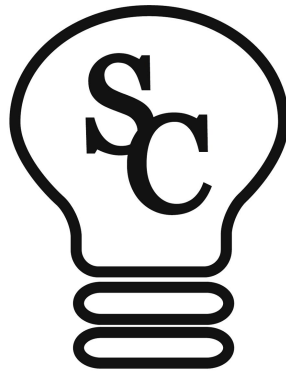


# Student Abstracts



## RESEARCH & CREATIVITY SYMPOSIUM



April 18, 2024

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## Oral Presentations

### Division of Business Administration & Multimedia Communication

#### 1. The Satanic Panic Epidemic in the 1980's: Media Influence

**Faculty Advisor:** Brian Steffen

**Student:** Wendy Moncerrat Soto

**Abstract:**

In the 1980's a woman accused Ray Bucky from the McMartin Daycare of the satanic sexual abuse of her child. Though with little to no evidence this became the most expensive trial in American History. Because of the popularity in the topic and other sociological and economic factors it caused the spread of accusations across the country that caused daycare workers and teachers to be incarcerated. The Satanic Panic to lasted over a decade. I will be investigating the influence on the media and why people are so inclined to believe in bizarre conspiracy theories. The question stands: is it up to the media to be aware of what the report at the expense of profit or is it up to the people to not give to conspiracy theories they read about on the news?

### Division of Education and Sport & Health Sciences

#### 1. History of Women's Sports in the Media

**Faculty Advisor:** Brian Steffen

**Student:** Kacie Eisentrager

**Abstract:**

In my presentation I am going to be discussing how the coverage of women's sports has differed through media history. Women's sports have never received the same amount of coverage as men's sports. The coverage lacks due to the perception that women's sports will not gain the viewership that men do. Even within women's sports, gender "appropriate" sports are shown and talked about more than those that are deemed not "appropriate" for women. Within the media, women are even compared to their male counterparts or referred to as the female version of them. Sport coverage is not based upon the participants that are involved but instead the commercial value the coverage can bring in. Women's coverage includes more sexualization and speaks about their bodies whereas men do not receive this. Commentators reference each gender differently. Women are more often referred to by their first name, which is a sign of less respect. Men, however, are referred to by their last name. The findings have shown that women have less coverage than men and are treated with less respect than men in sports media coverage.

### Division of Humanities

#### 1. Gender, Class, and Filicide in Victorian England

**Faculty Advisor:** Rebecca Livingstone

**Student:** Katherine Hendrickson

**Abstract:**

One of the greatest fears of middle-class society in Victorian England was the disruption of gender roles and social hierarchy. Women were to act one way, while men were to act another way. Within the generic gender roles were parenthood expectations. Mothers were the caregivers; the ones who nurtured their children. Fathers were the heads of the households, and they were to provide stability within them through acting in an authoritative way. These middle-class norms were disrupted whenever a parent killed their child or children. When a household became disrupted, it would lead to the entire community being disrupted. The middle class, who were the ones who determined the social and gender norms, wanted to keep it that way to prevent the troublesome working-class traits from taking over society. Victorian England's dominant middle-class expectations of nurturing motherhood and authoritative fatherhood had a role in deciding whether a parent was convicted of murder or manslaughter. The Old Bailey Sessions' portrayal of killer fathers exerting too much power and killer mothers going completely against their nature reestablished these expectations.

## 2. Women and Medical Professionalization in 19th and early 20th c. Iowa

**Faculty Advisor:** Nick Proctor

**Student:** Katie Christensen

### **Abstract:**

This paper examines the experiences of women medical practitioners in mid nineteenth to early twentieth century Iowa, shedding light on their interactions with institutions that shaped the professionalization of medicine in the state. Practitioners entering the state faced a unique subversion of gender roles due to the labor required by living in newly colonized territory and how those in isolated communities relied on residential midwives for care, forcing male doctors to collaborate with them to gain public trust. However, these forced interactions were not without conflict. Despite frequently taking prescriptions from midwives or native peoples in the area, male practitioners maintained a notion of superiority over all women who practiced medicine. As professionalizing institutions developed, qualified women encountered obstacles in obtaining medical licensure compared to their less qualified male counterparts, and the practices of medicine in the state with the highest proportion of female practitioners were deemed "quackery," and targeted to be eliminated. Hoping to create a medical department affiliated with a state university, legislators faced pressure from practitioners and citizens alike to ensure the fairness of the school's curriculum for all practices. Dissenting practitioners resisting regulations prompted legal battles between schools and regulators, resulting in rulings that affirmed institutional powers to control the practice of medicine in the state. By the early twentieth century, provided they adhered to regulations and stuck to their prescribed roles from their male counterparts, the capability of professional women practitioners began to be realized. Exploring this period in Iowa history from the lens of women medical practitioners reveals the complexities of gender expectations and institutional regulations and their impact on social attitudes towards women in Iowa, challenging the notion of Iowa as a "progressive" state.

## 3. Domestic Homicide and Wife Beating in Nineteenth Century Victorian England

**Faculty Advisor:** Rebecca Livingstone

**Student:** Hannah Curtis

### **Abstract:**

Domestic homicide has been an issue plaguing western society for centuries, and nineteenth century Victorian England was no different. Domestic homicide, specifically when a husband kills their wife, between the years of 1800 to 1900 will be evaluated as to why this is occurring. The purpose of this study is to evaluate the difference between abuse and discipline through the term 'wife beating'. By looking at the Old Bailey Proceedings Online, an online database of every case which occurred at the Old Bailey Courthouse in London between 1674 to 1913, I was able to narrow my search to husbands who were charged with murdering their wives between the years 1800 and 1900 resulting in around 300 cases. The cases which I ultimately selected were outstanding cases from this search, cases where the manner of death, verdict, or issues surrounding the death stood out from other clear-cut cases. From here, I was able to look into the issues surrounding the reason for the murder and cross reference what was occurring in one case with other cases in the Old Bailey to find other, similar themes across the Victorian era. The result being the gender roles which the Victorian population abide by have created a fine line between abuse and discipline. Specifically, the male gender roles which play a large role into why they committed the murder and whether it was intentional as the accepted gender role of men was that they are to be levelheaded and in control, thus their state of mind and habits when the murder of their wives was committed is evaluated during their trials and verdict of guilty or insane. This study is important in understanding the historical context of gender roles within the household and society, as well as viewing the historical side of domestic abuse.

## Division of Natural Science

### 1. Modeling Global Food Security with Agent Based Modeling

**Faculty Advisor:** Heidi Berger

**Student:** Allison Young

**Abstract:**

In an increasingly interconnected world, disruptions to food supply chains pose significant challenges to global food security. This project aims to simulate the dynamics of global food security using agent-based modeling, focusing on the impact of various factors such as conflict, natural disasters, and organized crime on food production, distribution, and trade. Motivated by recent events such as the Ukrainian grain exports disruption due to the Russian invasion, the project seeks to identify vulnerabilities in food supply chains and critical regions where diplomatic efforts could enhance stability. By modeling international food trade and interactions during disasters like famine, the project aims to provide insights into strategies for improving global food security in the face of complex challenges. This problem was done in coordination with an alumni in the Math-285 course.

### 2. Optimized Work-to-Rest Schedule for Construction Workers

**Faculty Advisor:** Heidi Berger

**Students:** Lara Kallem, Matthew Dietrich, and Jason White

**Abstract:**

Heat stress has become an intensifying issue for physically demanding occupations that take place outdoors, especially for construction workers. To reduce heat stress incidents, compa-

nies should give their workers safe working conditions, starting with adequate breaks. Creating an optimized work-to-rest schedule would look like minimizing heat-related incidents while maximizing productivity for the company. Heat-related incidents can potentially cost companies hundreds of thousands of dollars to compensate the workers harmed. With our project, we can provide a service that includes a productivity increase with a compensation decrease. This group project looks at Texas construction worker data collected from Vig-iLife's SafeGuard wearable sensors. Using the collected data and a data simulator, we have developed a calculator using Python code to create an optimized work-to-rest schedule based on core body temperature, external temperature, weather forecasts, and metabolic rate. The calculator utilizes a decision tree and a work-to-rest model by the National Institute for Occupational Safety and Health (NIOSH). By using this calculator, companies will retain workers and benefit financially. Texas currently has no regulations in place for workers in heat, so the importance of this project is paramount.

### 3. Application of Covalent Warhead Inhibitors for Improved Cancer Therapy

**Faculty Advisor:** Derek Lyons

**Students:** Sam Darning, Olivia Heerkes, Avery Plathe, Colin Hubbell, and Payton Seo

**Abstract:**

Cancer is a leading cause of death and there is a need for new clinically viable therapies. Next generation therapies must prevent cancerous cells becoming resistant through the upregulation of DNA repair pathways. Human apurinic/aprimidinic endonuclease 1 (APE-1) plays a key role in repairing DNA in the base excision repair (BER) pathway, and its upregulation is frequently seen in tumor cells. Inhibition of APE-1 sensitized the tumor cell to chemotherapy. A dual-therapy combining APE-1 inhibitors with chemotherapies is more effective. Initial APE-1 inhibitor designs have failed to block APE-1's DNA binding site without toxicity. Our solution to this problem is to target a cysteine residue present near the DNA binding site using an acryl warhead that covalently attaches to the cysteine and allows for weaker binding, less toxic inhibitors to be effective. We evaluated inhibitor effectiveness with an in vitro fluorescent assay that observes the rate of DNA repair processing over time. Effective inhibitors reduce the rate of observed fluorescence by impairing APE-1 function. Preliminary results show inhibitors with negative charge are effective, likely due to the inhibitor interfering with the positively charged residues in DNA binding site.

### 4. Analyzing Bias in Large Language Models

**Faculty Advisor:** Heidi Berger

**Students:** Kayla Jensen, Drew Klein, and Adam Gruhn

**Abstract:**

Large Language Models (LLM), such as Chat GPT, have become increasingly popular as tools in the workplace. Although algorithms are assumed to be impartial, much of the generated text from an LLM contains bias and misinformation. Our research investigates the cause of bias in LLM's and potential methods of mitigating bias. We performed a qualitative analysis on many different types of biases present in these models. We used a strategy of specific questions asked to many different models then analyzed the responses along with the sources attached to validate the information for accuracy. We have created a process using sentiment

analysis to rank the bias present in sources used for training data as well as responses from LLM's to quantify bias. While it's impossible to completely remove all bias, reducing the harmful bias from LLM algorithms will result in a more inclusive and accurate tool. This work is done in collaboration with a Simpson College alum through Math-285.

## 5. Simpson College Trees: A scientific and historical approach

**Faculty Advisor:** Aswati Subramanian

**Student:** Jared Oosterhuis

### **Abstract:**

The presence of trees in an ecosystem can give many insights about the health and history of that environment. Tree species vary in their growth rates and lifespans, so learning about how each tree grows can influence landscape planning and can impact natural and biological factors such as animal habitat, soil water retention, oxygen production, and carbon sequestration. In this project, I completed a broad historical and quantitative survey of the trees of Simpson College campus to assess the total biodiversity, species richness, and approximate age of all trees. To accomplish this goal, I measured the diameter at the breast height (DBH) of all trees, identified each to species, and noted each tree's location using GPS. I used average growth rate factors from the literature to calculate an approximate age for each tree. I also consulted historical archival photos of parts of campus to corroborate growth factor averages.

DBH of trees on campus ranged from 2.5 cm and 137 cm. Based on published growth factors, I calculated campus trees ranged in age from 6 to 191 years old. We know from historical information that no trees existed on campus when it was established 155 years ago. Thus, there were discrepancies between the growth factor model and the archival photos demonstrating the complex nature of estimating tree age from models based on "average" growth rates for species.

This project provides a baseline dataset with DBH measurements of each tree on campus, along with GPS locations and species identification, which can be compared in the future to better understand on-campus growth rates. All this data can help with future tree-planting planning and campus beautification.

## 6. Optimization of EMS Vehicle Location Using a Single Objective Model

**Faculty Advisor:** Heidi Berger

**Student:** Lara Kallem

### **Abstract:**

Emergency Medical Services (EMS) are crucial to ensure the safety of our communities. In order to be most effective, they must be as efficient as possible. Location of EMS vehicles and stations play a key role in measuring their efficiency. It is conventional for stations to be in densely populated areas to best serve the community. The Clive Fire Department recently built a fire station in 2021 at a new location to replace outdated and small facilities. The new station is now on a main road instead of a side street. The objective of this project was to determine if the location change impacted their efficiency in a positive manner. The optimization approach has been modeled on a 2011 study that measures efficiency by travel and response times as well as call coverage. The goal for fire departments is to minimize travel and response times while maximizing call coverage. This study utilizes real data from the

Clive Fire Department before and after changing the station location to see how efficiency was impacted. Data includes demand zone, call volume, travel time, and service time. A single objective model based on a paper by Chanta et al. is used to compute the efficiency of the new and previous station locations. Values are compared using a statistical T-test to determine if there is a significant difference in efficiency between the two station locations.

#### 7. **Optimizing Valve Response for Enhanced Autosteering Precision: A Case Study with AgLeader**

**Faculty Advisor:** Heidi Berger

**Students:** Christina Dietrich, Gabe Hadley, and Parker Lee

**Abstract:**

This project aims to develop a versatile model for the response of hydraulic valves in tractors and farming equipment, with a specific focus on autosteering systems. By addressing factors such as valve delay, nonlinearity, and responsiveness to different commands, the proposed model seeks to enhance precision and workability. The general model will provide a higher level of adaptability and automation compared to previous hardcoded approaches. We will explore several potential models to determine what best describes our data. We will utilize methods such as linear regressions, time-series analysis, and system identification practices. This work was done in coordination with AgLeader through Math-285, Industry-Mentored Research. The final work includes a comprehensive input-output model, documentation outlining parameters and behaviors, and a comparative analysis demonstrating improvements over existing models.

### Division of Social Science

#### 1. **The Sinews of War: Loose Monetary Policy and Propensity for International Conflict**

**Faculty Advisor:** Adrienne Gathman

**Student:** Scott Krueger

**Abstract:**

The sinews of war are infinite money.” - Cicero

Inflation and war have gripped the global community in recent years. With wars in Ukraine and Israel-Palestine and tensions rising around the world, it is clear that understanding conflict is becoming more necessary than ever. Domestic issues surrounding monetary policy have become more salient in the minds of many Westerners as the money supply continues to increase the price level, especially in the United States. Economic issues, particularly fiscal policy, have been connected in past research to the propensity for conflict or the ability of nations to wage wars. Still, little research has explored the possible tie between monetary policy and a nation’s propensity for international conflict. This leads to my research question: to what extent does a loose monetary policy affect a nation’s propensity for international conflict? I examine this topic through a rational-strategic framework focusing on a comparative analysis between two decades: 1998-2008 and 2008-2018,” which both feature incredibly important changes to monetary and foreign policy. This comparison will especially look to major Western nation’s decisions to enter into international conflict or support international



conflict after changes to their central bank's interest rate. I argue that a loose monetary policy will increase a nation's propensity for war because it supports poor fiscal policy and allows easier financing during a conflict - making the choice to go to war easier than in a more restrictive monetary policy.

## Division of Visual and Performing Arts

### 1. Women's Health and Wellness Magazine: Editorial Layouts

**Faculty Advisor:** Justin Nostrala

**Student:** Bethany Lachona-Luda

**Abstract:**

I would like to present the work that I am creating for my senior seminar in graphic design at the symposium. My project for this class will be completing the editorial layout for a young women's magazine. Using my studies and health and exercise, science and photography, I plan to design a Magazine that attracts the college female population, with the age range of 18 to 23. I plan to create a modern yet feminine design that is fully structured, but also has a sense of fun movement and color. I want to combine art and exercise science, my 2 loves. I want my magazine to focus on topics such as exercise, mental health, diet, and perhaps a bit of fashion, with sub categories, such as eating disorders, social media, etc. I plan to design a magazine that encourages women to feel accepted and welcomed as they go without making their lives healthier. My overall mission statement is: through this magazine, I want to create a sense of community amongst college women, as they strive to better themselves mentally and physically. I plan to use fun, but also modern fonts as I want to make sure the information is easily legible, and displayed in an organized manner, but not lacking uniqueness. I plan to incorporate many impactful images as well as self drawn elements. My magazine will have at least eight pages, front and back. I also plan to create a subscription mailer to insert into the magazine. I plan to have large scale printed pages as well as a physical copy of the Magazine for my presentation.

### 2. Music and the Uncanny Valley: Soundtrack Dissonance

**Faculty Advisor:** Kathryn Duffy

**Student:** Lyza Cue

**Abstract:**

For decades, horror and music have worked together to bring anxiety and entertainment to the masses. It is generally understood that in scenes of tension or violence, music that is fast in tempo or dissonant is the best choice to complement the visuals on screen. There is a school of thought in music and film, however, concerning what effectively elicits the most fear and anxiety from an audience. "Soundtrack Dissonance" and "Uncanny Valley" are two concepts that thrive on what happens when the audience is given the opposite of the expected. Instead of conforming to convention, these concepts instead diverge from it. Multiple studies conclude that audio, compared to visual elements, causes the human mind to create connections associated with the happenings on screen. However, what happens when those connections cannot be made? By exploring the long-standing relationship between music and emotion on a deeper level, one can dissect how these two concepts have found a new way to strike fear into the heart of an audience.

## Poster Presentations

### Division of Business Administration & Multimedia Communication

#### 1. Social Entrepreneurs at Simpson College

**Faculty Advisor:** John Walker

**Students:** Cody Durbin, Jerad Fischer, Austin Foster, Camden Ganzeveld, Bo Lee, Micheal Madeira, Joann Martin, Chris Martinez, Luke Mayer, Jack Perkins, Matthew Schubert, Wyatt Shoaf, Paul Tiedemann, Sophie Waugh, Lauren Wilgenbusch, Aaron Wilkins, and Sal Fratini

**Abstract:**

Students participating in MAGT 221 Social Entrepreneurship will present research on business opportunities that have a positive impact on their community, in society or the world. The overall goal of this project is to help inform the campus community of the difficult societal challenges we face and how students can work together to create solutions. We have 6 teams in the class working to solve these problems. Problems are based off the United Nations sustainability goals

#### 2. History of Media in the Commercialization of College Athletics

**Faculty Advisor:** Brian Steffen

**Student:** Sydni Powell

**Abstract:**

Today, people know the media plays a large role in the atmosphere of collegiate athletics but, what about a time in which the media was new to the atmosphere? One avenue that the increased amount of media in sports created was that coaches were given a platform to be seen or heard by their fans or those who tuned into the game. This changed how college sports were portrayed. Instead of viewing them as just intercollegiate athletics, they changed into a successful business model. Coaches could start their own talk shows on both the television and radio. Others could do an increased amount of interviews with reporters. Today, coaches can make six-figure salaries, pursue brand deals, and go on social media to garner engagement for their team. No matter how much this has changed, it is important to understand where this started. Which brings up the question: How did college coaches use the media to build their team and personal brand presence in the early days of the media in college/professional sports?

#### 3. Broadening Societal Understanding through Volunteering

**Faculty Advisor:** Tayler Keitzer

**Student:** Sydni Powell

**Abstract:**

Volunteering makes a large impact in the individuals' lives that you directly touch. In high school, I knew that helping others was a very important job that needed to be done. My senior year, I was able to start a non-profit with three other classmates. Our non-profit was created with the goal to help children with disabilities have opportunities to participate in sports. All volunteer work that I do to this day is with the mindset that everyone, especially children,

should have the same opportunities when it comes to feeling a part of a community. While a part of the Wesley Service Program, I have been able to increase my exposure to the needs of people in my community. Specifically, I have spent a lot of time volunteering in the high school debate circuit, which I spent a majority of my time in high school competing in. This has allowed me to mentor competitors and help them get the most out of the activity that they could possibly get. Through volunteering in high school and with the Wesley Service Scholars, I have been able to continue to broaden my societal understanding of needs within the community.

**4. WSS Poster - Nonprofits Helping Combat Childhood Sickness**

**Faculty Advisor:** Tayler Keitzer

**Student:** Emma Winterboer

**Abstract:**

Volunteering is a simple act of kindness that can change not only the lives of others, but your own. I have been volunteering since high school, and it has shaped me into who I am today. Some of my most memorable volunteer experiences include time spent in my church's kid ministry program, with Indianola middle schoolers, and helping at the finish line of races. As I have grown up, several volunteers have impacted my life in positive ways, so I wish to do the same to others. Volunteering allows me to give back to my community in impactful ways.

Strong health is any easy thing to take for granted, but there are several families out there who have their everyday life impacted because of childhood sickness. My heart breaks for these impacted families, and I want to begin investing more time and money into the related nonprofit organizations. I chose to research more about the nonprofit organizations who help those impacted by childhood sickness. I am a part of Tri Delta and our philanthropy is St. Jude Children's Hospital, I have participated in dance marathon, and I was one of the kids obsessed with collecting pop tabs throughout school to help the Ronald McDonald house. Although I have been exposed to these organizations in the past, I chose to dive deeper into the work these nonprofits do to help combat childhood sickness. I feel like the first thing that comes to mind with these organizations is monetary donations, but I chose to learn about the ways in which we can volunteer our time. It is my goal to begin spending more time volunteering at organizations like these that are close to my heart.

**5. Legends in Harmony: The Timeless Influence of 1960s Black Female Soul Singers on Contemporary Pop Music**

**Faculty Advisor:** Brian Steffen

**Student:** Abby Ludwig

**Abstract:**

Legends in Harmony: The Timeless Influence of 1960s Black Female Soul Singers on Contemporary Pop Music delves into the transformative impact of the biggest Black female singers of the 1960s, often referred to as the "Queens of Soul," on the genre of American pop music. Aretha Franklin, Etta James, Gladys Knight, Nina Simone, and Diana Ross, iconic figures of this era, revolutionized American soul music and laid the groundwork for the emergence of contemporary pop music. The central research question explores how these pioneering artists influenced the development and evolution of pop music, and their enduring legacy in

shaping the pop music landscape. The significance of this research lies in its exploration of the lasting impact these singers had on contemporary pop and their enduring relevance in the music industry. By tracing the lineage of pop music queens from before the 1960s to the present day, this study sheds light on the continuous and versatile evolution pop music has shown time and again that it contains and the enduring legacy of the “Queens of Soul”. Drawing on a wide range of scholarly sources, including biographies, critical analyses, and archival materials, this paper offers a comprehensive understanding of the time period and important figures being discussed throughout. These women stood out for their unique vocal styles, lyrical themes, and performance techniques that not only transformed the landscape of American popular music but also catalyzed a cultural shift in the industry. By analyzing their enduring influence on contemporary pop artists, this paper reveals the ongoing dialogue between past and present musicality and trends.

**6. Volunteer experience**

**Faculty Advisor:** Tayler Keitzer

**Student:** Landen Simpson

**Abstract:**

I believe it is important for people to volunteer because you are helping people that do not have as much as you. My favorite volunteer thing I have done so far is working at the special olympics. During this event I had a group of three kids and adults that I was in charge of. I was in charge to bring them to different basketball stations and drills and try and help them learn different basketball moves. I enjoyed this a lot and the kids and adults that I worked with also seemed to have a lot of fun playing in the drills. Before working at this event I did not know anything about the special olympics and know after working at it and talking with all the people about it I learned a lot. I learned they pretty much travel all over the country and do many different sports besides basketball like football and soccer. For a societal topic I chose bullying. I decided to pick bullying because in high school I was apart of this program call mentors in violence prevention. Mentors in violence prevention was a program where high schoolers would learn about different kinds of bullying and teach the younger classman why it was wrong and also what to do if they saw it happening. I think bullying is a very important issue to cover because it happens all over the world and at every grade level. It is a very bad thing because it causes some students to go into depression and also commit suicide. So far I have completed a little over fourty hours of community service so far and that consisted of working at the special olympics, volunteering at football and basketball camps back at my high school.

**7. Inclusive Sexual Education: Preventing LGBTQ+ Harassment in Schools**

**Faculty Advisor:** Brian Steffen

**Student:** Thomas Griego

**Abstract:**

Sex education plays a crucial role in promoting sexual health, yet the US education curriculum often overlooks or ignores the needs and experiences faced by LGBTQ+ individuals. This paper seeks to examine and answer the question: Do LGBTQ+ inclusive sex education courses prevent or decrease homophobic hate crimes? This paper investigates the benefits and

impact that LGBTQ+ inclusive sex education programs have on sexual and gender minority youth by utilizing and analyzing studies that evaluate the outcomes of inclusive sex education. Additionally, the research investigates the influence of a school (and policy) climate on the implications of inclusive sex education, identifying barriers in institutional practices. This research will identify policy barriers and the best practices of LGBTQ+ inclusive sex education to create affirming learning environments that foster acceptance and inclusion. Furthermore, this paper explores the broader societal impact that these programs have. This research will delve into the societal impact that these programs hold. These programs have the potential to challenge stigmas, improve LGBTQ+ health outcomes, and reduce discrimination against individuals. This study aims to contribute to the growing evidence supporting the necessity and effectiveness of LGBTQ+ inclusive sex education courses. Through comprehensive analysis, this paper seeks to bring attention to the role of LGBTQ+ inclusive sex education in encouraging societal change, promoting inclusive practices, and improving youth health outcomes and conditions.

#### 8. A Career-Oriented Volunteering Experience

**Faculty Advisor:** Tayler Keitzer

**Student:** Elise Boulton

**Abstract:**

My presentation will be an overview of my volunteer experience at Norwalk High School. At Norwalk, I was an intern in their athletic department, where I volunteered multiple times a week in order to gain experience in many different roles within the sports industry. My specific jobs included setting up for events, welcoming visiting teams and officials, payment of officials, staffing of concession stand and other areas, and clean up after the event. I created relationships with mentors, learned about new sports, was integrated into the community, and gained a new experience thanks to Simpson and the Wesley Service Scholars program. My presentation will discuss my roles and takeaways and how this experience has shaped my future and enhanced my Simpson experience. The outcome of this opportunity was experience in a sector of the sports industry to see what field I want to go into specifically. I had considered going the athletic director route in the past, but I am considering other options after this learning experience!

#### 9. Inclusive Sexual Education: Preventing LGBTQ+ Harassment in Schools

**Faculty Advisor:** Brian Steffen

**Student:** Thomas Griego

**Abstract:**

Sex education plays a pivotal role in the promotion of sexual health, yet the US education curriculum often overlooks or ignores the needs and experiences faced by LGBTQ+ individuals. This paper seeks to examine and answer the question: Do LGBTQ+ inclusive sex education courses prevent or decrease homophobic hate crimes? This paper utilizes previously conducted research studies done across the US regarding the same topic to investigate the benefits and impact that LGBTQ+ inclusive sex education programs have on sexual and gender minority youth by utilizing and analyzing studies that evaluate the outcomes of inclusive sex education. Additionally, the research investigates the influence of a school (and

policy) climate on the implications of inclusive sex education, identifying barriers in institutional practices. This research will identify policy barriers and the best practices of LGBTQ+ inclusive sex education to create affirming learning environments that foster acceptance and inclusion. Furthermore, this paper explores the broader societal impact that these programs have. These programs have the potential to challenge stigmas, improve LGBTQ+ health outcomes, and reduce discrimination against individuals. Through comprehensive analysis, it's found that students who interacted with inclusive sex ed courses are less likely to struggle with issues of homophobic bullying and harassment or mental health issues than those in schools without inclusive sex ed courses in place. This study aims to contribute to the growing evidence supporting the necessity and effectiveness of LGBTQ+ inclusive sex education courses. The primary focus of this paper is to bring attention to the role of LGBTQ+ inclusive sex education in encouraging societal change, promoting inclusive practices, and improving youth health outcomes and conditions.

**10. Pages of Change: Combating Illiteracy Through Volunteerism**

**Faculty Advisor:** Tayler Keitzer

**Student:** Madison Wiertzema

**Abstract:**

According to the National Center for Education Statistics, 1 in 5 adults in the United States have low literacy skills, making it difficult to perform daily tasks. Children with illiterate guardians are 72

As a Wesley Service Scholar at Simpson College, I have had the opportunity to volunteer with organizations in Warren County and throughout the State of Iowa that aim to lower illiteracy rates and foster a love of reading. This poster session will cover my experiences volunteering for organizations with this mission, my experience in the WSS program, and also how volunteering as a college student can assist with building soft skills that employers look for in the future.

**11. WSS Research & Creativity - Many Hands Thrift Market**

**Faculty Advisor:** Tayler Keitzer

**Student:** Hailey Cooper

**Abstract:**

During my experience at Many Hands Thrift Market, I have learned about the mission of helping people in need and providing support and funding here in Iowa and globally. I have made an impact each day I volunteer - I get to sort through giant boxes of donated clothes. I usually help out Jazzy, an employee at Many Hands Thrift Market, and it is cool to see how my help can help her.

**Division of Education and Sport & Health Sciences**

**1. Espresso Yourself!**

**Faculty Advisor:** Tayler Keitzer

**Student:** Cameron Rae Martin

**Abstract:**

In my experience of volunteering at the Holy Grounds Coffee Shop, I have been able to meet, create new relationships, and learn a new skill! I have never been a coffee person, and learning how to make it has been a new and exciting experience. I am a part of the WSS volunteer scholarship and have learned new social skills and a new skill of making something very important to many college students and professors: coffee. I am working to become an elementary teacher someday, and through volunteering at Holy Grounds, I have learned to communicate better with others and be more patient when multiple orders are flooding; patience is a big part of teaching, and this volunteer opportunity has allowed my patience to grow. I have learned that it is okay not to know all the answers. There were multiple moments in my volunteering where I didn't know how to do something; it is okay not to know! As teachers, we also will not know the answers all of the time, and it is okay to normalize asking questions, even when we are supposed to be professionals. According to the Sumato Coffee Company, coffee shops are designed to not only be comfortable and welcoming but their environments are made to reduce distractions and increase focus. Holy Grounds has warm lighting, cozy seating, and a relaxing ambiance with an R&B radio playing in the background. Another important point from this website is that humans are social, and coffee shops provide a space for people to interact anytime. When working in the coffee shop, I get to create new relationships with my peers and potential, as well as current, professors. It is an amazing place to work!

2. **Non-Profit Organization**

**Faculty Advisor:** Tayler Keitzer

**Student:** Adrianna Ruble

**Abstract:**

I will discuss the non-profit organization The Helping Hand in Indianola, Iowa, for my WSS poster session. I chose this organization for a variety of reasons. As a student who grew up in Indianola, I am very familiar with this organization and love its mission! The Helping Hand helps numerous families in Warren County who need help. They provide food, clothes, toys, books, shoes, and even personal care items! These items are completely free to everyone who lives in Warren County or any Simpson Student (with ID) I am also an Elementary Education student who hopes to teach around this area after graduation. This being said, my future students may need some of the things that The Helping Hand offers. Learning more about this organization will help me get these resources for my future students. I am excited to research this organization more to learn how many families use the resources they provide and how I can help!

3. **WSS**

**Faculty Advisor:** Tayler Keitzer

**Student:** Karissa Steinke

**Abstract:**

The importance of volunteering is so critical for society. Without volunteering, the world would be a disaster because there would be no support for those who need it. Think about



the animals that would be starving on the street if people didn't take the time to start animal shelters, and provide necessities to the animals in hopes for a better future. Or think about all of the organizations that provide food for those that are less fortunate. There are so many more organizations and opportunities within volunteering that make such a big impact. I am currently volunteering my time student teaching, and I have volunteered for many places that support READ > LEAD > ACHIEVE. This is Pi Beta Phi's philanthropy which raises money to help children and adults learn to read. I was the director of service and philanthropy for Pi Phi this past calendar year and I made a lot of connections to volunteer opportunities. Some of my favorite opportunities included having pen pals with the local elementary school or the library events. I will have completed over 700 hours of making a difference this school year! I find volunteering rewarding because I know the little things play a bigger part in all of it. I have learned to take advantage of volunteering opportunities because although I am only one person I know that can add up. I have continued to learn how to be a leader, how to be patient, and how to think first to understand.

#### 4. **Salvation Army**

**Faculty Advisor:** Tayler Keitzer

**Student:** Jade Tejada

**Abstract:**

I have an uncle who is heavily involved in the Marshalltown Salvation Army organization, so when I was presented with the volunteer opportunity to help serve others on Thanksgiving, I was able to jump at the occasion. For me personally, this volunteer experience was one that hit a soft spot in my heart because I was able to bring parents, children, and families together on Thanksgiving. My future plans are not planned around the Salvation Army organization so for me this is just a personal experience that was presented to me that I was able to take advantage of. I choose food insecurity because that is such an important topic that it doesn't get talked about enough in my opinion. I also believe that Marshalltown has the reputation of being a good town to settle down in and start a family but what I don't think gets talked about enough is the homeless population and the other percent of people living below the poverty line that can't afford food for their children and families. I chose this topic for my abstract because serving food for Thanksgiving at the Salvation Army really opened my eyes to see how grateful those families are and how much of an impact I had on their day. Even though I felt like I was only serving food, I could see the joy and happiness that it brought the families and that's what matters. Moving forward in the future, I would 100% consider continuing my volunteering at the Salvation Army because the feeling of bringing joy to other families is something that warms the heart. Lastly, I want everyone to know that it was an experience that everyone should see.

#### 5. **Veteran's confidence off the battlefield**

**Faculty Advisor:** Tayler Keitzer

**Student:** Taylor Busho

**Abstract:**

Volunteering is tremendously important because it is a chance to share your talents, learn new skills, and helps you feel apart of a community. Valorfit is a community of group fitness



facilities and gyms, like Crossfit Undone in Indianola, that comes together to raise money to help veterans regain their self-worth and confidence that may have been lost on the battlefield. This is done through dedicated local fitness facilities and gyms that are committed to drive strength, wellness, and to foster meaningful relationships that inspire individual success, growth, and empowerment. In November of 2023, I signed up to help volunteer at the Valorfit Games Crossfit Competition that was being held in Indianola and run by Crossfit Undone. I helped set up all the equipment for the event, moved equipment around in between heats, and helped bring all the equipment back to Crossfit Undone. During the event, I participated in a Hero WOD that is dedicated to push yourselves harder than you usually do in a workout, just like veterans fought hard for our country. I am choosing to write about this topic because there needs to be an increase of support to regain a veteran's self-worth and confidence after returning home from battle. Approximately 21 Veteran's take their own lives every day and 1 in every 5 military service personal suffer from PTSD. Fitness builds strength but being surrounded by like minded Veteran's builds something even more important, confidence and pride in self. Valorfit exists to build a Veteran's strength, confidence, and igniting their passion for life.

## 6. Supporting the Minds of the Simpson Community

**Faculty Advisor:** Tayler Keitzer

**Student:** Angel Schewe

### **Abstract:**

Mental health is an issue that has become increasingly prevalent within our society. It is an important issue gaining more attention and support, however, we still have a long way to go. While I am not someone who struggles with the ailments of a mental illness, I know I will consistently engage with it in my future occupation as a teacher. To connect with and best support my future students, I need to understand what they might be going through.

Throughout my 3 years in the WSS program, I've learned and experienced the impact of connection with not only the Simpson Community but the greater Indianola community as well. Forming these connections not only provided me with future opportunities to advance myself and my goals but also gave me a community of support. Through my volunteer experiences, I've met countless individuals I know I can forever count on to offer me advice, mentor and work with me to better myself, or lend a helping hand.

In forming these connections and building a deeper relationship with others, I've found myself able to serve beyond a physical capacity. Our society today is plagued with means meant to hinder our path toward human flourishing. Through service, we are to improve not only the outward, physical community but we are also able to strengthen the bonds between individuals to create a more supportive environment. In creating a more supportive environment, all individuals are able to seek the resources and help they need in order to flourish. Through my time in the WSS program, I've seen the joy and excitement which comes with the work of volunteering for not only those serving but also those being served. Together, we can not only better our communities but also create a positive, welcoming space for everyone.

## 7. Impacts of Dietitian Consult on Eating Habits of Patients in Cardiac Rehab

**Faculty Advisor:** Katie Smith

**Student:** Audrey Arnold

**Abstract:**

Cardiac events and cardiovascular disease are the highest cause of death in the United States. The growing prevalence has caused health care to put a larger emphasis on heart health and recovery when these events occur. Cardiac Rehab is a treatment tool utilized in health care to strengthen the heart and promote physical activity for patients with cardiovascular disease who may have suffered from a heart attack or have recently undergone cardiac surgery. Nutrition plays a large role in treating and preventing cardiovascular related diseases and events. This study will look at data collected from Cardiac Rehab at MercyOne Hospital in Des Moines, IA regarding patients' eating habits. Ninety-seven patients completed the Rate Your Plate survey and were scored based on their eating habits compared to what a heart healthy diet should look like. Some of these patients visited with a dietitian during their treatment at Cardiac Rehab, while others elected not to meet with the dietitian. The pre- and post-survey scores of the patients will be compared so we are able to see if dietitian consultation had any impact on the patients' eating habits, which may improve overall health. Although the data is yet to be analyzed because the MercyOne IRB is in the process of reviewing the proposal, the data will be analyzed and interpreted prior to the Symposium.

8. **WSS**

**Faculty Advisor:** Tayler Keitzer

**Student:** Bree Tenges

**Abstract:**

I think that it is important to volunteer because it is important to give back to your community, and serve others. My experiences thus far this year have been good ones, strengthening my leadership qualities and getting out and helping others. Volunteering at the helping hand even before coming to college I had no idea how many people in the surrounding community were homeless, and living out of cars, didn't have jobs or even access to food on a daily basis. It is really eye opening because even though I have lived here my whole life, I never gave that much thought. My goals moving forward are to just recognize that a lot of people are less fortunate, and we just don't see it sometimes. And it is important to recognize and to help them. I chose to learn more about homelessness in my community. I chose this topic because it is a topic that I never knew much about, just knew it existed, and yet it is here in my hometown, Indianola, Iowa. It is important to society because there are many people who are less fortunate and can't always provide for their family, a roof over their head, food, warm clothes, or stuff like that. And it is terrible that they don't all receive access to those things, even though there are a lot of programs around to help, they just can't reach everyone. I learned that not everyone has access to simple things to live, and that impacts engagement in my community, because there are things that we can do to help those people. Put up or give them a temporary home till they can get a stable job, or give them food from the food pantry. There are things to be done, that can be done.

9. **Volunteer experience**

**Faculty Advisor:** Tayler Keitzer

**Student:** Kaylin Long

**Abstract:**

I feel that it's important to volunteer because it makes others' lives easier and better. So far, during the fall and winter, I have spent many hours helping in elementary classrooms. I have tested students on reading and math, as well as helping paint the students' fingers and creating finger paintings to give to their families on Christmas. This has helped tremendously because it prepares me to do these activities and skills in my classroom. I focused on socioeconomic status in the classroom and how it affects students' education. I chose this topic because it's something I see in an elementary classroom, and I'm interested in learning more about it. Teachers need to be educated on understanding and teaching students with this factor differently. It's important to realize that not all students have the same benefits as others. Some require more attention in some educational regions. Some students also need more love in school because they don't see that at home. Shortly, I plan to be an elementary teacher. I plan to address these implications and ensure all students have a fair education and a compassionate classroom. I hope to help in more volunteer activities that help children excel. I plan to acknowledge my research when understanding children. Knowing students with low socioeconomic factors tend not to have the same benefits as others can help me be a better volunteer among children. During the fall and winter of 2023-2024, I completed over 60 hours of volunteer service. I have helped in multiple elementary classrooms with activities and testing. I have taken admissions at an AAU basketball game. I enjoy engaging in these two activities and will continue to engage in them throughout the next couple of years through WSS and separate volunteer hours. (out-of-college volunteer hours)

10. **Open eyes**

**Faculty Advisor:** Tayler Keitzer

**Student:** Blu Moo

**Abstract:**

Volunteering helps create many positive impacts. I have volunteered at places like helping hands, Karen Baptist Church, and helped volunteer for rotaract club. I have gained so much knowledge of the volunteering places and that has opened my eyes to many new experiences. When I volunteered at helping hands it opened my eyes to poverty. There are people that don't have much like clothes and at helping hands we were able to help solve that problem and help the families to be taken care of for that matter. Poverty is still a huge issue that families deal with and my goals moving forward with this is to help spread more awareness of this issue. Each time I volunteer there I plan to gain more new knowledge. When I volunteered at Karen Baptist church that is my church I go to as well, my church helps me to take initiative and help support them in whatever they need help with such as Sunday school. In Sunday School I would be like a Sunday School teacher for them in a way that helps them to sing and dance. I help support Sunday school by just being a teacher assistant for them. There is only a few Sunday school teachers and lots of children so it is hard for them to manage all the children. A skill that I learned is speaking Bible verses in Karen. I plan to further volunteer there to help uplift the children and be there for them. Volunteering for Rotaract club has helped opened my eyes to gain more knowledge about people that are in need and children that are in foster care. This has helped me to further engage in these communities and to go seek out more volunteering places because all these communities are so impactful.

11. **NCAA Division III & The Addition of Athletic Programs**

**Faculty Advisor:** Matthew Garrett

**Students:** Kasey Carter and Sam Campin

**Abstract:**

The purpose of this study was to investigate the increased practice of NCAA Division III institutions adding athletic programs, including determining whether there were commonalities among the institutions doing so or the sports being added. The study also reviewed official university press releases to determine which official offered comments and whether they explicitly acknowledged enrollment considerations as a reason for adding sports.

12. **NCAA Division III Conference Realignment**

**Faculty Advisor:** Matthew Garrett

**Students:** Reagan McFarland, Macy Emgarten, and Rylee Purvis

**Abstract:**

Groups of students were to research the NCAA Division III conference landscape among Midwest schools. They were to realign the conference as they saw fit, using the following criteria: mission, enrollment, location, athletic success as defined by Learfield Cup points, admission standards, and other criteria as groups could cite.

Students presented their selections with the learning outcome being to demonstrate the ability to defend their selections in a question-and-answer format. Our group identified each of the institutions in the NCAA Division III Midwestern sample. We then focused on location and geography as the number one criteria when we made our selections. It resulted in significant changes. One example involves our very own American Rivers Conference. We made a few big changes in this conference as we decided to eliminate Luther and Dubuque University. We moved Dubuque to the CCIW, and Luther went to the IWIAC. Since we got rid of two schools, we needed to bring new ones in. We chose to bring in Cornell College as well as Grinnell college, which were both previously a part of the Midwest Conference.

13. **Communication Board**

**Faculty Advisor:** Rachel Terlop

**Students:** Jenna Norris and Alaina Stemsrud

**Abstract:**

The use of this board will help students that are non-verbal or have difficulty communicating. This board can help them communicate with teachers on duty or even their peers on the playground. Some students have AAC devices that they use in the classroom and this board would allow them to leave the expensive piece of technology in the classroom and prevent it from being damaged. The board can also help students who are verbal and allowing them to communicate quicker and more efficient with teachers. The observation process would like going to the school and watching how students are interacting with the board. Taking notes on what pictures are being used the most and which ones are not being used. We can also see what pictures are missing that students would like to be on the board. We would then be making the changes and hopes of bettering the communication board to maximize the use and be helpful for the students.

## Division of Humanities

### 1. Importance of Giving Back

**Faculty Advisor:** Tayler Keitzer

**Student:** Madeline Petersen

**Abstract:**

College can be a season of life filled with minimal downtime, which in turn, makes time very valuable. As a college student, it is nearly impossible to give monetary donations to support the community, however, the time spent volunteering is just as valued by members of the community. Deciding to join WSS was one of the best decisions I could have made during my time here at Simpson. Over the past three years, I have had many life-changing opportunities to get involved with various organizations. Not only have my experiences helped me in my career, but I have also grown immensely as a person. It is so rewarding to see how impactful something so simple can be. Through giving back, I have gained a better understanding and awareness of what my community needs. It has been a fulfilling way to spend my time during college. Volunteering is an essential way to bring value to the community.

### 2. Bridging the Gap Between Creative Writing and Writing Centers

**Faculty Advisor:** Colin Payton

**Student:** Katherine Robey

**Abstract:**

Writing centers intend to serve a purpose of working with students across various academic areas. As writing consultants, we look at a range of written work from first-year writing to lab reports encouraging all writers from all areas to schedule an appointment and engage with writing consultants on their work at any stage of the writing process. One of the largest areas of writing though, creative writing, does not utilize the writing center as often as other subject and content areas despite the creative writing practice relying on the necessity of peer review and peer editing.

The purpose of this study was to investigate why the gap between writing centers and creative writing exists. In this presentation, I will discuss why the gap exists and how to remedy the gap in order to promote collaborative work between these two areas. For a semester-long project, I developed a literature review of how other writing centers and scholars have investigated what causes the divide and what suggestions and practices they offer to encourage creative writers to enter and utilize the writing center space and work with consultants. I also had conversations with Colin Payton and Jeremy Griffin about the concern for the divide and what solutions we could provide for more creative writers to work with writing consultants.

In my research, I found that creative writers feel vulnerable taking their work into the writing center while writing consultants feel underprepared to work with creative writers on their work. Our writing centers should attempt to open peer workshops in writing center courses, offer training for writing consultants on how to engage with creative writing pieces and writers, and provide strategies that will encourage the incorporation of creative writers into the writing center space.

### 3. Animal Abuse In The Modern World

**Faculty Advisor:** Tayler Keitzer

**Student:** Jeri Eisbrenner

**Abstract:**

I have been volunteering at the Kiya Koda Animal Shelter this year, offering my time to get to know the animals 'behind bars.' Throughout my time there, I began to wonder how animal abuse takes form in our day-to-day lives. It may not be as cut and dry as we think-finding ways into our Fashion, Food, or Entertainment Industries, as well as the very institutions we collect our data from. Utilizing the ground-breaking documentary "The Ghosts In Our Machines" by Liz Marshall, I expect to take a deep dive into animal cruelty and the exploitation of our furry friends. While the shelters in our town are free from animal cruelty, how many systems do we uphold that harm our creatures? Do they deserve the punishment we so willingly give them? What can we do to create change in our modern world?

**4. My Year as a Wesley Service Scholar**

**Faculty Advisor:** Tayler Keitzer

**Student:** Caleb Geer

**Abstract:**

This is a continuation of my initial application which was said to need more details about where I have volunteered. I have volunteered to give blood through Life Serve, volunteered to raise money for Feeding America by tabling for my fraternity, helped clean Highway 69 just outside of Indianola and helped volunteer at the Helping Hand in Indianola as well among other things. I also went on a trip to give time at Midwest Mission in Jefferson City, Iowa packing meals and making sleeping mats. With the remainder of my semester I plan to volunteer to pack meals through Meals for the Heartland, do another highway clean, put more time into collecting donations for Feeding America and volunteer at the Helping Hand more as well.

**Division of Natural Science**

**1. Human Physiology Research Project Poster Session**

**Faculty Advisor:** Jackie Brittingham

**Students:** Jenna Ducett, Maddie Williamson, Lili Duckmann, Emily Escoto, Haydon Mead, Jerad Fischer, Macy Kuhns, Breanna Bengel, Paul Llamas, Jake Gioffredi, Gabriela Garcia Medina, Lexi Fehl, and Keelin Curley

**Abstract:**

BIOL225 Human Physiology students will present the results of their research projects in a poster format. Students tested human performance in a variety of settings, recorded physiological output, and analyzed the results.

Topics include:

Motor Reflex Time of Drivers with Auditory Distractions

Audio Reaction Time in Athletes and Non-athletes with Auditory Distractions

Music Tempo and Time to Fatigue with Bicycle Activity  
 Music Tempo and Time to Fatigue with Running Activity  
 EEG and Autonomic Activity in Chess Matches

**2. Cookies for a Cause - WSS Volunteering**

**Faculty Advisor:** Tayler Keitzer

**Students:** Finley Hall and Ellie Fina

**Abstract:**

Why is it important to volunteer?

Volunteering is important because there is so much to do in the community with little help. We often forget that we are healthy and surrounded by healthy families, so giving back to kids who aren't in the same fortunate position is a good way to express gratitude for what we have.

What societal topic did you choose to learn more about?

We chose to learn about the Ronald McDonald House Charities. We baked and sold over 1800 cookies, and we raised 1,000 dollars. We were inspired by The Wave at the Iowa football games and wanted to find a greater way to impact those children in a time of need. Children having their families close when they are having treatment is very important so they feel a sense of comfort during such a hard time. Their families come from far away, so paying for a hotel every night is very expensive, so the Ronald McDonald House provides a place for them to stay. We will continue to do this yearly and expand each year.

Skills

Through this fundraiser, we learned how to market and advertise. We also learned how to communicate with customers. Lastly, we developed organizational skills with money and cookie orders.

**3. Hunger & Food Insecurity**

**Faculty Advisor:** Tayler Keitzer

**Student:** Kate Huisinga

**Abstract:**

Volunteering has been a part of my life for as long as I can remember. It is important to volunteer because it often takes only a small portion of a person's time to volunteer, but can help many people. This is the main thing that I have learned through my experiences so far in WSS. Volunteering is also a way to interact with people that a person might not normally interact with, which is a skill I've gained through WSS. I have interacted with lots of different people and developed my communication skills. My goals moving forward are to continue my involvement with the places I already volunteer for and to potentially try volunteering at new places. I will hopefully have completed all 60 hours by the time of the symposium, many of which are through Rotaract Club events and volunteering at Holy Grounds. The societal topic that I chose is hunger and food insecurity. I chose this topic because it is something I have become more aware of through WSS and have done service projects for, but I think it would be good to learn more about. I will discuss how this is important to society as well as how it might affect my volunteering as I move forward.



#### 4. **Small Acts that Create a Big Impact**

**Faculty Advisor:** Tayler Keitzer

**Student:** Audrey Gordon

**Abstract:**

Volunteering and community service are essential components of building and maintaining a thriving community. While many people believe that volunteering must be a grand gesture or a significant time commitment, the reality is that even small acts of kindness can have a significant impact. As a student and athlete, I often have limited time to dedicate to service projects or organizations. However, I have discovered that even brief, simple acts of service can make a big difference. During my time at Simpson, I have engaged in various volunteer activities that have allowed me to serve my community in small yet meaningful ways. For example, I volunteered at Holy Grounds as a barista, where I was told that being the person who asked them how their day was made the day that much better. I participated in events at the Indianola Public Library that aimed to foster a love of reading and learning among children in our community. Furthermore, I worked with the Rotaract Club to create bags for children in foster care, providing them with comfort during a challenging time in their lives. My goal with these volunteer projects is to emphasize that even seemingly minor acts of service can have a lasting impact on both the individuals directly affected and the volunteer itself. By sharing my experiences, I hope to inspire others to engage in service activities regardless of the scale of their efforts.

#### 5. **Quantifying Tannic Acid in Acorns**

**Faculty Advisor:** Adam Brustkern

**Student:** Bailey Petersen

**Abstract:**

Did you know acorns are actually edible? It is true! Most commonly, acorns are made into flour to bake with. However, it is not as easy as grinding an acorn into flour. Acorns are full of tannic acid, which can be toxic to humans if large amounts are consumed. To avoid being poisoned by your acorn cookies, it is important to leach the tannic acid out of the acorns before cooking with them. The two major ways to remove tannic acid from acorns are hot leaching and cold leaching. My research is focused on figuring out which method is the most efficient at removing tannic acid. To do this, I am testing samples of acorns at specific time points throughout both leaching processes. Once the tannins are extracted from the acorn meal, I am using the Prussian Blue method to dye the polyphenols and running UV-Visual spectroscopy on the samples to calculate the concentration of tannic acid in each sample. By the end of this research, I hope to find the time needed to leach specific amounts of tannic acid out of acorns using both leaching methods.

#### 6. **Has Access Improved? Geospatial Analyses of Virtual and In-Person Down Syndrome Specialty Program**

**Faculty Advisor:** Heidi Berger

**Students:** Paul Llamas, Kayla Jensen, and Jace Howard

**Abstract:**



A Down syndrome (DS) specialty clinic can address many healthcare needs beyond those that are provided in primary care settings. Currently, there are 71 Down syndrome clinics in 34 states within the continental United States. To improve access to quality healthcare for individuals with DS, Down Syndrome Program was launched Down Syndrome Clinic to You (DSC2U) in 2020. This is a virtual, asynchronous DS specialty clinic that provides individualized care for people with DS. We used geospatial modeling techniques to understand the access to specialty care for people with DS in the United States. Using zip code level data, we determined if DSC2U improves this access to care. This work is conducted through support from Simpson College and the Hal & Greta Bryan Summer Research Program.

#### 7. Technical Director for Menotti Double Bill

**Faculty Advisor:** Kara Raphaeli

**Student:** Keith Dittmer

**Abstract:**

As a Technical Director, I had to take the drawings of the set from the set designer and create the technical drawings for each of the different set pieces needed for the show. The technical drawing gives all the information about how to make that set piece. It gives a list of what size boards are to be used and what lengths those boards should be cut to. It also shows how all the boards have to be put together to create the piece. Two of the biggest pieces that I focused on during the Menotti double bill were a false wall that was over 35 feet long and 12 feet tall and a circular shelf on wheels that was 8 feet in diameter.

Another role of the technical director is to order all of the lumber needed for the set pieces and to stay within the budget that is given to you for that show. The biggest budget that I had to figure out was three-quarter inch plywood for the circular shelf and the one-by-four boards needed for the false wall. The rest of the lumber that we needed we already had.

My poster will explain much of this same information about the job duties and will contain pictures of my technical drawings as well as the budgets that I created.

#### 8. Ronald McDonald House Charities

**Faculty Advisor:** Tayler Keitzer

**Student:** Kacie Cowman

**Abstract:**

Volunteering is a vital part of being part of a community. Since being a member of the Wesley Service Scholars, I have learned to effectively communicate, plan events, recruit volunteers, and lead service opportunities. The societal topic I chose to research was access to healthcare. I believe the social determinants of health, including healthcare access and affordability, can greatly impact a person's physical and mental health. Since I work in the healthcare field, I need to understand how these factors influence health and how to use them to better assist my patients and their families. For this poster session, I am researching the Ronald McDonald House Charities, a nonprofit organization that supports families whose children are undergoing long-term hospital stays by providing free housing and meals. I was interested in learning more about Ronald McDonald House Charities because I like their connection to the healthcare field, especially since I am pursuing a career in medicine. The overall goal of this experience is to explore how Ronald McDonald House Charities addresses the social

determinants of health and incorporates community service into their mission. I aim to educate others about what the Ronald McDonald House is, how they can become involved, and why volunteering there is a worthwhile experience.

#### 9. Identification of Number of Layers in Graphene Using RGB-Based Algorithm

**Faculty Advisor:** Heidi Berger

**Student:** Paul Llamas

**Abstract:**

Current technology that specializes in identifying layers of materials at the atomic scale can take from a few hours to many days to give accurate results. These machines usually need a sample to be prepared in a particular way. Folding, tearing, and mixing of samples are common occurrences when preparing and moving the sample into these specialized machines and these accidents compromise the classification. Graphene is one of such materials that, even though known for its sturdiness, suffers from the same problem. The purpose of my project is to develop an algorithm that uses RGB-based (red-green-blue) images to classify pixels of graphene samples as monolayer, bilayer, or more than two layers. The algorithm uses machine learning trained specifically to identify each classification and uses the smallest residuals, or difference in value, of the predicted value and the real value to classify the pixel. This algorithm can help reduce the time needed to get promising results in a project as the waiting time for the identification of the sample's layers would be reduced. If the algorithm is applied in the production of graphene, it can help assessing the amount of monolayer, bilayer, and more than a few layers of graphene found after its production and the physical characteristics of the sample.

#### 10. The power of teaching

**Faculty Advisor:** Tayler Keitzer

**Student:** Luis Trigueros

**Abstract:**

Few people see a connection between men's volleyball and chemistry, but they share at least one thing in common: they are both unpopular among children. Both activities are dying because they struggle to attract school-age children. They did not even try to show interest because they saw the outer shell by thinking they would be stereotyped as nerds or weird. I had the opportunity to volunteer as a chemistry teacher and volleyball coach for children. I went to an elementary school with my chemistry teacher and used the knowledge I learned in class to give them a fun class with fun experiments so they could engage with the beauty of science that I love. For my other volunteering, I went to an athletic complex where children of similar ages went with the interest of learning volleyball. Girl's volleyball is popular, but it is more difficult to find. There was a kid who showed interest in the sport. He was the only one there, so I focused on showing him things I like about volleyball. By the end, he had fun, and we became friends. I have never been a teacher, but I have learned that inspiration comes from getting involved and interacting with children. It feels good to teach others about things you have experience and knowledge. Not everyone can teach, but I believe it should be a skill everyone needs.

#### 11. Need Volunteers?: Lessons from Planning a Massive Volunteer Event

**Faculty Advisor:** Tayler Keitzer

**Student:** Morgan Kerkman

**Abstract:**

Food insecurity is a broad problem faced by many people in the world. Through being a resource in combating food insecurity, Meals From the Heartland is one of many organizations that strive to alleviate the pain and struggle felt by households across Iowa, the United States, and the world. In this presentation, I will discuss the various ways Meals From the Heartland accomplishes their mission, distributes their meals, and fortifies their meals to be both cost-effective and nutritious. Also, since I became involved with Meals From the Heartland one year ago as vice president of the Simpson Volunteer Club, I'll discuss the experiences I gained coordinating Meals From the Land's annual event, where we packaged 35,208 meals in two hours. Future volunteer coordinators may be interested to learn how we pulled this off, including how to contact stakeholders and participants to accomplish such a large event. Finally, I'll talk about why volunteering matters and how to get others involved. The main goal of volunteering is always to help people, whether it's one person or multiple people, which is why I'm grateful to have the opportunity to volunteer with Meals From the Heartland. This opportunity also gives me a chance to lead by example in volunteering, potentially inspiring others to begin their journey as a volunteer. However, as vice president of Volunteer Club, I've learned that many students don't volunteer. While people believe some things are important to do, not everyone will follow that belief up with volunteering. I'll leave participants with strategies to create events around students' hectic lives to increase participation.

12. **WSS**

**Faculty Advisor:** Tayler Keitzer

**Student:** Ella Pippert

**Abstract:**

I volunteer at Holy Grounds right now, but I will also be volunteering at organizations in my hometown. It has been difficult to find new volunteer opportunities in Indianola compared to my hometown. At home, I was involved in 4H, NHS, and many other groups that made volunteering and finding community service events accessible.

While in college, I have volunteered at a few organizations, but during second semester I found Holy Grounds (the coffee shop attached to the chapel). I have been getting more volunteer hours here by working as a barista.

Volunteering through out my life has truly taught me the importance of community service and because of that I am willing to serve my world and fully understand the magnitude of helping others. Giving one's hands to something bigger than themselves is an act of selfless service that can better our world and give back to the others around us.

13. **Improving Cancer Therapy Through the Use of Covalent Warhead Inhibitors**

**Faculty Advisor:** Derek Lyons

**Students:** Olivia Heerkes, Sam Dering, Colin Hubbell, Payton Seo, and Avery Plathe

**Abstract:**

Cancer has been a leading cause of death worldwide, leading to a demand for new clinically viable therapies. The newest focus of cancer therapy research is finding a way to inhibit the ability of cancerous cells to upregulate DNA repair pathways. The upregulation of the DNA repair pathways within cancerous cells can lead to resistance to preexisting therapies. The human apurinic/aprimidinic endonuclease 1 (APE-1) enzyme is frequently found in cancerous tumor cells, and APE-1 plays a vital role in DNA repair through the base excision repair (BER) pathway. Finding a therapy that could inhibit APE-1 would allow the tumor to become susceptible to chemotherapy. Therefore, combining an APE-1 inhibition therapy with a preexisting therapy, such as chemotherapy, would render the treatment more effective. However, initial APE-1 inhibitor designs have been unable to block APE-1's DNA binding site without toxic repercussions. Our research will investigate a solution to the presented problem. Our solution targets a cysteine residue that presides near the DNA binding site. An acryl warhead is used that covalently attaches to the cysteine, which allows for less toxic inhibitors to be more effective in the therapy. We evaluated inhibitor effectiveness by using an in vitro fluorescent assay which observes the rate of DNA repair processing over time. An effective inhibitor will reduce the rate of observed fluorescence by diminishing APE-1 functionality. Preliminary results have shown that a negatively charged inhibitor is an effective option, likely due to the inhibitor interfering with the positively charged DNA binding site residues.

#### 14. Giving back

**Faculty Advisor:** Tayler Keitzer

**Student:** Denise Alvarado Lopez

**Abstract:**

"Start where you are. Use what you have. Do what you can" (Arthur Ashe). Often, individuals are intimidated to start volunteering because they feel that they need to help out with big volunteering projects for any difference to be felt, need guidance knowing where to begin, or believe that they must put hours upon hours of volunteering to give back to the community. Yet, one can start anywhere in their volunteering journey and dedicate the time they can. In my brief time in college, I've had numerous opportunities to engage in new service work, mainly when I participated in the fall break service trip to Midwest Mission in Jefferson, Iowa. I learned about how organizations are helping communities suffering from various circumstances and helping the environment by recycling plastic into things that can be useful, such as mats and benches. This experience was very eye-opening and changed my perspective on the infinite ways one can give back to the community that needs the most help while also benefiting the planet in which we live by recycling materials that are very accessible and inexpensive into practical and valuable items. Thus, there are no set criteria for how one chooses to apply for community service. Ultimately, it's up to each individual's likes, skills, and interests in what they may volunteer with, and it's always great to help others out.

#### 15. Buddy Programs are Beneficial for All Parties

**Faculty Advisor:** Tayler Keitzer

**Student:** Gabriela Garcia Medina

**Abstract:**

Volunteering is essential to not only strengthen your community but also to build relationships and friendships with others, enhancing your life. While in W.S.S, I was able to volunteer at

Holy Grounds and a local farm in my community. Holy Grounds has taught me the importance of interacting with and helping others, while the farm grew my appreciation for all the work that goes into making a meal. Moving forward, I aim to continue volunteering for as long as I am able. A topic I am heavily invested in is B. Well Foundation supports initiatives that focus on education, mentorship, families, schools in need of resources, positive role models, respect, and building character. Everyone needs help at some point in their life, whether it be financial, emotional, or physical. B. Well, the foundation offers all three.

**16. Evaluating Disparities of Prevalence and Severity of Diabetic Retinopathy in the State of Iowa**

**Faculty Advisor:** Lauren Points

**Students:** Jake Gioffredi and Payton Seo

**Abstract:**

Diabetic retinopathy (DR) is the leading cause of blindness in Americans aged 20-74, and prevalence rates are increasing along with rates of type II diabetes and obesity. Disparities in the rates and severity of DR are well documented and often are rooted in race, sex, income, location, and age. This study aimed to determine the extent of disparities in the State of Iowa on both a whole-state and per-county basis. Data from the CDC Vision and Eye Health Surveillance System (VEHSS), the census, and other sources were used to complete correlations. Whole-state data indicated higher rates of DR for males, and White and Black races, and higher proportion of vision-threatening DR for Black, Hispanic/Latino, and other (Native American, Asian, Native Hawaiian or Pacific Islander, 2 or more races) races. Per-county data indicated a significant correlation ( $p < 0.05$ ) between overall prevalence of DR with poverty rate (positive), Hispanic/Latino population (positive), average income (negative), and uninsured rate under the age of 65 (positive). Other variables such as population density, rural-urban code, White population, and Black population were analyzed on a county level with no significant results. These results indicate DR disparities primarily impact the Black and Hispanic/Latino communities, those living in poverty and/or lower income, and those without insurance. Higher rates of vision threatening DR in non-White populations also indicate more progression in the disease for these communities. This data guides where further resources for eye care services and healthcare education need to be targeted in Iowa. Marginalized communities face several boundaries to receiving proper eyecare: cost, location, cultural barriers, time, and others. Future research needs to look at solutions for these issues and investigate other variables that we were unable to. These include: the Native American community, distance to the nearest eye care professional, and others.

**17. WSS Hospice Volunteer**

**Faculty Advisor:** Tayler Keitzer

**Student:** Caroline White

**Abstract:**

Through WSS, I have been volunteering as a hospice patient companion through the past several months. I chose this area of volunteer work since I know I want to work in healthcare in the future. End of life care is a newer concept and needs a lot of improvement. Being able to talk to and comfort individuals at this stage has given me a lot of insight for what

could better their care. This opportunity has allowed me to grow my skills in interacting with others, building connections with those that have different life experiences than my own, and feel more engaged in my community. I will continue to learn about different needs of care from different populations, and how I can best assist people adjusting to this new period of their lives.

**18. Diversity of Odonata and Papilionoidea in the Simpson College Entomology Collection**

**Faculty Advisor:** Timothy Luttermoser

**Student:** Bailey Dostal

**Abstract:**

Insects are the most diverse group of animals on the planet, with even the smaller insect orders containing thousands of species. I examined insect diversity in the Simpson insect collection, focusing on the Odonata (dragonflies and damselflies) and Papilionoidea (butterflies). I identified specimens to family and quantified the diversity currently present in the collection. This project also incorporated adding new donated specimens from Fall 2023 and adding digital research for each specimen to allow for future research in the collection. In addition to describing the diversity currently present in the collection, my data identifies gaps to target future collecting efforts.

**19. Validation of a female rat voluntary wheel running model for the identification of candidate genes promoting physical exercise.**

**Faculty Advisor:** Lauren Points

**Student:** Kacie Cowman

**Abstract:**

Exercise has health benefits for humans, yet little is understood about the mechanisms behind these habits. Identification of factors promoting physical activity could help scientists understand what drives exercise habits, allowing researchers to predict how genetic makeup and gene expression impact exercise habits. Growing evidence has supported the role of estrogen receptor signaling in promoting exercise behaviors, and rodent models present an advantageous ability to study this phenomenon. Female rats have a 4-day estrous cycle with peak circulating estrogen levels during proestrus and minimal estrogen levels during diestrus. Voluntary wheel running (VWR) behaviors in female rats are cyclical with distances highest during proestrus and lowest during diestrus. In our lab, we have identified individual differences in VWR between animals, allowing placement into high-runner and low-runner groups. Identification of differential estrogen signaling within brain nuclei between these groups may identify novel pathways involved in driving voluntary physical activity. To validate our VWR model, we collected hypothalamic tissue from high and low runners after a bout of exercise during different stages of the estrous cycle to characterize changes in gene expression of two known estrogen receptor target genes. Melanocortin receptor 4 (MCR4) and neuromedin U receptor 2 (NMUR2) are G-protein coupled receptors previously shown to fluctuate in the hypothalamus throughout the estrous cycle in rats and are implicated in appetite modulation and physical activity in rodents. Using qRT-PCR to analyze MCR4 and NMUR2 mRNA expression levels, we expect to recapitulate previously documented fluctuations within the estrous cycle. Additionally, we expect to see increased expression levels overall in high-running

animals. Successful validation of these genes will support our model's usefulness in the identification of target genes involved in the promotion of physical activity. Targeting pathways to increase exercise can result in significant health benefits overall, lessening the burden on our healthcare system.

## 20. The Importance of Communication

**Faculty Advisor:** Heidi Berger

**Student:** Eric Reines-Schmidt

### **Abstract:**

Volunteering is important because it allows people to become more involved in communities and grow as individuals. When people have the opportunity to volunteer, they can meet new people and build connections, which is an essential aspect of people's lives. I've only volunteered at a few places during my time in WSS, but most of my WSS hours have come from these places. The main spot that I've volunteered the most was for the Indianola soccer program. I chose to volunteer for this program because I played soccer for them during my high school career and wanted to give back to the program. Volunteering at this program has allowed me to gain time management skills and the ability to coach youth soccer players as well as high school players. These skills that I've gained have allowed me to become better prepared when challenges are being presented during practice. For example, during my first volunteer experience at a practice, I noticed that the youth soccer players had difficulty retaining the information I explained to them. At first, I was confused about why this was occurring, but after reflecting on this situation after the training, I realized my mistake. My mistake was giving the youth soccer players complicated soccer information that should've been attended for older players. After I solved this issue, I immediately saw a change in the level of engagement amongst the players, which meant they had more confidence to make mistakes and learn from them. After volunteering for the Indianola soccer program, I've learned that it's essential to have the ability to adjust your way of presenting information to youth soccer players. I always carry this ability with me because the best way for youth soccer players to learn is by having a good coach.

## 21. How did the Pandemic Impact the Younger Generation?

**Faculty Advisor:** Tayler Keitzer

**Student:** Emma Sump

### **Abstract:**

COVID-19 was a large setback for everyone, especially students. Many high school students did not get to finish their senior year or have a normal graduation. Incoming college students didn't get the normal college move-in day. But did we think about how the pandemic affected the younger generation? After meeting with the counselors at Indianola Middle School, it became prevalent that many students were set back by the pandemic, and I want to help them. I am involved in a program on Simpson's campus called Wesley Service Scholars, and the main objective is to gain new skills and experiences through volunteering on Simpson's campus and in the Indianola community. Through this program, I have learned proper communication skills and an important sense of individuality. Volunteering at Indianola Public Schools will be a great opportunity for me to help kids and address the growing issue of young students



being set back by the pandemic. I personally know what it feels like to be set back as a high school student, but I am interested in how it affected the younger generation. By the time of my presentation, I will have volunteered for approximately 10 hours at Indianola Middle School. I hope that I can make a profound impact on the kids there, whether it be with their academics or just as someone to talk to.

## 22. Empowering Communities Through Volunteering

**Faculty Advisor:** Tayler Keitzer

**Student:** Mya Whitaker

### **Abstract:**

Numerous studies have shown that volunteering increases empathy and understanding towards other's struggles. First engagement with individuals facing challenges fosters compassion and a deeper awareness of social issues. Research indicates that volunteering enhances teamwork, problem-solving abilities, leadership skills, and project management capabilities. These skills are often acquired through hands-on experiences in volunteer activities and can be applied in various aspects of life, including work and personal relationships. There is amplified evidence suggesting that volunteering strengthens social bonds within communities. By working together towards common goals, volunteers build trust and solidarity among neighbors, leading to a more cohesive and resilient community. Countless examples demonstrate the pivotal role of volunteers in driving social change at local, national, and global levels. Volunteer-led initiatives, such as community clean-up campaigns, advocacy efforts, and humanitarian aid projects, have contributed significantly to addressing social, environmental, and humanitarian challenges worldwide.

## 23. Breaking Barriers: Female Professors in Academia

**Faculty Advisor:** Brian Steffen

**Student:** Audrey Gordon

### **Abstract:**

In modern academia, the underrepresentation of women as professors and in other leadership roles is a persistent problem. While this gender gap has decreased in the last thirty years, there is still a significant jump that needs to be made to secure gender equality within higher education. Through a literature review with a qualitative analysis of criteria such as implicit bias and workplace climate and a quantitative analysis on the gendered wage gap and tenure track, this paper will explore the systematic barriers women face in the workplace as they ascend the professional ladder within academia. These barriers include issues such as gender expectations of academic work, lack of mentorship, unconscious bias, and institutional structures that inadvertently reinforce gender stereotypes. This paper proposes actionable recommendations for addressing these challenges, such as targeted mentorship programs, institutional policy changes to foster inclusivity, and raising awareness of implicit biases.

## 24. Creating a Motor Protein Mutation in *Tetrahymena thermophila*

**Faculty Advisor:** Aswati Subramanian

**Students:** Haylee King and Layna Depping

### **Abstract:**



Cilia are hairlike structures found on the surface of eukaryotic cells. In single-celled organisms, they help in the movement of the cell. In multicellular organisms, they move fluid across the surface of tissues. In humans, ciliary defects can lead to diseases such as hydrocephalus and primary ciliary dyskinesia. The movement of cilia is brought about primarily by motor proteins called dynein within cilia. Dyneins "walk" • along microtubule tracks to bring about bending and cilia movement. When dynein function is impaired, ciliary aberrations occur. Dyneins are composed of heavy, intermediate, and light-chain proteins. The dynein light chain family is diverse. Mutations in light chain genes have been known to cause ciliary defects. The LC4 family of light chains is found across species ranging from single-cell organisms such as Tetrahymena to humans. The role of LC4 proteins in ciliary motility is yet to be elucidated. In our lab, we use Tetrahymena as a model organism to study the dynein LC4A light chain. Tetrahymena offers the unique advantage of having cilia on its surface, making it amenable to observe ciliary defects in mutants. We aim to determine LC4A's function and implications in ciliary motility. We predict a defect in the swimming speed of the LC4A mutants. Swimming speed is a product of waveform and beat frequency of cilia. We predict that an analysis of these characteristics will show defects in beat frequency and/or cilia waveform. At Simpson College, the LC4A gene has been disrupted in-vitro in the lab. The mutant gene was removed from its plasmid backbone using restriction enzymes that cut the DNA at specific places. The selection of restriction enzymes was determined using a plasmid vector map. The sample will be sent to Cornell University for further processing of the mutant gene into Tetrahymena.

25. **Wesley Service Scholars Impact**

**Faculty Advisor:** Tayler Keitzer

**Student:** Bailey Petersen

**Abstract:**

Meals from the Heartland is an organization based in West Des Moines with a mission to empower individuals to save starving children. Their vision of accomplishing this goal combines education on global hunger issues, engaging community members in service, and feeding children in Iowa and around the world by partnering with meal distribution organizations. Meals from the Heartland has an opportunity to pack meals on Simpson's campus at least once a year, making them a well-known organization among regular volunteers. Many people know what the main mission of Meals from the Heartland is but do not know how they accomplish this goal or the extent of the impact that hunger truly has on the world. This presentation will take a look at the impact of childhood hunger in Iowa and what Meals from the Heartland is doing to put an end to this issue.

26. **Final Touch-Up: Designing Hair and Makeup for the Menotti Double Bill**

**Faculty Advisor:** Kara Raphaeli

**Student:** Piper Jackman

**Abstract:**

Hair and makeup are crucial aspects of a stage production, I was chosen to design hair and makeup for The Telephone and The Medium by Gian Carlo Menotti in the spring of 2024. My poster will show my initial inspiration photos, discuss my decision making process, and showcase the final look on stage.

## Division of Social Science

### 1. Tie Blankets

**Faculty Advisor:** Tayler Keitzer

**Students:** Abby Pope, Emily Wilshusen, and Katie Harryman

**Abstract:**

In the United States today, more than 437,000 youth are currently living in the foster care system due to neglect, drug abuse, and unsafe living conditions (American SPCC). Many of these children enter the system with minimal personal belongings such as toys and clothing. Foster's Hope, located in Atkinson, Illinois, is a non-profit organization focused on supporting these children experiencing the hardships that come with being a part of the foster care system. Together, our group decided to make tie blankets and donate them to Foster's Hope as part of our work for the Wesley Service Scholar Program. So far, we have made eight tie blankets and we will have completed 15 by the time of the symposium. We chose to donate to Foster's Hope because we wanted to give these children a sense of comfort and a personal item to keep with them during their time in the foster care system. The foster care system is a growing and often overlooked issue in the world today. In the future, we plan on making more tie blankets to donate to Foster's Hope and other organizations to help make a positive impact in these children's lives.

### 2. We Lift

**Faculty Advisor:** Tayler Keitzer

**Student:** Peyton Robertson

**Abstract:**

For this project I am explaining my volunteer for WSS and why it is important. I do multiple different volunteer events but the one I am focused on is WeLift. WeLift is a non-profit organization here in Indianola that provides job readiness skills, community outreach through local resources, partnerships and self-empowerment. I work specifically with the girls group at Indianola Middle School and for me this work is extremely fulfilling and important. This group meets once a week on Tuesdays and what girls group aims to do is provide a safe space for girls that may be struggling to come and learn and talk about the struggles that they face daily. For many of these girls it is a place where they feel seen as most are high-risk youth. For me this group has afforded me so many skills and a new perspective. I have learned how to manage different personalities in an effective and caring way as well as gives me a new perspective as I see how different each girls life is and the struggles they have gone through at such a young age. This organization ties directly too societal issues surrounding familial issues and emphasizes the need for family resources to be available nationally not just in Indianola. I hope that with this research project/presentation that I can make WeLift a more well known organization as well as express the importance of strong resources within our community.

### 3. The Power of Volunteering

**Faculty Advisor:** Tayler Keitzer

**Student:** Alyssa Beckwith

**Abstract:**

Volunteering offers an abundance of valuable benefits that extend beyond personal growth and fulfillment. As a 4th year member of Wesley Service Scholars, I've had the privilege of participating in roughly 240 hours of dedicated service to members of the surrounding communities through various in-person and virtual volunteering opportunities. These have ranged from judging high school debate tournaments to writing letters of encouragement and support. WSS has provided opportunities that have been nothing short of eye-opening and beneficial.

Throughout my experiences, I have had the opportunity to gain insight into the challenges and needs facing my communities. While benefitting from experiences of self fulfillment and personal development, iv'e also had the opportunity to dig deeper into the pressing societal issues. One such issue that has garnered my attention is that of a prevalent homeless population, especially in Indianola.

Further examination of this issue reveals a variety of ways in which volunteering can make a significant difference. This can look like donating time and resources to even offering skills and expertise. Ultimately, there are so many ways in which people can contribute to those who may need some assistance.

In the end, my time with WSS has provided new perspectives on the power of volunteering, while also providing many ways to engage with with social issues that impact everyone while working towards positive action. There is no denying the positive impact volunteering can make as it has potential to transform lives, foster community, and allow for self fulfillment.

**4. What's Going on in Palestine & What can we do to help**

**Faculty Advisor:** Tayler Keitzer

**Student:** Kylie Rae Torres

**Abstract:**

One topic that I have been very interested in recently has been the ongoing genocide and violence that the Palestinian people have been facing. From current news, I have been seeing how they have been struggling receiving aid, meaning medical and health supplies, along with food and other hygiene products as well. The Israeli government has been withholding such aid from the Palestinian people while forcing them into smaller and smaller areas. I do know that Yemen, Egypt, and Jordan have been trying to send in aid to them, but there have been struggles for the Palestinians to be able to obtain them. One community service project that I have worked on has been Meals from the Heartland, and got me thinking where exactly the meals go; and hopefully they are going to places in need. So, for my presentation, I will be focusing on what type of aid that the Palestinian people need, and different resources that can help provide such resources and help to them.

**5. Animal Rights**

**Faculty Advisor:** Tayler Keitzer

**Student:** Kassidee Savaria

**Abstract:**

I feel that it is important to volunteer because it allows people to step outside of their comfort zone and view the world from a different perspective. During my time in Wesley Service, I have volunteered with my hometown AAU wrestling team. I have volunteered with the club for multiple years now and I have learned a lot. One thing that I have learned while volunteering is, children often come from bad households and use wrestling as an escape. Many kids in the club think of it as a second home and I enjoy seeing them open up and be themselves. Moving forward, I want to keep volunteering with this wrestling club and possibly my hometown high school team because I want to be able to make a difference in these kids' lives. The societal topic I am choosing to learn more about, though, is animal rights. I chose this topic because I find it interesting and I do not think that many people consider animals having rights. This is important to society because all living creatures should be treated with respect and learning about animal rights is a step toward a better future. While I have not completed any hours for Wesley Service in Indianola, I would like to volunteer with Kiya Koda. Until recently, I had wanted to be a veterinarian, but I realized I would not be able to handle the heartbreak of that job. Instead, I am thinking about the possibility of becoming a K9 officer. Volunteering with animals would help me gain experience in handling different animals while also helping animals in the shelter.

#### 6. The Impact of Summer Camp

**Faculty Advisor:** Tayler Keitzer

**Student:** Grace Porath

**Abstract:**

Through my many years of volunteering, the Newton Christian Conference Center has always been my favorite. The opportunities for volunteers are endless and allow people to work with what their strongest skills are. The volunteers are what make this camp happen for so many youth and adults, without them, the experience would not be possible. At the CCC I am a camp counselor and the social media director. I get to promote all the amazing experiences and help others enjoy them. I hope to use these skills to guide youth and use social media in my everyday life as a Mental Health Counselor.

I would like to learn more about the impact summer camp has on youth's mental health and well-being. For me, it provided a family and a welcoming environment that I could be myself in. I think giving kids opportunities to expand their circle of people is important along with a week away from parents and daily life. I hope to provide education to viewers on the impacts and benefits of a summer camp environment.

#### 7. Food Insecurity in Warren County

**Faculty Advisor:** Tayler Keitzer

**Student:** Brett Vanstrien

**Abstract:**

There are many reasons why volunteering is important. It has allowed me to get to know my community better. I am helping people who struggle with food insecurity. I have developed compassion for people who are in need of food and I am passionate about it. I enjoy serving my community. This relates to my volunteering because I have been serving at GEF Food Pantry and Meals from the Heartland which addresses food insecurity. I have learned empathy

and communication skills. I will continue learning more communication skills and critical thinking moving forward. The societal issue I will be addressing at the Symposium is food insecurity. I will addressing the issue of food insecurity and how many people in Warren County are currently struggling with having enough food to feed themselves and their families. I will be providing statistics and information about this issue. I will discuss local programs currently available that are helping people. I will talk about the part I have been involved with improving food insecurity in my community. I have been working with the organization; GEF Food Pantry. This has helped with my community engagement by addressing this issue. Volunteering has allowed me to have a different perspective. It has encouraged me to help others. My overall goal of the project is to improve food insecurity in my community and to educate the public that it happens everywhere. Everyone should do their part in making their community a better place with people who are struggling. What I have learned from this experience is the fact that food insecurity happens everywhere and anyone can struggle with having enough food. It is important to show kindness and support towards people who deal with this issue. I feel good after volunteering my time to serve others.

#### 8. **Social Comfort with Prerecorded and Zoom Interactions**

**Faculty Advisor:** Don Evans

**Student:** Madison Luderman

**Abstract:**

This experiment examined the interaction of social anxiety and eye contact in a pre-recorded video and a live, Zoom video call. Social anxiety was measured with brief, self-report surveys along with a basic demographic questionnaire. All participants viewed both a pre-recorded video and completed a Zoom call which required them to answer three simple questions, three personal questions, and then three more simple questions. All viewing was completed on a screen equipped with a RED-500 eye tracking system. The eye tracking system provided data on eye movement and positioning for both the recorded video and the live, Zoom interaction. These data were used to calculate the amount of time spent with eye contact compared to the time spent on other areas of the image. Eye contact differences will be compared in live vs. recorded sessions and related to self-reported anxiety. We expect to see higher eye contact levels in recorded video and in participants with lower reported anxiety.

### **Division of Visual and Performing Arts**

#### 1. **Telephone and the Medium Set Design**

**Faculty Advisor:** Kara Raphaeli

**Student:** Wendy Moncerrat Soto

**Abstract:**

In my presentation I will present the process of creating the set for the double-bill operas, The Telephone and The Medium. I will show my Design Board and the different elements and progress of design. I will also show my inspiration pictures, drafts, paint elevations, and the final product. Finally I will share my experience of being a set designer for the first time.

#### 2. **Good Kids Stage Management**

**Faculty Advisor:** Kara Raphaeli

**Student:** Dorian Burke

**Abstract:**

For this poster, I will write about my process for stage managing the play Good Kids. I will showcase various pieces of paperwork, diagrams, and tracking documents to demonstrate how I kept organized with all the different components of the production. In this show, I primarily focused on getting the management and organizational work done in order to amplify the voices of the creatives and artists involved including the director, designers, and actors. This was an incredibly important production dealing with the topic of sexual assault, and I feel that I was able to make a huge difference by managing this production. This poster will be a showcase of all the work and organization I put into this show, giving exact documents and pieces of paperwork to show what I did.

**3. How Does “Promise Scholarships” Affect Diversity on Campus**

**Faculty Advisor:** Brian Steffen

**Student:** Spencer Krantz

**Abstract:**

In the last 100 years, campuses around the country have only been getting more diverse. This diversity has a correlation to the upcoming “promise scholarships” or full-ride scholarships with more specific requirements. This paper’s primary and secondary sources that are covered lead to answering questions important to solving the question. Sources in the paper will discuss the reasons why colleges might strive for diversity, the statistics of diversity on campuses over time, the benefits of diversity, and other information related to the question. Information from these resources gives answers to the question of “How does “promise scholarships” affect diversity on campuses?”

**4. Sound Designer/Engineer - A Beautiful Day in November on the Banks of the Greatest of the Great Lakes**

**Faculty Advisor:** Kara Raphaeli

**Student:** Masumo Mwenyi

**Abstract:**

As the sound designer for “A Beautiful Day in November on the Banks of the Greatest of the Great Lakes,” a quirky comedy that cleverly transforms an extended family’s Thanksgiving dinner into a fiercely fought competitive sport, my focus was on creating an immersive sonic experience that captures the play’s blend of humor and dark satire. Beginning with a deep dive into the script’s themes of familial tensions and the absurdity of competitive gatherings, I meticulously curated a sound design that accentuated the play’s comedic and macabre undertones.

To mirror the peculiar and ultimately macabre goings-on of the Thanksgiving dinner competition, I selected a diverse range of musical styles, from lively tunes to whimsical circus tension, infusing the production with a sense of whimsy and absurdity. Additionally, I incorporated various sound effects, including cooking timers, exaggerated chewing noises, and the occasional door buzzers, to heighten the absurdity of the characters’ antics and the intensity of their familial rivalries.

In keeping with the play’s exploration of the ego-devouring aspects of family life, I composed music ranging from darkly comedic to eerily unsettling, each reflecting the characters’ inner turmoil and the escalating stakes of the Thanksgiving competition. By carefully balancing music, sound effects, and intentional placement of speaker and panning, I aimed to enhance the play’s comedic timing, amplify its thematic resonance, and fully immerse the audience in the absurd world of ”A Beautiful Day ……….”

My accompanying poster offers a glimpse into the creative process behind the sound design, detailing the eclectic mix of musical tones, the array of sound effects utilized, and the layout of hardware crafted specifically for the production. Through this behind-the-scenes look, I aim to showcase the integral role of sound design in bringing this darkly comedic farce to life on stage.

**5. Lighting Design - A Beautiful Day in November on the Banks of the Greatest of the Great Lakes**

**Faculty Advisor:** Kara Raphaeli

**Student:** Kenneth Norris

**Abstract:**

A Beautiful Day in November on the Banks of the Greatest of the Great Lakes is unlike many shows I’ve done in the past; it is a Thanksgiving dinner without any tables or turkey, and more reminiscent of a sports stadium than a dinner by the fireplace.

The process of lighting design for this show began with reading the script several times to identify the important themes, scenes, and light sources within the play. I then had several discussions with the director about the atmosphere we wanted the play to have: we both came to the conclusion we wanted our stage to be bright and competitive, so actors’ faces could be seen as they navigated all four quarters of dinner with the in-laws. I worked with Simpson College Student Development to borrow two of their Chauvet Intimidator moving lights to create an immersive sporty environment, and learning how to work with these lights abetted by my career in lighting. I also brainstormed and proposed several solutions for some of the high-contrast or heavily-intense scenes, like the disco party after the turning of the bird and the onslaught of the babies at the end of the show. By using color-correcting cool-tone gels contrasted with warm saturated colors, we were able to create a high-stakes environment for our audience members to get excited about!

**Students with Undeclared Major**

**1. Pawsitive Impact: Volunteering at Animal Shelters**

**Faculty Advisor:** Tayler Keitzer

**Student:** Emma LaFave

**Abstract:**

Volunteering is essential so you can give back to the community, and it will help you build connections while making a difference. I have volunteered at many places, including the Indianola community, Kiya Koda, and my college, Simpson. Through these experiences, I have learned to work with the community and kids, the importance of working with sheltered animals because sometimes you are the only faces they will see all day, and helping grow the



knowledge and skills at my school for a softball camp. I learned the skill of just knowing how to handle and work with kids while assisting at the Indianola Square; I realized that I want to help animals in my future and how much they rely on people, and finally, I learned how to teach kids new skills while improving the ones they already have as we try to make learning fun and keep having the kids enjoy the game.

I really want to focus on animal care in shelters since it is where I spent most of my hours during the first semester. I had volunteered at the ARL with my mom years ago, so Kiya Koda was the perfect volunteer spot. While I volunteered there, I got to know a lot of the dogs personally and some of the staff as well. People probably don't realize the importance of working in animal shelters until they get to see these dogs and learn how much each deserves a loving home. The impact these dogs have made on me will affect me in the future because this has shown how much I want to work with animals. They need people to interact and play with them so they know some people still care about them in a shelter until they can find their forever homes.

## 2. WSS Volunteering

**Faculty Advisor:** Tayler Keitzer

**Student:** Meredith Downs

### **Abstract:**

During WSS, we are exposed to many different volunteering opportunities. I have got the majority of my hours through two different volunteering opportunities. The first one is Holy Grounds. I have learned different lessons through working at Holy Grounds. I have learned about the importance of being able to talk to everyone and be personable. This is a trait that is important in the coffee shop but also in everyday life. Another volunteer opportunity that I have volunteered at is EverybodyWins!Iowa. Through this organization, I read to a third-grader once a week during their lunch. This student is below the grade level average for reading. Through this volunteering, I have also been exposed to how poverty affects learning but also how poverty can affect households. Both of these opportunities have taught me the importance of giving back to others and to always help others.

## 3. Beauty Of Volunteering

**Faculty Advisor:** Tayler Keitzer

**Student:** Keiri Holmquist

### **Abstract:**

For my topic more specifically, I am choosing Kiya Koda Humane Society. Although I am not volunteering there every single day, it has opened my eyes to those who need help. Not only do humans need help, animals do as well and that matter just as much as humans. There are changes in their behavior when you step into the room or you start petting them. They are selfless creatures and want love just like people do. Seeing the dogs and cats there, you cannot help but think how many more animals need our help in the world. When it comes to my volunteer work I think the dogs and cats have benefited from having me there even though it is only a short time. With the cats, they just lay down in a small crate and when I come in to play with them, there is so much life brought back into them. With the dogs, taking them on walks help them see more than a small patch of green grass or a dark concrete



room. They are so happy when they have someone around them that knows they love them. Volunteering has brought hope and life back into the world, no matter who it is affecting. If you are able to make someone feel good or even smile, you know your impact is small but great in their eyes. There is so much change to happen and anything helps when it comes to volunteering. I hope to do more in the future and see where it can lead me.

## Division of Business Administration & Multimedia Communication

### 1. Welcome to the Era of Swiftie-nomics: Are You Ready For It?

**Faculty Advisor:** Mark Green

**Students:** Claire Hughes, Anna Schewe, Dylan Holland, Madison Wiertzema, and Macy Gaskill

**Abstract:**

Time magazine's 2023 Person of the Year and global phenomenon Taylor Swift has changed the cultural landscape completely with her unprecedented Eras Tour. With more than 150 shows in five continents, Eras is the highest-grossing concert tour ever, with more than \$5 billion in revenue. Wherever Swift touches down, local hospitality industries boom as her fan base of Swifties fills hotels, restaurants, and other businesses. Arriving after the COVID-19 pandemic, during which global hospitality revenues hit an all-time low, the Eras Tour provides a much-needed boost. This panel will explore Swift's global economic and cultural impact and showcase the role of her carefully crafted brand emphasizing fan engagement on her unparalleled success.

### 2. Let's "Tok" Shop: From Social Media Juggernaut to Online Megamall, TikTok Marches On

**Faculty Advisor:** Mark Green

**Students:** Hailey Cooper, Brenden Godbout, JR Knauss, and Will Paech

**Abstract:**

Despite a turbulent relationship with governments, parents, educators, and others, TikTok continues to grow at an unprecedented rate. But, how much of a good thing is TOO much? This panel will ask the question: Is TikTok's bubble about to burst?

### 3. Attack of the Bots: ChatGPT and Its Contemporaries Rage On

**Faculty Advisor:** Mark Green

**Students:** Tenley Schroeder, Kegan Trebilcock, Max Trembly, and Juan Zamora

**Abstract:**

One year ago, the ChatGPT presenters warned you: The C(h)at is out of the bag and it's "bot" its friends. What does the future of artificial intelligence (AI) mean for college grads and the future of the job market. This panel will analyze AI's increasing impact on intellectual property rights, job creation and destruction, and independent thinking. Who will be the winners and who will be the losers in the AI lottery? Does ChatGPT represent a growing threat to the innovative mindset?

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