

## 2025 STEVEN GALOVICH MEMORIAL SYMPOSIUM PROGRAM

*Note: all Symposium presentations except the Senior Art Exhibit and the Student Public Booths will meet in Lillard.*

### **BLOCK 1 (9:00 AM – 10:20 AM)**

#### **PANEL 1: Rhetoric of Civil Rights**

Room 244

Faculty Moderator: Elizabeth Benacka

**Title: Changing the Course of History? Critical Race Theory Bans, the Lost Cause, and the Anti-Establishment Rhetoric of *Last Week Tonight***

Student: Anna Blazkova

Faculty Sponsor: Elizabeth Benacka

Abstract: Critical Race Theory (CRT) has remained confined largely to academic circles up until 2020, when it entered the wider public consciousness after George Floyd's murder and subsequent protests. Soon after Donald Trump issued an executive order effectively banning CRT in several different contexts, and state legislation banning discussions of CRT in school settings followed. These bans didn't remain unaddressed. In February 2022, the late-night television program *Last Week Tonight* dedicated a main segment to CRT bans. Late-night television has long been a staple of American pop culture, and more recently has become a common vessel for openly political satire. This paper explores how John Oliver's show functions as a means of agitation for counterestablishment movements, with a specific focus on anti-CRT legislation. *Last Week Tonight* engages in promulgation on the issue of CRT bans, as well as in solidification on the level of a more general divide between progressive and conservative American politics, all through the use of humour, subversion of opponents' rhetoric, and a dramatization of issues through the binary of good and evil. Anti-CRT legislation continues the tradition of removing race issues from the public eye established by historical Lost Cause rhetoric by organizations such as the United Daughters of the Confederacy.

**Title: I am a MAN-MACHINE-BEING, RAVING IS MY RIGHT: Techno-Counterpublic Space, Cybernetic Self-Design, and the Racialized Double Standards of American Assembly Rights**

Student: Mohammed Chowdhury

Faculty Sponsor: Elizabeth Benacka

Abstract: Phrases of dissociation experienced as one gazes at media; images of atrocity and abstracted labor make us unconsciously complicit in war and violence. We have become inured to atrocities and enamored with our own production and labor. Destruction is interwoven with freedom such that if it was a sin to covet rights, then the citizen is the most offensive soul alive. This research instigates that the First Amendment, specifically the right to assemble, is a racial project that is a double standardized dissemination. The United States' history holds not only two timelines, but two standards—Black and white. To assemble a counterculture is a Black act, but a counterculture assembled is a white Right. Such accepted and acknowledged white countercultural assemblies only originate from the Black and Brown struggle. These countercultural spaces-of-color were coopted and commercialized by whites such that people of color continue to be subjugated whilst their attempts at assembly and creativity are deconstructed to be a cultural byproduct for white, western assembly and acceptance. These ironies in our country only humor the technocrats who mechanize every medium insofar media is an industrialized technocracy for corporate profit.

**Title: Weapons of Mass Liberation**

Student: Davis B. Hamilton

Faculty Sponsor: Elizabeth Benacka

Abstract: This presentation will inform the use of weapons and other displays of power against oppressive forces and governments throughout the civil rights movement, centering on the usage of firearms as a pivotal tool for communities to display and retain power to preserve their right to self-determination. It will provide a reading list of books from civil rights leaders which discuss and provide further context to the circumstances in which weapons were necessary for the liberation of people. This portion of the presentation will work proactively to facilitate a conversation surrounding firearms that is cognizant of the implications and violence they cause within society, attempting to focus around the social and legal circumstances that currently exist, and the changes needed for equitable ownership and regulation that promotes safety while maintaining marginalized communities' right to power and self-determination under an oppressive state.

**Title: Disrupting the Narrative of Naturally Occurring Inequality**

Student: Chris Meza

Faculty Sponsor: Elizabeth Benacka

Abstract: The project examines housing discrimination and the narratives surrounding or obscuring the practice and its results. Using Chicago artist Tonika Lewis Johnson's projects "Inequity for Sale" and "unBlocked Englewood" as a starting point, I explore the ways housing discrimination has operated in the United States both while legal and when adapting to Supreme

Court decisions or Civil Rights legislation. I conclude with an evaluation of how Lewis Johnson has effectively presented processes impeding Black homeownership as unjust in spite of technical legality and the resulting implications for communications of housing inequality and segregation.

## **PANEL 2: Punishment**

Room 130

Faculty Moderator: Siobhan Moroney

Societies punish to further certain goals. But what are those goals? Sometimes they are contradictory, and sometimes the means of punishment do not actually serve the goals. Often, there are unintended consequences. These papers explore the nuances of punishment practices.

### **Title: Exploring the Impacts of Parental Incarceration on Children**

Student: Niki Datangel

Faculty Sponsor: Siobhan Moroney

Abstract: My research investigates how parental incarceration affects children's emotional, behavioral, and socioeconomic development, particularly within the broader context of mass incarceration in the United States. I found that parental incarceration contributes to adverse childhood outcomes, including increased mental health struggles, academic difficulties, and heightened risks of future incarceration. By analyzing historical policies such as the War on Drugs and the 1994 Crime Bill, the research I collected demonstrates how systemic incarceration patterns contribute to cycles of poverty and intergenerational incarceration. Using scholarly research, statistical data, and psychological theories—such as attachment and social bonding theories—my paper examines the direct effects on children's well-being and the structural barriers their families face. The findings underscore the urgent need for policy reforms and social interventions to break the cycle of incarceration and provide better support for affected children.

### **Title: Manufacturing and Maintaining Inequality Through Mass Incarceration**

Student: Ben Jurgens

Faculty Sponsor: Siobhan Moroney

Abstract: The United States today incarcerates nearly two million people, a phenomenon that has disproportionately devastated working-class people of color and their communities. This paper traces the roots of mass incarceration and the prison industrial complex (PIC) to the mid-to-late 20th century while situating it in the larger conversation of systemic racism and white supremacy. Indeed, the study argues that the carceral system is inherently racialized and outlines

how it operates within the purview of the (racial) capitalist system of the United States. The paper provides an analysis of the policies that drove mass incarceration, statistics on the socioeconomic factors that affect incarcerated individuals, and the commodification of the PIC and its integration into the culture of the United States. In doing so, it argues that the PIC is a continuation of state-sanctioned violence and control that has been exerted over non-white individuals for centuries.

### **Title: Conviction Review Units: The Arduous Path Towards Exoneration**

Student: Kate Kiamah

Faculty Sponsor: Stephanie Caparelli

**Abstract:** In light of the changing scientific landscape and increasing media focus on issues of social justice, wrongful convictions and the concept of investigating previously settled cases have become a focal point in criminal justice reform. Networks of innocence projects have long been the sole avenue for individuals to obtain support in pursuing a claim of innocence. Yet, these organizations face significant barriers in providing sustainable and meaningful assistance, as they consistently face staffing, funding, and resource shortages. Recognizing the need for a new path towards exoneration for the many individuals making innocence claims, progressive state's attorneys' offices have created in-house options: conviction review units (CRU). Operating from within a district or state's attorney's office, conviction review units allow these offices to be held accountable for the cases they review while also providing an additional pathway for post-conviction examinations when other forms of appeal have been exhausted. Although many CRUs were created with the mission of identifying and remedying cases of wrongful convictions, due to the convoluted nature of reinvestigating closed cases and navigating the bureaucracy of a state's attorney's office, the progress of these units often falls short of the intended goals. To highlight the challenges of CRUs, this thesis will focus on the case study of *People v. John Doe*, a case currently pending in the conviction review unit of the Lake County, Illinois, State's Attorney's Office. Drawing from primary sources provided by the Lake County State's Attorney's Office, I will describe several relevant considerations flagged during my review, and I will detail the challenges these points present to attorneys tasked with the review of John Doe's case. I will explore the larger scale challenges presented to CRUs across the United States and examine recommendations for conviction review units facing challenges in the pursuit of justice for wrongful convictions.

### **Title: Transitional Justice: Restorative or Retributive Punishment**

Student: Enzo Pablo Aravena Magüida

Faculty Sponsor: Siobhan Moroney

**Abstract:** This research examines how societies address severe human rights violations through retributive and restorative justice. Using case studies from Colombia, post-Soviet states, and

South Africa, it explores how these justice models balance punishment, reconciliation, and proportionality. Retributive justice emphasizes deterrence and accountability, as seen in Colombia's selective prosecution of war crimes and the Czech Republic's lustration policies. Conversely, restorative justice prioritizes victim reparations and societal healing, exemplified by South Africa's Truth and Reconciliation Commission. Drawing from foundational legal and philosophical texts, as well as international human rights frameworks, this study assesses the effectiveness of these approaches in transitional societies. Findings indicate that while retributive justice upholds the rule of law, restorative justice fosters long-term peace, often at the cost of full accountability.

### **PANEL 3: Healthcare: Problems in Accessibility and Treatment**

Room 132

Faculty Moderator: Ben Swerdlow

Student Moderator: Peter Liphardt

#### **Title: Nonsuicidal Self-Injury in the Bisexual+ Community: Associations with Identity-Related Stress and Coping Styles**

Student: Nicolle Bek

Faculty Sponsor: Benjamin Swerdlow

**Abstract:** Research indicates that rates of nonsuicidal self-injury (NSSI) are high among bisexual, pansexual, queer, and fluid (bi+) individuals (Liu et al., 2019). Minority stress theory has been used to explain these disparities and identify risk and protective factors, such as identity-related stress and coping (Feinstein & Dyar, 2017). However, little research has focused on adapting and applying minority stress theory to understanding NSSI specifically among bisexual individuals, particularly through validated, bi-specific measures of identity stress (Dumas & Pepper, 2023, being a notable exception). I examine associations between bi+ identity-related variables and NSSI and whether these associations are moderated by coping styles. Data are drawn from a sample of bi+ individuals (N = 497) collected as part of an ongoing longitudinal study at Rosalind Franklin University. The primary research questions include: (1) Which bi+ identity-related variables (anticipated binegativity, internalized binegativity, identity affirmation, identity centrality, and identity certainty) are associated with or predictive of NSSI endorsement or frequency, either separately or conjointly? (2) Are associations between bi+ stress (anticipated binegativity, internalized binegativity) and NSSI moderated by coping style? (3) Are associations between bi+ identity affirmation and NSSI moderated by identity centrality? Specific hypotheses and methods have been preregistered on the Open Science Framework. The

anticipated findings aim to deepen understanding of NSSI by extending research on stress and coping within a historically understudied and underserved community.

**Title: Exploring Mental Health Narratives and Systemic Barriers in Prison Populations**

Student: Margarida Carreira

Faculty Sponsor: Benjamin Swerdlow

Abstract: Mental health disorders are disproportionately prevalent among incarcerated populations, yet systemic and structural barriers hinder effective recovery. This study synthesizes qualitative research and personal narratives to highlight the impact of barriers such as overcrowding, understaffing, inadequate access to therapy, and punitive policies. These factors exacerbate symptoms of conditions such as depression, anxiety, and PTSD while fostering neglect and stigma. The findings advocate for trauma-informed care, enhanced therapeutic access, and rehabilitative models to address these failures. By prioritizing recovery and rehabilitation, these changes aim to reduce recidivism, improve outcomes, and encourage a more humane correctional system.

**Title: The Effect of Alcohol Consumption on Car Crashes in Texas**

Student: Jacob Cutler

Faculty Sponsor: Nancy Tao

Abstract: Drunk driving is the leading cause of traffic-related deaths in the United States. Texas, with its mix of rural and urban counties, experiences significant variation in DUI crash rates. Reducing these crashes in a large state like Texas could serve as a model for other states to follow. This study examines the impact of alcohol consumption on DUI crashes at the county level in Texas. It explores whether factors influencing DUI crashes changed after the COVID-19 pandemic and identifies additional contributors to these incidents. By analyzing trends across diverse county populations, this research provides insights into effective strategies for reducing DUI-related fatalities.

**Title: Data For All: Bridging the Accessibility Gap**

Student: Tobi Ellis

Faculty Sponsor: Andrew Gard

Abstract: This research project investigates the intersection of accessibility, data science, and psychology, with a specific focus on the experiences of blind and low-vision users. Through comprehensive interviews, software testing, and rigorous accessibility assessments, the study

uncovered significant barriers to full participation for visually impaired individuals in these fields. Key findings highlighted the critical need for improved screen reader compatibility, enhanced alternative text descriptions for complex visualizations, and more intuitive navigation systems in data analysis software. While primarily focused on visual impairments, the guide's principles can be adapted to address a broader range of disabilities. By addressing these challenges, the research aims to create a more inclusive and equitable academic landscape that supports students with disabilities and enriches learning experiences through increased diversity and understanding.

**Title: Insights Into the Function of Mycobacterial Brkb via Copurified Protein Partners Using *M. smegmatis***

Student: Piotr Pawlowicz

Faculty Sponsor: Will Conrad

Abstract: Tuberculosis (TB) is a respiratory disease caused by the bacterium *Mycobacterium tuberculosis*. Modern research in TB has shifted toward finding new drug targets to create more effective treatments and to reduce the treatment time for TB. One such drug target is the uncharacterized protein Rv2707, an ortholog of the gene Bordetella resistance to compliment killing gene B (BrkB), which has shown growth attenuation in an *in vivo* model. These results showcase a critical mycobacterial virulence factor with an extracellular growth defect in vivo. To uncover the function of Rv2707, we purified the ortholog, MSMEG\_2755, in the nonpathogenic related model organism, *Mycobacterium smegmatis*, along with additional purified proteins to see if cooperation with these proteins can provide clues to the function of Rv2707. Results show 118 proteins of interest, with 16 selected for future studies, implying that Rv2707 may be involved in lipid transportation or degradation.

**PANEL 4: Meaning and Subtext in Art and Literature**

Room 044

Faculty Moderator: Ben Goluboff

Student Moderator:

**Title: “This Mania of Hers for Marriage”: Nonromantic Connection in Virginia Woolf’s *To The Lighthouse***

Student: Cara Goldstone

Faculty Sponsor: Ben Goluboff

Abstract: This essay evaluates the characterization of femininity and romance in Virginia Woolf's 1927 novel *To The Lighthouse*. Woolf's presentation of the novel's two protagonists-- Mrs. Ramsay and her foil, Lily Briscoe-- emphasizes the intrinsic harms of romantic expectations for women. Woolf highlights the pervasive nature of societal standards of romance through the influence Mrs. Ramsay, ideal matriarch of her family, has upon the people around her. Lily's self-actualization arises only in the absence of these standards, after Mrs. Ramsay has died. *To The Lighthouse* thus concludes with the implication that one must question the social roles assigned to them in order to attain genuine personal fulfilment.

**Title: Wilde's *The Picture of Dorian Gray*: The Role of an Artist**

Student: Stella McCourry

Faculty Sponsor: Ben Goluboff

Abstract: Oscar Wilde's *The Picture of Dorian Gray* and its preface are often viewed as contradictory. This paper analyzes their seemingly opposing ideas: "art for art's sake" with the preface, and a moral storyline about corruption and the artist as a persona. How can the preface exist in harmony with the story following it, and what does their relationship reveal about the artist's role according to Modernism and Wilde's writing? The persona created by an author is not to be conflated with the real person, just as Dorian's idealized self is not true to his inner self. Both the preface and the novel portray this theme that the artist's true self is only known to themselves. Gomel uses the concept of the "death of the author" to suggest that Wilde is intentional in separating his personal self from his art, which is paralleled by Craft's concerns on idealized reflections that diverge from reality.

**Title: *The Rock* by Peter Blume**

Student: Neema Joan Nelson

Faculty Sponsor: Lia Alexopoulos

Abstract: This is a visual analysis and interpretation of the 1944-48 painting *The Rock* by Peter Blume at the Art Institute of Chicago. Close observation of this work's composition, light, color, line, space, form, texture, scale, and movement conveys how the construction of artificial worlds comes at the cost of nature, causing a sense of profound loss and continuous environmental destruction.

**Title: Trees as Capsule for Nostalgia**



Student: Griffin Rowe-Cohen

Faculty Sponsor: Ben Goluboff

**Abstract:** Nostalgia is a powerful emotional force that bridges memory, sentimentality, and the longing for an idealized past. Within the natural world, few symbols encapsulate this phenomenon as profoundly as trees. This presentation examines trees as quintessential embodiments of nostalgia through a multidisciplinary lens, incorporating scientific, literary, and artistic perspectives. Trees transcend human generations, serving as silent witnesses to the passage of time. With lifespans spanning centuries or even millennia, they evoke both permanence and impermanence, challenging humanity to confront its fleeting existence. Scientifically, trees influence human well-being, reducing stress and fostering connections with the environment. In literature, trees function as metaphors for memory and identity, anchoring human experiences and creating spaces for reflection and existential inquiry. Similarly, trees hold a significant place in cultural and religious traditions, symbolizing origins, purity, and transcendence. Artists throughout history have depicted trees as powerful symbols capable of evoking longing and introspection.

## **PANEL 5: The Natural World: Ecosystems and the Ways We Interact with Them**

Room 144

Faculty Moderator: Camila Pizano

Student Moderator: Jessica Caal Chamam

### **Title: Corporate Greenwashing**

Students: Judith Johnson and Adriana Voloshchuk

Faculty Sponsor: Linh Pham

**Abstract:** This presentation is part of a book chapter that has been accepted by the editors. The presentation provides an overview of the definition and regulatory framework related to corporate greenwashing, together with the empirical research on its causes and consequences. We highlight the lack of a consistent anti-greenwashing regulatory framework, which creates significant challenges in identifying and mitigating corporate greenwashing. Additionally, we present the mixed empirical evidence on the causes and effects of greenwashing, suggesting that stakeholders, such as investors, consumers and policymakers, may not fully consider greenwashing in their decision-making. We conclude with recommendations for policy and future research.

### **Title: Reimagining Lake Forest College's Durand Art Institute Green Space**

Student: Ella Chicone and Anika Kinnear

Faculty Sponsor: Brian McCammack

Abstract: The Durand Art Institute, with its large green lawn sitting at the forefront of Lake Forest College, hosts a unique opportunity to explore both the intersection of ecological restoration and art through community engagement. Inspired by the Chicago's Sweet Water Foundation, this project reimagines the space by implementing a "Sculpture Prairie" that would combine restoration and outside art sculptures in the green space and a "Shelf of Life" inside the Art Institute that would foster a growing environment used to grow plants that would later be transplanted into the prairie and teach students about the prairie's various species. Both aspects of the project welcome collaboration with college communities and offer opportunities for both native flowers and artists to thrive. Through extensive research with local experts, AI generative sources, and community connections, we have developed a proposal, identifying ways to implement our ideas. This presentation will outline the design and implementation of the Sculpture Prairie and Shelf of Life, as well as their role in fostering biodiversity, and their potential to reconnect students with nature.

### **Title: Alternative Lawns at Lake Forest College**

Student: Emma O'Malley Galvan

Faculty Sponsor: Camila Pizano

Abstract: The American green grass lawn is often thought of as the default: framing households across the country, and taking up a surface area three times that of US cultivated corn. The traditional turf lawn consumes 30-60% of all American home, business, and educational facility water use, making it the largest irrigated crop in the country. Consumption continues as Americans pine over an aesthetic lawn, pumping not only fertilizers, but \$60 billion dollars into lawn upkeep annually. Turf is non-native and non-pollinator friendly, posing the question as to why we aren't utilizing native, sustainable, and low-maintenance options instead. The Chicago Botanic Gardens, in collaboration with the Chicago Park District, have started an initiative by implementing experimental plots of different lawn compositions around Chicago, hoping to research and test a variety of options to suit homeowners' needs. The campus of Lake Forest College is comprised of swaths of non-native green grass lawn. This study aims to test two alternative lawn compositions. In collaboration with Dr. Pizano and Dr. Becky Barak with the Chicago Botanic Gardens, this study will utilize greenhouse space at the Chicago Botanic Gardens to grow plugs from seed for placement in experimental plots located in three different locations on the campus of Lake Forest College. Half of the experimental plots will serve as a control, while the other half will be treated with compost created from on-campus waste. We expect to see a significant difference between the control and compost-treated plots, with a

potential difference in success based on the campus locations where plots lie.

**Title: Ant Foraging in Response to A Periodical Cicada Emergence**

Student: Calliope Saban

Faculty Sponsor: Sean Menke

Abstract: Periodical cicada emergences, like that of 2024's Brood XIII, represent an example of a resource pulse, an ephemeral, outstanding abundance of a resource in an ecosystem. A resource pulse can have many direct and indirect impacts upon the ecosystem's function, acting as a nutrient influx and a new source of food for organisms affected by the pulse, its effects radiating through the food web and environment. However, cicada emergences are poorly understood when it comes to their impact on ant communities. Ants are an ecologically important organism for their scavenging, mutualisms, herbivory, and nest-building behaviors that can contribute to nutrient cycling and plant reproduction. This project compiles the foraging behavior and nutrient use of ant communities active in the summer of 2024 alongside the periodical cicadas, to quantify the effect of a cicada resource pulse on these communities. Ants of an intermediate body size, and those of the *Myrmica* genus were most prevalent in nutrient baits, with a community preference for carbohydrate baits. Compared with preliminary sampling from the previous year and corresponding months, some sites saw greater recruitment carbohydrate baits in July, and all sites had greater carbohydrate recruitment in June. There is a general trend of greater ant foraging activity during the summer of 2024 compared to summer of 2023, though further analyses will need to be performed for any conclusions to be drawn. The current extent of the data cannot fully capture the effects of this resource pulse over the course of a single season, and subsequent summers will see repeated sampling to determine the extent of impact Brood XIII can have on ant communities.

**PANEL 6: Gender, Sex, and Power**

Room 128

Faculty Moderator: Danielle Cohen

Student Moderator:

**Title: Merovingian Queens in Early Medieval France: Accessing and Exercising Power**

Student: Anela Elze

Faculty Sponsor: Anna Jones

Abstract: This study examines how five Merovingian queens—Clothild, Radegund, Brunhild,

Fredegund, and Balthild—navigated the complexities of early medieval rule to access and exercise power. Despite the absence of formal anointing or statecraft training, these women asserted authority in a system that largely restricted female agency. Clothild played a crucial role in the conversion of Merovingian France to Catholicism, while Radegund leveraged her piety and monastic connections to amass influence through relic collection. Brunhild and Fredegund, as regents for their descendants, engaged in fierce political rivalry, each attempting to undermine the other. Balthild's remarkable rise from enslavement to queen, regent, and saint further illustrates the fluidity of power in this period. While these queens do not represent the typical experience of Merovingian women, their presence in historical sources offers rare insight into female authority in the early Middle Ages. This study explores how, despite prevailing social and cultural constraints, women could shape political landscapes and establish lasting legacies.

**Title: Reexamining the Rhododendrons: The Gothic Genre and Dangers of the Patriarchy in *Rebecca***

Student: Trinity Look

Faculty Sponsor: Ben Goluboff

Abstract: This research examines how Daphne du Maurier's novel *Rebecca* critiques the patriarchal expectations imposed by English society. Through Gothic conventions, du Maurier highlights the pervasive influence of the English patriarchy, illustrating how all characters—regardless of gender—ultimately suffer under its rigid standards. This analysis explores key Gothic literary techniques, including the recollection of an imagined past, unreliable narration, engagement with moral ambiguity and the taboo, evocative imagery tied to a physical setting, and gestures toward the supernatural. By employing these techniques, *Rebecca* exposes the oppressive nature of patriarchal norms and their far-reaching consequences.

**Title: Feminizing Kashmir: The Strategic Use of Sexual Violence in Kashmir**

Student: Diya Mokha

Faculty Sponsor: Danielle Cohen

Abstract: This research examines the strategic use of sexual violence by the Indian Armed Forces in Kashmir, exploring how it serves as a deliberate tool to feminize the region and reinforce the hyper-masculine identity of the Indian state. Using a gendered theoretical framework, particularly Wilkinson's concept of feminized and masculinized states, this study argues that sexual violence in Kashmir is not an incidental byproduct of war but a calculated military strategy aimed at suppressing Kashmiri self-determination, fracturing social cohesion, and furthering Hindu nationalist agendas. The analysis draws on case studies such as the Kunan Poshpora mass rape, feminist international relations literature, and the role of the Armed Forces Special Powers Act in enabling a culture of impunity. Additionally, this research examines how

systemic mass rape serves as psychological warfare, demoralizing Kashmiri resistance by emasculating Kashmiri men and reinforcing India's hegemonic masculinity.

**Title: Teaching and the Importance of the Problematic Nature of Works by Edgar Allan Poe**

Student: Alice Virani

Faculty Sponsor: Ben Goluboff

Abstract: While Edgar Allan Poe remains a celebrated author, scholars debate whether his works should be taught in classrooms due to their problematic nature. Poe repeatedly fetishizes and sexualizes female death, crafting a macabre aesthetic around female suffering. Additionally, his use of racism and misogyny reinforces power imbalances between male and female characters. While many scholars view Poe as deeply problematic, others argue that his works were politicized and that he, in fact, empowered women by portraying their suffering as a form of agency. The debate over whether his works belong in academic settings persists. I argue that Poe's works should be taught in schools because they encourage critical discourse on the social and cultural impact of literature.

**PANEL 7: Challenges to Democracy: Populism, Nepotism, and Institutional Fragility**

Room 048

Faculty Moderator: Ajar Chekirova

**Title: Democratization in Latin America: The Consequences of Revolutionary and Negotiated Paths of Transition**

Student: Emília Guilhermina de Paula Fonseca

Faculty Sponsor: Ajar Chekirova

Abstract: Since their transitions from authoritarian regimes in the twentieth century, countries in Latin America have reached different levels of democratization, ranging from established democracies to deeply unstable regimes that have not parted from authoritarianism. Some of these countries transitioned through negotiation, such as Brazil, while others did so through revolutions, such as Nicaragua, which raises the question of how different paths of regime change lead to different levels of democratization. Both Brazil and Nicaragua's transitions allow for the understanding of what factors can create and strengthen or not democracy when it comes to the maintenance of political institutions. In this study, the cross-country analysis compared historical data regarding their transitions to democracy to the V-Dem indexes of free and fair elections, civil liberties, and equality before the law and individual liberty. Such analysis was

done under transition theory and ultimately indicated that negotiation provides a system of power-balancing that a revolution does not, therefore promoting more democratization.

**Title: Sources of Support for Punitive Policies and Populist Rhetoric in El Salvador**

Student: Kyle Lassen

Faculty Sponsor: Ajar Chekirova

Abstract: This study investigates the paradox of strong popular support for undemocratic leaders, using Nayib Bukele in El Salvador as a case study. Survey data collected before his 2019 election and again before his 2024 reelection reveal that perceptions of physical insecurity, rather than actual victimization by violent crime, drive a desire for law and order. This desire, in turn, fosters greater tolerance for authoritarianism, ultimately fueling support for Bukele's punitive policies and eroding democratic institutions.

**Title: Trianon Trauma, the Gateway to Populism in Hungary**

Student: Aidan Roberg

Faculty Sponsor: Ajar Chekirova

Abstract: The legacy of the Treaty of Trianon continues to shape Hungarian nationalism and populism, playing a central role in Viktor Orbán's political rhetoric. This research examines how the collective trauma of Trianon is reactivated in contemporary political discourse to foster nationalist identity and support illiberal populism. Through analysis of public opinion surveys and over 50 hours of Orbán's speeches, the study shows how Trianon, framed as a historical injustice, is used to galvanize support and consolidate power. Orbán's rhetoric turns Trianon into a unifying narrative of loss and resilience, mobilizing nationalism against perceived external threats, particularly from Western elites. The research illustrates how historical grievances are weaponized to undermine democratic norms, advance populist agendas, and reinforce authoritarianism.

**Title: Nepotism and the Erosion of Democratic Value in the Context of Cambodia**

Student: Muykong Taing

Faculty Sponsor: Ajar Chekirova

Abstract: Democratic backsliding is a global concern, eroding public trust in democratic institutions, governance quality, and accountability. In Cambodia, nepotism within the government has significantly weakened an already fragile democracy. This study examines the impact of nepotism through an analysis of elite family networks, intermarriages in politics and

business, public opinion surveys on democracy, political propaganda, and traditional proverbs. The findings reveal that the appointment of elite children to top government positions, normalized through traditional and religious beliefs, has contributed to the erosion of democratic values. Over time, this has led to a decline in public support for democracy, with the ruling CPP currently holding over 95% of parliamentary seats.

**Title: Fragile Foundations: Understanding Nepal's Coalition Instability through the Lens of Party System Institutionalization**

Student: Suvexa Pradhan Tuladhar

Faculty Sponsor: Ajar Chekirova

Abstract: Since Nepal's transition to a Federal Democratic Republic in 2008, its political landscape has been marked by instability, with frequent and unpredictable coalition governments. This study argues that Nepal's coalition instability results from a weakly institutionalized party system, shaped by its turbulent democratization. Using Mainwaring and Scully's Party Institutionalization Theory, it examines four dimensions: electoral volatility, weak social roots, lack of legitimacy, and poor organization. Through a mixed-methods approach, including electoral data and public opinion surveys, the study shows how weak party system institutionalization undermines democratic stability and fosters fragile coalitions.

**INTERMISSION MUSICAL PERFORMANCE (10:20 AM - 10:35 AM)**

Lillard First Floor Lobby

Performers: Riley Leja and Kiera McKee

**PLANT SALE (11:00 AM– 2:00 PM)**

Lillard First Floor Lobby

**Title: Greenhouse Plant Sale and Plant Information Table**

Students: Charlotte Cleveland, Yuliia Kulchytska, Michael Nsibande, and Calliope Saban

Faculty Sponsor: Lynn Westley

**BLOCK 2 (10:40 AM – 12:00 PM)**

## **PANEL 8: Morality, Society, and Justice: The Internal and External Factors that Shape our Moral Choices**

Room 244

Faculty Moderator: Nora McLean

Student Moderator: Margaret Fields

### **Title: The Effect of Economic Conditions on Crime Rates: Evidence from Brazil**

Student: Ian Villardi

Faculty Sponsor: Tilahun Emiru

**Abstract:** The paper aims to assess the effect of economic conditions on crime rates in Brazil between 2015 and 2021. The study focuses on the impact of the COVID-19-induced economic crisis on different crime types in the country. Criminality and economic volatility have been national issues in Brazil in the past few decades and analyzing them is crucial for efficient policy making and government spending decisions. Current literature on the effect of economics on crime is limited to high-income, developing nations or focuses on the 2008-09 crisis, hence the study's value-added. The paper also incorporates an analysis of the victims' gender. To conduct the analysis, the research used a panel data set covering multiple economic and crime variables from 2015 to 2021. A regression model estimated by Ordinary Least Squares (OLS) was used. The paper concluded that wealth inequality and HDI are significant in determining both violent and property crimes. It also concluded that GDP and unemployment are significant in determining economically related crimes, but not violent crimes. Finally, poverty and unemployment only significantly affect violent crimes against women, which implies a targeted gender in opportunistic crimes.

### **Title: Invisible Ink: Towards an Understanding of Epistemic Injustice in the Realm of Male Rape**

Student: I. Moonlight

Faculty Sponsor: Roshni Patel

**Abstract:** This paper examines how a socially biased conception of rape within dominant power structures perpetuates and reinforces hegemonic ideals of masculinity and power. Specifically, it explores how this framework leads to epistemic injustices experienced by male rape victims, hindering their validation, communication of experiences, and access to collective support resources. Drawing on Fricker's notions of testimonial and hermeneutical injustice, alongside Dotson's concept of contributory injustice, this study reveals how dominant societal narratives distort and dismiss male rape experiences. Legal frameworks historically limited rape to acts against female anatomy, overlooking male victimization and positioning men predominantly as



perpetrators. While anti-rape feminist movements broadened legal definitions, they have not fully addressed societal preconceptions, perpetuating gendered misunderstandings that undermine male victims' testimonies and agency. This analysis argues that male victims face significant testimonial injustices, struggling to articulate their experiences amid societal norms that conflict with personal realities. Fricker's framework primarily addresses injustices faced by marginalized groups, leaving male victims unsupported within dominant identity narratives. Dotson's contributory injustice framework expands this understanding by highlighting how the refusal to accept marginalized perspectives perpetuates epistemic gaps, limiting recognition of male victimization. The deliberate neglect of male victims' experiences serves to maintain existing power structures, reinforcing dominant myths and impeding progress toward inclusive understandings of rape. This study advocates for a broader adoption of hermeneutical resources developed by marginalized communities to challenge and correct prevailing misconceptions, fostering a more equitable discourse on sexual violence.

**Title: Luther, Modernity, and Moral Failure**

Student: Davis Rowe

Faculty Sponsor: Janet McCracken

Abstract: In the *Introduction to After Virtue*, Alasdair MacIntyre claims that we have “lost our comprehension, both theoretical and practical, of morality.” He argues that modern society lacks the ability to make moral progress, views human nature as incorrigible, and no longer ties ethics to human flourishing. MacIntyre attributes this loss of moral coherence to the Enlightenment. However, the problems he critiques in modern moral thinking can also be found in the earlier work of Martin Luther. Luther maintained that humans could make little moral progress, that human nature was depraved, and that goodness was not linked to human flourishing. While he was not the first to develop such ideas, Luther has been and continues to be influential in shaping moral thought. I focus on how Luther conceives of moral failure. First, I will reconstruct Luther’s understanding of moral failure. Then, I will examine why Lutheranism was appealing to its adherents. Finally, I will consider how Luther’s ideas provide insight into the modern moral crisis MacIntyre describes.

**Title: Psychosocial Stress, Perceived Control, and Everyday Moral Decision-Making**

Student: Jia Zheng

Faculty Sponsor: Nora McLean

Abstract: Past research suggests that individual differences in stress reactivity may moderate how people make moral decisions under psychosocial stress (Singer et al., 2017; Starcke et al., 2010; Starcke et al., 2012). This study explores how psychosocial stress affects everyday moral decision-making and how the perception of control during social evaluative threat moderates the

effects of stress on subjective stress reactivity and moral reasoning. Participants are semi-randomly assigned to a control group or one of two variations of the Trier Social Stress Test (TSST), a standardized psychological stress task used to assess reactivity to mild psychosocial evaluative threat (Kirschbaum et al., 1993). In the “lack of perceived control” condition, participants are not given a five-minute preparation period for a job interview, while those in the “perceived control” condition are given time to prepare. Participants then complete the Everyday Moral Conflict Situations Task (EMCS Task; Singer et al., 2019), which assesses decision-making in moral conflict scenarios. We expect stress to influence moral decision-making, leading to an increase in utilitarian responses under stress. Additionally, we anticipate that individuals with a greater perceived sense of control will show more consistent moral reasoning. Finally, we predict that those with a higher perceived sense of control will demonstrate lower subjective stress reactivity, suggesting that this perception may serve as a protective factor in high-stress situations. Findings that support these predictions could provide valuable insights into how psychosocial stress influences moral decision-making, as existing research on stress and moral reasoning remains mixed. Additionally, understanding the role of perceived control in evaluative stress scenarios may help identify coping strategies for managing unavoidable stress.

## **PANEL 9: Solving Problems with Data: Algorithms and Models**

Room 130

Faculty Moderator: Sara Jamshidi

Student Moderator:

### **Title: Strategic Trade Partnership Optimization: A Quantitative Analysis of Bangladesh’s Economic Growth Potential**

Student: Taqiul Ghani

Faculty Sponsor: Carolyn Tuttle

Abstract: This research constructs an econometric model to forecast Bangladesh’s GDP by identifying the most significant predictors of GDP. Using previous models for the United States and China, my forecasting model employs multivariate regression analysis of 80+ variables and an ARIMA/Monte Carlo stimulation. The forecasting model can be used to predict Bangladesh’s growth trajectories under various scenarios through 2035.

### **Title: MLB Teams Payroll Spending Effect on Fan Attendance**

Student: Mike Michaud

Faculty Sponsor: Nancy Tao

**Abstract:** Major League Baseball lacks a hard salary cap or floor, leading to significant disparities in team payrolls. This study examines whether payroll spending or winning percentage has a greater impact on fan attendance. Specifically, it explores how payroll expenditure, win percentage, and other factors influence attendance trends. By analyzing these variables, the research aims to provide insights into the economic and performance-based drivers of fan engagement in professional baseball.

### **Title: Letters, Colors, and Words: Constructing the Ideal Building Blocks Set**

**Student:** Ricardo Esteban Salazar Ordoñez

**Faculty Sponsor:** Sara Jamshidi

**Abstract:** What is the optimal way to assign letters and colors to the faces of a set of cubes to maximize the number of specific words that can be spelled? We propose an optimization problem involving the design of a building block set: a collection of  $n$  cubes, each with six faces, where each face is assigned one letter and one color from a palette of  $m$  colors. The goal is to maximize the number of mono words (words where all letters share the same color) and rainbow words (words where all letters have unique colors) that can be formed using a dataset of six-letter English words commonly known by a 14-year-old in the United States. Focusing on  $n = 6$  and  $m = 6$ , with the constraint that each color appears exactly once per cube, we demonstrate that this problem is computationally intractable, making brute-force approaches impractical. To address this challenge, we applied various optimization techniques, including random search, simulated annealing, greedy and best-first tree searches, and a genetic algorithm. Although we also explored reinforcement learning, the model failed to converge to valid solutions. Among the tested methods, the genetic algorithm proved the most effective, yielding a configuration that enabled the spelling of 2,386 mono and rainbow words.

### **PANEL 10: The Artificial, Emotional, Social, and Cognitive Development of Tutors and Clients in the Writing Center**

Room 132

**Faculty Moderator:** Daniel Henke

This panel addresses obstacles posed by higher education's writing standards, which limit clients' and tutors' learning development and self-expression in tutoring sessions. Navigating the language superiority and traditions within standardized education requires rethinking how to address various artificial, emotional, social, and cognitive spaces while tutoring writing strategies.

### **Title: Addressing Neurodiversity and Disability Awareness in Writing Centers**

**Student:** Nicolle Bek

**Title: Navigating Rhetorical Diversity: A Cross-Cultural Approach to Tutoring**

Student: Sofia Santana

**Title: AI Integration in the Writing Center: Balancing Progress and Integrity**

Student: Shellane Shettleworth

**Title: Redefining Success in Writing Centers: Navigating Vernacular Language and Academic Requirements**

Student: Samantha Pindiak

**PANEL 11: Music and Film**

Room 044

Faculty Moderator: Don Meyer

**Title: Film Music Archetypes in Disney**

Student: Gavela M. Maculuvé

Faculty Sponsor: Don Meyer

Abstract: Music has long played a pivotal role in the film industry, shaping audience connections to characters, emotions, and narrative. This research explores the evolution of film scoring conventions for the archetype of “The Lovers,” focusing on how melody, instrumentation, and rhythm have been used across cinematic eras to define romantic relationships. By analyzing key scenes from *Lady and the Tramp* (1955) to *Princess and the Frog* (2009), it examines how film scores establish individual identities for the Lovers, evolve to reflect their deepening connections, and incorporate musical techniques—such as leitmotifs—to symbolize their bond. By tracing these evolving techniques from the Silver Age (1950) to the Revival Era (2009-present), this study highlights how animated film scores have adapted to cultural and technological shifts while continuing to shape how audiences fall in love with love on the screen.

**Title: The Music of the Pixar Movie *Cars***

Student: Madeline Mann

Faculty Sponsor: Don Meyer

Abstract: The score of *Cars* (2006) has always been a favorite of mine. Randy Newman does a great job of not only matching the feelings and movements in a scene with his own scoring, but

also choosing songs that match perfectly with a character or a scene. There is not a lot of musical repetition in this film. Of course, the act of racing itself has a theme, but it is not distinct, just vaguely heroic and tense. Director John Lasseter did a great job at deciding when to use music and when not to. The music that was chosen does a great job at hinting towards things that are going to happen, whether it be McQueen getting caught by the Sheriff in his chase through Radiator Springs being foreshadowed by “McQueen’s Lost”, or the build up of the feelings between McQueen and Sally aided by “Sh-Boom” by The Chords. While it might be crazy to say that a children’s movie about sentient cars has basically a perfect score, the music in *Cars* shows that a score doesn’t just have to be made from either adapted music or original music; it can be a mix and work perfectly.

**Title: The Film Score for the Pixar Movie *Soul***

Student: Anika Kinnear

Faculty Sponsor: Don Meyer

Abstract: Pixar’s 2020 film *Soul* combines music and storytelling to create themes that look into power of creativity, the journey of self-discovery, and the complexity of purpose. With jazz compositions by Jon Batiste, and electronic music by Trent Reznor and Atticus Ross, the soundtrack backing this film creates two drastically different styles of music to represent two different aspects of the film. The jazz, deeply rooted in Black American culture, reflects main character Joe Gardner’s musical passion, identity, and connection. The ethereal electronic score, in contrast, represents the existential realms of both The Great Before and The Great Beyond. These aspects allow the film to explore life’s true meaning. Through an analysis of the crucial key musical sequences, I investigated how the film bounces between diegetic jazz music and non-diegetic electronic soundscapes, mirroring Joe’s journey between his physical and metaphysical worlds. By redefining the role of music in animated cinema, the score backing Pixar’s *Soul* encourages viewers to live in the moment and embrace the beauty of everyday experiences.

**Title: Alexandre Desplat’s Score for *Little Women***

Student: Sammie Ross

Faculty Sponsor: Don Meyer

Abstract: What makes an effective film score? How is this score used to convey deeper meanings to audiences? What checks both of these boxes is a film score that provides nuance to the plot and communicates themes beyond the ability of dialogue through timing, leitmotifs, and attention to the context surrounding the film. Alexandre Desplat is a modern film composer who displays a keen understanding of these characteristics of a great film score. Desplat’s work in *Little Women* (2019) is particularly impressive, composing the score on the heels of the #MeToo movement and in turn using feminism to drive the tone of the work. The story of *Little Women*,

with the help of director Greta Gerwig, then became a story of the female experience as modern audiences view it, not just as women in the mid to late 19th century. Desplat's awareness and attention to detail creates a higher degree of meaning in the classic story of the March sisters.

## **PANEL 12: Spanish Across the Professions: Business, Public Health, and Environmental Challenges in Latin America**

Room 144

Faculty Moderator: Marilen Loyola

*Note: This Symposium panel will be presented in Spanish and English.*

The presentations in this panel stem from the *Spanish for the Professions* curricular initiatives in the Modern Languages and Literatures Department, which include a series of senior research projects and courses such as SPAN/LNAM 320: *Spanish for Business, Law, and International Relations*, and SPAN 322: *Medical Spanish in a Global Context*. These interdisciplinary research projects connect fields and industries across Latin America while emphasizing key Spanish-language concepts relevant to their areas of study. Presentations will highlight students' authentic, contextualized language use, professional development, and intercultural competence.

## **Title: Information vs. Misinformation in Mexico: How Public and Private Institutions Impact the Diabetes Epidemic**

Student: Lily Ávila

Faculty Sponsor: Marilén Loyola

**Abstract:** Mexico is one of the top diabetes-ridden countries in the world with the 6th highest number of diabetes cases in adults. Religious and governmental institutions and private companies all play a role in the education on diabetes in Mexico. In this presentation, I analyze how public and private institutions and organizations such as the Catholic Church, the Mexican government's Ministry of Health, and Coca-Cola Co. impact awareness and treatments for the diabetes epidemic in Mexico. All three are known to have a strong influence on Mexican culture and the lifestyle of Mexicans of all ages. This study examines cultural and social research studies, the documentary "El Susto: Mexico's Love Affair with Sugary Drinks" (2019, Karen Akins, dir.), a variety of government-sponsored public health campaigns, as well as television commercials, to examine the influence each institution or organization has on the at-risk Mexican population. Using a framework of preventive medicine and reactive medicine, I analyze each institution's diabetes initiatives in terms of which type of approach to treatment they value. Findings suggest that the Catholic Church and the Ministry of Health focus on maintaining a healthy lifestyle to prevent diabetes, whereas Coca-Cola focuses on daily exercise to distract from the problem of a poor dietary habits.

**Title: Fruits of Conflict: The Sociopolitical and Environmental Cost of Haas Avocados and Cavendish Banana Cultivation in Latin America**

Student: Sayra Gonzalez

Faculty Sponsor: Marilén Loyola

Abstract: Haas Avocados from Mexico and Cavendish Bananas from Ecuador are fruits that can be found in kitchens all over the world, but their cultivation, harvest, and trade are not considered by many consumers. Both the avocado and banana industries are worth more than 20 billion dollars (2023), and are continuously growing, yet there is constant involvement with organized crime, political corruption, and environmental challenges within their harvesting countries that are rarely recognized publicly. In Mexico, the drug cartels are constantly threatening, kidnapping, extorting, and stealing from farmers, while in Ecuador, banana plantations have been linked to political corruption, labor exploitation, and deforestation. This presentation examines the global trade of these fruits and explores the socioeconomic, environmental, and political impact surrounding each fruit's cultivation. Case studies in Mexico reveal long-standing ties to extortion and violence in the production of avocados, even leading to the deaths of Mexican environmental activists. Meanwhile, political ties surrounding banana production in Ecuador have produced the loss of millions of dollars for the country, in one case, leaving tons of bananas rotting in shipping containers at sea. While there is constant discussion of how to improve the working environments for harvesters, especially for women, there is also constant exploitation from multinational corporations that dominate banana production. This presentation advocates for changes that ensure fair labor standards and environmental preservation, while warning against corruption and underscoring the symbiotic relationship between organized crime and each country's economy.

**Title: Beyond Borders: How the War of the Pacific's Legacy Shapes Modern Copper Mining and Environmental Challenges in Peru and Chile**

Student: Isis Yari Correa Tume

Faculty Sponsor: Marilén Loyola

Abstract: This research project examines how the territorial consequences of the War of the Pacific (1879-1884) continue to influence copper mining policies and environmental management in Peru and Chile, particularly in the context of growing global demand for green technologies. While the conflict's immediate impact on mineral resource distribution is well-documented, this study reveals how its legacy creates persistent asymmetries in economic development strategies and environmental management between the two nations. Through the analysis of key mining regions like Quebrada Blanca, which produces over 287,000 tons of copper annually under the Chilean administration, this research project demonstrates how post-war territorial changes fundamentally altered both countries' development trajectories. In this

presentation, I examine how Peru's political instability, exemplified by six presidential changes between 2016-2023, contrasts with Chile's institutional strength in mining management, directly affecting each country's ability to address environmental and social challenges. Drawing from recent environmental impact studies and community health reports, particularly in regions like Cerro de Pasco and Tacna, this project highlights how mining-related environmental issues transcend national borders, affecting communities in both countries.

### **PANEL 13: Identity and Culture: Explorations of Belonging, Representation, and Expression**

Room 128

Faculty Moderator: Zachary Cook

Student Moderator: Keisha William

#### **Title: Analyzing the Youth Gender Gap in the 2024 Electorate**

Student: Noah McAdam

Faculty Sponsor: Zachary Cook

Abstract: In Autumn 2024 I completed an analysis of the youth gender gap in the 2024 presidential election. I analyzed social identity theory, as well as symbolic and operational ideology to help explain the growing divergence between 18–29-year-old males and females. When researching the trends among young men, I spent a lot of time explaining the “manosphere” and its significance. The manosphere consisted of media personalities like Nelk Boys, Joe Rogan, Dana White, etc. My conclusion was that young women are becoming both operationally and symbolically more liberal, and young men are becoming operationally more liberal but symbolically more conservative.

#### **Title: Boxing People In: Emotional and Strategic Responses to Limiting US Racial Categorization**

Student: Sam Sosani

Faculty Sponsor: Holly Swyers

Abstract: Living in the United States with a racial or ethnic identity not captured by bureaucratic forms often involves complex emotions and strategic identity navigation. While literature highlights race as a socially constructed hierarchy, less attention is given to the emotional impact of feeling “invisible” and the strategies used to navigate unclear categorization. In interviews with LFC students identifying as MENA, Hispanic/Latinx, and/or multiracial, participants



described feeling obligated to answer census race questions, despite discomfort and frustration. Many reported emphasizing either their minority status or whiteness, depending on which identity provided societal advantages. This highlights how they strategically adapt to bureaucratic categorizations.

**Title: Cambodian Cultural Heritage Restitution: Current Duties and Legality Concerning Illicit Antiquities and the Pathways For Restitutions**

Student: Muykong Taing

Faculty Sponsor: Ajar Chekistrova

Abstract: This presentation explores two questions: How did Cambodia's period of turmoil, the market demand for Khmer artifacts, and the lack of international regulations on cultural heritage contribute to the mass looting and smuggling of Khmer artifacts? And what pathways has Cambodia taken to reclaim its cultural heritage under current legal frameworks? After the Angkorian era, Cambodia faced significant decline, lacking the capacity and autonomy to protect its cultural heritage. After turmoil periods such as the French colonization, the Khmer Rouge regime, and subsequent periods of conflict and instability, much of the population now live in poverty. For many villagers, looting and selling ancient artifacts became a primary source of income due to the high market demand for Khmer antiquities. Meanwhile, international laws protecting cultural heritage were still in their early stages, failing to prevent the Cambodian artifacts from being smuggled out of the country. Today, Cambodia is actively working to recover stolen artifacts through diplomatic efforts with the United States, media advocacy, international cooperation, legal battles, and reparations. The 1970 UNESCO Convention and the 1995 UNIDROIT Convention provide a legal framework that strengthens Cambodia's negotiations with museums and private collectors for the restitution of its cultural heritage.

**Title: Queer Representation in Media**

Student: Zoey Whittington

Faculty Sponsor: Linda Horwitz

Abstract: Throughout the history of cinema, the representation of queer characters has fluctuated between accurate inclusion, flawed oversight, and harmful stereotypes. While progress has been gradual, recent decades have seen significant shifts in queer portrayal. However, despite these advancements, stereotypes and limited representation persist, leaving gaps in the narratives available to queer audiences. This documentary film explores my personal experience growing up queer and the profound impact of having little to no exposure to authentic queer representation in film and media. It examines how the absence of these narratives left me searching for identity and validation and how discovering queer representation helped me better understand myself and my place in the world. Through this deeply personal lens, the film weaves together intimate storytelling and broader cultural commentary, fostering dialogue about the power of representation to validate, empower, and inspire the queer community. The documentary primarily focuses on my journey of self-discovery, using my personal narrative to

explore the broader impact of queer representation in media. It incorporates insights from scholars and authors who study queer cinema, connecting my experiences to a larger cultural context. Through personal reflections, archival footage, and intimate storytelling, I trace how queer representation—or its absence—shaped my understanding of identity and belonging while growing up. These reflections are paired with critical analysis of how media influences societal perceptions of queer individuals and shapes the collective understanding of their stories.

#### **PANEL 14: The Antebellum Crucible: Local Perspectives on Slavery and Politics**

Room 048

Faculty Moderator: Rudi Batzell

This panel features research projects that explore local perspectives on the broad national crisis over slavery in the year 1850. Students use a local newspaper, as well as published and manuscript census data to locate their particular city or county within the broader controversy over the status of slavery in the territories conquered from Mexico as well as other major political issues of the antebellum era such as women's rights, industrialization, and increasing class conflict.

##### **Title: Building Baton Rouge: Ambition, Slavery, and Division in 1850**

Student: Emilce Baudracco

Faculty Sponsor: Rudi Batzell

Abstract: This paper examines everyday life in Baton Rouge during a period of national turmoil, focusing on ordinary citizens. Using evidence from the 1850 census, slave schedules, and the Baton Rouge Gazette, it explores the town's demographics, women's roles, economic growth, and local attitudes toward slavery. The study highlights Baton Rouge's ambitions for industrial self-sufficiency, its economic independence from the North, and tensions between Unionist sentiments and Southern nationalism. By analyzing household data and newspaper discourse, this research situates Baton Rouge within the broader sectional conflicts leading to the Civil War.

##### **Title: Beyond the Plantation: Southern Slaveholding and Society in Washington, Arkansas in 1850**

Student: Rebekkah McGrath

Faculty Sponsor: Rudi Batzell

Abstract: This paper examines the intersection of slavery, politics, and society in 1850 Washington, Arkansas, highlighting the complexity of slaveholding politics in the antebellum

South. Unlike regions focused on secession, Washington valued both slavery and political compromise through the Union. Using data from the 1850 census, slave schedules, local newspapers, and secondary sources, the paper explores local views on slavery, territorial expansion, and race relations, especially concerning free and enslaved Black people and Native Americans. It reveals a society deeply invested in a racialized hierarchy while supporting federal governance, challenging the assumption that all slaveholding societies were driven to secession.

**Title: Portsmouth, New Hampshire in 1850: A Tale of Fires, Deaths, Railroads, and Politics**

Student: Jacob Shternberg

Faculty Sponsor: Rudi Batzell

Abstract: This paper examines the lives of working-class citizens in Portsmouth, New Hampshire, and how local issues influenced their political outlook in 1850. Industrialization, particularly fires and deaths linked to it, was a major concern. The town, largely composed of working-class individuals centered around the port, tended to support the Democratic Party, which opposed industry. The paper uses the 1850 census to establish the town's demographics and analyzes local newspapers, especially the pro-Democrat Gazette, which criticized the Taylor/Fillmore administrations and advocated for workers' rights against industrial elites.

**Title: An Early Advocate for Free-Soil: Burlington, Vermont in 1850**

Student: Adriana Voloshchuk

Faculty Sponsor: Rudi Batzell

Abstract: This paper examines Burlington, Vermont in 1850 as an early example of growing free-soil sentiment, which would later shape the Republican Party. Using evidence from the US Federal Manuscript Census, the US Census Bureau, and the *Burlington Free Press*, it highlights local perspectives on economic interventionism, women's social roles, and the temperance movement. While free-soil proponents condemned slavery as immoral, they also supported industrial expansion and protectionism. This research challenges the idea that free-soil politics were solely driven by concerns over slavery, exploring the broader motivations behind the movement's rise and national adoption.

**STUDENT PUBLICATION INFORMATIONAL BOOTHS (12:00 PM - 1:00 PM)**

Mohr Student Center

**Title: Informational Booths for Student Journals, Newspapers, and Other Publications**

Lake Forest College has numerous student publications, from research journals to literary magazines and journalistic newspapers. During the lunch hour, there will be several informational booths to learn more about what these student publications entail. Stop by to talk with student editors, student contributors, and faculty advisors to learn more about these platforms that showcase students' remarkable work.

### (POSTER SESSION (12:00 PM – 1:00 PM))

#### Lillard

*Note: This presentation below will run during the 12-1pm poster session in Lillard Room 048, featuring music and dance.*

#### **Title: From Ekasi to Ibiza: Amapiano's Cultural Role in Decolonizing African Representation**

Students: Lwandle Dlamini, Hawi Annette Odhiambo, and Mohammed Chowdhury

Faculty Sponsor: Holly Swyers

**Abstract:** The Amapiano movement is a vibrant expression of Africanness that challenges Western-dominated media narratives and cultural representations that acts as an implicit form of cultural decolonization. Originating from South Africa, Amapiano is a dynamic musical genre that serves as a vehicle for Africans to articulate their identities within a postcolonial context. The study investigates various cultural elements associated with Amapiano, including music production and distribution, dance, fashion, and public engagement, emphasizing how personal and communal expressions of identity function as acts of decolonization. Adopting a decolonized approach, this research aims to be decolonial in both content and methodology, culminating in a written component, visual component, and interactive presentation. It seeks to explore the theoretical assertions of Amapiano in decolonial efforts while critiquing decolonial knowledge as not merely theoretical but also practical behavior.

#### **Title: Drawing From Nature: A Showcase from Professor Bielak's Fall 2024 course**

Students: Emma Ackland, René Aguilar Monge, Cass Barbera, Jessica Caal Chaman, Garrett Ford, Grace Griffin, Serena Kramp, Emma O'Hagan, Peter Niro, Riley Stapley, and Paul Wolters

Curated By: Susy Bielak and Camila Pizano

Close observation is the foundation of scientific inquiry. It is also key to making art. In the course Drawing from Nature, students use their surroundings — from microscopic organisms to

the natural environments on/around Lake Forest campus — as a source of discovery and inspiration for making drawings. Working with a variety of materials, students develop their abilities to observe and interpret nature.

This exhibition showcases work from the Fall 2024 Drawing from Nature class responding to four assignments: “Crumpled Leaf,” “Through the Microscope”: Collaging Silhouette and Pattern,” “Midterm: Parallel Botany,” and “Final Project: Life Cycles.”

**Title: Investigating the Tissue-specific Impact of EMC4 Knockdown on Fertility and Lifespan in *D. melanogaster***

Student: Salma Abdelkhalek

Faculty Sponsor: Rebecca Delventhal

**Abstract:** The endoplasmic reticulum (ER) membrane protein complex (EMC) plays a vital role in the proper folding, insertion, and trafficking of membrane proteins. We found that EMC4 knockdown in glial cells of *Drosophila melanogaster* leads to significantly reduced lifespan and developmental delays. In addition to the nervous system, another system that relies on signaling between different cell types is the regulation of fertility and reproduction. We hypothesize that the EMC may play a role in this inter-organ signaling through its involvement in the biogenesis of membrane proteins. To investigate this, we used the GAL4-UAS system to knockdown EMC4 in various tissues known to signal to the ovaries: hemocytes, the fat body, and insulin-producing neurons. Fertility assays were conducted in young (4-5 day old) and aged (21-23 day old) females, measuring eggs laid (fecundity) and eggs hatched (fertility). We discovered distinct tissue-specific effects of EMC4 knockdown on fertility and fecundity. Knockdown in the fat body showed the most robust impact on fertility and fecundity compared to other tissues; the effect of knockdown in some tissues was age-dependent, whereas others were observed in both young and old females. These findings suggest a potential tissue-specific requirement for EMC4 in regulating reproductive capacity. Given the well-known tradeoff between life history traits of reproduction and lifespan, we wondered whether EMC4 knockdown in these tissues would also influence adult lifespan. Contrary to expectations, lifespan data showed that knockdowns that decreased fertility did not correspond with increases in lifespan, indicating that the predicted tradeoff was not observed in all tissues. These results hint at a tissue-specific role of EMC4 in aging, independent of reproduction.

**Title: Optimization and Scope of Aqueous Hydroxylation of Aryl Halides Under Air**

Students: Mariam Beshara and Gwendolyn Jones

Faculty Sponsor: Erica Schultz

**Abstract:** Through the use of environmentally hazardous organic solvents, aryl halides are commonly synthesized to phenol derivatives. By exploring greener solvents, the environmental

toll of the synthesis of phenol derivatives can be reduced. Aqueous polyethylene glycol-2000 (PEG-2000) is a biodegradable co-solvent to help with solubility of organic substrates. We found 10-20% aqueous PEG-2000 allows the reaction to proceed with moderate to good conversion for electron poor and/or sterically encumbered aryl halides in the presence of a Pd catalyst, bippyphos, and NaOH. Reaction temperature optimization to 90 °C allows for the reaction to proceed under 5 hours. We explored the substrate scope with >40 iodo-, bromo-, and chloroarenes. The reaction is performed under an atmosphere of air, which leads to additional oxidation of benzyl alcohol substrates to benzaldehyde or acetophenone derivatives.

**Title: Understanding Respiratory Rhythms: Investigating the Relationship Between the preBötzinger Complex and Multiplets in Neonatal Mice**

Student: Marcelo Camba Almazan

Faculty Sponsor: Kaiwen Kam, Rosalind Franklin University of Medicine and Science

Abstract: Breathing is essential for life, mainly delivering oxygen and removing carbon dioxide. However, it is a controlled process that must adapt to our body's responses to the environment and coordinate with other behaviors such as speech. The preBötzinger complex (preBötC), a population of neurons in the ventrolateral medulla, is critical for generating respiratory rhythms when our body needs to breathe successfully. Electrophysiology revealed that the preBötC in neonatal mice would sometimes send multiple signals in a short period of time referred to as multiplets, but their significance remains unclear. To better understand this phenomenon, this research project aims to determine whether neonatal mice brainstem slices with multiplets differ anatomically from slices without multiplets in relation to their distance from the facial nucleus. We hypothesized that brainstem slices exhibiting multiplets would show different distances from the facial nucleus compared to slices without multiplets. Using thionin staining and microscopy to analyze the slices and comparing the stained slices with a brainstem atlas, we determined specific distances from the facial nucleus, which could be then used to see if there were any differences between them. Our results revealed no significant difference in the distance of slices with and without multiplets. These findings suggest that the occurrence of multiplets may not depend on the precise position of the preBötC in neonatal mice.

**Title: Effects of Teacher Coaching on Student Mathematics Achievement in a Low Income School**

Students: Jackson Rothman, Nicole Golden, and Shuen Yet "Mac" Chan

Faculty Sponsor: Elayne Vollman

Abstract: Educational inequality remains a critical challenge in the U.S., disproportionately affecting low-income, minority communities, especially in the wake of COVID-19. Place-based research strategies can address complex educational issues, improving student engagement and community outcomes. This study is part of a research-practice partnership with a middle school

serving primarily low-income, immigrant students from Mexico and Central America. To improve low graduation rates and achievement outcomes, we implement evidence-based interventions and teacher coaching, focusing on non-cognitive factors such as growth mindset and teacher beliefs. Participants include 11 math teachers, 44 other teachers, and 752 students in grades 6-8. Data collection occurs at the start, midpoint, and end of the 2024-2025 school year. Teacher measures include mindset, self-efficacy, ability differentiation, and demographics, while student measures assess mindset, math anxiety, belongingness, engagement, and math achievement (iReady). Interventions include a mindset program (adapted from Yeager et al., 2022) and weekly one-on-one coaching for math teachers. Analyses will examine: (1) cognitive and non-cognitive factors affecting student achievement; (2) the impact of teachers' mindsets on student outcomes; (3) changes in teachers' beliefs and pedagogy post-intervention; (4) differences between math teachers and the broader faculty; and (5) the effect of interventions on student math performance. Findings will contribute to research on school-based interventions, mindset strategies, and teacher coaching.

**Title: White Oak (*Quercus alba*), Mycorrhizal Diversity, and Functionality Across Urban and Natural Ecosystems in the Chicago Area**

Student: William Cleveland

Faculty Sponsor: Camila Pizano

**Abstract:** Many species of fungi live inside plant tissues, often symbiotically. These endophytes—like other fungi—are important for plant function and survival in various ways and are highly diverse in all types of plant tissue. However, research on fungi in general is sparse compared to other organisms. This gap (in both identification of species, genus, family and function) is even more pronounced in endophytic fungi, yet more so in endophytes living in plant roots including mycorrhizae, and very rare with regards to any given specific species in different environments. To contribute to filling this gap, we will run an experiment to compare the diversity and function of mycorrhizal fungi coming from urban vs. natural habitats with white oak (*Quercus alba*). To do this, we will inoculate white oak seedlings with either live (containing all living fungi) or sterilized (containing no living fungi) roots of this same species collected from urban or natural forests. We will then sequence the root DNA and identify relevant fungi genera, families, and phyla, and will use kinetic assays to determine the functions of these endophytes. This understanding could crucially add to the limited knowledge of endophytes and help efforts to conserve *Q. alba* (a keystone species), as saplings could be inoculated with the optimal species of endophytes.

**Title: A “Divine Society” and Who’s Behind It: A Literature Review and Proposal on Religion, Women, and Mental Health**

Student: Daniel Contreras

Faculty Sponsor: Benjamin Zeller

**Abstract:** This presentation discusses an assessment of current scholarship on the intersections of religion, women, and mental health. In a 2024 bringing in a Trump-era United States, how is “religion” understood by practitioners, i.e. organized religion and places of worship, individual spiritual journey, or a cultural understanding with distant personal involvement (Bonhag and Upenieks, 2021; Smith, 2024)? This study considers questions such as: how are women engaging with the institutions of religion or how do women-identifying individuals understand religion or spirituality? I conjecture that women are reported to be more religious compared to men, with increased engagement in various measures of religion such as prayer and personal identification with their religion (Murphy, 2016; Cokley et al., 2013). Whether religious, areligious, or somewhere else on the spectrum, women are impacted by the religious doctrine and morals that surrounds them, regardless of participation status. In what ways does this pervasive nature of religion create a bidirectional opportunity to engage with not only religion but also the divine? I hear of experiences where religion supports confidence and community but also accounts of punitive experiences with holy text or religious leaders. Focusing on this interaction, I aim to explore how women understand and interact with religion/spirituality and its empowering or harming impacts on their mental health. I propose a mixed methods qualitative approach to measure how women and their intersecting identities engage with various measures of religiosity/spirituality, and the impacts to their individual mental health.

**Title: Examining SEL Constructs in Media Across Cultural Contexts: Analysis of Sesame Street and Ahlan Simsim**

Students: Arianne Collins and Valeria Almendares

Faculty Sponsor: Elayne Vollman

**Abstract:** Social-emotional development is a crucial aspect of early childhood growth, shaping both academic and social outcomes later in life. Media serves as a powerful tool for teaching children skills that support this development. However, there is limited research on the pedagogical approaches and specific social-emotional learning (SEL) constructs used in children's media. This study explores the social-emotional skills and teaching strategies used in two Sesame Workshop productions: *Sesame Street*, a U.S.-based program designed to support children's development in the United States, and *Ahlan Simsim*, a co-production tailored to early learners in the Middle East. Using the SELECT coding scheme, we will analyze two seasons from each show, chosen based on pedagogical focus as identified by Sesame Workshop. *Ahlan Simsim* Season 3 and *Sesame Street* Season 45 were selected for their emphasis on self-regulation, while *Ahlan Simsim* Season 5 and *Sesame Street* Season 47 were chosen for their focus on kindness. A total of 40 episodes will be coded. This analysis will assess: (1) which SEL skills are most emphasized; (2) the pedagogical techniques used most frequently; and (3) how SEL pedagogy differs for culturally distinct audiences. Findings will offer insights into how cultural context shapes the SEL constructs highlighted in children's media and how these concepts are presented to viewers.



**Title: Glial-specific Function of the Endoplasmic Reticulum Membrane Protein Complex (EMC): Distinct Roles of Individual Subunits**

Student: Martin Ettlin Cuitiño

Faculty Sponsor: Rebecca Delventhal

Abstract: The endoplasmic reticulum (ER) is an organelle critical for modifying, packaging, and inserting membrane proteins into the cell. The ER membrane protein complex (EMC), composed of 8–10 subunits, facilitates these processes. Malfunctions in several EMC subunits have been implicated in a range of human pathologies, including neurodegenerative diseases, visual impairments, metabolic disorders, and certain cancers. Previous findings from our lab demonstrated that fruit flies (*Drosophila melanogaster*) with a genetic reduction of EMC subunit 4 specifically in glial cells exhibited delayed development, severe locomotor impairments, and a dramatically shortened lifespan of 5–6 days compared to the typical 2–3 months. To investigate whether these effects were unique to EMC4 or if other EMC subunits are similarly required for glial cell function, we performed genetic reductions of additional EMC subunits. Surprisingly, we found that knockdowns of all tested subunits, except EMC3, generally resulted in normal development, lifespan, and locomotion, though knockdown of some subunits did show some sex-specific effects. These results suggest varying functional roles among EMC subunits. To further validate and explore these findings, future research will focus on measuring subunit levels in glial cells to better understand if the degree of reduction differs for each EMC subunit. We will also measure proteins whose production is impacted by each EMC subunit's knockdown in glial cells to identify the subunit-specific client proteins for the EMC. Our findings emphasize the importance of understanding the distinct roles of each subunit, as some may be more required than others for specific EMC functions, such as transmembrane protein insertion, that are critical for glial function.

**Title: Examining the Geographic Differences of Endophytic Communities of *Monstera deliciosa***

Student: Daniel Dziadula

Faculty Sponsor: Camila Pizano

Abstract: Plants contain rich microbial communities both externally and internally. Endophytes are part of this microbial community that colonizes the internal tissue without causing harm and can benefit the host. To further the understanding of endophyte ecology, this study aims to compare the regional differences in fungal colonies isolated from *Monstera deliciosa*, a tropical plant species native to Central America. The study will compare leaf microbiomes of *Monstera deliciosa* plants cultivated in Wisconsin, Illinois, and Florida, representing a gradient of environmental conditions from temperate to subtropical. The research will investigate the impact of geographic distance on leaf-associated microbes, the influence of local environmental factors

on endophytic communities, and potentially gaining insights into the complex ecology of endophytes. Leaf samples will be collected from *Monstera deliciosa* plants and will be surface sterilized to remove epiphytic fungi. DNA will be extracted using the DNeasy Plant Mini Kit, followed by sequencing to identify and characterize the endophytic communities. I hypothesize that there will be the lowest overlap in endophytic isolates between specimen cultivated in Wisconsin and Florida, and the most overlap between specimen cultivated in Wisconsin and Illinois. I believe that the vast difference in climate between the temperate Wisconsin and Illinois and the subtropical Florida will create a bigger difference in endophytic communities as the plant may require different functions from its endophytes to survive in a non-native climate. This study will contribute to our understanding of plant-microbe interactions in non-native environments and may provide insights into the adaptability of tropical plants to temperate conditions.

**Title: Event-related Potential Signatures Associated with Prosocial Deception**

Student: Cecilia Flores

Faculty Sponsor: Naomi Wentworth

Abstract: People lie every day, often for the benefit of others. These types of lies are referred to as prosocial lies. Emotional contexts frequently influence such lies, such as when a friend asks us to conceal their feelings of depression following a negative event. This study aims to identify the neural signatures associated with prosocial lying compared to truthful responses using electroencephalography (EEG). During the experiment, participants will have their EEG activity recorded while engaging in a task organized into four blocks. In each block, they will view images of four different human faces, each displaying either an emotional (e.g., happy, sad) or neutral expression. Participants are assigned one face, designated as their "friend," and instructed that this individual has requested they hide their emotions from others. Consequently, when their friend appears in the task, participants must lie—indicating "emotional" when their friend's expression is neutral and "neutral" when it is emotional. For all other trials, they are required to respond truthfully. We will analyze three event-related potential (ERP) components—P300, medial-frontal negativity (MFN), and late positive potential (LPP)—which represent short segments of EEG activity evoked by cognitive events. Previous studies on lie detection have identified significant differences in the amplitudes of these components when participants lie versus tell the truth. We hypothesize that notable differences in the amplitudes of these three components will also emerge when participants provide deceptive versus truthful responses regarding their friend's emotional state.

**Title: Concern about Discrimination and Responding to Bias in a Social Media Context**

Students: Fatima Galvan-Alva and Loreto Galvan-Alva

Faculty Sponsor: Emily Dix

Many Americans remain unaware of ongoing racial disparities in the USA, leading to the frequent invalidation of Black individuals' experiences with bias. This study tests a behavioral paradigm to examine how individuals engage with race-related content in online forums like Reddit. Specifically, we investigate whether concern about discrimination predicts people's interactions with a Reddit-style post about racial issues. We recruited approximately 200 White participants via Prolific. At Time 1, participants complete the Concern About Discrimination Scale. At Time 2 (1-5 days later), they encounter a post suggesting Black people are overly sensitive to bias. Participants rate their agreement and can upvote, downvote, or comment. Comments are coded based on whether they validate or dismiss Black individuals' concerns. Our analysis examines comment frequency and content, using linear and logistic regression to assess whether concern about discrimination predicts engagement. We hypothesize that individuals with higher concern about discrimination will be more likely to downvote the post and defend Black individuals' experiences. This paradigm offers a novel way to assess online engagement with race-related content and can be used in future research to evaluate interventions aimed at increasing receptivity to Black individuals' experiences with racism.

**Title: Tapping Into the Sensory Modalities That Contribute to the Ballistic Jumping Behavior of Silver Hatchetfish**

Student: Hridey Kapoor and Jeremy Levin

Faculty Sponsor: Margot Schwalbe

Abstract: Various species of fish are capable of launching themselves out of the water, but fewer are known to do so intentionally and repeatedly. Multiple sensory systems, including vision and the mechanosensory lateral line, are believed to mediate these jumping behaviors, allowing fish to evade predators or catch prey. This study examined the lateral line system of silver hatchetfish (*Gasteropellicus sp.*) and their unique jumping mechanism. Fluorescent microscopy revealed that these fish possess an extensive lateral line system, particularly concentrated on the top of their skull and along their deep, narrow ventral keel. To examine their jumping response, a custom-built device delivered vibrational stimuli while high-speed cameras recorded their reactions under different sensory conditions. Since standard lateral line ablation methods were ineffective, a species-specific technique was developed to successfully disable the lateral line, as confirmed through fluorescence microscopy. The results showed that silver hatchetfish consistently responded to vibrational stimuli by propelling themselves out of the water with a powerful downstroke of their elongated pectoral fins. Variations in their jumping movements were observed depending on sensory conditions.

**Title: Instructor Presence in an Instructional Video: Student Recall, Perception, and Anxiety**

Students: Isabelle Nordstrom, Pablo Gilbert, Keisha William, Stephanie Arreola, and Jackson Rothman

Faculty Sponsor: Nora McLean

**Abstract:** Learning research and educational psychology have examined the effects of instructor presence in video lectures on learning outcomes (e.g., recall, transfer), attention distribution, and perception. While instructor presence may not directly facilitate or hinder learning, it has been suggested that it can improve student perceptions of their educational experience. Its benefits may depend on the difficulty of the content, or learning and attention may be enhanced only when specific features, such as dynamic drawings or eye contact, are included. This study explored how instructor presence and lecture topics in asynchronous learning videos affect recall, perception, and acute stress. We predicted that instructor presence in asynchronous lecture videos would lead to more positive perceptions of the learning experience and lower acute stress after learning. Based on Cognitive Load Theory and the Cognitive-Affective-Social Theory of Learning in Digital Environments (CASTLE Theory), we predicted that instructor presence could either improve or hinder information recall. We randomly assigned lecture videos to student participants, varying instructor presence (present vs. absent) and lecture content (statistics vs. stress psychology). We measured state anxiety levels before and after participants watched a lecture video, assessed learning retention through pre- and post-recall quizzes, and evaluated subjective perceptions of learning. We found no main effects of instructor presence on state anxiety or recall. However, students had higher post-recall scores for the psychology of stress content, and at post-test, those who watched the statistics video had higher acute stress scores compared to those who watched the psychology of stress video. These findings have implications for designing virtual learning materials to better support students both academically and emotionally.

**Title: Glial Expression of Endoplasmic Reticulum Membrane Protein Complex Subunit 4 (EMC4) Plays a Role in Survival, Development, and Larval Behavior**

Student: Inés Riojas

Faculty Sponsor: Rebecca Delventhal

**Abstract:** The endoplasmic reticulum (ER) is involved in the modification, packaging, and insertion of membrane proteins in the cell. The EMC is a membrane protein complex in the endoplasmic reticulum composed of 8-10 subunits that work together to facilitate protein biogenesis. Our lab observed that *Drosophila melanogaster* exhibited shorter lifespans of 5-6 days instead of 2-3 months when an RNAi knockdown of EMC subunit 4 was induced in glia. These flies also exhibited severe locomotion impairments (weakened climbing), an increase in protein aggregation, a decrease in developmental viability, and delayed development. Through a detailed developmental analysis, we observed approximately a one-day delay per stage: wandering 3rd instar larva, pupation, and eclosion, suggestive of a delay that begins in larval development. To test other larval phenotypes possibly affected by the knockdown, we examined olfactory-driven behavior as chemosensory perception is crucial to their survival. Preliminary analyses indicate there are no significant differences in olfactory sensitivity between larvae with and without the glial knockdown of EMC4, though studies are ongoing. These results suggest that the observed developmental delay may be due to other alterations in glial function besides olfaction. To determine whether the developmental role of EMC4 impacts the adult survival

phenotype, we conducted a temporally restricted glial EMC4 knockdown using a temperature-sensitive Gal80 inhibitor of the UAS-Gal4 system. We observed that the adult-specific knockdown did not exhibit the same severity of survival or locomotion declines, further supporting the importance of EMC4 in development. Our overall findings suggest EMC4 has a key role in protein biogenesis, which leads to severe phenotypes in locomotion, survival, and development when knocked down in glia.

### **Title: Do People Evaluate Deontic and Consequentialist Arguments Differently?**

Student: Davis Rowe and Rebekkah McGrath

Faculty Sponsor: Paul Henne

Abstract: When making moral arguments, people may appeal either to the consequences of an action or to general rules and principles that one should follow. The former reflects consequentialist reasoning, while the latter represents deontic reasoning. Although moral judgments and behaviors have been widely studied, no research has examined whether people evaluate the quality of consequentialist and deontic arguments differently. To address this, we will present participants with a moral dilemma and ask them to assess the quality of arguments for different courses of action. The findings may have significant implications for both philosophy and cognitive science by revealing whether people are more responsive to one type of moral reasoning or find certain kinds of arguments more convincing.

### **Title: Female Mating Preference For Antennation Behavior in Bean Beetles**

Student: Lia Romanotto and Sylvia Paddon-Jones

Faculty Sponsor: Flavia Barbosa

Abstract: Antennation is an observable courtship behavior in bean beetles during which the male rapidly taps the female's abdomen with his antennae prior to copulation. Previous research shows that changes in the frequency of antennation may influence female bean beetles' willingness to copulate. In this experiment, we evaluate female mating preferences for the intensity of the antennation behavior of a courting male by testing the hypothesis that female bean beetles have a preference for antennation behavior. We manipulated antennation by ablating the left antenna of males, and allowing females to mate twice, with a manipulated and an intact male. We then measured female preference through latency to copulate and latency to kick. We predicted that females would be less responsive to mating attempts from male beetles with manipulated antennae. This experiment aims to provide an understanding of the importance of antennation rate in female mate choice, in a species where courtship has not been considered an important factor in sexual selection.

**Title: Ionothermal Synthesis and Characterization of Tin and Iron Metal Thiophosphates: [EMIM]<sub>2</sub>[Sn(P<sub>3</sub>S<sub>9</sub>)<sub>2</sub>] and [EMIM]<sub>3</sub>[Fe(P<sub>3</sub>S<sub>8</sub>)<sub>3</sub>]**

Student: Amy Tram

Faculty Sponsor: Jason Cody

Abstract: Ionic liquids (ILs) are green and renewable solvents used for their low vapor pressure, high ionic conductivity, and high thermal stability. In synthesis reactions, ILs may serve as solvents and structure directing agents. New metal thiophosphate salts [EMIM]<sub>2</sub>[Sn(P<sub>3</sub>S<sub>9</sub>)<sub>2</sub>] and [EMIM]<sub>3</sub>[Fe(P<sub>3</sub>S<sub>8</sub>)<sub>3</sub>] were synthesized by ionothermal synthesis in [EMIM][CF<sub>3</sub>SO<sub>3</sub>] and [EMIM][BF<sub>4</sub>] (EMIM = 1-ethyl-3-methylimidazolium), respectively. The Sn atom is octahedrally coordinated to three S atoms of the tridentate P<sub>3</sub>S<sub>9</sub><sup>3-</sup> ligands. The Fe thiophosphate anion contains an Fe atom that is also octahedrally coordinated to two tridentate P<sub>3</sub>S<sub>8</sub><sup>3-</sup> ligands, but through two S atoms and one P atom of the ligand. Because of the different oxidation states of the central metal atoms, each anion crystallizes with different numbers of EMIM cations. Neither new compound can be prepared in the other ionic liquid. The structures and properties of these compounds will be presented.

**Title: Do Adult Periodical Cicadas Eat?**

Students: Saniya Varghese and Kiera McKee

Faculty Sponsor: Sean Menke

Abstract: Periodical cicadas nymphs live most of their lives underground. However, they emerge from the ground when they are about to reach adulthood. The density of these emergences provide a massive nutrient pulse to the ecosystem. Nutrient pulses are a shift in the abundance of nutrients within an ecosystem, such as an increase in prey species density. So far, research on the feeding habits of adult periodical cicadas (*Magicicada sp.*) has been scarce. Periodical cicada nymphs feed on xylem in plant roots, but little is known about what the adults feed on, or if they feed at all. This study attempts to determine if 1) adult cicadas feed, and 2) the effect of feeding on the cicada lifespan during the Brood XIII emergence in the northern Illinois area during the summer of 2024. Our species of focus were *Magicicada cassini*, *Magicicada septendecim*, and *Magicicada septendecula*. These periodicals have 17-year emergence cycles. We hypothesized that adult periodical cicadas from Brood XIII feed from trees, which promotes an extended lifespan. We conducted two trials. Each trial included an experimental condition of access to a tree (*Quercus sp.*), and a control condition without access to a tree. Each trial was run until no more living cicadas were left in the ‘with tree’ or ‘without tree’ conditions, the first trial for 20 days and the second for 12 days. In both conditions, 10 adult female cicadas and 10 adult male cicadas were placed in an isolated mesh cage outside. The ‘with tree’ condition had an oak tree added to the mesh cage. Each trial contained two replications per condition, for a total of 4 replications per condition between two trials. Results from both trials demonstrated that cicadas with tree access had significantly longer lifespans in comparison to cicadas without tree access.

Additionally, trial two results showed that female cicadas lived significantly longer than males. These findings suggest that adult periodical cicadas feed on tree nutrients.

### **Title: Religion and Music**

Student: Miles Wells

Faculty Sponsor: Benjamin Zeller

**Abstract:** Religion and music share a rich history in human tradition. Music supports religious expression, with practitioners using instruments like meditation bowls, organs, or their own voices to deepen their connections with the divine. Conversely, religion frequently inspires music, as artists draw on their spiritual experiences to shape their themes—one of the most prominent being forgiveness. Forgiveness is a fundamental aspect of many religious traditions, offering both empowerment and humility to those who seek it. This project examines how faith influences the way artists engage with forgiveness in their music. The works of Kendrick Lamar, Kanye West, Frank Ocean, and others will serve as case studies, illustrating how forgiveness is sought, granted, or withheld. A typology will be developed to categorize these expressions into three themes: artists forgiving themselves, artists seeking forgiveness from loved ones or fans, and artists reckoning with religion itself. Research for this project will include the creation of a video collage and weekly radio shows, each focusing on case studies of musicians navigating forgiveness through a religious lens.

### **Title: The Alice Home Hospital Excavation Unpacked**

Student: Theresa Wilhite

Faculty Sponsor: Rebecca Graff

**Abstract:** This exhibit “unpacks” and presents newly analyzed artifacts from the 2009 to 2010 archaeological excavations conducted on the Lake Forest College campus at the former Alice Home Hospital. The Alice Home Hospital opened in 1899 and was demolished in 1965, leaving behind Bradley Lodge, now known as Cleveland Young Hall. The excavations to discover remnants of a main feature of north campus in the past. The area was originally designated to be a medical center for the students of the then Lake Forest University and the surrounding community. Up until recently the remaining materials of this part of campus history were hidden away, unanalyzed and untouched in Hotchkiss Hall. This exhibit aims to shed light on a relatively unknown part of Lake Forest College history

### **Title: Bumblebee Gobies Use Vision and Their Reduced Lateral Line Canal System to Find Prey**

Student: Zoey Young

Faculty Sponsor: Margot Schwalbe

**Abstract:** The sensory systems of aquatic animals varies from that of terrestrial animals due to the nature of their environments. For example, in order to sense changes in their aquatic surroundings, fish rely on their water-sensing lateral line systems. This mechanosensory system assists in crucial behaviors such as prey detection. When a prey moves in the water, the lateral line system is able to detect small flow disturbances and creates hydrodynamic images around the fish's body. Five types of lateral line canal patterns have been found in bony fish, but the functional roles of these patterns remain largely unknown. In our research, we are examining the role of the reduced canal pattern in prey detection in bumblebee gobies (*Brachygobius sp.*). This species is a representative from a large family of fish, since all gobies typically have a reduced lateral line canal pattern. Further, fish that have reduced canal patterns tend to occupy hydrodynamically quiet or low light environments. During our behavioral trials, isolated gobies were tasked to find live prey under various sensory-eliminating conditions. These conditions included both light and dark trials, as well as ablation of the lateral line using gentamycin. Bumblebee gobies were able to detect prey in both light and dark conditions. However, when the lateral line was disabled, there was significantly reduced feeding. The ablation of the lateral line was confirmed using fluorescent microscopy. Due to these findings, we confirmed that their prey search strategy was altered depending on the available sensory systems.

### **BLOCK 3 (1:00 PM– 2:20 PM)**

#### **PANEL 15: Rhetorical Analysis of US Presidential Inaugural Addresses**

Room 244

Faculty Moderator: Linda Horwitz

United States Presidential Inaugural addresses are not required by the United States Constitution, yet they have become a critical text in the construction of the rhetorical presidency. Inaugural addresses are a hybrid genre whose analysis illustrates how textual analysis combined historical contextual analysis allows scholars to engage in organic analysis which says something about the text but also how we as a culture both create and consume rhetorical texts. This panel will look at the first inaugurals of President Harry Truman, President Ronald Reagan and President John F. Kennedy.

#### **Title: A Fitting Response: A Rhetorical Critique of Reagan's First Inaugural Address**

Student: Cate Frederick

Faculty Sponsor: Linda Horwitz

**Abstract:** Ronald Reagan's first inaugural address is consistently ranked one of the best in its genre, and Reagan himself has been praised for his public speaking ability. In this paper, I intend to use Bitzer's approach to rhetorical criticism to evaluate Ronald Reagan's first inaugural



address and show if it is a fitting response to the rhetorical situation. Bitzer's approach calls for an in-depth understanding of a speech's rhetorical situation, including the exigence, audience, and constraints. The oration is then evaluated based on the speaker's ability to use Aristotle's appeals to address the situation. Reagan did this very well, and it is clear that he understood the context that surrounded the speech and what was required of him to address it. He used ethos appeals to support his credibility and show he was ready to face the challenges ahead. Pathos arguments demonstrated his empathy for his audience's struggles. And logos appeals prove that he was knowledgeable about the economic, governmental, and foreign threats that had arisen. This evidence shows that Ronald Reagan's first inaugural address was a great speech under Bitzer's critical approach. Ultimately, this research also demonstrates the importance of a fitting response not only in specific oratory, but in campaigns and the presidency as a whole.

**Title: From “Accidental” to Elected: A Rhetorical Analysis of Harry Truman’s 1949 Inaugural Address**

Students: Gabriel Sanchez Bozo

Faculty Sponsor: Linda Horwitz

Abstract: How did Harry Truman's 1949 inaugural address help transform public opinion of an “accidental president” to a legitimate elected leader? This research examines how Truman navigated both ceremonial expectations and pressing historical circumstances through a rhetorical analysis combining Bitzer's framework of rhetorical situation with Campbell and Jamieson's insights into inaugural conventions. Through close textual analysis, this study demonstrates how Truman's “Point Four Program” served as more than policy proposal—it rather functioned as a rhetorical device that established his leadership credibility while unifying a fractured Democratic Party and skeptical public. The evidence reveals how Truman's careful deployment of ethos, pathos and logos created what Bitzer terms a “fitting response” to his unique rhetorical situation. This analysis concludes that Truman's inaugural address succeeded not merely as ceremonial rhetoric but as a transformative moment that redefined both his presidency and American unity at the dawn of the Cold War.

**Title: A Fitting Response: John F. Kennedy’s Inaugural Address**

Student: Sam Sosani

Faculty Sponsor: Linda Horwitz

Abstract: When considering how to understand and adequately criticize John F. Kennedy's inaugural address, one must consider the rhetorical situation of 1961. My analysis will follow Bitzer's process of rhetorical criticism, including the rhetorical exigence, audience, situation, Aristotle's three proofs, and whether the orator gave a fitting response. One valuable element of understanding the address is the rhetorical situation, giving insights into what Kennedy was addressing and the role of the audience. Performing a successful organic criticism requires a close analysis of the text and identifying how ethos, logos, and pathos enable Kennedy to

respond fittingly to the rhetorical exigence. My criticism concludes that Kennedy's speech should be recognized as exceptional because of his ability to persuade the audience to recognize their vital role as citizens and the importance of their unity.

## **PANEL 16: Economic Relationships and Outcomes**

Room 130

Faculty Moderator: Nancy Tao

Student Moderator: Ellis Mudrik

### **Title: How Local Financial Infrastructure Supports Small Businesses**

Student: Belen Cuadros

Faculty Sponsor: Nancy Tao

Abstract: Access to financial services is a crucial determinant of small business success, particularly in underserved communities. This study examines the relationship between local banking structures—including commercial banks, credit unions, and market competition—and the growth of small businesses across the United States. By analyzing data from the U.S. Census Bureau (demographics & income), Summary of Deposits, Credit Unions, and the Small Business Administration (SBA) 7(a) loan program, this research investigates how financial accessibility and local economic factors influence small business formation and the power of borrowing rights.

### **Title: Does the Political Composition of United States Circuit Courts of Appeals Influence the Extent of the Environmental Impact of Firms?**

Students: Zofia Joanna Czarnik

Faculty Sponsor: Rob Lemke

Abstract: In 2024, the landmark precedent set in *Chevron U.S.A., Inc. v Natural Resources Defense Council, Inc.* was overturned, effectively removing the requirement that judges defer to agencies in interpreting ambiguous laws. My presentation examines the effectiveness of *Chevron* as precedent during twenty-seven years of its lifespan by investigating the relationship between judicial ideology and the environmental decisions of firms. Under strict obedience to *Chevron*, minimal correlation would be expected between judicial ideology and firms' environmental decisions. Conversely, a significant correlation between judicial ideology and firms' environmental decisions would be expected under loose obedience to *Chevron*. Econometric analysis is conducted at the Circuit Courts of Appeals level and considers the air pollution, water pollution, land pollution, and recycling/energy recovery decisions of firms as reported in EPA-mandated Toxic Releases Inventory (TRI) data.

**Title: Evaluating the Effectiveness of China's Provincial Emissions Trading System: A Policy Impact Analysis**

Student: Filip Kmeto

Faculty Sponsor: Linh Pham

Abstract: Emissions Trading Systems (ETS) is one of the key market-based policies to fight climate change. While the European Union's ETS has been extensively studied, China's relatively new provincial ETS, which launched in 2013, received less attention. This study examines the impact of China's ETS on industrial emissions, with the focus on its effectiveness in reducing co-pollutants created alongside CO<sub>2</sub> emissions. Utilizing the difference-in-differences and event study methods, this research analyzes how industries respond to the policy. By comparing emission levels before and after the implementation of ETS and between regulated and non-regulated industries, this research investigates whether the policy led to a reduction in co-pollutants such as NO<sub>x</sub>, SO<sub>x</sub>, and particulate matter emission. We find that the ETS leads to lower SO<sub>x</sub> and particulate matter emission, however, the effect on NO<sub>x</sub> emission is statistically insignificant. This research builds on William Nordhaus's Nobel Prize paper, which talks about the need for economic policies in global climate governance. Due to China's position as the world's largest emitter of pollution, the success of its ETS has significant implications for the level of emissions in the atmosphere. The results of this research provide insights into how emissions trading can be used in emerging markets and inform on its strengths and weaknesses.

**Title: An Analysis on the Relationship Between School Funding and Students' Test Scores in England**

Student: Vilaura Narin

Faculty Sponsor: Nancy Tao

Abstract: This study examines the impact of school funding on A-Level performance in England using data from 617 schools for the 2022/2023 academic year. An OLS regression model analyzes the effects of funding, demographics, school characteristics, and operational metrics on student outcomes. Findings reveal that per-pupil funding and enrichment programs, such as advanced math premiums, significantly boost A-Level scores, particularly for disadvantaged students. However, coronavirus recovery funding negatively correlates with performance, possibly due to allocation patterns or delayed effects. While demographics have minimal influence, higher absence rates are linked to lower scores. School characteristics show no significant impact. Policy recommendations include increasing funding per pupil, optimizing disadvantage and recovery fund distribution, reducing absenteeism, and incorporating racial demographic data for deeper analysis. These insights inform policies to improve educational equity and student performance in England.

**Title: Econometric Model For Housing Affordability**

Student: Artur Petrosyan

Faculty Sponsor: Tilahun Emiru

Abstract: This paper investigates the effect of U.S. monetary policy on housing affordability across 50 U.S. states, using quarterly data from 2005 to 2023. Housing affordability remains one of the most important issues, as increased housing costs can create substantial financial burdens for many households. Although several previous studies highlight interest rates as the leading factor affecting housing markets, this paper addresses the gap by considering additional variables such as rental vacancy and homeownership rates. I use an ordinary least squares (OLS) regression method to demonstrate the average effect of interest rates and other variables on housing affordability in the United States.

**PANEL 17: Self-Care and Social Media: Existing in a World that Demands Constant Attention**

Room 132

Faculty Moderator: Holly Swyers

**Title: Emerging Social Landscapes from the COVID-19 Pandemic**

Student: Jonathan Luke Chao

Faculty Sponsor: Holly Swyers

Abstract: The COVID-19 pandemic reshaped students' approaches to social interaction, leading to two distinct perspectives: one prioritizing an online social life centered on shared interests and identities, and another emphasizing in-person connections based on proximity and shared experiences. Data collected from the classes of 2025 and 2026, along with existing literature, highlight this shift. Early COVID-19 protocols caused social isolation, harming students' social well-being. However, the prevalence of virtual learning encouraged greater online socialization through platforms like social media and video games. These online and transitional experiences have fostered lasting preferences for either online or in-person interaction, with implications that may persist into professional and personal spheres.

**Title: The TikTokification of Self-Care: Constructed Financial Barriers**

Student: Sawyer Kuzma

Faculty Sponsor: Holly Swyers

**Abstract:** Recent literature argues that social media influence sways young people to mindlessly purchase what TikTok and other platforms tell them to. One area in which we can see a high volume of “influencer” content geared toward purchasing is self-care. I investigated self-care trends on TikTok and how college students interact with the commodification of self-care on the platform. I collected data from Lake Forest College students who self-identified themselves as women, revealing that participants recognized the increased cost associated with self-care but did not feel like they were financially barred from participating in self-care. Additionally, many stated that they did not feel pressure to spend money despite being constantly advertised to. The data I collected directly refutes the popular notion that young people are oblivious to how social media acts upon them and provides a new perspective on how college students interact with online content and commodification.

**Title: It’s More Than Just a Book: How College Students Explore and Define Emotional and Spiritual Wellbeing through Leisure Reading**

Student: Lauren Volk

Faculty Sponsor: Holly Swyers

**Abstract:** To manage the many demands of daily life, students often create structured schedules. While these schedules help balance academic, work, and social responsibilities, they can also lead to the neglect of personal needs. This project examines leisure reading as a practice that enables students to safeguard their emotional well-being. It explores the strategies students use to set boundaries and preserve time for themselves. I argue that by dedicating time to leisure reading, students reinforce their sense of self and agency, maintaining control over an aspect of life that prioritizes personal fulfillment. Additionally, I examine how leisure reading supports emotional regulation and mindfulness. The apparent escapism of leisure reading serves as a gateway to self-discovery, helping individuals shape their identities, establish boundaries, and build resilience.

**PANEL 18: *Killing Coppelia*: A Reading of a New Play By Shaina Maitino ’25**

Room 044

Students: Shaina Maitino, Katelyn Boerke, Charleigh Justice, Joshua Marchbanks, and Jade Smith Taylor

Faculty Moderator: Chloe Johnston

**Description:** In this darkly comic retelling of *Coppélia*, the sinister scientist becomes a cutthroat music industry manager, and the object of obsession is none other than a rising pop sensation. Olympia, a superstar on the verge of even greater fame, is in the midst of a national tour that is skyrocketing her career. The night before her highly anticipated performance in Chicago, Hilda—a bitter critic—breaks into Olympia’s hotel room, expecting to confront the pop star herself. Instead, she finds Olympia’s neurotic assistant, Antonia. As the night unfolds, both

women discover far more about Olympia than they ever anticipated. Their relationships—both parasocial and real—will be challenged in unexpected ways

### **PANEL 19: Selections from Collage Magazine**

Room 144

Students: Peter Aupperlee, Maite Olivera Caballero, Ella Chicone, Kyle Nicola Lee, Declan Murray, Elise Nguyen, Nicole Parra, Runtiah Qatami, Alondra Reyes, and Keisha William

Faculty Moderator: Ying Wu

Student Moderator: Shellane Shettleworth

Abstract: Collage Magazine represents the cultural and linguistic diversity within the Lake Forest College community, providing an opportunity for students of any language other than English to use their abilities in a creative medium. The magazine also encourages any members of the College community (students, faculty, and staff) to express in words their cultural perspectives.

### **PANEL 20: Divine Femininity: Goddesses and Women in Hindu Scriptural Texts**

Room 128

Faculty Moderator: Anya Golovkova

This panel explores goddesses and women in Hindu Puranic narratives and Tantric ritual texts, bringing attention to diverse sources and stories that have been commonly overlooked in previous research. By examining these narratives, we highlight their unique mythology and what they reveal about the people who worship Hindu goddesses. The first presentation examines the history and practice of Sitala, the Cooled Mother of Disease. As Ma wanders Northeast India with her donkey, her encounters challenge practitioners to worship her. Those who refuse may experience her disruptive powers, which transcend binary distinctions. The next presentation analyzes the narratives and ritual worship of Annapurna and Guheswari, locally significant forms of the pan-Indian goddesses Uma and Sati, with a particular focus on their worship in Nepal. Just as disease goddesses have been historically understudied, Hindu traditions in Nepal have often been overshadowed by scholarship of the more well-known pan-Indian deities. The presentation on Camunda, the Hag Goddess, explores her narratives within the stories of others. This discussion delves into her history, imagery, and literary representations, shedding light on the people who revere her. Our penultimate presentation focuses on Kannagi, a central figure in Tamil culture. In the *Silappatikaram*, the earliest epic in the Tamil language, Kannagi embodies justice, resilience, and feminine strength. *Kannagi: From Legend to Divinity* traces her transformation from mortal to deity, her cultural adaptations across regions, and her continued relevance in discussions of gender and power. Finally, our last presentation examines power dynamics in historical Hindu traditions. By analyzing tantric texts and scholarship, this research explores the reversal of gender roles in tantric sex. Together, these presentations illuminate the

richness of Hindu goddess traditions, highlighting their regional diversity, ritual significance, and evolving cultural roles. By exploring overlooked narratives, this panel challenges dominant frameworks and broadens our understanding of divine femininity in South Asia and beyond.

**Title: Sitala: The Cooled Mother of Disease**

Student: Daniel Contreras

**Title: Annapurna and Guheswari: Nepalese Forms of Sakti**

Student: Urvee Singh

**Title: Cāmunda: The Hag Goddess**

Student: Theresa Wilhite

**Title: Kannagi: From Legend to Divinity**

Student: Betsy Daniel

**Title: Women’s Roles in Tantric Sex: Esoteric Reversals of Gender Roles**

Student: Mikayla Arenson

**PANEL 21: From Exclusion to Expansion: The Politics of Urban Change in Three Continents**

Room 048

Faculty Moderator: Ajar Chekirova

**Title: Megaprojects in Saudi Arabia: Domestic and International Perspectives**

Student: Anna Blazkova

Faculty Sponsor: Ajar Chekirova

Abstract: This project tackles the recent boom in the planning and construction of urban megaprojects in Saudi Arabia, and examines their political significance both domestically and in terms of Saudi Arabia’s international pursuits. The Saudi royal family, with Crown Prince Mohammed Bin Salman in particular, supports the development of these futuristic megaprojects in order to establish an image of Saudi Arabia as a progressive, forward-thinking, socially and environmentally conscious global player. Internally, these projects also support a renewed nationalist sentiment in Saudi youth. The project examined six case studies of Saudi megaprojects, three from the highly medialized NEOM region, as well as three others, all connected to Saudi Arabia’s Vision 2030 development plans.

**Title: Unequal Cities: Exploring the Structural Roots of Segregation in Johannesburg and Chicago**

Student: Rumbidzaishe Marufu

Faculty Sponsor: Ajar Chekistrova

Abstract: This research explores the interplay between historical segregationist policies and contemporary urban inequality in Johannesburg and Chicago. By applying spatial racial mismatch theory and path dependence, the study investigates how apartheid and redlining have established enduring barriers to economic mobility and spatial equity. Case studies of both cities highlight how differing political structures yield similar outcomes of persistent segregation. The research underscores the urgency of addressing these path-dependent systems to achieve sustainable urban equity. It calls for policies that confront the structural legacies of segregation, advocating for a reimagined approach to urban planning that centers on inclusion and social justice. This study provides a critical framework for understanding how historical injustices continue to shape modern cities and offers pathways toward transformative change.

**Title: How Do Expats Influence Gentrification in Mexico City?**

Student: Andrea Sandoval Torres

Faculty Sponsor: Ajar Chekistrova

Abstract: In recent years, gentrification in Mexico City has become increasingly pronounced, particularly after a surge in expatriates relocating to the city in the aftermath of the COVID-19 pandemic. This study examines the extent to which these trends are correlated and whether expatriate migration actively drives gentrification. The findings suggest that expats significantly contribute to gentrification by driving up housing prices (in some places up to a 66% increase) leading to the displacement of locals. Moreover, expats create social divisions, as they tend to cluster in specific neighbourhoods, contributing to a loss of cultural identity in the city. This research employs a mixed-methods approach, drawing on both primary and secondary sources. Academic literature on gentrification in global contexts provides theoretical frameworks and comparative insights, while local news articles, interviews, and housing market data offer empirical evidence to substantiate these claims.

**Title: Politicizing Identity and Belonging Through the Lens of Urban Development: A Case Study of the Newā People of Khokana, Nepal**

Student: Suvexa Pradhan Tuladhar

Faculty Sponsor: Todd Beer



**Abstract:** This paper examines the use of state-led urban development to suppress Indigenous voices in Khokana, Nepal. Through content analysis and interviews, the study explores how the Nepali government perpetuates settler-colonial agendas of land encroachment using processes of invisibility, selective visibility, and hypervisibility. Utilizing in-depth interviews, archival materials, newspapers, and scholarly research, the paper highlights Kathmandu's contested status as a settler city, challenging the narrative that urban spaces cannot be “Indigenous.” By connecting state-led urban development projects in Khokana to broader frameworks of gentrification and settler colonialism, this study demonstrates how Indigenous suppression manifests in urban settings and how Indigenous communities resist these policies to protect their rights, identity, and heritage.

#### **INTERMISSION MUSICAL PERFORMANCES (2:20 PM - 2:35 PM)**

**Lillard First Floor Lobby**

Performer: Maria Argueta Gonzalez

#### **BLOCK 4 (2:40 PM – 4:00 PM)**

##### **PANEL 22: Talking about Politics in Public: The Rhetoric of the 2024 US Presidential Election**

Room 244

Students: Albin Arulanandu, Heidi Cruz, Gabby Garceau, Davis B. Hamilton, Delfina Jorgensen, Finn Michael Kraker, Willow Poppleton, and Zoey Whittington

Faculty Moderator: Linda Horwitz

In Fall 2024, COMM 384 put on six separate public events for the rest of the campus in order to educate their peers and practice talking about politics in public. This panel is an opportunity for the students to discuss the experience, what they learned, and what they would like to see happen at Lake Forest College in the future.

##### **PANEL 23: Race and Gender Bias: Real-World Impacts of Structural Inequalities**

Room 130

Faculty Moderator: Tilahun Emiru

Student Moderator: Adriana Voloshchuk

**Title: Concern About Discrimination and Support for Policies That Promote Racial Equity**

Student: Lucy Freeman

Faculty Sponsor: Emily Dix

Abstract: Amid growing efforts to restrict discussions of racism (e.g., Anti-Critical Race Theory legislation), it is crucial to understand the variability in White individuals' recognition of racism and its behavioral consequences. This study evaluates how people's acknowledgement of ongoing racial bias and its impact predicts their reactions to race-related events. A politically balanced sample of 200 White adults (ages 18–65) in the US was recruited via Prolific. Participants completed the Concern About Discrimination Scale, which measures their perceptions of racial discrimination across specific domains, rated their support for various race-related policies, and shared their reactions to the Supreme Court's decision to overturn affirmative action. Results indicate that higher discrimination concern is associated with greater awareness of racial bias in key areas (e.g., hiring, medical care, and loans) and stronger support for equity-promoting policies (e.g. baby bonds, reparations for slavery, affirmative action, and preferential hiring). Additionally, participants with higher discrimination concern were more likely to oppose the Supreme Court ruling, believing it would undermine the fairness of college admissions. These findings hold when controlling for political identity, highlighting discrimination concern as a unique predictor of policy support and beliefs. By validating the Concern About Discrimination Scale and demonstrating its link to policy attitudes, this study identifies concern about discrimination as a potential leverage point for interventions aimed at increasing support for racial equity.

**Title: Extended Maternity Leave and Its Effect on Annual Wage Outcomes Among Employed Women**

Student: Tong Hao

Faculty Sponsor: Tilahun Emiru

Abstract: In 2016, China extended maternity leave to address declining fertility rates and encourage childbirth. This study examines its impact on women's wages using a difference-in-differences approach with data from the Population and Family Planning Regulations and the China Family Panel Studies. While prior research has focused on labor supply outcomes like employment rates and working hours, particularly in developed countries, our findings reveal a 7.05% decline in wages for employed women. This decrease may stem from increased household responsibilities, such as childcare and housework.

**Title: The Effect of Child Tax Credits on Female Labor Force Participation: An Econometric Analysis**

Student: Diya Mokha

Faculty Sponsor: Tilahun Emiru

**Abstract:** This paper aims to uncover the relationship between receiving two different types of child tax credits (CTC & ACTC) and female labor force participation in the United States. Currently, there is very limited literature on the child tax credit and additional child tax credit, with the existing literature providing contradictory findings. This study makes use of cross-sectional data from the 2023 CPS ASEC and utilizes maximum likelihood estimation to generate results. The results show that receiving a child tax credit is positively associated with women's labor force participation; however, receiving an additional child tax credit is negatively associated with women's labor force participation. The strengths of these relationships depend on variables such as income level and number of children in a household.

**Title: Job Discrimination Against Race and Sex Comparing 2019 and 2022**

Student: Ako Ogihara

Faculty Sponsor: Nancy Tao

**Abstract:** This research examines the impact of ethnicity and sex on job salaries before and after the pandemic, investigating whether wage disparities persist. Specifically, it assesses whether discrimination based on race and sex remains a significant factor in earnings. The findings reveal that racial wage gaps continue, with White individuals earning more than multiracial groups, while Black and Asian workers still earn less. Although sex-based pay disparities have narrowed over the years, the gap remains significant, particularly for single women. To analyze these trends, I used cross-sectional data from IPUMS CPS and conducted OLS regressions for each year, applying robust standard errors to account for heteroskedasticity. Both the 2019 and 2022 models were statistically significant at the 99% level.

**Title: Factors That Affect the Probability of Employment**

Student: Natalie Williams

Faculty Sponsor: Tilahun Emiru

**Abstract:** This study examines the factors influencing employment probability, with a focus on identifying potential sources of discrimination and bias. Understanding these factors is essential for promoting fair, inclusive, and equitable hiring practices. A key gap in existing research is the limited analysis of how specific occupations and industries affect employment probabilities. Using a linear regression model, this analysis identifies statistically significant factors that impact employment outcomes. Findings indicate that married women have a 2.42% higher probability of employment. Additionally, results reveal racial disparities, with Black women and Black men facing lower employment probabilities. Black women experience a 2.83% decrease,

while Black men face a smaller reduction of 0.43%. These findings highlight the need for further investigation into systemic employment inequities.

## **PANEL 24: Practice Research Grant Proposals**

Room 132

Faculty Moderator: Margot Schwalbe

Preparing and presenting grant proposals is a key skill for many scientific researchers. This panel presents four students making an appeal for a research funding project.

### **Title: Comparing the Biomechanical Properties of the *Pseudoliparis swirei* Skeleton to other Snailfish (Liparidae) across Oceanic Depths**

Student: Emma O'Malley Galvan

Faculty Sponsor: Margot Schwalbe

**Abstract:** In the deepest zone of the ocean, the oceanic hadal zone, vertebrates are scarcely seen. This phenomenon is largely due to the extreme hydrostatic pressure that is placed upon their skeletal structures. To date, the deepest known oceanic vertebrate is *Pseudoliparis swirei*: the Mariana Trench hadal snailfish. The mechanisms that allow *P. swirei* to withstand these extreme pressures remains largely uninvestigated. Research thus far has primarily focused on cellular and molecular adaptations, while the remaining research describes only the composition of skeletal structures and gelatinous tissues. Musculoskeletal features have not yet been researched, begging the question as to whether the bone of *P. swirei* would display increased performance under mechanical testing in comparison to the bones of shallower-dwelling snailfish (Liparidae). The specific aim of this study is to place selected bones (neurocranium, maxilla, opercula, and sagittal otoliths) of 50 Liparids, including *Pseudoliparis swirei*, under three mechanical tests: a three-point bending test, a compression test, and a test under high hydrostatic pressure. The results from these tests will be compared with data from a previous study (Gerringer et al. (2021a)) analyzing the bone density of these 50 species to assess if there is a correlation between bone density and mechanical performance, and whether these differences appear to have a phylogenetic association.

### **Title: Effects of Climate Change on the Survival Adaptations of the Arctic Woolly Bear Moth (*Gynaephora groenlandica*)**

Students: Sylvie Paddon-Jones and Lia Romanotto

Faculty Sponsor: Margot Schwalbe

**Abstract:** The Arctic woolly bear moth, *Gynaephora groenlandica*, is native to the High Arctic region of Canada, Greenland, and Russia. Subject to Arctic temperatures ranging from -28°C to 0°C, *G. groenlandica* spend most of their life in their larval caterpillar stage, save for a month in the summer. Many Arctic species like *G. groenlandica* have behavioral and physiological adaptations to survive the harsh winter conditions of the High Arctic region. Among these are basking behaviors, altered life cycles, and the use of antifreeze proteins (Danks 2004). The Arctic woolly bear moth can spend up to 60% of its time basking in the sun as a form of thermoregulation (Kukal et al. 1988). Additionally, they use antifreeze proteins to survive and be freeze-tolerant to temperatures below -70°C as caterpillars (Bennett 1999). Global warming poses a dire threat to Arctic species that have specialized adaptations to harsh conditions. Temperatures in the High Arctic region are projected to rise 5-7°C in the next ten years, along with an unknown increase in humidity (Lindsey & Scott 2023). Though their adaptations are well-studied, climate change's threat to *G. groenlandica* is unknown. The proposed project aims to use *G. groenlandica* as a model to understand the effects of climate change on physiological and behavioral adaptations to extreme environments.

### **Title: Sacred Guardians: Leveraging Cultural Beliefs for Asian Elephant Conservation in Southern India**

Student: Sina Soltan

Faculty Sponsor: Margot Schwalbe

**Abstract:** Asian elephants (*Elephas maximus*) in southern India are both culturally revered and ecologically critical. As ecosystem engineers, they shape habitats and maintain biodiversity by altering landscapes, creating waterholes, and facilitating seed dispersal. Simultaneously, they hold deep symbolic importance in Hinduism and other regional traditions, exemplified by their association with the deity Ganesha. Despite this, elephants face increasing threats, including habitat fragmentation, genetic isolation, and human-elephant conflict. This research proposes a community-driven conservation approach that integrates cultural beliefs and ecological methodologies to address these challenges. Specifically, we aim to document and leverage traditional reverence for elephants to develop conservation strategies, restore critical habitats, and mitigate human-elephant conflict. Key strategies include engaging local communities through interviews and focus groups, using GPS tracking and genetic research to map and restore fragmented habitats, and implementing culturally aligned conservation interventions. By aligning cultural reverence with ecological priorities, this initiative aims to foster coexistence, enhance biodiversity, and establish a replicable model for culturally sensitive conservation.

### **Title: Effects of Climate Change-induced Intensification of El Niño on the Pacific Common Thresher Shark (*Alopias vulpinus*)**

Student: Zoey Young

Faculty Sponsor: Margot Schwalbe

Abstract: El Niño is a weather phenomenon caused by the weakening of trade winds that allows warmer weather to migrate east. This causes water temperatures on the western coasts of North and South America to increase. El Niño events disrupt the upwelling of cooler water to the surface, reducing pelagic plankton viability which results in a trophic cascade. The combination of rising temperatures and the lack of food sources causes many marine species to migrate out of their typical range in search of refuge. Research also suggests that El Niño weather events will intensify due to climate change. It is currently unknown how a dominant pelagic predator, *Alopias vulpinus*, will adapt to these weather changes. *Alopias vulpinus* are commonly found off the coasts of Southern California and are known to be a highly migratory species along their temperature gradient. This study will span 20 years, with the average lifespan of a thresher shark being anywhere between 19-50 years, as the researchers continue to collect data from tagged sharks to compare their findings to the baseline data collected in the first year. This long-term study allows for a broader understanding of how the climate change-induced intensifications of El Niño are affecting common large predators along the Pacific coast. Previous studies have found that the introduction of an apex predatory species into a new range often creates drastic trophic cascades that disrupt the entire marine ecosystem. The collected data will provide an ecological survey of the impacts of shifting predator-prey dynamics caused by climate change-driven El Niño escalation.

## **PANEL 25: Musical Stories in French: Class Collaborations**

Room 044

Faculty Moderators: Cynthia Hahn

In this session, students from Professor Don Meyer's Music Theory II class and students in Professor Cynthia Hahn's Art of Storytelling (in French) class will demonstrate and discuss how a piece of music may provide a backdrop to enhance story development, or how a particular musical structure may inspire lyric-based narrative.

1. Evelyn Anguiano: Music by Leon Levin
2. Atlas Gregory: Music by Fares Noueir
3. Megan Tanquilut: Music by Gabriel Fernandez-Tyson
4. Ethan Karabanow: Music by Abby Rice
5. Maite Olivera Caballero: Music by Riley Leja
6. John Ennis: Music by Leslie Casares

## **PANEL 26: Serious Comics: The Possibilities of Graphic Narrative**

Room 144

Faculty Moderator: Josh Corey

Students from the fall iteration of ENGL 266: Reading the American Graphic Novel present their final creative projects--original fictional and nonfictional comics that demonstrate the power and versatility of the form.

**Title: The Curious Anna**

Student: Luisa Carlos

**Title: Ari and the Minotaur, a Comic Adaptation**

Student: Shaina Maitino

**Title: Iconicity in Anthropomorphism: Why Cartoony Comics Matter in Portraying Real Life**

Student: Isabel Mantilla

**Title: Drivel**

Student: Theone Purev

**Title: Comics as Character Studies**

Student: Calliope Saban

**PANEL 27: Bodily Autonomy and Female-identifying Images**

Room 048

Faculty Moderator: Daniel Henke

This panel addresses societal expectations and self-perception regarding gender identity. Investigating the relationship between external and internal perceptions requires the analysis of visual facets of identity primarily connected to women: the physical body image, complexion, dialect, and symbols of national identity. Research such as Kellie et al. (2019) demonstrates a negative correlation between female objectification and the assumed notions regarding their character. Deeper understanding of this occurrence may be beneficial to deconstruct and disengage these preconceptions. By bringing light to a whole array of visual identity, this panel hopes to reshape the “Feminine Image.”

**Title: Skincare for Youth: Ramifications of Deeply Embedded Beauty Standards on Young Girls**

Student: Niousha Akbari

**Title: Women in the Gym: A Research Study of Others' Perceptions on Women in Bodybuilding**

Student: Ariella Aranovich

**Title: The Mind, Body and Society: Self-Objectification and Treating the Body as an Other**

Student: Brianna Cruz

**Title: Filler Words and the Feminine Image: A Research Study on How Diction Disproportionately Influences the Credibility of Women**

Student: Savannah I Matta

**Title: Patriotism or Oppression? Gendered Perspectives on National Symbols in Social Media**

Student: Azahara César Sánchez

**PANEL 28: Buddhist Paths to Nirvana: A Multi-Genre Exploration of Art, Sound, and Movement**

Room 128

Students: Shrija Chhetri, Daniel Contreras, Ava Jarock, Libby Moog, Adam Phillips, Kristina Treibachs, and Tracy Wamarema

Faculty Moderator: Anya Golovkova

This interactive multi-media art exhibit includes seven Unessay projects, prepared for the RELG 215 Buddhist Paths to Nirvana course. The projects respond to teachings on meditation, the eight-fold path, the concept of karma and *samsara*, and Buddhist art and architecture. The first performance is a soundscape of meditation music with visuals that map the presenter's experiential practice during the Buddhist Paths to Nirvana. Next is a live dance performance called *Panch Dhyani Tathagatas* (Five Wisdom Buddhas), which uses symbolic hand movements and gestures (*mudras*) to reflect on the qualities associated with the Buddhas. Next is a performance of a personal poetic reflection on scriptures, faith, and practice in Christianity,



Buddhism, and Islam, which responds to the presenter's study of Buddhist sources. Finally, participants listen to a soundtrack of Western songs such as the "Boddhisattva Vow" by the Beastie Boys and "Strawberry Fields Forever" by The Beatles, which reflect on Hindu and Buddhist practices and traditions. Finally, the audience views the drawing of "Samsara Mandala," which illustrates the Buddhist concept of the cycle of rebirth, a Minecraft recreation of Borobudur, a ninth-century Mahayana Buddhist temple, and photographs of nature *mandalas*, created from leaves, pinecones, flowers, and seed pods, collected from the Lake Forest College campus grounds. Together, these projects respond to ways in which Buddhist practitioners understood and responded to the core problems of human existence.

### SENIOR ART EXHIBIT AND FINAL RECEPTION (4:00 PM - 5:30 PM)

Durand Art Institute

#### **Title: Roots of Memory**

Student: Olivia Elsasser

Statement: This series of digital collage posters explores the nostalgic and dreamlike essence of personal landscapes, representing my memories of spending time in Illinois and California. Using photography of native plants and flowers, manipulated with slow shutter speeds and digital layering, these collages evoke the vague yet vivid way memories are shaped over time. By using surreal color palettes and abstract compositions, these pieces capture the emotional and sensory experience of time spent wandering ravines, forests, and gardens—transforming real places into romanticized expressions of the past.

#### **Title: Constructing Motherhood**

Student: Brigitte Menye Eto

Statement: What emotions or words come to mind when you hear the word *motherhood*? Motherhood is a complex, intertwined experience shaped by societal perceptions, personal history, and deep-seated expectations. Despite its overwhelming emotions, it carries a duality—both tender and enduring—reflected not only in the artist's own experience but also in the natural world. Nests symbolize nurturing and warmth, while wire introduces fragility and coldness, layering the complexities of motherhood. Bamboo, with its earthy tones and familiar texture, evokes a sense of home and comfort. Its flexibility allows it to flow like the ocean, embracing and enclosing the nest, yet also revealing uncertainty. The juxtaposition of materiality and symbolism captures both the warmth and the unspoken fears that motherhood brings to the artist.

### **Title: Self-Resiliency**

Student: Alison Green

Statement: My piece for Senior Seminar explores the idea of post-traumatic growth and resiliency through trauma in a group of three 24 x 36" inch hand-carved, layered frame with a mixed media and graphic design image using scanned cyanotype images of flowers and a glowing image of a figure manipulated in Adobe Photoshop. Although trauma can affect others differently and not all healing is linear, the idea of post-traumatic growth is making sense of the destruction caused by trauma through reflection and creating positive change through that struggle. My intention for this project is to explore the idea of processing trauma through three consecutive pieces to represent the positive strength within that struggle.

### **Title: Beyond Light**

Student: Dean Kousiounelos

Statement: In this exhibit, I invite the audience to interact with astronomy and the tools used to study it. By engaging visitors with aspects of astrophysics, such as binary star evolution and the subtle ripples of gravitational waves, this work bridges the gap between vast cosmic events and human perception. At its core, this exhibit dives into a narrative of my interplay of art and science. Scientific concepts like gravitational waves and binary stars are not just mathematical constructs but also live in a world of metaphors that resonate with our own experiences of connection, disruption, and transformation. Stars spinning like ballet dancers, mapping out the cosmos. The work in this exhibit is inspired by the astrophysics research I have been conducting over the past two years on binary stellar evolution and gravitational waves.

### **Title: Beyond Chaos**

Student: Ismael Alexander Maldonado

Statement: In this work, I explore the intersection of fragmentation and unity, using puzzle pieces as a medium to represent the tension between order and chaos. The swirling composition evokes a cosmic landscape, with celestial bodies emerging from a fragmented void, symbolizing creation, destruction, and the unknown forces that shape our universe. By layering puzzle pieces, I disrupt traditional notions of image completion, embracing imperfection and reconfiguration. The gradients of color and scattered forms create a sense of movement, as if the piece is still in flux, resisting finality. This work challenges the viewer to reconsider their relationship with materials and the idea of "finished" versus "unfinished" art. Through this piece, I invite the audience to engage with the tactile and conceptual nature of puzzles, objects designed to fit together yet here repurposed to express fluidity and transformation. It reflects my ongoing fascination with play, materiality, and the unexpected beauty found in deconstruction.

**Title: my angel, even in death we are intertwined.**

Student: Finch Martin

Statement: Much like most of the population, I want others to understand me—to understand how I experience the world—but this is difficult for me to convey. I often struggle to express myself and my emotions verbally, and sometimes, the only way I can do this is through art. The title of this series, “my angel, even in death we are intertwined.” is a reference to a poem written by my wife about the two of us, and each individual piece in this series is inspired by a segment from it. Aside this, the boxes represent certain aspects of how it feels for me to love. I want to leave some things up to interpretation as I believe love is one emotion every person experiences uniquely, but I do want to highlight two details and their personal meanings. One of these details is the lighting. It was important to me that I include lighting because my love is like a light—it illuminates its surroundings. Everything around it is brighter, even if just barely. Related to this, I wanted to point out the ball of light in the first box. Although this is one feature that is more ambiguous and can have multiple meanings, I chose this shape because I refer to my wife as my sun and my stars.

**Title: “Nostalgic wants”**

Student: Julia McMullen

Statement: Do we truly want to grow up, or do we wish we could relive our childhood again? Are we really ready to step into this new world of “Adulthood”? These are the questions I have asked myself during my final year at Lake Forest College. With my doubts and worries for my future, it has inspired me to express these thoughts in my piece that explores the conflict between the opposing wants, the urge to grow up versus the longing to return to childhood memories. Growing up, I always thought I was ready to become an adult. As the oldest child in my family and the eldest grandchild on both sides, I was often told to be mature, to be the bigger person, and to serve as a role model. With this mindset, I assumed I was preparing myself for adulthood after college. But now that I’m here, I no longer feel ready. I look back at my childhood and teenage years, wishing I had approached a different mindset. The piece expresses the discomfort and rapid pace of growing up, alongside the nostalgia that emerges once the realization comes that it is over. I explore this feeling through a visual and interactional representation of the emotional experience of moving from youth into adulthood. When we reach the end of our youth, the opportunity to relive those simpler days is no longer accessible.

**Title: “32” and “Untitled”**

Student: Sophie Snihur

Statement: “32”- sculpture with resin teeth, beads, and spray foam.  
Representation of ED habits.

“Untitled”- small frames with charcoal drawing and oil paintings. (40-60)

### Chamber Choir 4:30 pm

Durand Art Institute

Student Performers: Sardar Atayev, Emily Bailey, Bishrel Batzaya, Leslie Casares, Sarah Faller, Greg Hernandez, Peter Piper Huizenga, Cian Hyde, Sindhuja Kaja, Finn Michael Kraker, Louis Leone, Trinity Look, Madeline Mann, Kiera McKee, Amy Tram, and Angeliki Vitogiannis