced and comprehensive understanding of pre-clearance as it pertains to voting rights in the United States.

9:20 Yates 221

#### **Race, Soldiering and American Imperialism on the Frontier 1870-1890**

Hallie Lindsey

*Advisor: Dr. Daniel Kotzin*

The Civil War pushed Americans to shift their focus west and use the ideology of manifest destiny to justify these new pursuits. Americans from all natures of life looked towards the West to make fortunes and find a place within the national narrative. African Americans were no different; while their contributions to this narrative are largely forgotten, they were integral in shaping the West. There were many Black pioneers, such as the Exodusters on the Kansas frontier and the Black cowboys that ranged the plains. Just as important were the Black soldiers, often referred to as Buffalo soldiers.

This paper explores how soldiering and life on the frontier shaped the concept of race for African Americans between 1870 and 1890. By applying W.E.B. Du Bois's concept of "Double Consciousness," the paper attempts to understand how the identity of Black soldiers was shaped by predominantly white institutions, such as the Army, and by interactions with Native Americans, like the Battle of Milk Creek. The strict barriers of race became more flexible on the frontier, but this resulted in Black soldiers having to navigate a racial society that constantly contradicted itself. By examining letters written by Black and white soldiers, indigenous people, and others who interacted with the Black units, military documents, and newspapers, this paper will argue that the identities of Black soldiers in the American West at the end of the nineteenth century were critically influenced by how the white population and Native Americans perceived them.

## Mexican American Immigrants in Kansas City from the 1940s – 1950s

Rane Rynard

*Advisors: Dr. Danial Kotzin, Dr. Megan Groninger*

Mexican Americans created their own unique history in Kansas City as they began immigrating in large waves in the early 1900's. Through time, they began to establish firmer roots within the city as family ties strengthened through generations. However, the establishment of a Mexican culture within the city was often met with stereotyping and growing racial tensions from the primarily white population. I questioned how Mexican American immigrants adapted to Kansas City society in the 1940s-1950s and how they were impacted by the discrimination that was imposed on them. With the input from several firsthand accounts and secondary sources, I answered this question by looking at the influence of the push and pull factors that initially brought Mexican immigrants to the city, and then how these factors impacted their daily life. I further addressed the idea of community and the six ethnic enclaves in Kansas City in which the Mexican Americans established cultural neighborhoods. The question of discrimination in economic and domestic opportunities was also a dominant factor within my research as I found that it greatly impacted their sense of community amongst each other. By researching Mexican Americans in Kansas City and their experiences here, it brings to light how dynamic and communal their population was despite some of the barriers and obstacles that they faced. It further suggests how their history has often been glossed over when looking at Kansas City, which brings significance to my input into the field.

## Yates 222

## Impact of a General Education Course on Student Wellbeing

Brian Bartels and Nathan Lightfoot

*Advisor: Dr. Keli Braitman*

College can be a stressful time for students. In recent years, college counselors have reported that more students than ever are seeking help for mental health concerns. One way that colleges are responding is by infusing wellbeing courses and material within the curriculum. In the current study, 25 students enrolled in a general education course on wellbeing completed measures of wellbeing at the beginning and end of the Spring 2023 semester. The course introduced students to the science and practice of wellbeing, including how it can be operationally defined and measured. Students read and discussed scientific literature on habits and behaviors that promote and detract from wellbeing; learned about goal-setting and developed a plan for enhancing their own wellbeing; and completed assignments that encouraged the development of wellbeing practices. T-tests revealed statistically significant increases in self-reported positive emotion, satisfaction with life, meaning, and two measures of happiness, and a decrease in negative emotion ( $p < .05$ ) with small to medium effect sizes. No significant changes were observed for engagement,

relationships, accomplishment, health, loneliness, and gratitude ( $p > .05$ ) although gratitude scores were high even at pretest. Data collection is being repeated this semester in the same course, along with a control group of students enrolled in a different general education course at the same college. Findings suggest that offering a general education course promoting the understanding and practice of wellbeing may be a way to encourage such practices among college students and have measurable impacts on their wellbeing.

9:20 Yates 222

## **Life After COVID-19: The Connection Between Adolescent Development and Nonprofit Involvement**

Ashlyn Steller

*Advisor: Dr. Thomas Vansaghi*

Emerging from the global COVID-19 pandemic has been a difficult and strenuous process for all age groups, but especially for 7th through 12th grade adolescents. Science has proven that adolescents rely on being surrounded by their peers for maximal brain development. Prolonged isolation during the pandemic severely impacted adolescents' emotional, social, and mental well-being. Schools are struggling to deal with these consequences, and the author wanted to answer the question: what can nonprofits do to bridge the gap and help adolescents re-enter society as healthy, well-adjusted individuals? Through a survey and interviews with education and nonprofit professionals, the author learned that teachers, schools, and adolescents are struggling to help adolescents develop academically, mentally, socially, and with their peers. Resources and funding are spread too thin to make a lasting impact on adolescents. Results from the survey and interviews indicated that adolescents and educators were suffering due to the pandemic, and nonprofits can help provide vital experiential learning opportunities and access to mental health resources to aid education professionals in making up what COVID-19 took away. This research project explores how nonprofit professionals can partner with educators and dedicate their time, resources, and human capital to positively impacting and navigating adolescent development in a post-pandemic world.

9:40 Yates 222

## **The Seen and Unseen Limitations of Leaving Domestic Violence Situations; the Support Domestic Violence Shelters Provide**

Jordan Riley

*Advisor: Dr. Thomas Vansaghi*

In my Research Essay, "Seen and Unseen Limitations of Leaving Domestic Violence Situations; the Support Domestic Violence Shelters Provide," I describe the major limitations to leaving Domestic Violence situations, the assistance Domestic Violence Shelters provide, and the social limitations that hold survivors back from the support of these organizations. In my research, I found 10 scholarly articles and resources. Additionally, I interviewed two local Domestic Violence shelters. The limitations that many Domestic Violence survivors face include the risk of homelessness, racial, and criminal record biases, legal restrictions, legal restrictions based on location, mental illness, and geographical/cultural differences. The two organizations I interviewed include Hope House and New House. In my essay, I discuss what services these organizations provide, the individuals they help, and the social needs they are asking to be addressed.

Domestic Violence plagues our area, country, and world. There are barriers seen and unseen that make it impossible for some victims to find freedom. What is important is that we, as a society, work to break down the barriers that are holding survivors back. The risk of homelessness, facing the judicial system, managing trauma, and operating according to different cultures/locations are all obstacles for survivors trying to leave. It is our job, as communities, societies, and cultures, to put an end to this abuse. Policies need to be changed, training needs to be implemented, and stigmas need to be erased.

## **Gano Assembly**

**9:00 Gano Assembly**

### **Counting Stitches: Creative Nonfiction on Knitting, Family and Mathematics**

Hope Peck

*Advisor: Dr. Ruth Williams*

The reading of this creative nonfiction essay will expose the audience to unexpected parallels between knitting and mathematics through an exploration of my familial connections, memories, as well as the history of women in textiles and mathematics. Drawing on examples from academic research, I uncover how knitting can represent complex mathematical ideas. This presentation will showcase the profound effect of familial heritage, the value of diverse forms of knowledge, and the boundless possibilities that emerge through interdisciplinary studies.

**9:20 Gano Assembly**

### **Falling Behind (a short story)**

Kaleah Petersen

*Advisor: Dr. Mark Walters*

A young girl struggles with the stress of trying to do too much and feeling like she cannot succeed. She is called to the academic counselor's office for a meeting she does not know the purpose of. The girl reflects on earlier warnings given to her by the counselor and decides she has been called because she tried to do too much and is now falling behind in school. She imagines her future based on this assumption, one in which she cannot ever escape the failure of falling behind. When she enters the office, however, she finds the meeting is not what she expected it to be.

**9:40 Gano Assembly**

### **Spinning Words into Gold: Finding Poetic Inspiration**

Samantha Bard and Morgan Mayo

*Advisor: Dr. Ruth Williams*

Poetry is famously difficult to define, and likewise the art of writing poetry can appear shrouded in mystery. In truth, writing poetry is a much more structured process than it may seem on the outside. It is a process of trial and error, playing with language until something sticks. Similarly, poetic inspiration can come from less lofty places than one might imagine. The aim of our readings is to showcase how inspiration can be pulled from a myriad of places, be it photography or music, our personal history, or everyday objects. By reading our poetry, we wish to display and explain the poetic process as we experience it from the first light of inspiration to the finished piece.

## **Pryor Learning Commons 112**

9:00 PLC 112

### **Engineering Buddy: Concrete Cracking Detection**

Andrew Kurke

*Advisor: Dr. Will Lindquist*

In the ever-evolving landscape of infrastructure and construction development, cost-effectiveness, time, and efficiency are paramount concerns. Often, professionals and companies are left stranded to grapple with the challenges of ensuring the structural integrity of a concrete section/slab and determining whether a crack or a chip is a problem or not. To address this issue, and to provide a virtual engineer in your pocket, we propose the development of "Engineering Buddy," an innovative AI-powered software solution. This groundbreaking project is a joint effort between the Data Science department and Civil Engineering department at William Jewell College as in no doubt over the coming years these two industries will be heavily linked together.

9:20 PLC 112

### **Demolition and Pre-Construction of Semple Hall**

Cody McKimens, James Smith, and Jonah Sanford

*Advisor: Dr. Taqsim Husnain*

The proposed project involves the demolition and redevelopment of Semple Hall, a residential building on William Jewell College's campus, due to structural failure. The objectives include demolishing the existing structure, redesigning the parking lot, installing retaining walls, implementing a new water management system, and constructing a foundation pad capable of supporting the equivalent load of the original structure. The scope encompasses geotechnical work, surveying, foundation design, site development, transportation redesign, stormwater management, and erosion control. The design must adhere to specific guidelines provided by the owner, ensuring resilience against extreme weather events and long-term stability. The project team comprises civil engineering students with intern experience, led by a team leader who has passed the FE Exam. A detailed schedule outlines tasks to be completed each month, culminating in the finalization of designs by May. Cost assessments estimate expenses for demolition, materials, retaining walls, pavement, stormwater systems, and design work, totaling approximately \$811,590, subject to change based on hourly rates and project requirements.

9:40 PLC 112

### **Pre-Construction Design of Schneider Clubhouse**

James Schneider, Sam Wambold, Jordan Jermain, and Cory Conley

*Advisors: Dr. Will Lindquist, Dr. Taqsim Husnain*

The Schneider Clubhouse Design Project, led by "KC FourCrest Engineering" (Jordan Jermain, James Schneider, Sam Wambold, Cory Conley), proposes a modern, sustainable facility to elevate William Jewell College's sports community. With a five-month timeline, the team, spearheaded by Jordan Jermain, aims to enhance sports facilities while prioritizing functionality and sustainability. Situated east of the Soccer/lacrosse field, the clubhouse integrates MEP (Mechanical/Electrical/Plumbing) services, ensuring compliance with codes and standards. Through the use of

sustainable materials and energy-efficient systems, the project underscores environmental responsibility. Upon completion, the clubhouse promises upgraded facilities, increased spectator turnout, and a secure environment for families, thereby contributing to the college's sports legacy. This comprehensive approach aligns with William Jewell College's commitment to excellence and sustainability, positioning the Schneider Clubhouse as a focal point for sports and community engagement.

**10:00 – 10:45 Poster Presentations - Union Atrium**

## **The Relationship between Personality, Performance, and Perseverance in Developing a Brief Assessment of Resilience for College Students**

Poster Presenters: Athena Wilden, Makayla Ratzlaff, and Lauren Taylor

*Advisor: Dr. Bryan Fox*

The construct of resilience continues to be of interest to researchers examining success factors of the modern college student, especially in the larger contexts of health (e.g. the COVID pandemic) and societal (e.g. gun violence) concerns. The present study aims to examine the effect on resilience of the so-called "3 Ps" of personality, performance, and perseverance, as well as the relationship between those variables. It is hypothesized that perseverance will be highly correlated with both prosocial personality factors and objective measures of academic performance. After taking part in a series of questionnaires, William Jewell students will rate their responses to a number of situational vignettes on a resilience scale. These responses will be used in conjunction with the above performance measures to assess the validity of a resilience scale that may be employed to assist institutions in identifying potential areas of opportunity to meet student needs and provide targeted assistive services where appropriate.

## **The Effects of Locus of Control on Time Management, Motivation, and Resilience of College Students in the Post-COVID World**

Poster Presenter: Hrithika Bhugvandeem, Brian Bartels, and Alexandria Boswell

*Advisor: Dr. Bryan Fox*

The construct of resilience continues to be of interest to researchers examining success factors of the modern college student, especially in the larger contexts of health (e.g. the COVID pandemic) and societal (e.g. gun violence) concerns. The present study examines the effect of the so-called "Locus of Control" (LOC) in assessing how students view their ability to manage emotions, expectations, or level of personal impact they have on "dealing with" events seemingly out of their control. We hypothesized that students with a higher degree of internal LOC will report greater levels of resilience, as well as more confidence and/or positive emotions in coping with stressful or potentially traumatic events. After random assignment to one of two situational vignettes, students will complete questionnaires assessing whether they felt in control of their decisions and feeling ("internal" LOC) or they simply reacted to stimuli as they were presented ("external" LOC). Findings will support a greater understanding of the factors that affect student ability to cope with stressful situations, and the impact these have on academic performance.

## **The Trajectory of Childhood Attention Deficit Hyperactivity Disorder to Adult Bipolar Disorder**

Poster Presenter: Katelynn Sheets

*Advisor: Prof. Debra Penrod*

A meta-analysis was performed with the goal of understanding the trajectory of childhood attention-deficit/hyperactivity disorder (ADHD) into bipolar disorder (BD) in the adult years. Recognizing that ADHD can lead to BD in the adult years will have important implications for the holistic psychiatric care of patients. This system review is designed to aid nurses in taking an individualized holistic approach when caring for patients who fall within this trajectory spectrum of childhood ADHD. Having the proper understanding of this disorder and its comorbidities can have an important impact on nursing assessments, diagnoses, and interventions. Studies support the hypothesis that childhood ADHD is a risk factor for bipolar disorder in adults and can lead to an earlier onset. The variables of parental mood disorders and co-occurring Major Depressive Disorder could increase the correlation between ADHD and BD. This investigation found evidence to support the relationship between adults with mood disorders and a history of childhood ADHD as well as unfavorable characteristics that can occur with the comorbidities of ADHD and BD. Recognition that childhood ADHD can lead to bipolar disorder in the adult years will have important implications for the holistic psychiatric care of patients.

## **Euthanasia: It is Time?**

Poster Presenter: Travis Bailey

*Advisor: Prof. Debra Penrod*

Euthanasia, a legal option in select regions globally, provides individuals with the choice to end their lives on their terms. In the United States, public backing for euthanasia has plateaued since the 1990s. Presently, Medical Aid in Dying (MAID) is sanctioned in 10 U.S. states while 40 states still deem it illegal. Technological advancements have ushered in a new era with consumer-level 3D printers offering a unique alternative for painless life termination. At the forefront of euthanasia methods is a groundbreaking option that allows a user to recline in a 3D-printed pod which is then guided by prompts from an artificial intelligence algorithm. The regulatory landscape has been slow in adapting to these technological advancements underscoring the need for legislation to catch up with the pace of change.

## **Exploring the Potential Therapeutic Benefits of Restoring Healthy Intestinal Flora in Patients with Behavioral/Mood Disorders**

Poster Presenter: Joshua Gately

*Advisor: Prof. Debra Penrod*

Interest in the relationship between the gut microbiome and mental health has increased over the past decade. Current research aims to demonstrate a link between the composition of the human gut microbiome and mental health providing evidence that may be used to develop adjunctive therapies to alleviate psychological complaints by targeting the intestinal flora. Due to this burgeoning research, it is important to explore the role of the gut microbiota in psychosocial behavior while also examining effective interventions to proliferate a healthy population of intestinal microbiota to alleviate cognitive and psychological complaints. Available human observational studies demonstrate the ability for emotions, stress, and trauma to have lasting effects on the composition and diversity of the gut microbiome lending credence to the notion that the gut-brain axis contributes to social behavior and cognition.

Human microbiome research is in the early phases and most of the controlled studies have been performed on animals. The available human observational studies demonstrate anomalies in gut microbiome composition amongst populations with mental health conditions. Diet and lifestyle modifications remain the most accessible methods to restore gut health, but there are several proposed longitudinal studies that aim to explore the use of fecal microbiota transplantation as a therapeutic intervention for cognitive and psychological conditions.

## **Yates 221**

10:45 Yates 221

### **The History of Voting Rights in Kansas City: Black Americans' Fight for the Ballot Box**

Tatyana Turner

*Advisor: Dr. Daniel Kotzin*

The pervasiveness and expansive nature of political violence against Black Americans in the Greater Kansas City region demands public acknowledgment and understanding, rather than censorship and historical erasure. This paper examines the social, political, and economic factors that shaped the evolution of Black voting rights from the 19th century to the present day. Focusing primarily on the pre-Civil Rights Era to document histories that cannot be shared through first-person narratives, this paper highlights the historical struggles for Black voting rights in Kansas City, shedding light on the systemic political and psychological tactics employed to suppress Black enfranchisement in the Greater Kansas City region.

11:05 Yates 221

### **The Evolution of Queer Activism in Kansas City**

Sunny Williams

*Advisor: Dr. Daniel Kotzin*

My research paper is focused on the growth of queer activism in Kansas City. The research question is "How has intersectionality influenced the queer community and its methods of activism in the 1960s and 1970s?" For this research paper, I examined queer activism in 1960s Kansas City before Stonewall and compared it to activism after Stonewall to see how influential the uprising was on queer activism, by looking at the role that intersectionality and black queer folks played in Kansas City activism. My paper also discusses the evolution of what the activists were hoping to accomplish in the different decades of activism in order to make the point that, while the contribution of black queer folk are commonly overlooked, black and queer intersectionality was vital in creating the necessary circumstances for queer activism to have evolved from the methods used by the Homophile Movement in the 1960s, to those used by the Gay Liberation Movement in the 1970s. For my research, I used primary sources from queer newspapers and advertisements from the 1960s and 70s in Kansas City, as well as photographs from popular Kansas City gay bars to show the significant role that intersectionality played in changing queer activism. I also use essays and historiographical sources to discuss how popular historians view Stonewall and the intersectionality involved in the uprising.



## Cardinal Conversations: Challenging Polarization on College Campuses

Jamie Schenck

*Advisor: Dr. David Lisenby*

Political polarization poses a great threat to American Democracy, and fixing the issue can start with higher education. This project seeks to test a model for facilitating potentially polarizing conversations, specifically on college campuses. To examine this, the project observed four William Jewell events using the American Public Square Civility Toolkit to facilitate non-polarizing conversations over hot-topic issues. After each event, a voluntary and anonymous survey was sent to the participants to focus on their experiences. Survey data is currently being collected and analyzed to determine if the American Public Square Civility Toolkit is effective. Initial observations show that there has been an overwhelmingly positive response and that these conversations could open the minds of participants in a way that other event formats cannot. The findings of this project are expected to detail what effective approaches to political polarization among college students look like, and American Public Square partner schools across the nation can mirror their conversations after them. Overall, "Cardinal Conversations" provides a precedent for how colleges handle difficult conversations with their students, political or not. The final results and conclusions of this study are still to come, as research is ongoing.

## Yates 222

## Adolescent Group Therapy: Supporting Mental Health within the Education System

Kathryn Price, Jackie Hensley, and Sophia Lopez

*Advisor: Dr. David Lisenby*

In the last two decades, mental health has had a significant decline across the globe. Rising rates of mental health disorders in adolescents create a greater need for support systems and mental health resources. Adolescent years are vital in shaping one's beliefs, morals, emotions, and many other key aspects of who they become. By addressing mental health more at this age, we can prepare and equip children to deal with mental health events as they develop in the future. Children spend most of their adolescent years in the classroom; however, addressing mental health within the educational system is challenging. Many middle schools do not address mental health due to a lack of resources within the education system and awareness of the issue's importance. To learn more about the programming middle schoolers receive, we partnered with Guadalupe Centers Middle School and Mattie Rhodes, two non-profits in urban Kansas City. They offer group sessions for a selected group of eighth-grade boys and girls. After attending multiple sessions, we led a discussion focused on mental health and its importance. When discussing hard topics with their peers, the kids were more open to share their feelings and talk about possible coping strategies. We observed that group therapies can be an effective implementation for schools to address mental health. They target more students at once, alleviate the stigma around seeking help, and improve mental health knowledge and coping mechanisms in adolescents.

11:05 Yates 222

## Interpersonal Connections at William Jewell through the Lens of Interpersonal Psychology

Kyler Hurst

*Advisor: Prof. Alex McEntire*

Using readings from the founder of Interpersonal Psychoanalysis Harry Stack Sullivan and mainline psychiatrists heavily involved in interpersonal psychotherapy such as John C. Markowitz, this project aims to take a deep dive into the field of Interpersonal Psychology and how its ideas can benefit the William Jewell community on campus through assessing student interpersonal engagement. Interpersonal psychoanalysis emphasizes the impact social interaction and perspective has on the wellbeing of an individual. We aim to look at how the needs of students on campus are being met through community efforts. These needs include ideas that aren't frequently associated with common "needs" of a person, such as physical touch and social interaction. Through the exploration of these frequently unknown needs, we can address to the audience how to best fulfill them for a better wellbeing, both on a local scale as well as campus wide for all students and staff.

11:25 Yates 222

## Community Based Mental Health Approaches: An Analysis of Journal Publications and Case Studies

Tristan Groves

*Advisor: Dr. Hilary Wright*

A substantial population of 255,000 Missouri residents grapple with the challenges of serious mental illness (SMI). Recognizing the potential of Community-based Mental Health Treatment (CBMHT) as a transformative approach, which involves conducting therapeutic activities within community settings rather than institutional environments, offers many advantages for both patients and healthcare providers. This innovative approach not only addresses financial constraints but also mitigates the institutional and emotional burdens associated with traditional treatment methods. Employing a methodical approach, I engaged in systematic observations, documented treatment processes, conducted a comprehensive analysis of relevant journal publications, and conducted insightful informal interviews with individuals contending with SMI. These efforts have contributed to a nuanced understanding of the effectiveness of CBMHT. This discourse not only underscores the need of broadening access to such initiatives but also advocates for heightened awareness and increased financial funding, emphasizing the transformative potential of this mode of treatment in the realm of mental health care.

## Gano Assembly

10:45 Gano Assembly

## Navigating Ted Tally's *Terra Nova*

Cal Perkins

*Advisor: Prof. Nathan Wyman*

In the world of the performing arts, the set serves as a dynamic canvas. It is important for the creator to know that this set will create an environment for the audience: whether it be positive or negative. In this presentation, I will explain my process of designing a set for Ted Tally's hauntingly human play, *Terra Nova*. Set amidst the race of Captain Robert

Falcon Scott's ill-fated Antarctic expedition of 1913, Tally's gripping narrative throws the audience into the harsh and unforgiving landscape of the South Pole, exploring themes of ambition, brotherhood, nature's cruelty, and the indomitable human spirit. Physically and mentally creating a set for *Terra Nova* presents a unique challenge, as it requires the construction of an environment that captures the stark emptiness of the Antarctic wilderness and conveys the emotional complexity and journey of the characters' experiences in an accurate manner. Each element of the set must be meticulously designed to transport the audience to the heart of this chilling tale, integrating the multiple hallucinations of the cast.

During this presentation, I will describe the creative process behind building a half-inch scale set for this play, examining the research, historical facts, and lessons in the script to translate a visual set, then showing photos of the model itself. Through timelines, conceptual sketches, and behind-the-scenes insights, attendees will achieve a deeper understanding of the pivotal role that set design plays in shaping the theatrical experience, as well as the challenges and rewards of bringing a historical epic like *Terra Nova* to the stage.

**11:05 Gano Assembly**

## **The Benga Beat: An exploration into the Music's History in both Kenyan Tradition and British Colonialism**

Hayley O'Keefe

*Advisor: Dr. Dorothy Glick Maglione*

Benga is a fast-paced and rhythmic style of music from Kenya that combines aspects of traditional music of the Luo people and contemporary popular musical practices. While the music's main purpose is to preserve the traditional music of the Luo people, the genre also exhibits various modern influences rooted in colonialism. Kenya was under British rule from 1895 to 1963 and benga emerged in the 1940s around the end of colonial rule. Benga is mainly characterized by the sound of electric guitars and bass-instruments brought to Kenya by the British-and its fast-paced rhythmic beat that takes a cue both from the music transported to the African continent with the gramophone and traditional musical styles. There are also significant cultural factors that impacted the genesis of benga including the region's history, traditions, and modern practices that contributed to its creation and popularization. The sound characteristics of benga including instrumentation and musical structure will be outlined. These aural markers combined with the traditional setting of benga and cultural context reveals the position of the genre not only within the Kenyan culture but also as a result of colonialization.

**11:25 Gano Assembly**

## **The Necessity of a Macro Level Analysis of Interlocking Structures of Power in Contemporary Feminist Theory**

Abigail Clifton

*Advisor: Dr. Jennifer Cotter*

This essay, drawn from my senior honors thesis, critically analyzes diverse feminist theories for their effectiveness and limits in addressing the relationship of the oppression of women to power relations of race, gender, class, and sexuality. The second-wave feminist movement, in many respects, paved the way for the societal, financial, and political reform of women's rights. However, many iconic second-wave feminists, e.g., Simone de Beauvoir and Betty Friedan, took a "single-axis" approach that persistently overlooked the complex relationship of gender to class, race, sexuality... and, as a result, were limited in addressing the liberation of all women. In this essay, I critically analyze "single-axis" feminisms

and discuss the contributions made to more inclusive feminisms by second wave feminists of color, such as Audre Lorde and the Combahee River Collective, as well as, more recently, by "intersectional feminists" such as Kimberlé Crenshaw and Patricia Hill Collins, and feminists advocating for "interlocking structures of power" theory, such as Anna Carastathis and Martha Gimenez. A significant part of my discussion involves a comparative analysis of "intersectional" and "interlocking" theories. Theories of intersectionality work to understand individual experiences with oppression through focusing on micro systems in society. Theories for interlocking structures of power are focused on the macro structures in society that construct and reproduce material and social conditions. While both theories make significant contributions to feminism, I aim to show that the eradication of macro structures of power must be the focus of contemporary feminist movements, to enable social change that liberates all women.

## **Pryor Learning Commons 112**

10:45 PLC 112

### **Method Development for the Detection and Comparison of Trace Level Compounds in Sources of the Herbal Supplement Silybum Marianum using HPLC-UV**

Lucille Beattie

*Advisor: Dr. Shane Price*

Nutraceuticals are substances that are used for both nutritional and medicinal purposes. The FDA does not regulate nutraceuticals in the same strict manner as they do with pharmaceuticals. Thus, the chemical compositions of the nutraceuticals are unregulated and therefore largely unknown. Milk thistle (*Silybum marianum*) is one of these nutraceuticals and has been used as an herbal remedy for centuries for liver and biliary diseases. Today, milk thistle can be taken in a supplemental form for its proposed hepatoprotective, antioxidant, and biliary-supporting properties. Little research has been conducted to truly evaluate the quantity of the compounds in milk thistle supplementation. The active component of milk thistle is silymarin, to which most of the milk thistle's medicinal properties are attributed. Previous research has found significant variability in silymarin content and negative interactions with certain pharmaceuticals. Given these factors, the efficacy and safety of such supplements are called into question. This research aims to determine the variability of the trace compounds in milk thistle supplements. To complete this, we will develop and optimize an extraction and separation technique to compare the quantities of the different compounds between two sources of milk thistle supplements. Using methanol as the extraction solvent, the compounds are then separated using High-Performance Liquid Chromatography equipped with a C18 column and UV/Visible Spectrophotometric detection. Peaks that are found to be significantly different between samples will be part of future work to identify the compounds of those peaks.

11:05 PLC 112

### **Evaluation of the Compound Variability Between Morus Alba L. Nutraceuticals Through HPLC**

Sarah Foote

*Advisor: Dr. Shane Price*

Nutraceuticals are generally defined as products derived from plants or foods that are used to relieve or protect against a chronic illness. Despite this, they are classified by the FDA as dietary supplements, meaning they are not as tightly regulated compared to pharmaceutical drugs. The phytochemical makeup of a plant is subject to great variability based

on a number of factors, such as growing conditions and harvest time. The purpose of this project is to examine the compound variability between two commercial samples of white mulberry leaf (*Morus alba*) nutraceuticals using high performance liquid chromatography. Ten identical samples were prepared from each source for a total of twenty samples. To analyze the trace compounds in each sample, they were extracted using a hydromethanolic solvent (80:20 methanol water) and injected into the HPLC. The HPLC utilized a gradient, and two mobile phases composed of different amounts of acetonitrile, water, and glacial acetic acid. Detection was performed by measuring absorbance at 280 nm and 320 nm, based on a combination of spectrophotometric data and literature values. We performed a statistical analysis on the peak areas of compounds appearing in both supplements. Based on physical observations and the peak area analysis, we believe there are significant differences in the trace compounds. In the future, we plan to use LCMS to obtain the masses of some of the prominent peaks appearing in one supplement but not the other. We also plan to apply this method to local white mulberry leaves to compare the results.

11:25 PLC 112

## **Method Development for Analysis and Comparison of Lutein and Zeaxanthin Nutraceutical Supplements Using High Performance Liquid Chromatography**

Kyla Schulte

*Advisor: Dr. Shane Price*

Lutein and zeaxanthin are the main components found in marigold petals. These compounds are hypothesized to have benefits for eye health, specifically for patients with age related macular degeneration. There are no scientifically proven benefits for these compounds, but they are said to act as antioxidants by protecting your eye from harmful free radicals by absorbing excess light energy. One source of these compounds is found in nutraceutical supplements, which are not regulated by the FDA. This means they are not required to undergo the same purification processes to meet the strict standards leaving other nonreported compounds within each supplement. Lutein and zeaxanthin are the only reported compounds on the food label of each supplement, so the trace compounds are unknown, leading to potential unknown drug interactions. This research focuses on developing a method to analyze and compare two commonly purchased lutein and zeaxanthin nutraceuticals. The developed method will consist of extraction, separation, and analysis of each sample. The extraction will consist of dissolving in methanol, stirring, and centrifuging each sample. The separation will be completed using High Performance Liquid Chromatography with a C18 column to produce a chromatogram with the separated compounds shown as different peaks. These peak areas will be used during analysis to determine if the levels of trace compounds in the two supplements are significantly different from each other.

# Duke Colloquium Schedule | April 19, 2024

## Afternoon Sessions

### Yates 221

1:00 Yates 221

#### **Anxiety and Identity: Understanding the Rising Threat of Ethnic Nationalism in Western Politics**

Luke Zahnd

*Advisor: Dr. Gary Armstrong*

A special form of nationalism - "ethnic nationalism" - has reemerged as a major political force in Western democracies. Indeed, some scholars have, in fact, described modern politics as being the "era" or "age" of nationalism. The United States, Italy, France, and Germany have all seen ethnic nationalist parties and candidates increasingly mobilize political agency and bolster their share of the electorate. In effect, the accentuation of this particularly nasty form of nationalist thinking has led many Western states to become less tolerant, increasingly divisive, and-ultimately-less stable. This paper explores the grave threats ethnic nationalism poses towards democratic institutions, as well as elucidates the forces propelling ethnic nationalism's return. Ultimately, the paper argues that anxieties in particular groups, typically targeting the growth of outside minority groups, have combined with attempts by political leaders to capitalize on these fears while emphasizing a constructed group identity to culminate in a highly dangerous and highly combustible political "reality."

1:20 Yates 221

#### **Moral Realism: International Relations Theory with Chinese Characteristics**

Calvin Heit

*Advisor: Dr. Gary Armstrong*

As the relationship between the US and China deteriorates and leads them closer to conflict, it is important to understand the theories and worldviews informing Chinese foreign policy. Yan Xuetong, China's most influential international relations scholar, has developed a new systematic theory of world politics called "moral realism," which builds off the classical "realist" theories using ancient Chinese philosophy and history. Yan argues that the type of state that dominates the international system determines the nature of the world politics - and that the most important variable is the type and quality of political leadership. This project conducts a comparative analysis between Yan's moral realism and the work of two of the West's most important realist scholars: John Mearsheimer's neorealism and Henry Kissinger's classical realism. I compare three core elements of each theory, and then illustrate the predictions and prescriptions of each for the future of US-China relations. This analysis yields an understanding of moral realism as a hawkish theory that prescribes power maximization, but uses international norms, credibility, and political morality to do so.

## **Perpetuating Victimhood: Missouri Needs to Expand Criminal Record Relief for Survivors of Human Trafficking**

Mary Leniton

*Advisor: Dr. Gary Armstrong*

Arrest and conviction records can follow survivors long after they are identified as victims of trafficking, impacting their ability to find employment and housing, receive financial assistance, and further their education. Unless states take action to provide survivors with legal protections from such criminal records, the system designed to protect victims instead commits additional injustice against them. In Missouri, an adult survivor of human trafficking who has engaged in conduct that constitutes an offense of prostitution may present evidence of coercion as an affirmative defense—excusing the survivor from criminal liability for an offense of prostitution. However, affirmative defense does not protect survivors from the impacts of arrests, charges for crimes other than prostitution, or false convictions. This paper argues for expanding criminal record relief for victims of human trafficking in Missouri and draws on practices within other states to provide specific recommendations for Missouri's next steps.

## **Yates 222**

## **Shaping Success: The Role of Financial Development in a College Student**

Evan Highfill

*Advisor: Dr. David Lisenby*

When referring to the financial education of a college student, a commonly used term is broke. Regarding personal finance, students are commonly uneducated and don't find success navigating their finances. Research conducted at William Jewell College reveals that 75% of students express a desire for better financial practices. To dig deeper into this issue, students participated in a study involving surveys (n=40) and follow up interviews (n=8). Based on these results and discussions with a finance educator, an educational seminar was developed targeting underclassmen. The seminar provided valuable information students could use throughout college. The initial result was zero attendance for the seminar. The initial study indicates the lack of interest in personal finance and that there was more to this problem. A second study was conducted where forced participation occurred. The results showed many students hoped to implement these practices into their lives. After further investigation, personal finance literature shows early education and home-life experience plays an important role in the interest and success of college students with their finances. This presentation will explore the knowledge gathered from the experience and the impact it can have on student's lives and futures.

## **Distributism: Its Basis in Catholic Social Teaching, its Practicality, and its Impact on Modern Politics**

Casey Booth

*Advisor: Dr. Rein Staal*

Beginning in the late nineteenth century, the Catholic Church developed Catholic social teaching (CST) as its unique response to the challenges of capitalism, communism, industrialization, and secularization in the modern world. While rooted in earlier theologians such as Thomas Aquinas, CST emphasizes human dignity through subsidiarity, solidarity, and the centrality of the family, primarily by criticizing the excesses of liberalism, capitalism, and collectivism. In the early twentieth century, a group of thinkers led by Hilaire Belloc and G.K. Chesterton developed a theory of political economy based on the tenets of CST called distributism. Distributism is meant to balance capitalism and collectivism. It aims to do so by encouraging the ownership of private property through the development of small land holdings based around the family combined with artisanal guilds to protect from monopoly. Importantly, while based in Catholic social teaching, its policies are not strictly Catholic. While providing a unique perspective, most economists believe distributism is not especially practical on a wide scale and it has never been a significant political force. Despite this, it has proved to be surprisingly influential in some of the oddest places including the European Union, the policies of Margaret Thatcher, and the anarchist activist Dorothy Day. Distributism's genius is that it provides a consistent analysis of politics and economics which challenges the assumptions of the traditional political spectrum while emphasizing human dignity, private property, and the rights of the common man.

## **Ethical Reasoning and the Assassination of Reinhard Heydrich**

Jackson Cooper

*Advisor: Dr. Daniel Kotzin*

Reinhard Heydrich served as one of Hitler's closest allies and a principal architect of the Nazis' policy decisions. Heydrich controlled the police and intelligence forces of Nazi Germany as head of the Reich Security Main Office. Heydrich played an indispensable role in orchestrating the Holocaust as chairman of the Wannsee Conference, which determined the logistics of the Final Solution. For his efforts, Heydrich was deployed to pacify occupied Czechoslovakia, also known to Nazi Germany as Bohemia and Moravia. Heydrich's efficiency and importance to the Nazi regime made him a target of the Czechoslovak government-in-exile, which worked closely with Great Britain's Special Operations Executive and the Czech Resistance Movement to carry out a successful assassination on Heydrich in 1942. The brutal response that followed saw the murder of thousands of innocent people, the burning of the Czech villages Lidice and Lezaky, and the destruction of the Czech Resistance Movement. Was the action worth the cost? For years, historians have debated the moral and legal consequences behind Heydrich's assassination. In this discussion, I argue in favor of the assassination as a moral and just action in the context of World War 2. To that end, I will offer my detailed analysis of the death of Heydrich and the debate over its morality to determine if there is an ethical answer when faced with a truly great evil.



## Gano Assembly

1:00 Gano Assembly

### **“We Think More Than We Should About Hope”: Repressive Ideology and Religion in Manlio Argueta’s *One Day of Life***

Tarryn Fredde

*Advisor: Dr. Jennifer Cotter*

Throughout the centuries, complete ideological suppression has been a critical control tactic of authoritarian regimes. In his 1980 novel, *One Day of Life*, Manlio Argueta showcases how, during its civil war, the El Salvadoran government employed horrific acts of violence and repressive ideology to justify its strict class hierarchy and systematic elimination of all threats to its power. The novel centers on Guadalupe Guardado, the matriarch of a poor farming family who finds herself in the crosshairs of the Authorities after her husband and granddaughter join protests fighting for farmworker's basic human rights. Drawing from Althusser's critical theory of "Ideological State Apparatuses" as well as other critiques of ideology and class exploitation, I analyze the way the novel exposes the use of the Catholic Church as an "ideological state apparatus" that defends the interests of the landowners, teaching exploited farmworkers to hope for a better life only in death. I also discuss the way the farmworkers, with the help of new priests, develop a new "awareness"-i.e., critical class-consciousness of "the system that exploits us." In turn, I analyze how, with the help of the US and other countries, the El Salvadoran government turns to state violence when they perceive this new ideological awareness as a threat to the economic hierarchy. Finally, I examine how Argueta's depiction of Lupe's hope for a better future for her granddaughter is based in radical awareness and commitment to change, not in empty religious platitudes.

1:20 Gano Assembly

### **Lorca’s Legacy: Female Expression in a Patriarchal Francoist Society**

Lauren Flickinger

*Advisor: Dr. David Lisenby*

Federico García Lorca's 1936 play *La casa de Bernarda Alba* serves as a heart-wrenching demonstration of female repression within the confines of a patriarchal society. In rural Spain, Bernarda, a widowed mother, dictates ruthlessly over her five daughters, ensuring that the suffocating gender roles of Spanish society drive her daughters to misery. At large, Lorca's play reflects the socio-political climate immediately preceding the Spanish Civil War, where archaic values of the past clash with modern-age desires. Shirley Mangini argues that Francisco Franco's 1939 victory in the Spanish Civil War marked an unfortunate regression in the status of women in Spanish society. Lorca's play, written directly before the onset of the war, foresaw the strong repercussions of Francoist-style suppression of women through the fictional narrative of Bernarda and her daughters. Therefore, Lorca's work serves as a lens through which one can not only analyze the historic oppression of women but also the timeless consequences of repressing human autonomy and individual expression. In essence, Lorca's *La casa de Bernarda Alba* serves as a framework for exploring the significance of individual expression and the lasting impact of oppressive norms, prompting a deeper exploration regarding the importance of individual expression.

## Franco's Continuation of Violence in Postwar Spain

Dallas Carpenter

*Advisor: Dr. Robert Wells*

Francisco Franco was a harsh, fascist dictator in twentieth century Spain whose rule lasted thirty-six years (1939-1975). Now known as the "Francoism" era or "Francoist Spain", his strict Nationalist government and extreme cruelty did not end until his death in 1975. In 1936, he led a military coup to overthrow the Republican government. Spain then experienced a civil war which lasted three years (1936-1939). Franco's fascist forces won, thus his reign as dictator is also known as the "postwar" era. Due to his long and relentless time in power, Franco's authoritarian and violent governing style had extreme effects on the population of Spain during this time. Francoist Spain is represented allegorically in the coming-of-age novel *Nada* published in 1945 by Spanish author Carmen Laforet. Here, the reader is shown this harsh, desperate world through the eyes of the first-person narrator and protagonist, 18-year-old Andrea, when she goes to live with extended family in broken-down Barcelona in the early 1940s after the death of her parents in the civil war. It is through Andrea's experiences we see the many forms of protracted violence portrayed during this postwar time, such as deliberate famine, surveillance and espionage, and physical and domestic abuse. Francoism caused great damage to Spanish society, the effects of which are still felt today. Yet, novels such as *Nada* help us learn from history, witnessing how the violence of the Spanish Civil War effectively continued into the postwar era.

## Pryor Learning Commons 112

## Forced Convective Cooling of a Resistive Element

Kaden Gammon

*Advisor: Dr. Blane Baker*

Experiments in this presentation will focus on determining temperature changes of a resistive element due to forced convective cooling. A resistive element is connected to a direct current power supply to produce Joule heating. Once an equilibrium temperature has been determined, forced convection is produced by a fan blowing at constant air speeds. With air flowing, a new equilibrium temperature is measured to determine a temperature change. These data are modeled assuming that the input and output power are equivalent. Results using MATLAB modeling predict temperatures in close agreement with experimental temperature findings. Implications of these experiments and modeling are synonymous with forced convective cooling on transmission lines. Power transmission results in heating of lines due to the currents present, as a result, this heating is acknowledged in transmission to avoid harm to the lines. However, a temperature change due to forced convective cooling would allow for currents in power transmission to increase without the danger of high temperatures.

## Altered Pharmacokinetics and Pharmacodynamics in Pediatric Patients with Down Syndrome

Amanda Kempus

*Advisor: Prof. Debra Penrod*

Down syndrome is a genetic disorder that occurs when abnormal cell division causes an individual to have an additional partial or full copy of chromosome 21. Individuals with Down syndrome have an increased risk of developing various health issues that require extensive pharmaceutical management. With this increased need for medications, there is

also an increased risk of adverse reactions, drug toxicity and overall medication sensitivity. Studies suggest decreased clearance of methotrexate and thioguanine in the cells of patients with Down syndrome. Studies also suggest that high doses of anthracyclines, such as doxorubicin and daunorubicin, result in increased risk for patients with Down syndrome to develop cardiotoxicity. Exact numbers and statistics vary from study to study, but there is a consensus that patients with Down syndrome show an increased sensitivity to various chemotherapies.

**1:40 PLC 112**

## **Prioritizing Patients over Prices: Helping Low-Income Americans Preserve their Vision**

Juliann Smith

*Advisors: Dr. David Lisenby, Dr. Hilary Wright*

In the United States, more than 0.9 million adults 40 years or older are legally blind, and 2.4 million have low vision, which is defined as 20/40 best corrected eyesight. Low vision limits an individual's ability to perform countless everyday activities such as reading, driving, working, etc. Despite its necessity, certain populations including Black and Hispanic, low-income, and non-college educated Americans are less likely to receive proper eye care. To examine this issue, this project observed how the Kansas City Free Eye Clinic serves low-income individuals. The partnership involved four visits to the clinic including participation in two clinical days where nearly 25 total patients were seen. Observational findings illustrated eye care is not easily accessible for low-income Americans because of certain economic barriers including insurance ownership, electronic communication, and transportation. Therefore, organizations located within areas of need which operate at reduced costs, such as the Kansas City Free Eye Clinic, help patients overcome such barriers to receive proper eye care and preserve their eyesight.

## **Afternoon Music Performances (Locations Below)**

**1:00 Pillsbury Music Center (Forbis Recital Hall)**

### **William Jewell Opera Workshop: Art Song Vignettes**

Emma Johansen

Mekhi Brooks

Payten Davis

Carolyn Schrock

*Advisor: Prof. Jennifer Townsley*

William Jewell's Opera Workshop is geared towards students' understanding of professional rehearsal protocol, stage acting, and learning of various theatrical repertoire. This year we learned how to put on a high-quality performance with little to no budget, and we also learned how to perform in an alternative stage-setting in which the set was both on stage and below. William Jewell's Opera Workshop Performance this year performed a 1950's themed evening of staged songs, scenes, and a One Act Opera.

This performance includes a selection of art songs that have been staged in the style of vignette scenes. A vignette scene is a short scene that captures a single moment or defining detail about a character, idea, or element of a story. Art songs are not typically staged, but this was a great acting exercise for our students and has really turned into an interesting and quite innovative project. This ended up being well-received in our performance and helped us as a class realize there is a whole world of opportunities in staging art songs.

**1:20 Pillsbury Music Center (Forbis Recital Hall)**

## **William Jewell Chamber Orchestra: Samuel Barber String Quartet**

Amelia Beck  
Jonathan Fang  
Ariel Chen  
Emily Castillo

*Advisors: Dr. Langston Hemenway, Prof. Dana Woolard*

William Jewell's Chamber Orchestra presents the second movement of the Samuel Barber String Quartet (op. 11). This movement is more commonly known as "Adagio for Strings"

**2:00 Pillsbury Music Center (Forbis Recital Hall)**

## **William Jewell Opera Workshop: Game of Chance**

Kylie Schuster  
Lila Frazier  
Lukas Lockett  
Jordan Riley

*Advisor: Prof. Jennifer Townsley*

William Jewell's Opera Workshop is geared towards students' understanding of professional rehearsal protocol, stage acting, and learning of various theatrical repertoire. This year we learned how to put on a high-quality performance with little to no budget, and we also learned how to perform in an alternative stage-setting in which the set was both on stage and below. William Jewell's Opera Workshop Performance this year performed a 1950's themed evening of staged songs, scenes, and a One Act Opera.

In our one act opera entitled a Game of Chance, we meet three young Knitters that all have different desires, but their one commonality is that they do not want to live a mundane and boring life. A mysterious figure known as the Representative appears from out of nowhere and suspiciously offers opportunities for each knitter to have their desires come true.

**2:35 Gano Chapel**

## **William Jewell Chamber Winds**

Elie Babb, Ryan Beck, Jolia Bernal, Alexis Harper, Andrew Herring, Lili Jackson, Cherisse Lubbers,  
Jonas May, Chloe McDonnell, Kaleah Petersen, Fabian Reyes

*Advisor: Dr. Langston Hemenway*

The Jewell Chamber Winds is a group of 10 instrumentalists that perform music for smaller ensembles, with a variety of different repertoires. Personnel consists of all year levels, but everyone is a top-level scholarship recipient or a music major.

The performance will feature the different capabilities of the chamber ensemble and will showcase varied repertoire that ranges from smaller quartets to larger flexible instrumentation. Student presenters will discuss the repertoire and the different musical aspects of each piece.