

**2021 UNDERGRADUATE RESEARCH AND CREATIVITY SYMPOSIUM
ABSTRACTS**

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Part I: Oral Presentations

BUSINESS & MULTIMEDIA

Propaganda and the Suffrage Movement

Caroline Oberg

Faculty Advisor: Brian Steffen

This paper investigates how the women's movement used media and propaganda as tools in their campaign for women's suffrage. Using peer-reviewed sources, this paper looks at methods from the time that were used to turn public opinion towards the women's movement. My analysis has shown that one prominent leader of the suffrage movement in the United States understood the significance of the influence on public opinion, Alice Paul. Through lobbying, picketing, protesting, road trips, parades, and incarceration, Paul was able to gain the sympathy and support of many American citizens. I conclude that propaganda doesn't always have to be seen in a negative light, and sometimes the subtle manipulation of the American public can be used for activism and change.

HUMANITIES

“Strong and Weak Democracy, Technology, and Human Agency”

Natasha Shipp

Faculty Advisor: John Pauley

In the essay “Strong Democracy and Technology,” Richard Sclove explores the impact of technology on democracy. At the core of his argument, he differentiates two forms of democracy with one major notion: the level of true participation by the citizens. In a strong democracy, citizens are actively involved in the policymaking process. They protest, are part of the judicial process by way of juries, and attend town meetings to argue their views. During these practices, those participating are actively and consistently changing the social structures around them. Democracy becomes integral to their daily lives and practices as an act of ‘self-actualization’ and display of agency. In a weak democracy, people vote for others to represent them and allow that circle of elites to make decisions in relation to the social structure of society. The citizens’ power and agency are weakened or stripped entirely because their ability to self-express is diminished. Technology, a social structure that affects every facet of our lives, can either do one of two things; support a strong democracy or shift it to a weak one. This essay analyzes the impact of surveillance technology on democracy. Instances such as the Patriot Act (now the USA Freedom Act) and police surveillance will be used as examples to show that as surveillance becomes more ubiquitous and invasive, it actively perpetuates this loss of agency in communities of color, leading to the thinning of our democracy as a consequence.

New in Town: Iowa Political Influences on the First Presidential Impeachment

Elliott Meyer

Faculty Advisor: Daryl Sasser

It is undeniable that the American Civil War and the following Reconstruction period are some of the most critical and defining periods of our nation's history. The decade of the 1860s was rife with political upheaval on a scale unimaginable to our young nation, and the politicians elected at the time actively participated in fundamentally shaping the United States into the country we live in today. One specific political controversy that rocked our nation in 1868 was President Andrew Johnson's impeachment trial, the successor to the late President Abraham Lincoln. Johnson would go down in history as the first American President to be impeached, and congress members from across the nation had their first opportunity to decide whether or not the sitting president should be removed from office. At the time, the state of Iowa

had barely passed its twentieth anniversary of statehood. Despite being a very young state at the time, Iowa politicians were deeply rooted in national politics, and some played vital roles in President Andrew Johnson's Impeachment. This presentation aims to describe to what degree Iowa politics and politicians influenced President Johnson's Impeachment through the letters and correspondence of several Iowa congress members like Senator James A. Grimes, Senator James Harlan, and Representative James Falconer Wilson. It will also discuss the condition of Iowa politics during the late 1860s, which undoubtedly influenced the minds of those men who participated in the congressional vote of impeachment.

Human Nature and Anti-Sexism: Deconstructing Apologist Ideology and Masculinity

Shawn Schossow

Faculty Advisor: John Pauley

Traditional views of human nature align with or resemble a degree of biological determinism, insofar as contemporary human behavior is strongly influenced by instincts and natural behaviors. These views tend to subscribe to Hobbesian attitudes regarding our inherent values, which understand human beings as violently selfish and incredibly greedy, controlled only by social contracts between one another created because of the mutual understanding that perpetual combat is not conducive to one's own survival. I contend that Hobbes' philosophy has influenced Western culture to the degree that his philosophy manifests itself within our cultural epistemology and institutions. Specifically, it does so in ways that reinforce sexism and Western masculinity, the primary example of which is apologist ideology and its position as an ideological force of sexism. I concur there is a cyclical relationship between Hobbes' view of human nature, gender norms, sexist cultural ideology, and normed sexist behavior, and that anti-sexists must include in our efforts the epistemic deconstruction of the traditional view of human nature as well as the introduction of a new and more accurate view. This would occur alongside the abolition of specific social institutions in order to fully combat sexism. I will explore the influence of apologist ideology on the construction of contemporary masculinity and rape culture, followed by a proposal of a different way of thinking about human nature.

Environmental Ethics and the Problem of Evil

Josiah Sutton

Faculty Advisor: John Pauley

In Susan Neiman's work, *Evil in Modern Thought*, there are two examples of 'evil' which guided philosophical development. The first of these examples is the 1755 Lisbon earthquake which was the focal point of Enlightenment philosopher's definition of evil, and the very example that would be called to mind when the Problem of Evil was discussed in its theistic rendition. The second example of evil, located at the end of, is Auschwitz. This is what the general reader would recognize as evil—a monstrous action brought forth by human will. The process of modern thought brought this distinction, 'natural evil' vs. 'manmade evil,' into existence, and the only cases which 21st century thinkers recognize 'natural evil' at all is in abstract conversation regarding the existence of God. Outside of the theistic Problem of Evil discussion, an idea of an evil hurricane, earthquake, or wildfire is almost nonsense. However, the 21st century provides us with a crisis regarding this distinction. While manmade environmental catastrophe predates the turn of the century, we are becoming more and more aware of the impact human action has on nature, and the subsequent evil which accompanies it. In the American West, wildfires caused by human recklessness and exasperated by manmade ecological conditions ravish the coastal forests. Hurricanes grow more prevalent; drought and famine become common features of the Third World. The distinction between Auschwitz and Lisbon becomes more and more fine as we live in a world where Lisbon can happen from fracking, and Auschwitz can happen through manmade famine. In Neiman's work, this distinction represents modernity's development. As this distinction collapses, that modern conceptions of evil and ethics will be forced to adapt.

Religious Imagery in Haiti

Josiah Sutton

Faculty Advisor: Daryl Sasser

Throughout Haiti's history, the invocation of religious imagery served a variety of roles within the colonization and liberation of the Haitian public. The nature of Haitian syncretism has encouraged the identification of liberatory or revolutionary values with the imagery introduced by the colonizer. In this presentation, I will trace the ways in which visual representations of the religious figures are invoked for the causes of oppression and resistance, and theorize about the ability for an image to contain two very different perceived meanings.

NATURAL SCIENCES

Spotify Song Recommendation

Josie Clarke

Faculty Advisor: Katherine Vance

Spotify was the frontrunner in what we now know of as music curation. Now, streaming devices have their own algorithms and methods for curating playlists unique to each listener. This project is focused on making curation even more precise. The focus is on recommending music on a song-by-song basis, rather than a playlist to fit the general listening data of a particular user. Although the playlists are a great resource, making a recommendation based on the current song someone is listening to has the potential to satisfy users on an even higher level. My goal is to find the most efficient way to do this song recommendation system, and I will continue to work at it through the end of the semester. I have used the computer program RStudio to gather data, explore, and build a model for specific song recommendations.

Identifying Knots in Random Grid Diagrams

Elijah Marriott

Faculty Advisor: Katherine Vance

Mathematical knots are knotted closed loops in 3-D space. In this presentation, we will be looking at randomly generated sets of knots represented by grid diagrams by n grids with X's and O's that follow specific rules. By looking at these sets of Grid Diagrams I hope to answer the question "what patterns arise in these sets of randomly generated knots and links." To tackle this question, I developed and edited numerous programs in R, Java, and Sage. These programs randomly generated sets of knots and links, analyzed these sets using invariants such as the Alexander polynomial, simplified the grid diagrams, and produced graphs that help us look at what exactly makes up these sets. A large portion of this presentation will be dedicated to the randomly generated one-component links.

Modeling Diversity of B-cell Receptor Proteins

Kaylee Grabarkewitz

Faculty Advisor: Katherine Vance

The immune system is the primary mechanism for fighting infection, diseases, and attacking foreign bodies. The human immune system, on a cellular level, consists of B and T cells, also referred to as immunoglobulin and T-cells. Each cell is specific in its receptor, which has a unique genetic code. The immune repertoire encompasses the different types of immunoglobulin and t-cells. This repertoire catalogs upwards of 10^{11} different receptor types. The human genome does not consist of such a high number of different genes, so another mechanism is done to promote diversity among the receptors genes. V(D)J recombination coupled with junctional diversity allows such specificity between receptors. Models exist to give the probability that that receptor protein was made but require an already created receptor protein to do that.

The following proposed model will look at the different factors involved in B-cell receptor diversity: V(D)J recombination, junctional flexibility, P-region nucleotide addition, N-region nucleotide addition, and somatic hyper mutation. Using experimental data and mathematical techniques, the probability of each of the previously mentioned mechanisms can be estimated and the probability of any given mutation occurring found. This allows for the model to give an overarching view how diversity in B-cell receptors is generated.

Determining the Role of the LC4 Dynein Light Chain Class

Ethan Madden

Faculty Advisor: Aswati Subramanian

Cilia are hair-like structures found on the surface of cells in the human body, such as, kidneys, brain, respiratory tract, etc. Each cilium consists of as many as 1000 different proteins and movement of cilia is brought about by a large protein-complex referred to as the dynein motor proteins. Dyneins, with the help of chemical energy, move along cellular tracks to cause bending and beating of cilia. Our interest lies in disrupting dynein motor function to study its impact on ciliary motility. The basic structure and function of cilia is highly conserved across organisms and therefore, studies of ciliary function are performed in model systems other than humans. We use the single-cell organism *Tetrahymena thermophila* as a model system in our lab. These cells have hundreds of cilia on their surface which makes them amenable to observations of ciliary movement under the microscope. Previous gene and protein sequencing studies across organisms ranging from *Tetrahymena* to humans have shown that, a sub-set of proteins known as light chains form part of the dynein-motor complex, and are known to regulate the assembly of the dynein complex in cilia. The light chains are a large family of proteins and despite the progress made on determining their role in ciliary motility, the functions of several groups of light chains are completely unknown. We are currently mutating two light chain genes in *Tetrahymena*-light chain 4A. We hypothesize that the LC4A proteins are required for the assembly of the dynein motor complex in cilia. Therefore, we predict that the absence of these proteins will lead to a disruption in the assembly of the dynein motor complex. This will in turn have an impact on ciliary movement in the above mutants. Analysis of ciliary function in these mutants will be carried out by high speed video-microscopy.

SOCIAL SCIENCES

Accommodations: For the Deaf Community

Faithyna Leonard

Faculty Advisor: Carolyn Dallinger

The deaf community has been overlooked for many years due to the main form of communication they use, sign language, being the smallest linguistic minority group. Throughout history many policies have been established that cover the general population of disabilities but this serves to be problematic due specific criteria within each policy being ignored. This allows loopholes that often result in people who are deaf to get left behind. To provide the appropriate accommodations and solutions for the deaf community we must understand the past, current policies in place, sensitive issues, and look at the problems faced.

Stress and It's Impact on Working Memory

Mara Jauron

Faculty Advisor: April Drumm-Hewitt

As a result of the compounding burdens associated with COVID-19, many people have experienced higher stress levels, particularly Generation Z (Gen Z; American Psychological Association, 2020). Gen Z represents individuals between the ages of 6 and 24. During these formative years, emerging adults go through a myriad of developmental and environmental changes that induce stress. Stress has negative

impacts on the body including the impairment of memory (Mayoclinic, 2019), or short term/working memory which lasts about 15-20 seconds (Goldstein, 2019). Stressed individuals have higher cortisol levels and have found to be affected by high load working memory tasks more than un-stressed peers (Oei, Everaerd, Elzinga, Van Well, & Bermond, 2006). It is possible that Covid exposure, and/or financial difficulty due to Covid, may be affecting student's stress levels and therefore their working memory. In the current study the link between stress and working memory will be explored through a memory task administered through Survey Monkey. Participants will take one of two surveys. One survey begins with a stress-inducing video that displays images and footage from the previous year. The video is then followed by a perceived stress questionnaire in which students are asked to recall the stress they have felt in the past six months. Once completed, students will be asked to complete a working memory task. They will watch a series of five-second videos and answer questions related to what they remember seeing. Participants taking the second survey will perform the same memory task and complete the same perceived stress questionnaire, but without viewing the stress-inducing video. We hypothesize that students who take the first survey will perform worse on the memory task than those who do not watch the stress inducing video.

House and Impeachment: Does Impeachment effect House member's re-election?

Jordan Baldwin

Faculty Advisor: Adrienne Gathman

There is no bigger political event than the impeachment of the president of the United States. For members of the House of Representatives, a yes or no vote on Impeachment could have a wide impact on their careers. But, does a yes or no vote on Impeachment cause their chances at re-election to decrease? Examining the Bill Clinton impeachment and members of the House in the state of Iowa during the time period, it is shown that Impeachment does not cause a member to lose his or her seat the next time they're on the ballot. In fact, the re-election of each house member in Iowa showed that they won by wider margins than in their previous election. Examining factors like the partisan nature of impeachment, incumbency and other social and economic issues that are in the districts shows that many voters in Iowa and across the country did not view a vote in favor or against impeachment as a major factor when determining who they were going to vote for. I will be discussing why this phenomenon has occurred and what it can mean for future elections.

VISUAL & PERFORMING ARTS

SC Honors: The Enemy of Truth, Henrik Ibsen's Explanations for Climate Denial

Elise Sturgeon

Faculty Advisor: Mimi Kammer

In recent years, productions of Henrik Ibsen's play *An Enemy of the People* have been cropping up across the United States. Why has a play written about a Norwegian town and its denial of germ theory in the 1880s resonated with modern audiences in the United States? I attempt to answer this question by elucidating some key parallels between the world of *An Enemy of the People* and the United States today. Specifically, I apply my analysis of the power dynamics of *An Enemy of the People* to the phenomena of climate change denial in the United States. It is in this way that I argue that this play can serve as a warning of the consequences of politicizing issues with vast scientific consensus. *An Enemy of the People* was written at a time when germ theory was widely accepted by the scientific community, while it had not yet gained full acceptance by the public at large. So, when Dr. Thomas Stockmann reports that bacteria in the town baths are killing their guests, powerful interest groups with concerns about the economic and political ramifications of these results begin to make this a political issue and introduce a narrative of denial that prevents the public from accepting definitive scientific results. From this framework, I collect research that reveals the powerful interests in the United States fueling climate denial and the consequences of such apoliticized environment surrounding climate science. Politicization, polarization, and the media are all interacting factors.

Part II: Poster Presentations

BUSINESS & MULTIMEDIA

Using Eurodollar Futures: Projecting Intermediate Highs and Lows of the stock market

Thomas Mussig

Faculty Advisor: Mark Juffernbruch

Often viewed as one of the most important financial markets, Eurodollar futures pose as a global benchmark, reflecting market expectations on U.S. interest rates. Eurodollars are significantly unique as they are not under the control of the Federal Reserve. This implies that the demand for these dollars for investment purposes reflects actual business activity, constituting potential predictive values for the U.S. stock market. Throughout my research, I present an interpretive review of the trends and tendencies found within the relationship between the S&P 500 and Eurodollar futures in terms of conceptual and analytical approaches used. Final implications drawn from the research will be concluded using these techniques.

Yellow Journalism & Yellow Peril: How Sensational Media Coverage Provoked the Internment of Japanese-Americans

Colbee Cunningham

Faculty Advisor: Brian Steffen

This research paper analyzes the role that American media played in the manufacturing of anti-Asian sentiment within the United States, and it demonstrates how this media-fueled ideology influenced President Franklin Delano Roosevelt's decision to intern Japanese-Americans during World War II. A historical analysis of media coverage surrounding Asian-Americans reveals a deep-seated phobia of both Asian immigrants and Asian-Americans, known as the Yellow Peril. American media greatly exacerbated fears of the Yellow Peril, specifically toward Japanese-Americans, after the bombing of Pearl Harbor. Through implementing tactics of Yellow Journalism, media crafted a narrative in which Japanese-Americans were viewed as enemy aliens as opposed to loyal citizens. This narrative not only had a negative influence on public perception of Japanese-Americans, but is partly responsible for their government-mandated internment.

EDUCATION AND SPORT & HEALTH SCIENCES

Improving Mental Healthcare in Iowa

Paula Carlson, Jenna Pfeiffer, Kylie Jones, & Kacie Cowman

Faculty Advisor: Jacy Downey

I will be presenting a white paper on improving mental healthcare in the state of Iowa. It discusses the importance of primary care providers especially when it comes to screening for mental health issues in annual well-child exams. The paper outlines resources and tools that the healthcare industry can utilize, such as incentives or referral systems, that would increase awareness and support for those struggling with mental illness. The paper also informs people about burnout and the severity of lack of providers in Iowa when it comes to medical professionals dealing with mental health patients. Solutions are then proposed as to how to recruit and retain more medical professionals in this field in the state of Iowa. Finally, the white paper discusses how a value-based care health insurance model would be beneficial when it comes to serving everyone including those with mental health issues. All in all, the white paper discusses the problems faced in the United States, especially Iowa, and how to try and solve these issues to help those in our community.

Mental Health in Public Schools

Bailey Earls

Faculty Advisor: Jacy Downey

Prevalence of mental health issues continues to rise and many mental health misconceptions still exist. Mental health issues often begin during the school-age years. The Centers for Disease Control and Prevention (CDC) report that one in five children in the U.S. have or have had a debilitating mental illness. Fifty percent of mental illness begins by the age of 14. Children spend so much of their life at school and because of this, mental health education should start at an early age and be regularly included in the curriculum. Equipping children with an understanding of brain science and mental health may raise awareness, lessen stigma, and increase access to care.

HUMANITIES

Islam in Turkey

Heidi Ekborg-Ott

Faculty Advisor: Jon Kara Shields

This poster will cover the various ways Islam is practiced in Turkey. It will touch on the universality of Islam as well as how it has become localized to Turkey. We will dive into history and the development of Islam in the context of the unique Turkish culture and how it has become what it is today. It will introduce the ways that Turkey has fostered the growth of Islam, how it has been interwoven into their history, and how Islam is seen today by the Turkish population. Essentially, this poster is focusing on the culture of Turkey and Islam's influence and place in that culture.

NATURAL SCIENCES

CampusSafe Mobile App

Kaitlyn Kottlowski

Faculty Advisor: Mark Brodie

I am creating an iOS and Android mobile app in the same shared codebase using a Cross-Platform UI framework called Xamarin.Forms. I am developing the CampusSafe app in Visual Studio and storing data in Firebase, a NoSQL cloud-hosted database. The main use for the CampusSafe app is for students to be able to utilize their Security Office and make them feel safer on campus. There will be many features including a "Pick Me Up" button that will allow students to quickly notify Security that they are in need of a ride. This can be used by students who may not be able to speak due to sickness, intoxication, or a disable. There will also be a "Friend Walk" feature that will allow students to continuously send any contact(s) their location and their destination. The contact(s) will also be notified of the student's arrival to their destination. There will be other tabs on the app screen that will contain more resources including CA/RA, SARA, and anything the Security Office may want to add. The student's account will also include a profile with information that will be shared with Security, if Security should need it.

Demonstrating Single-Photon Interference Using Correlated Photons

Kade Tatkenhorst

Faculty Advisor: David Olsgaard

A demonstration of quantum interference is done using correlated photons. In theory, we can represent a Mach-Zehnder interferometer using an unitary operator. Further, the probability of finding a photon exiting one of the interferometer arms is $P = (1/2)(1 + \cos \delta)$. The probability is not constant, so we know interference can occur. To show interference, we will use down-converted photons to create correlated

pairs, sending one-half of the pair into a Mach-Zehnder interferometer and a clear interference pattern appears in both arms exiting the interferometer. The interference pattern follows a cosine wave with the interference arms having opposite peaks and valleys.

PowerPollen Automated Pollen Counting

Alyssa Whitham, Ethan Humble, Georgia Porter, Eli Marriott

Faculty Advisor: Ross Sweet

PowerPollen is a company that focuses on increasing the lifespan of pollen and agricultural products. Currently, the company uses human hand counting to find the number of corn pollen grains and tubes collected to determine the germination rate. They tasked us with creating an automated computer algorithm to count the pollen more efficiently. We are going to be showing the methodology to create more efficient pollen grain and tube counting using Python. PowerPollen developers have reached a 95% accuracy rate with their pollen grain counting, but they have encountered many issues with pollen tubes. Using image analysis functions like grayscale, thresholding, and shape detection, our goal was to increase the accuracy rate of pollen grain counting and reach a 95% accuracy rate of pollen tube counting.

SOCIAL SCIENCES

Leadership Within Media

Heaven Lynch

Faculty Advisor: Walter Lain

The focus of this project is media and how it can be used within leadership roles. It is a common understanding that different types of media can invoke various feelings, thoughts, and actions. The past has shown several instances where entire revolutions and complete reconstructions of society have come about as a result of media that was offered to society. In a more utopian world, the media would serve to build up citizens and would refrain from pushing toward an agenda. Sadly, this is not the case and a quick glance at the news or listening to the radio reveals that much more is skewed than the average citizen would know. This project serves to uncover different ways media is being used as a form of leadership in the world and how it causes motion in everyday life. The collection consists of insight from the Indianola Independent Advocate, Bizzart, and the University of Arkansas Fort Smith. Each approaches the use of media in leadership by a different method. The project acts as a peek behind the veil of media and leadership, a mysterious combination very few explore.

How Companies Can Protect Minoritized Groups On Their Way Into A Job

Heidi Cecilia Ekborg-Ott

Faculty Advisor: Walter Lain

This research project is aimed at higher management and their responsibilities towards bringing minoritized groups into the workplace. The information can be split into five primary categories including: shifting where employees are sourced, changing how the organization trains their hiring department(s), diversity quotas, marketing the company to potential employees, adjusting dress code guidelines. The research is centered around areas that companies and corporations may improve in order to better include and promote minoritized groups of all kinds. I bring attention to the current social issues our society is facing today and how modern organizations should go about bettering the way they treat all diverse individuals and groups.

Evaluation of the George Washington Carver National Scholarship

Ling Rudicil

Faculty Advisor: Walter Lain

The evaluation will include an in-depth look at the history of the scholarship, interviews with current fellows in the program, comparisons with scholarship programs from other schools, analysis of the application process, and recommendations for the future of the program. The purpose of this research is to educate people on the George Washington Carver Scholarship, help people understand the role and importance of the scholarship to students, and to improve upon the program.

Bias Response Team

Taylor Williams

Faculty Advisor: Walter Lane

Since my first year at Simpson College, I have noticed an issue with how the administration handles bias related incidents specifically involving minority students on campus. My capstone project is designed to bridge the gap between the administration and minorities safety on campus. The Foundation for Individual Rights (FIRE) discovered and surveyed 231 Bias Response Teams at public and private institutions during 2016. FIRE believes that the number of Bias Response Teams is growing rapidly across the country. Simpson College would greatly benefit from the use of a bias response team. Minority students deserve support from the institution and having a response team that will hold students accountable for their actions may decrease the number of incidents on campus. This team would be constructed of students and a faculty or staff advisor and function similarly to the SARA program. This team will also work closely with SGA and the VP of Diversity, Equity, and inclusion. This project outlines how this would impact the campus culture and function as a part of the Simpson community.

Diverse Leaders in Sport Industry

Cassie Nash

Faculty Advisor: Walter Lain

This poster presentation will examine the current state of leadership of people of color in the sports industry. The lack of diverse leadership in pro teams all the way to the collegiate level of sports will be investigated. The diversity gap in sports leadership is a significant concern facing the industry at this point in time. Finally, advice from individual sports leaders of color will be provided within the presentation.

An Analysis of Unjust Immigration System in the United States

Guadalupe Valladares

Faculty Advisor: Carolyn Dallinger

This poster presentation will examine the due process and human rights violations of Central American Immigrants, including the loopholes in the process, and the deportation of people without hearings. Myths held by everyday people of the U.S. including immigrants' ability to 'get in line' or easy immigration access will be explored. Through a social justice lens, this presentation will center on U.S. involvement in Central American countries leading to desperation and cause for increased immigration to the U.S. Finally, this poster will present reasons that the U.S. should to be involved in solving this humanitarian crisis.

How Has Sports Helped Women Shape Who They Are Today?

Maxie Saceda-Hurt

Faculty Advisor: Carolyn Dallinger and Walter Lain

Athletics have been around for many years. However, women have only started to participate in athletics many years ago. Women in athletics is still a new discussion, especially women in higher positions within athletics. Athletics have helped shape the lives of women of all different age groups. It has helped them make their mental game stronger. I have interviewed 2 powerful women that have helped shape my life in more ways than just athletics.

Will the Suburbs be key to a Democratic Victory in Wisconsin for the 2024 Presidential Election

Geoff VanDeusen

Faculty Advisor: Adrienne Gathman

We have seen the Wisconsin suburbs flip from one party to another starting with president Barack Obama. Joe Biden carried the state and its ten electoral college votes by only a little more than 20,000 votes or 0.7%, a razor thin margin. The battleground state is reflective of the rest of the country in which it is a showdown between rural and suburban voters. In the 2020 election the suburban voters were enough to outperform the rural voters but can the Democrats rely on this for the next presidential election, should the Democrats pursue more rural votes, or even should Republicans try and carve into the Democrat suburban strongholds? Wisconsin serves as a predictor of a rapidly changing electorate that can show overarching trends of voters in the United States.

Inattentive Blindness and Threat Detection

Caitlynn Shadle

Faculty Advisor: Don Evans

Does focusing attention on a task prevent awareness of stimuli that may be important, but are not directly relevant to the task? We intuitively believe that salient or distinctive objects will capture our attention. Surprisingly however, they often do not. This phenomenon has been referred to as “inattentive blindness.” Inattentive blindness refers to the common and involuntary failure to notice and perceive plainly visible items when attention is otherwise preoccupied. The goal of the present study was to replicate the inattentive blindness findings of Wiemer et al. in 2013, while also determining how neutral, non-threatening, and threat-relevant stimuli would influence stimulus detection as well as physiological responses. Participants completed a Fear of Spiders Questionnaire and a computer-administered distraction task while being monitored physiologically. At intervals during the task, threat-relevant, non-threat-relevant, or neutral stimuli appeared on the screen. Following exposure to critical trial stimuli, participants were asked, “Did you see anything else besides the cross in this trial?” If they answered yes, they were also asked what they saw and where it appeared. While completing this task, skin conductance was also measured. This served as a biological indicator of an alerting or stress response. Our hope is to further understand the processes that occur during inattentive blindness and the influence of distractions on information processing. We will also seek to further address the question of whether inattentive blindness is truly an attentional process or if it interacts with our threat-detection processes.

Part III: Class Panels

2021 Sport Administration Capstone Presentations

Clint Huntrods

Students: Scott Oderio, Jamie Glanz, Emily Jansen, Jeramy Randol

Sport Administration students completing their Capstone this semester will present insights produced in their research project and also present on the practical experiences they completed during their time at Simpson.

Performances of Distinction

Deano Pape

Students: Specific Students Will be Selected Following the National Tournament

Select students from the speech and debate team will present interpretations of literature, original speeches, and limited preparation events.

Building Capacity for HSL capstone internships

Jacy Downey

Students: Emily Berkland, Paula Carlson, Abby Ruby

This panel discussion will feature HSL students who have previously or are currently engaged in HSL internships. I will invite HSL students who have yet to register for internships to participate in the discussion so that they will be better armed to be an advocate for starting conversations with potential host sites about developing high-quality, rigorous internship experiences. Currently, I have been developing internships for students, one-at-a-time, using a project-based model. This process is not sustainable nor does it empower students to engage with the professional community.

Simpson Honors Capstone- An interdisciplinary approach to ethical service

Jesse L Wilcox

Students: Reza Mohammadi, Mackenzie Ritscher, Natasha Shipp, Laura Nielsen, Taylor Hoffman, Sydney Alt

Students in the Simpson Honors Capstone were asked to reflect on their own personal experience in the program, their education in the liberal arts, and collectively how they have met the learning objectives of the program. They then created original products that demonstrate interdisciplinary connections and provide connections to the ethical service of others. In this session, students will present their capstone projects and discuss what the Honors program has meant to them as they prepare to begin their post-college lives.

Crossing Borders: Latin America and the US

Lau Cesarco Eglin

Students: Bahari Afare, Ricardo Ibarra, Morgan Kerkman, Paisley K. Kintigh, Triniti Krauss, Madison Luderman, Mike Mcgee, Ronaldo Zambrano, Aiden Ruble, Rylie Sandvoss, Wendy Soto, Elise Sturgeon, Bleu Valladares, Spencer Young

In this panel/session students will present their research about one particular topic related to immigration from Latin America to the US, Latinx people in the U.S., Latinxs in the U.S., among others.

Sequel 2020-21 Release and Reading

David Wolf

Students: Rachel Bieker, Brayden Biersner, Katie Grilli, Faith Nickens, Blu Ossian, Jordyn Wilson, Makenna Mullin, Katie Robey, Ash Pickens, Kaya Young, Faith Leonard, Ashley Merkley, Macie Bopp, Nina Ortiz

David M. Wolf Sequel 2019-20 Release and Reading Sequel, Simpson College's literary and visual arts annual, published continuously since 1948, will release its 2020-21 edition, with readings and visual arts presentations by a selection of contributors. A Q & A session will follow.

Stress in Your Pocket?

Don Evans

Students: MacKenzie Grenko, Gizzy Keeler, Juliana Bourne, Hannah Parks, Carter Stacey, Haley Nizzi

Most adults use a cell phone and keep it with them at all times. We explored whether phone use might be creating unwanted and possibly unhealthy stress. In addition to several psychological measures, our participants completed a session that measured heart rate and skin conductance as indicators of stress responses to phone alerts. We will discuss our findings in the context of past research that has identified cell phone use as a source of stress and what might be done to lessen its impact.

Suggested Changes to the U.S. Juvenile Justice System by Comparing Other Countries

Carolyn Dallinger

Students: Nyan Baker, Kylee Bass, Craig Garrison, Joseph Kramer, Chance Mace, Olivia McKelvey, Lorin Miller, Hunter Muhlbauer, Hannah Murphy, Zach Murphy, Madison Reno, Jakob Slavin, TJ Stephenson, Kimmie Strand, Sam Wolff, Maryamu Yakubu

This class panel discussion will explore the differences and similarities of the U.S. juvenile justice system with the systems in New Zealand, Russia, China, Chile, Germany, Philippines, Brazil, Belgium, Japan, and South Africa. Students will explain methods from other countries that would make the U.S. juvenile justice system more effective.

The Details of George Washington Carver's Life as a Scientist, Seeker of Racial Justice, Life as a Student, and His Important Friendships.

Walter Lain & Carolyn Dallinger

Students: Teria Campbell, Karlie Hill, Derrick Johnson, Jessica Orozco, Nina Ortiz

This panel discussion will cover research on George Washington Carver's life including his legitimacy as a scientist, his cleverness in facing racial discrimination, his education experiences through childhood and college, his supportive relationships through his young life, and his famous friendships encouraging his renowned status later in life. People attending this session will learn many things about this great man, even during some of his time as a Simpson College student.

The 2020 Simpson Political Survey

Kedron Bardwell

Students: Katie Cardoza, Geoff Van Deusen, Jailyn Seabrooks

What are the views of Simpson students on controversial issues? How do these views differ from those of faculty and staff? How did the student body vote in the 2020 presidential election? The 2020 Simpson Survey analyzes student, faculty, and staff opinions in a survey conducted in November 2020. The survey was written, distributed, and analyzed by students in POSC 285: Political Research. The survey included a range of questions about party/ideology, vote choice, and issues (Black Lives Matter, campus protests, COVID-19, immigration, health care, climate change, and impeachment). This panel offers the opportunity for the instructor and class to share the survey results formally with the campus and community.

Social Statistics Term Projects

Ali Madanipour

Students: Zoe J. Baker, Victoria E. Barksdale, Hannah Mulligan, Ragan B. Shelgren, Sydney K. Stephenson, Treye W. Teske, Kaytee J. Van Clark

In this panel, students will present the results of their data analyses individually or collaboratively. They have worked on the variety of topics at individual, state and country levels, formulated hypotheses, collected data from available sources, imported data to the Statistics Package for Social Science Software (SPSS), and applied various descriptive and inferential statistical tests to evaluate their hypotheses and to respond to their research questions.