

Oral and/or Visual Presentation

BEGINNING AT 9:00 A.M.

KIRKHOF CENTER 1104

Play Time: Therapeutic Use of Play for Children with Cerebral Palsy

Presenters: Madeline Bagnasco, Emma Gutierrez, Ava Kunkel, Erica Vazquez

Mentor: Dawn De Vries

This presentation shares our findings about the benefits of the therapeutic use of play to improve the level of independence and overall functioning of children with cerebral palsy. The research findings reflect how recreational therapists provide individualized interventions and an inclusive approach to play.

KIRKHOF CENTER 1142

The Detriments of Autistic Masking: A Literature Review

Presenter: Karis Gillen

Mentor: Amy Matthews

This literature review expands on the symptoms and causes of autistic masking from childhood and into adulthood. Autistic masking is characterized by an autistic person camouflaging their autistic traits, which includes emotions, facial expressions, tone of voice, social abilities, stimming, and more. This is done in order to “fit in” and appear “normal” to their neurotypical (non-autistic) peers. The consequences of masking can be detrimental to the physical and mental well-being of an autistic person. Its main symptom is extreme exhaustion and depression which can manifest as burnout. This review will further examine the symptoms and causes of burnout. Finally, this presentation will delve into how an autistic individual can limit their masking behaviors and how others can help create a safe environment for autistic people to unmask.

KIRKHOF CENTER 2201

Data Fusion Uncertainties Knowledge Graph

Presenter: Braiden Betway

Mentor: Jiaxin Du

Data fusion is a rapidly evolving field, yet current methodologies lack consistency and often fail to account for uncertainties, leading to unreliable analytical outcomes. This research aims to develop a knowledge graph framework that systematically integrates state-of-the-art data fusion techniques while explicitly addressing three types of uncertainties: conceptual uncertainties within the research, measurement uncertainties in data collection, and analytical uncertainties in modeling approaches. The proposed framework will enhance the reliability and transparency of data fusion practices by enabling structured documentation and intelligent reasoning over heterogeneous data sources.

A key innovation of this research is the integration of artificial intelligence to extract and organize data fusion methods from scientific literature, thereby automating knowledge representation and uncertainty detection. Additionally, the project will develop an interactive interface leveraging large language models and uncertainty visualization techniques to support users in exploring and improving data fusion methodologies. The ultimate goal is to provide a scalable, AI-driven tool that not only evaluates uncertainties in existing data fusion techniques but also synthesizes new methodologies to advance interdisciplinary research. By establishing a robust foundation for intelligent data fusion, this study contributes to improving decision-making in complex real-world systems such as urban planning, environmental sustainability, and public health.

KIRKHOF CENTER 2259

Burial Practices of Stone Age Populations from Southeast Europe

Presenter: Sofiia Svyryd

Mentor: Alexey Nikitin

Ancient DNA from Neolithic and Eneolithic burials in the Northern Black Sea (North Pontic) region reveals shifting social structures. Neolithic burials (6200–5000 BCE) were communal and patrilineal, with kin interred together. In contrast, Eneolithic burials (5000–3000 BCE) show increased complexity, with unrelated individuals and male–female pair burials, suggesting evolving social roles and marriage practices. Burial sites of Eneolithic Trypillian farmers of Ukraine further emphasize collective burial traditions. These changes reflect broader shifts in mobility, kinship, and social organization, offering insight into the region's cultural transformations that swept across the North Pontic and into the rest of Europe as well as large parts of Asia in the Early Bronze Age.

KIRKHOF CENTER 2266

Effects of Cognitive Behavioral Therapy on the Severity of Symptoms in Adults with Major Depressive Disorder

Presenters: Emily Chase, Lilly Epley, Francesca Petrucci, Alivia Royer

Mentor: Chad Sutcliffe

Major depressive disorder (MDD) is the most prevalent psychiatric disorder globally, affecting approximately one in six adults over their lifetime. The prevalence of MDD has risen by 27.6% following the COVID–19 pandemic. MDD is characterized by symptoms such as depressed mood, loss of interest in activities, sleep disturbances, fatigue, feelings of worthlessness, psychomotor changes, cognitive impairment, and suicidal thoughts. We conducted a systematic review to examine the efficacy of cognitive behavioral therapy (CBT) in treating MDD. CBT, a psychotherapeutic approach focused on identifying and altering negative thought patterns, has been shown to improve emotional regulation, social engagement, and overall well–being. Previous studies suggest CBT's potential in preventing and reducing MDD symptoms in adults, with positive effects on physical and mental health. The goal of this review was to evaluate the correlation between CBT and symptom reduction in adults aged 19 to 44 diagnosed with MDD. We found a positive correlation between cognitive behavioral therapy and decreased symptoms for adults diagnosed with major depressive disorder. Given the positive association between CBT treatment and reduced MDD symptom severity, adults diagnosed with MDD should choose CBT for their treatment.

BEGINNING AT 9:30 A.M.

KIRKHOF CENTER 1104

Scaling New Heights: Overcoming the Challenges of Rock Climbing with Limb Impairments

Presenters: Samantha Leonhardt, Brenden VanHaver, Sarah Webster

Mentor: Dawn De Vries

Adapted rock climbing is a challenging leisure activity that provides lots of benefits for people with limb impairments. Things like problem–solving skills, coordination, strength and overall well–being can be improved by taking part in this highly specialized activity. This systematic literature review will focus on the role of recreational therapists who can use adaptive rock climbing as a tool to help improve patient outcomes and overall quality of life.

KIRKHOF CENTER 1142

A Novel Investigation into Species–Specific Tree Architecture

Presenter: Catherine Chappell

Mentors: Gary Greer, Susan Mendoza

The woody component of a tree is a standing vascular system that supplies water and vertical support for spring growth, reproduction, and recovery from damage. As a result, the architecture of a tree (rate, size,

and angles of branching) represents the genetically imposed behaviors characteristic of its species plus phenotypically plastic traits modified by situationally unique combinations of competition with neighbors for sunlight and exposure to physical stressors such as wind, snow, and ice. Despite its ecological importance and potential utility in understanding forest and tree-crop response to climate change, research regarding the relationship between tree architecture, anatomical composition, local conditions, and large-scale geographic distributions are almost entirely non-existent. To address this lack of knowledge, I took scaled photographs of ten species native to Southern Michigan and measured their architecture. Next, we collected and organized species-specific anatomical data of wood and leaf traits relevant to hydraulics and structural support from scientific literature and web-based repositories. Finally, we used principal components analysis and correlation to seek relationships between species-specific architectures and underlying anatomical traits.

KIRKHOF CENTER 2201

A Woman's Lament: The Gendered History of Classical Greek Funerary Rituals

Presenter: Mikayla Ide

Mentor: Melissa Morison

I was inspired by Madeline Devantier's still-life *Orpheus and Eurydice*. The portrayal of the coins led me to the question "How were funerary rituals gendered in Classical Greece?" I focused on how an individual's gender informed the funerary rituals they were permitted to perform and participate in. Integrated analysis of both textual and material evidence indicates clear patterns in assignment of gender-based roles in funerary rituals in classical-period Greece. This research helps us better understand the important roles that women have played and continue to play in death and mourning.

KIRKHOF CENTER 2259

What's Love Got To Do With It? A Study of Love in Transnational Marriages

Presenter: Hannah Perri

Mentor: Yan Yu

China has undergone significant changes over four decades of economic development, including an increase in the number of Chinese women marrying Western men. As these marriages become more common, various assumptions have surfaced, with the most common being that these women marry for money rather than love, leading to the belief that such marriages are inherently unstable. Based on data from 17 in-depth interviews with Chinese women married to American husbands, we argue that love and marriage are multidimensional, complex and sometimes contradictory. Love is not just about emotions or feelings—it can be expressed through care, respect and commitment. We find that love does exist in transnational marriages, though it often takes forms that differ from the conventional idea of romantic love. Our findings highlight that these women define romantic love through contextual factors including culture, personal happiness and social support. When we ask about personal definitions of romantic love, details of personal life take a first-hand in influencing definitions. However, many other aspects are at play in over-arching perceptions of love.

KIRKHOF CENTER 2266

The "Man Bites Dog" Case of Canada's Immigration System

Presenter: Madelyn Stembol

Mentor: Thomas Walker

Madelyn Stembol

Hostility toward immigrants is rampant in the Global North. Canada, however, has had an exceptionally durable pro-immigration policy approach that stands out against Western trends. This study investigates the Canadian policy approach to immigration, and explores potential explanations for why Canada has been an outlier in the modern Western world. This topic is incredibly relevant during a time when many right-wing populists are using xenophobia to tilt Western governments away from democracy. By

exploring why Canada is different, we can learn about how to decrease xenophobia, and create immigration policy that works better for all. Previous research has explained Canada's immigration policy using its unique social culture, which has a focus on multiculturalism. I will evaluate this explanation, and will explore Canada's welfare system, as well as simple self-interest as potential factors, using academic and grey literature. After careful evaluation, I find self-interest to be the most compelling explanation for Canada's unique immigration system. The implications of my research are that to fight xenophobia, there needs to be a balance of humanitarian, and economic immigration. Moreover, knowledge of the benefits of economic immigration has to be widespread to counterbalance xenophobia.

BEGINNING AT 10:00 A.M.

KIRKHOF CENTER 1104

Positive Change: Behavioral Modification Techniques for Adolescents with Autism in Community Settings

Presenters: Sophia Corpel, Dylan Franges, Trevor Lewis, Megan Malinowski
Mentor: Dawn De Vries

The presentation focuses on identifying effective behavioral strategies that assist adolescents (8–18) with Autism Spectrum Disorders (ASD) in practicing appropriate behaviors in the community. We will discuss how mindfulness, social skills and emotional regulation interventions can enhance their ability to perform these behaviors.

KIRKHOF CENTER 2266

Abortion on the Ballot: Analysis of Abortion Referenda in the 2022 and 2024 Elections

Presenter: Nancy Boyd
Mentor: Thomas Walker

In the absence of federal provisions to protect abortion access, the 2022 Midterm and 2024 Presidential elections have offered inconsistent attitudes on the nation's commitment to upholding the statutes that were once held in *Planned Parenthood v. Casey* and *Roe v. Wade*. This paper explores how the decision in *Dobbs v. Jackson's Health Organization* has affected electoral outcomes in the subsequent election cycles. Through analyzing historically Republican, Democratic, and swing states and drawing upon public opinion, electoral outcomes, and voter turnout rates, this paper finds that abortion-related referenda do not affect voter motivation. However, the referenda tend to offer success for Democrats in races where Republicans were suspected to win, resulting in anomalous races. Ultimately, this paper offers an analysis of the everchanging influence abortion has on electoral outcomes in the United States and how the issues' role may influence future elections.

BEGINNING AT 10:30 A.M.

KIRKHOF CENTER 1104

Montessori Magic: An Exploration of Hands-On Activities for People with Dementia

Presenters: Delaney Geiersbach, Lirie Krasniqi, Sarah Smid
Mentor: Dawn De Vries

This presentation will discuss the effects Montessori-based activities have on individuals with dementia. Specific discussion on the outcomes proven to be successful in reducing agitation and dementia-compromised behaviors will be presented.

KIRKHOF CENTER 1142

Evaluating Foreign Intervention: A Libya Case Study

Presenter: Chloe Chynoweth

Mentor: Thomas Walker

Foreign Intervention is a term with many faces. On the international political stage, militant and humanitarian intervention is either intended to support domestic dissent or force its own interests on the state it is intervening in. Although provocative and indicative of both realist and liberal beliefs, does it always end in turmoil? Following the theory of interventionism in international politics, this case study is intended to weigh the socio-economic, political, and international stability consequences of foreign intervention in Libya in the 2010s. How did Western aid fail to consolidate the Libyan power vacuum after the dictatorial reign of Muammar Qadhafi? Is intervention on Middle Eastern states seen as inherently negative due to its “glass half empty” approach? This case study will seek to provide possible progressive solutions to uplift Libyan civilians in decades to come as an alternative to political forces and militant approaches through non-empirical and qualitative research.

KIRKHOF CENTER 2201

Threading History: Women’s Agency in Antiquity

Presenter: Caroline Collier

Mentor: Melissa Morison

Caroline Collier

Madeline Devantier's piece *Athena*, which depicts a spider hanging from its web, serves as a powerful metaphor for weaving -- an art historically associated with women in both ancient Greece and Rome. This study examines how weaving functioned not only as a domestic craft but also as a symbol of women's role in shaping cultural narratives. By linking Devantier's modern interpretation of Athena with this ancient tradition, this analysis explores how the art of weaving reflects women's agency, creativity, and connection to mythological and social themes in classical antiquity.

KIRKHOF CENTER 2259

Accelerating Electrodeposition Simulations with Physics-Informed Neural Networks

Presenter: Allan Ngaruiya

Mentor: Abishek Balsamy Kamaraj

Electrodeposition is important in processes such as electrochemical additive manufacturing (ECAM) and electroplating, where precise control over current density and deposit thickness is crucial for achieving desirable mechanical and structural properties. Given the numerous independent variables in the electrodeposition process, traditional methods of experimentation and simulation are often time-consuming, costly, and prone to inaccuracies, limiting their usefulness in optimizing electrodeposition parameters. This study investigates the application of machine learning (ML) models, specifically data-driven artificial neural networks (ANNs), simulation-based physics-informed neural networks (PINNs), and hybrid PINNs, to accelerate and enhance the accuracy of electrodeposition parameter predictions. Baseline data was generated from a potentiostatic electrodeposition experiment and simulation models incorporating Fick’s Law and Faraday’s Law. Data-driven ANNs utilized experimental data, simulation-based PINNs integrated simulation parameters with physics laws, and hybrid PINNs combined the strengths of both approaches to model current density, deposit thickness, and ion concentration. The results show that ML models can achieve up to 120 times increase in computational speed compared to traditional simulations, with superior accuracy in predicting dynamic behavior. The findings were validated with experimental and simulation results, highlighting the potential of ML models to provide rapid, reliable, and scalable solutions for optimizing process parameters.

KIRKHOF CENTER 2266

Rewriting the Humanities in Eco-crisis: How A.I. and Tech Dominance Limits Our Collective Creativity

Presenters: Jackson Hicks, Brooke Rempalski

Mentor: Brian Deyo

Development in our cultural relationships with climate crisis has centered technological ideals and extractive practices, and the push of A.I. threatens to leave humanities-shaped understandings out of the conversation. Cross-disciplinary collaboration and humanities pedagogy hold the unique potential to promote change in a time of need.

We ask what the locale of Grand Valley is doing to promote change, how the constituents of the university feel primed to contribute to the discussion and investigate the hidden costs of the tools students are pushed to use. We find that the question of how well we are equipped to handle the coming years in the educational environment suggests no simple, singular answer.

An intersection of community-building within the classroom, decisive moves for the university infrastructure, and long-term pedagogical shifts for students' lifelong learning journeys provides a path for a necessary shift in climate-informed living.

KIRKHOF CENTER 2270

Factors Affecting Satisfaction Levels of Visitors of Harbor/Marinas in Michigan During 2023/2024 Seasons

Presenters: Donovan Fiyalko, Benjamin Hettinger

Mentors: Patty Janes, Sango Otieno

A summary of the online survey data provided by the Michigan Department of Natural Resources will be presented. The survey was sent to parties who made reservations of which 1,018 and 1,777 parties responded in 2023 and 2024 respectively. The goal of the findings is to help assist the DNR in developing key factors that result in satisfied visitors. This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

BEGINNING AT 11:00 A.M.

KIRKHOF CENTER 1104

Breaking Boundaries and Building Memories

Presenters: Sydney Affholder, Julia Blaney, Maria Esparza

Mentor: Dawn De Vries

By exploring the impact of inclusive summer camps for children with developmental disabilities, this presentation will highlight the experiences that inclusive summer camps give children to improve their independence and overall well-being.

KIRKHOF CENTER 2201

"Don't Waste Your Suffering:" The Language of Buddhist-Based Recovery

Presenter: Cass Kramer

Mentor: Michael Wroblewski

Addiction recovery commonly involves "reconfiguring [users'] relationship with language" (Carr 2010, *Scripting Addicton*, 4). Although deemed inane by newcomers, peer-based recovery groups widely encourage the repetition of phrases, mantras, and condensed slogans (e.g., *easy does it*, *don't waste your suffering*); this ritual, playful speech practice foregrounds the language, and phrases gain personal significance over time. I begin with a general analysis of recovery language grounded in Bateson's theory of communicative framing: heightened linguistic awareness aids change in metacommunicative habits, while repetition increases perceived intersubjectivity, both of which are important for recovery. This theory is exemplified and challenged by an ethnographic case study of North American Buddhist-based recovery groups, including interviews with participants and examination of published recovery narratives. Buddhist recovery groups deliberately position themselves as an alternative to the dominant, Christianity-associated twelve-step paradigm, which is regarded as dogmatic and identity-effacing. Individuals seek

to preserve their sociocultural identities and their identities related to their particular addictions; accordingly, the language rituals of Buddhist recovery, including silent repetition, mindfulness meditation, traditional structures of enumeration, and vocabulary from ancient texts and contemporary Critical Theory, foster intersubjectivity and metalinguistic awareness while simultaneously emphasizing individuality. These observations may help inform future recovery meeting scripts and formats.

KIRKHOF CENTER 2259

Findings from Girl Scouts of Michigan Shore to Shore 2022–2024 Online Surveys.

Presenters: Sinell Robinson, Leah Stawara

Mentor: Sango Otieno

The Girl Scouts organization inspires and uplifts members through leadership, personal growth and community service. To strive for success, Girl Scouts of Michigan Shore to Shore (GSMISTS) analyzes Key Performance Indicators (KPIs), the Girl Scout Leadership Experience (GLSE), how Girl Scouts are benefiting from their experience, and how Girl Scout experiences differ for other groups of people. We analyze data from the 2022 to 2024 Online Surveys by accounting for the total membership for each year to identify areas of improvement. In addition to summarizing data using a variety of graphs and tables, Chi-Square tests of independence are used to help generalize the sample results to the population. This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

KIRKHOF CENTER 2266

How African Students in the U.S. Share Cultural Practices: Exploring the Relationship Between Food and Communication

Presenter: Ruth Yeboah

Mentor: Anthony Spencer

For African students in the U.S., food is more than just a means of nourishment—it is a form of communication, cultural preservation and identity expression. This study explores how African students in the U.S. use food as a form of cultural communication. Grounded in hybridity theory (Bhabha, 1994), this research draws on ethnographic observations and in-depth interviews with 12 African students at a Midwestern university to examine how food spaces—personal kitchens, media spaces, African grocery stores, or social gatherings—become sites of cultural negotiation and identity formation. Findings reveal that African students engage in food-based communication in three key ways: (1) preserving cultural identity through traditional cooking and ingredient sourcing, (2) strengthening intra-African connections through shared meals and communal cooking, and (3) building intercultural bridges by introducing their cuisine to non-Africans. The study highlights that food not only connects students to home but also serves as a language of belonging in a foreign space. By exploring the relationship between food and communication, this research contributes to broader discussions on migration, identity, and international student experiences. Understanding how food functions as a cultural text can help higher education institutions foster inclusive environments where international students feel seen, valued, and supported.

KIRKHOF CENTER 2270

Presenting Prettily: Cosmetics and Body Modifications in Antiquity and How They Were Used

Presenter: Elyse Karasinski

Mentor: Melissa Morison

Inspired by Madeline Devantier's still-life *Aphrodite*, specifically the lipstick shown, this project showcases ways in which cosmetics were incorporated in daily life in the ancient central Mediterranean. Today, we do not have access to the literal and physical forms of cosmetics used in ancient Egypt, Rome, and Greece; however, we do have evidence for use of ingredients like galena and malachite, as well as different cosmetic containers and tools. Along with make-up, this project also touches on other body modifications in antiquity, such as tattoos, piercings and branding. Cosmetics and other forms of body modification are important in modern times as well as in the past, and various contemporary media are

tailored to sell new beauty products or anti-aging remedies and to glamorize other forms of body modification. This project enhances understanding of how, and why, ancient people used cosmetics and in which ways other cultures used them differently/ similarly.

BEGINNING AT 11:30 A.M.

KIRKHOF CENTER 1104

From Combat to the Waves: Therapeutic Surfing and its Effects on Veterans

Presenters: Grace Gunderson, Hailey Vander Roest

Mentor: Dawn De Vries

This paper examines the therapeutic benefits of surfing for veterans, focusing on mental health, amputations, and psychosocial well-being. Additionally, this paper suggests that the therapeutic use of surfing should be integrated into the veteran population to utilize support programs as a complementary treatment option.

KIRKHOF CENTER 1142

Michigan DNR Day-Use Area Data Analysis

Presenters: Mason Denton, David Smith

Mentors: Patty Janes, Sango Otieno

The Michigan Department of Natural Resources is focused on protecting and managing the outdoors for generations to come so that everyone can enjoy the natural beauty that Michigan offers. Their mission statement reflects this commitment: "we are committed to the conservation, protection, management, use and enjoyment of the state's natural and cultural resources for current and future generations." We analyze the data collected from Campground Day-Users across the state to determine how the expectations of visitors compare to their satisfaction with the experience of their visit. That is, we seek to establish if the day-use areas (beach town, destination, Great Lakeshore, loved by locals, and nostalgic) determine how well the expectations of visitors align with their satisfaction across various categories, including beach access, cleanliness, enforcement of rules, trails, signage to help get around, and wifi availability. This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

KIRKHOF CENTER 2266

Tech Communications Analysis

Presenters: Samuel Defrank, Jason Hagen

Mentors: Sango Otieno, John Reynolds

The objective of this project is to observe patterns within the responses of CIS 230 students before and after a presentation on tech communication. Data was collected during each semester, for four semesters, from fall 2023 to winter 2024. The goal of this analysis is to identify parts of the presentation to remove, and construct ideas to add to the presentation based on the responses of the students. This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

KIRKHOF CENTER 2270

Chariton to Charlotte Brontë: The Role of the Ancient Greek and Roman Romances in the Evolution of the Novel

Presenter: Mckinley Hixon

Mentor: Melissa Morison

Inspired by the quill and stack of books in the *Apollo* and *Athena* art pieces by Madeline Devantier, I wanted to direct my research toward learning more about a genre of Ancient Greek and Roman literature that is not often discussed in scholarly circles: the novel. Different from the plays, poetry, and historical accounts most are familiar with, the Greek novel is prose fiction and, in many ways, parallels the conception of the novel that developed in the centuries following. My research tracks these similarities and differences, looking at these ancient texts in relation to the genre conventions found in later ones (primarily from the Renaissance period onwards) to see what influence, intentional or not, exists in these later works. In pursuing this investigation, my goal was to uncover what role these texts have in the broader history of literature and if they are just as relevant and worthy of attention and discussion as their poetic and nonfiction counterparts.

BEGINNING AT 12:00 P.M.

KIRKHOF CENTER 1104

Finding Balance: The Power of Tai Chi in Combating Depression and Anxiety

Presenters: Jacie Burk, Anna Schlutt, Lillian Scripter, Elisabeth Vogt

Mentor: Dawn De Vries

This presentation aims to evaluate the effectiveness of Tai Chi as an intervention for treating depression and anxiety symptoms in adults. While pharmaceutical treatments are commonly used, Tai Chi offers a holistic approach that promotes mindfulness, relaxation, and physical activity, which can reduce stress and improve mental well-being. This presentation will summarize existing studies on the therapeutic benefits of Tai Chi for depression and anxiety across various settings.

KIRKHOF CENTER 2266

We Do Not Accept OPT!: Contesting Systemic Barriers for International Student Internships

Presenter: Amanda Anka

Mentor: Anthony Spencer

International students are heavily recruited and valued by US universities, but not all fields are valued equally. STEM students consistently find more opportunities for sponsorship to complete internships, while students in the social sciences and humanities struggle to legally find off campus to work. High-impact practices like internships are a hallmark of the US educational system; however, without sponsorship, international students are literally stuck on campus while others take part in these practices. The search for the internship opportunity that can make us stand out as people with a different lived experience proves to be the only thing standing in our way while in our homelands finding internships was seldom a struggle.

I interview international students and discuss my own lived experiences in the internship process. I utilize sensemaking as a theoretical lens to understand strategies employed by students and the hurdles they encounter. Sensemaking theory unravels the cognitive processes through which students interpret and navigate these complexities, which are systemic and out of their control. Findings reveal multifaceted challenges stemming from visa restrictions, work authorizations, the perceptions of companies investing in international students, and the notion that STEM programs are better suited for a chance at landing internship opportunities.

BEGINNING AT 12:30 P.M.

KIRKHOF CENTER 1104

Boarding Flight 988: Meaningful Travel Experiences for Healing in Foster Care Communities

Presenter: Elaina Marcum

Mentor: Dawn De Vries

This presentation will look at the benefits of travel experience to enhance the quality of life for individuals with lived experience in foster care communities.

KIRKHOF CENTER 1142

On Roman and American Virtue and the Bonfire of Virtue

Presenter: Richard Finn

Mentor: Paul Cornish

There has never been a government created on the promise of bringing vice to its citizenry. Instead, all governments are formed on the premise that they will inspire virtue in their citizenry. This is accomplished through a “chief virtue” from which all other virtues are derived. Through an examination of two republican governments, the Roman Republic and the Republic of the United States of America, we find that governments, through their actions, culture of origin, and the structure of their constitutions will select different virtues for their chief virtue.

These chief virtues operate as a metaphorical bonfire, as they provide a beacon and model for all of citizens to follow. It is of paramount importance for governments to do all they can to maintain this bonfire of virtue. If the society or government around this bonfire causes an excess or deficiency of that virtue, it will spell disaster for that government and its citizens. This is best understood in the Aristotelian conception of virtue ethics.

KIRKHOF CENTER 2266

Keeping Score at Grady's Garden

Presenters: Nicholas Altena, Nathaniel VanDyk

Mentor: Sango Otieno

Grady's Garden is dedicated to fostering healthier lifestyles among children and families by enhancing access to nutritious foods limiting the addition of added sugar and preservatives and promoting the benefits of gardening. Through their educational program, “Grady's Classroom,” the organization aims to educate children on healthy eating habits and gardening. This study evaluates the effectiveness of Grady's Classroom in influencing children's knowledge and promote positive attitudes and association toward nutrition. Participants took pre- and post-tests for each module of the program to assess changes in their understanding of healthy eating. The results of these assessments provide insight into the program's ability to promote healthier eating behaviors and its potential to positively impact children's long-term dietary choices. This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

BEGINNING AT 1:00 P.M.

KIRKHOF CENTER 2201

Rule or Be Ruled: An Analysis of Zeus as a Passive Spectator

Presenter: Jacob Morgan

Mentor: Melissa Morison

I was inspired by Madeline Devantier's still life titled *Zeus*. The piece shaped the question: “How does Zeus fall into the passive spectator role in regards to ancient society based on literary evidence?” Based on the works of Homer, this study analyzes how the “god of gods” plays a passive role using hegemony and language to maintain his position above his fellow gods as a pseudo-active judge. With this research, I present my own analysis of Zeus alongside scholarly research to reveal Zeus's submission to Fate and his willingness to allow humans to conduct their own affairs with less divine interference.

KIRKHOF CENTER 2259

Misrepresentation of Muslims in Western Media

Presenter: Mariam Rida

Mentors: Carl Brown, Anthony Spencer

Lights, camera, Islamophobia? This research examines the representation of Muslims in Sacha Baron Cohen's 2012 satirical film *The Dictator*, arguing that the film perpetuates harmful stereotypes and contributes to the marginalization of Muslim communities. Drawing on Edward Said's foundational work, *Orientalism*, and employing the Riz Test as an analytical tool, the research exposes how the film reinforces negative stereotypes of Muslim men, conflates Arab and Muslim identities, and uses exaggerated accents and fabricated language to "other" Islamic cultures. The broad societal consequences of such portrayals are demonstrated by citing Pew Research studies that show how media portrayals shape public perceptions and contribute to prejudice. But the impact goes beyond the screen, with evidence highlighting the psychological impact on Muslim youth's mental health and civic engagement. By situating *The Dictator* within Hollywood's historical context of Islamophobic representation, this study advocates for media literacy initiatives and the authentic inclusion of Muslim voices in storytelling. These findings serve as a basis to ongoing thesis work that explores the complex relationship between media ownership and the rhetoric surrounding the Middle East conflict in Western media.

KIRKHOF CENTER 2266

Exploratory Analysis: Advertising to Gen-Z

Presenters: Kyle McKee, Julia Osmun

Mentors: Sango Otieno, Robin Spring

Working with the GVSU National Student Advertising Competition Team, we analyze data obtained from an online national survey targeting Gen-Z. Utilizing chi-square testing and bivariate analysis, we examine relationships between Gen-Z demographics and preferences on various topics including social media, communication, streaming services, and more. Multiple visualizations highlight trends from the respondents at different demographic levels. Further, we probe the idea of connection, and what it means to Gen-Z. Through topic modeling procedures, we identify two lenses to view connection: a business lens and a personal lens. Through analysis, we aim to answer the question: how do we advertise to Gen-Z? This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

BEGINNING AT 1:30 P.M.

KIRKHOF CENTER 2259

Echoes of the Dead: The Treatment of the Dead in Hoplite Warfare

Presenter: Kailey Washburn

Mentor: Melissa Morison

I was inspired by Madeline Devantier's art piece *Ares*, that depicts a war helm and spear. Hoplite warfare with its face-to-face, close-quarter combat leads to very little room for the dead and wounded on the battlefield, especially in the progress of the bloody and gruesome battles. The nature and scale of these types of battles often leads to a difficult and complicated retrieval and burial of the dead. The intention of this project is to identify the ways the dead were treated after and during battles, including retrieving the bodies, burials and cremation, the looting of the bodies, and the honoring of the fallen. Focusing on the Classical and Hellenistic periods, textual and material evidence referencing multiple battlegrounds and battles throughout Greece illuminates understanding of this understudied aspect of armed conflict.

BEGINNING AT 2:00 P.M.

KIRKHOF CENTER 1104

Statistics on the Driver's Seat at the GVSU Counseling Center

Presenters: Lauren Wolak, Lilly Wright
Mentors: Brian Bossick, Sango Otieno

The GVSU Counseling Center focuses on improving the well-being of the university's student body. The mission is "to enhance the well-being of our diverse GVSU community through mental health services, including prevention, education, and counseling." The purpose of this project is to determine if there is a significant improvement in symptoms between the initial and final counseling sessions and if patient demographic has an impact on mental health. The findings provide insights into reduction trends of eight distinct symptoms (depression, anxiety, social anxiety, academics, eating, hostility, alcohol, and distress) and demographic influences (sexual orientation, race/ethnicity, academic status, and gender identity), aiming to support data-driven improvements in counseling services. This project is part of the STA 419 course and is designed to provide students with an opportunity to gain experience in statistical consulting.

KIRKHOF CENTER 2201

The Shadows of Troy: The Trojan War Rewritten and Reviewed Through the Experiences of Trauma in *The Silence of the Girls*

Presenter: Lilian Hevron

Mentor: Melissa Morison

Inspired by Madeline Devantier's *Apollo* silkscreen and the ink pot and quill as symbols of who gets to write history, I was motivated to study the untold stories of antiquity and analyze how they are being rewritten. Classical literature, particularly *The Iliad*, glorifies war and heroism but marginalizes captive women like Briseis— a silence that Pat Barker's *Silence of the Girls* disrupts by shifting the focus to the experience of female trauma. This research explored Barker's novel as a feminist counterpoint to *The Iliad*, using *écriture féminine* and trauma theory to reframe war. Drawing from the works of trauma theorists, this analysis contrasted *The Iliad*'s externalized epic form with *Silence of the Girls*' fragmented, introspective narration. Barker's novel challenges classical depictions of women, revealing how male perspectives erase or soften female trauma. By comparing *The Iliad* and *Silence of the Girls*, epic storytelling's problematic limits become clear. Now, retellings can recover these silenced voices. This study contributes to classical reception studies, feminist literary criticism, and trauma literature by reconsidering how war narratives can be told and redefining whose voices are prioritized.

BEGINNING AT 2:30 P.M.

KIRKHOF CENTER 2201

Seasonal Shifts in Angler Attitudes and Motivations at Drowned River Mouth Lakes

Presenters: Amanda Francis, Steven King

Mentors: Amanda Buday, Carl Ruetz

Understanding the sociological factors within a fishery is a critical component for successful fisheries management. The objective of this research was to understand factors underlying the seasonal shifts in angling activity at drowned river mouth (DRM) lakes. West Michigan has a series of DRM lakes that are lake-like habitats that connect tributaries to Lake Michigan and offer year-round opportunities for recreational angling. In winter and summer 2024, we conducted angler surveys (n=166) to collect baseline information on the attitudes and motivations of participants at three DRM lakes: Muskegon, Pentwater, and Pere Marquette. Anglers were asked to respond to Likert scale statements pertaining to their reasons for fishing (e.g., recreational enjoyment, food acquisition) and the importance of various aspects of fishing (e.g., being outdoors). Additionally, we recorded basic demographic information (e.g., age, gender, race) and asked questions related to angler experience. We found that eating fish, and catching Yellow Perch is what drives winter angler behavior. Summer anglers demonstrated a more "generalist" approach to fishing and represented a higher level of racial diversity compared to winter anglers. Our findings will assist fisheries managers to craft regulations that better address angler attitudes and motivations.

KIRKHOF CENTER 2259

The Understanding of Geographic Space in Antiquity

Presenter: Samuel Sabatino

Mentor: Melissa Morison

Inspired by the globe present in Madeline Devantier's *Hermes*, this project seeks to better understand how the peoples of the ancient Mediterranean understood geographic space, using both textual and material evidence. The available evidence suggests that while the ancient inhabitants of the Mediterranean had some understanding of the idea of the globe, and the theoretical ability to create what in modern times would be considered an accurate map, limits in technology forced them to develop a number of creative ways to represent geographic space. Understanding how the people of the Ancient Mediterranean may have conceptualized space may aid in understanding the reasoning behind their choices in many areas of life, whether that be how to describe the layout of a house, how to move an army somewhere, or just the general way that progression is described rhetorically.

BEGINNING AT 3:30 P.M.

KIRKHOF CENTER 1104

Profiles of Michigan State Park Campground Visitors Based on a 2024 Online Survey

Presenters: Nicholas Ricketts, Zachariah Yonker

Mentors: Patty Janes, Sango Otieno

We analyze data (39,899) collected by the Michigan's Department of Natural Resources (DNR) in a 2024 online survey sent to overnight visitors at Michigan state parks and campgrounds. Exploratory and inferential data analysis are performed in an effort to profile parks by campers' experiences. The trends discovered will help the Michigan DNR to identify why campers visit parks, where they come from, and the activities they do there. This will lead to improving the environment of state parks to entice campers from all over the state, especially younger campers who are creating a new generation of camping trend. This project is part of the STA 419 course designed to provide students with an opportunity to gain experience in statistical consulting.

KIRKHOF CENTER 2266

A Study and Mapping of the Chian Wine Trade in the Classical and Hellenistic Periods Through Amphorae

Presenter: Enzo Arcamone

Mentor: Melissa Morison

I was inspired by Madeline Devantier's 2024 artwork, *Dionysus*. The juxtaposition between the oinochoe and the modern 750 mL wine bottles led me to research aspects of the wine trade in antiquity. Specifically, I chose the trade of wines from the island of Chios, as textual evidence shows that they were widely regarded as wines of utmost quality. An analysis of the wine carried in Chian amphorae shows how far Chian (viti)culture reaches and why Chian wine was so sought after in antiquity. Using this study, I establish the major parallels between the ancient and modern luxury goods trades, as the modern trade of luxury goods echoes the luxury goods trade of centuries past.

BEGINNING AT 4:00 P.M.

KIRKHOF CENTER 2270

Place Your Bets: Games and Gambling in Ancient Greece

Presenter: Martin Hall

Mentor: Melissa Morison

I was inspired by Madeline Devantier's *Hermes* and *Athena* still-lives. Seeing the inclusion of dice, cards, and game pieces raised the question "What games did the Greeks play?" How did the Ancient Greeks use and understand games as a social phenomenon? I'm focusing on how adults interacted with one another and how they understood these games. There are multiple types and categories of games, which include skill, competitive, team-building, and games of luck or chance. Each game leaves an individual with decisions and outcomes that impact their next moves. For games that have a clear winner or loser, players or observers can enter into a level of stakes in which bets can be made on the possible outcomes of victory. This research helps us to better understand the social aspects of dice games, board games, and athletic competition, both ancient and modern.

BEGINNING AT 4:30 P.M.

KIRKHOF CENTER 1142

National Student Advertising Competition (NSAC) Ad Campaign Presentation

Presenters: Rebekah Bleyenbergh, Grant Fales, Grace Roginski, Sophia Rolfe, Helena Wilson

Mentor: Robin Spring

We are the GVSU NSAC Team presenting an advertising campaign for a national client in competition with 100+ universities across the U.S. The Campaign strategy is based on research insights from interviews, focus groups, a national survey, biometric testing, and secondary sources. Students implement research analysis, critical thinking, problem-solving, creative execution, and written and oral presentation skills.

KIRKHOF CENTER 2201

A Pilot Study on Tongue Pressures in the Geriatric Population

Presenter: Rylee Davis

Mentor: Srihimaja Nandamudi

Presbyphagia refers to changes in swallowing function due to aging. It is a natural consequence of aging and is not considered a disorder. However, older adults with presbyphagia, especially combined with other medical comorbidities, are at a higher risk of developing swallowing difficulties, choking, and pneumonia. The current project aims to compare the oral pressures between younger and older populations and to identify risk factors in the latter group that could increase the risk of swallowing difficulties. The goal is to facilitate early identification and intervention. The research questions are (i) Is there a difference in tongue and lip strength and endurance values between young [20–30 years old] and older [60–85 years old] individuals? and (ii) what factors impact swallowing function in older individuals, potentially increasing the risk of swallowing difficulties and choking (aspiration) related pneumonia? The study is on-going and the results of the data will be reported in the presentation.

KIRKHOF CENTER 2259

Perceived Support & Belongingness Amongst Groups of Underrepresented and Majority Graduate Students

Presenter: Jada Thomas

Mentor: Mikhila Wildey

Objective: Graduate students are at high risk of mental illness; support and belongingness during graduate school are linked to their greater resiliency. This study compared perceived functional support and belongingness between underrepresented graduate students (e.g., non-heterosexual, non-White, non-American citizens, or those with chronic conditions) and majority group graduate students (e.g., heterosexual, White, American citizens, or those without chronic conditions). **Participants:** 734 graduate students from a large, Midwestern university. **Methods:** A survey assessed perceived functional support and belongingness, and differences between underrepresented and majority groups were analyzed. **Results:** Underrepresented students reported less support and feelings of belongingness compared to majority group students. **Conclusion:** Universities can enhance resiliency and reduce stress among

underrepresented students by improving functional support and belongingness. Recommendations are provided.

KIRKHOF CENTER 2266

Reconstructing Hera: Gender, Marriage, and Power in Greek Mythology

Presenter: Aoife McKenzie

Mentor: Melissa Morison

I was inspired by Madeline Devantier's work, *Hera*, and was particularly drawn to the wilted flowers in one of the vases, which stood in stark contrast to the healthier flowers displayed in her piece *Zeus*. These wilted flowers seemed to symbolize the tension between the idealized notion of marriage—reflecting Hera's role as goddess of marriage—and the harsh realities sometimes present in marital relationships, especially when considered in the context of Hera's own troubled marriage with Zeus. This project examined the various representations of Hera throughout Greek mythology and literature, and how these depictions have been interpreted over time. Hera's myths, still relevant today, offer profound insights into modern issues such as gender dynamics, marital struggles, and power imbalances. Through this study, this project aimed to deepen our understanding of how ancient narratives portrayed not only Hera, but also the broader themes of family, marriage, and marital strife through her stories—topics that continue to inform and resonate with our present-day experiences.