

Spring 2021

Senior Honors Presentation

Heidelberg University's Life of the Mind Honors Program is proud to present the Zoom and video presentations for this Spring 2021 Senior Honors Projects. Students worked with a faculty mentor for the duration of the semester, exploring topics as varied as telemedicine in the age of COVID, pop-culture Easter eggs, women in sports, and Socrates.

Zoom Presentations

April 27, 2021

4:30 p.m.

Rebecca Helt

“Gender and Negotiation”

For years it has been commonly stated that women achieve less favorable outcomes than men at the bargaining table. These effects are noticeable in the gender wage gap that continues to favor men and the lack of women in upper management. Some people believe men's and women's negotiation outcomes are due to innate differences in ability, but an ever-growing body of research indicates that gender bias and stereotypes are the main inhibitors of women's success. Studies have shown that women are less assertive and set lower expectations for themselves to hedge against anticipated backlash they would incur if they did not act sufficiently “lady-like” at the bargaining table. However, further research indicates that backlash for women is dependent on the negotiation context and can be attenuated by reframing negotiations and teaching negotiation skills. When women and men are both trained in negotiation skills, there is no statistical difference in their outcomes, indicating that men are not inherently better negotiators than women.

Faculty mentor: Dr. Susan McCafferty

4:50 p.m.

Logan Kittaka

“Impacts of COVID-19 and Telemedicine on Patient-Provider Relationships”

The purpose of this study is to examine how COVID-19 and the increased use of telehealth have impacted patient-provider relationships. The relationship between a patient and their healthcare provider can have a large impact on the quality of care given. Having a strong, healthy relationship based on trust and compassion is vital to patient care. If a patient-provider relationship is poorly maintained, the consequences can lead to dissatisfaction, malpractice claims, medication errors, and poor symptom resolution. Some common barriers that lead to the aforementioned consequences include acceptance, healthcare system model, and social

factors. COVID-19 is another barrier that has impacted many patients and providers. The COVID-19 pandemic has forced many healthcare providers to alter the way they provide care by adopting telehealth, often in the form of virtual video calls. Seeking medical attention can cause much stress and anxiety for patients. The impacts of COVID-19 and the increased use of telehealth have brought with it new challenges for patients and providers. Along with new challenges come new, promising outcomes. Many patients and providers have described the benefits of telehealth. These benefits may include decreased wait times, increased provider access, enhanced provider productivity, and decreased strain on the healthcare system. In order to adapt to these lasting changes, providers must be able to identify how they can build strong, healthy patient-provider relationships when utilizing telehealth.

Faculty mentor: Professor Lauren McGraw

5:10 p.m.

Em Swain

“*Rooster: A Fictional Investigation into the Character of Socrates*”

Rooster: A Fictional Investigation into the Character of Socrates is an original short play paired with an academic explanation of textual evidence, character analysis, investigation into writing methodology, and a literary critique. The play highlights and explains the textual evidence for changes made to the character of Socrates in Plato’s writing. The play explores themes of grief and Freudian ideas of mentorship and paternal relationships, expanding on the psychological nature of the primary conflict between student (Plato) and teacher (Socrates). The intent of the play and the academic structure complimenting it are for the audience/reader to experience Plato’s investigation into Socrates as Plato saw him. Plato’s memories and perspective of his deceased idol are challenged throughout the play as Plato attempts to immortalize Socrates’ writing and teachings. Those slighted by Socrates’ pride in the trial and in life are depicted critically, and Plato’s high opinion of his teacher is challenged.

Faculty mentor: Dr. Heleana Theixos

April 28, 2021

4:30 p.m.

Amanda Sharier

“Analysis of Light in *Lord of the Rings*”

J. R. R. Tolkien’s *The Lord of the Rings* is saturated with nature. He weaves it seamlessly into his work, going beyond just beautiful descriptions of the scenery and making it part of the essence of his story. One facet of nature in which he does this is celestial light, or the sun, moon and stars. Light within his story is rooted in the very beginning and shines throughout the ages of Middle-Earth. In this paper I examine the role that light plays in *The Lord of the Rings* and how his story is steeped in it, even to the very steps of Mordor. I explore how light is tied into the nature around it and how it is the embodiment of Tolkien’s story.

Faculty mentor: Dr. Barry Devine

4:50 p.m.

Christina Mealwitz

“An Analysis of the Awareness of Sickle Cell Trait Testing in NCAA Athletes”

Even though carrying one altered copy of the hemoglobin gene does not cause Sickle Cell Disease, it can be concerning for the athletic population. When exercise is intense, these sickled red blood cells can block blood flow, cause dehydration, and increase the chance of medical complications (NCAA). The NCAA recommends that all student-athletes are tested to determine their Sickle Cell Trait status prior to participating at the collegiate level. It is unknown how educated students and student-athletes are on Sickle Cell Trait on Heidelberg's campus. Therefore, an analysis was done on student awareness of Sickle Cell Trait testing in NCAA athletes and general Sickle Cell Trait knowledge. Fifty-two students completed the survey, equalling a response rate of 4.4% of the student population. I hypothesized that students are unaware of the testing of Sickle Cell Trait in NCAA athletes and do not have a basic foundation of knowledge on this topic. Regardless of their status as a student-athlete or not, students were more likely to be in favor of Sickle Cell Trait testing after completing the readings and survey (87%) than they were prior to completing the readings (48%). Additionally, there were common misconceptions noted in the students' definitions of Sickle Cell Trait (29%) and disadvantages of Sickle Cell Trait testing in NCAA athletes (7.5%). This study suggests there is a need for more education campus-wide on this topic.

Works Cited:

NCAA. “Sickle Cell Trait.” Fact Sheet. Sports Science Institute. N.d. Web.

“Sickle Cell Trait.” NCAA. 2006, <https://www.ncaa.org/sport-science-institute/sickle-cell-trait>.

Faculty mentor: Dr. Kylee Spencer

April 29, 2021

4:30 p.m.

Bailey Croft

“Deteriorating Retention Rates”

Employees are leaving highly sought-after positions at Fortune 500 companies after only a few years of employment. Companies are losing employees for a multitude of reasons, whether it be job dissatisfaction, career growth, or job poaching. Problems arise for companies when this becomes the norm. Companies begin investing less in young employees and focusing more on the next batch of recruits. Employers are not trying to retain their staff, but instead have fallen numb to the new trend in employment.

Faculty mentor: Dr. Maef Woods

4:50 p.m.

Mark Ward

“Music’s Ability to Teach Us While We Listen”

Music has many capabilities as an art form. Some of them heavily analyzed, some of them not so much. This paper aims to examine a component of music that hasn’t been a large focal point: Music has storytelling capabilities, which paired with attention to detail in listening to lyrics, can teach its listeners a great deal about current events or eras in which it was created. While music isn’t going to make anyone a history expert on its own, it can add color to some events that people have prior knowledge of. This ability to teach listeners can have a profound effect on them in which they can feel and articulate the emotions that were being expressed at the time of the music’s creation. This paper examines music from three major eras in American history: The Vietnam War, the 9/11 era, and the COVID-19 pandemic, with a variety of music from each period, including music from rock, country, and rap genres. By overlapping the lyrics with an explanation of the events it is trying to depict, this paper will show how much music can teach its listeners when the lyrics are truly heard. Some key ideas in the paper are that music can teach listeners the emotions of its times, the idea that music can add color to a painting of just lines (an analogy that will later be explained), and lastly that music can depict what life was like during these eras.

Faculty mentor: Professor Stephen Svoboda

Pre-recorded videos

Eli Allen

“An Individual's Perception of their Teeth and its Effect on Self-Image”

Objective:

Physical appearance has played a large role in how humans interact with each other, as well as how they perceive themselves. A large portion of this is the physical appearance of teeth, as teeth are one of the most noticeable characteristics on the human face. The purpose of this study was to examine the effect a person’s perception of the physical appearance of their teeth has on their mental health.

Method:

Using an online survey, 101 participants answered questions about how they perceive their teeth and smile and their mental health. This survey utilized a Likert scale to gauge each of the participants. The questions were then placed into two categories, appearance and mental health, and the scores were averaged for each individual.

Results:

A negative correlation was found between physical appearance and mental health. This means that mental health issues are more prevalent in individuals with a more negative perception of their physical appearance.

Conclusion:

An individual’s perception of their teeth is related to the condition of their mental health. These results may be explained by the social pressure for one’s teeth and smile to look a certain way.

Faculty mentor: Dr. Virginia Gregg

Paige Allen-Marsh

“The Effects of Alcohol Consumption on Maternal Behaviors in Rats”

Alcohol consumption is known to have negative effects on health and normal behaviors, including maternal behaviors. This study was conducted on rats to investigate the effects of maternal consumption of alcohol on the general health of the family unit and the behaviors of the dam (mother rat). It was hypothesized that there would be a negative effect on nest construction, nursing strategies, and time spent with litters and also a negative impact on the weight of the dam and the litter and that there would be a negative effect on nest construction, nursing strategies, and time spent with litters.

Ten likely pregnant Wister females were provided with a single fluid option of 10% ethanol, and the fluid consumption was determined daily. Weights were taken daily for the females and litters. Nest construction was rated, number of piles of pups was noted, and time spent with pups was recorded. An alternate data set was created with ten females who were provided with a single fluid option of water.

When the ethanol and water consumption groups were compared, only two significant differences were found. The dams provided with ethanol consumed less fluid and spent more time with their litters. All other data showed no significant differences. The ethanol consuming dams went into birthing with a lower overall body weight, which may have limited the ability to properly nurse. Additionally, with lower fluid consumption in the ethanol group, the dams may have produced less milk which could have caused the lower litter weights. In future studies, a larger sample size may produce more statistically significant differences between the groups.

Faculty mentor: Dr. Pamela Faber

Jessica Ballow

“Ethical Challenges in *Grey's Anatomy* and Their Real Life Teaching Practices “

Seemingly a cultural staple, *Greys Anatomy* now in its 17th season, still challenging social issues taking a stand for social justice. For the last 16 seasons the show has been tackling different issues and how they would be portrayed to health care, all the while advocating for all different types of social justice. The show tries its best to address these issues properly but did the show handle the issues properly? Coming across this question and the passion for the show is what has sparked this research. The standard practices of teaching often differ from their real world implementation determining what these standard teaching practices are however is essential to determining if the show took the appropriate course of action in handling not only the patients health but their culture and religions as well. Health care is complicated enough but the addition of peoples religion, culture, and personal history and balancing interactions with care is such a gentle balance, yet it is essential into being the most effective professional possible.

Faculty mentor: Professor Lauren McGraw

Zariah Baynard

“Body Image: Social Media and Beauty Standards”

With the increasing use of social media in today's society, it is important to remain aware of the potential effects that come with its use. Social media networks have opportunities for feedback in the form of likes and comments from online audiences. When people post their content such as physical appearance this leaves room for those receiving the feedback to interpret the evaluations in a negative connotation. This can potentially lead to mental health issues associated with social media and body image. In this study the relationship between social media, body image, and mental health will be examined through the use of a Google Form survey. The connection will be explored among Heidelberg University's college students. Due to the lack of research available regarding social media platforms and body image, rather than traditional media (magazines, television, etc.) it is imperative to broaden this scope of research and bring awareness.

Faculty mentor: Dr. Robin Heaton

Allison Blythe

“Libraries Before the Printing Press”

This project represents the preliminary research for a much larger public history multimedia exhibition to be pursued further in graduate school. The project explores the history of libraries before the printing press in the Western World. Through the lens of library history, a public audience will be introduced to concepts such as the interdisciplinarity of library history, how historical narratives change over time as new evidence comes to light or previously known evidence is reexamined, and how historical narratives are not all encompassing and have holes where research has not been done. During the current pandemic and in its aftermath is an opportune time to pursue this topic, because statistics on borrowing patterns indicate that in times of uncertainty, people turn to libraries for help, information, and stability. Public audiences are familiar with the institution of the library, and are more aware of the role libraries can play in the lives of communities, and would be more willing now than ever to learn about the history of the institution.

Faculty mentor: Dr. Barry Devine

Gillian Duer

“The Effects of Applied Pesticides on Common Garden Plants”

Pesticides come in a variety of forms from synthetic chemical concoctions to more plant-based “biopesticides.” There is detailed evidence, such as Zamin Shaheed Siddiqui and Soaliha Ahmed's “Combined Effects of Pesticide on Growth and Nutritive Composition on Soybean Plants,” showing the negative effects of using synthetic pesticides, especially on agricultural vegetation, but there is not much research showing if biopesticides have similar adverse effects. The purpose of this study is to compare a synthetic pesticide to the biopesticide, Neem Oil, by observing how each will affect the physiology of two representative plant species: Marigolds and Bush Beans. I will also be comparing how pesticides affect soil chemistry. I plan to record differences in plant height, germination date, plant flower production or bean yield, and end-of-term biomass.

I hypothesize that the plants being treated with the biopesticide will be the most successful, meaning that the plants grow the quickest and the tallest, and produce the highest flower and bean yield.

Faculty mentor: Dr. Amy Berger

Tristan Goerk

“Transgender Representation in the Media”

This paper will be taking an in-depth look at the representation of transgender characters and actors in the media. The question to be answered is this: while there is more trans representation in the media, is it good representation? The research methods will include direct consumption of the media being studied as well as compiling outside sources and reviews of the media. The results of this research have concluded that not all of the transgender representation has been good, but it has not all been bad either.

Faculty mentor: Professor Stephen Svoboda

Shaadia Flint

“Supporting First-Generation College Students”

First-generation college students are a large population of college students each academic year. This paper aims to dissect the factors contributing to the success of this group of students by comparing their experiences, needs, and struggles with their continuing-generation college student peers. Recommendations will be made regarding first-generation students on Heidelberg’s campus.

Faculty mentor: Dr. Virginia Gregg

Trevor Harrison-Rawn

“The Impact of Reagan Policies”

The foundation of Ronald Reagan’s polarizing presidency was built upon economic deregulation, combating communism, and bolstering American prestige around the world. He has been heralded as both the mastermind behind the economic boom of the 1980s and as the antichrist to progressivism in America. This project attempts to piece together and call to attention the facts and figures of the administration’s impact upon all Americans, understand the mark U.S. intervention left on the rest of the world, and uncover what many Americans misinterpret about the Reagan administration. His successes are widely noted and it is evident as to who benefited from the administration’s policies both home and abroad. Here, the focal point is to discover whom, and to what extent, the Reagan presidency touched in a disproportionately negative manner.

Faculty mentor: Dr. Marc O’Reilly

Hannah Kilps

“Hunting for Easter Eggs: An Analysis on Fandom Response of Pixar’s Easter Eggs”

What comes to mind when hearing the words “Easter Egg?” Is it multi-colored plastic eggs that are hidden around for children to find? That is an Easter Egg; however, the term is also used in film but with a slightly different meaning. In film, an Easter Egg is an item, or image hidden somewhere in a movie for the audience to find. Pixar Animation Studios utilizes Easter Eggs in almost all of its movies causing a variety of different reactions and responses from Pixar fans. The purpose of this study is to analyze the reactions and responses of Pixar fans to “Easter Eggs” in Pixar movies. Social media platform Twitter was used to gather fan responses specifically for Pixar films. Twitter is a public platform that allows users to share their opinion on a vast variety of topics. The key words “Pixar’s Easter Eggs” and “Easter Eggs in Movies” were used to narrow the search for this study. Once the tweets were collected, they were sorted and analyzed based on their content allowing for common themes to be developed. These common themes include promotional, re-viewing, bragging, and theory/speculation and tell us a bit about how Easter Eggs benefit Pixar Animation Studios and their fandom.

Faculty mentor: Dr. Julie O’Reilly

Mason Metz

“Magnetic Engine Hypothesis via Chaos Induction”

The purpose of this research is to find a renewable energy source via the use of magnetic propulsion of other magnets in a circular motion. The final design of the engine is a basic octahedral with an inlay of a sequence of magnets on each of the eight faces of the octahedral. The octahedral will be surrounded by a system of two magnets that will have the ability to be raised and lowered to affect the revolution per minute of the octahedral. The Chaos Induction will allow for a function of time to be created to explain the amount of torque created.

Faculty mentor: Dr. Terry Lemley

Megan Newell

“Color in Anime: The Color Coding of Characters”

Color is a plastic element filled with symbolic and aesthetic meaning. In visual storytelling, it plays an important role in telling the story in the specific way the creator wanted it to. This is no different in anime. In fact, Japanese animation has managed to incorporate the broad experience of the dynamic and chromatic color theories accumulated throughout the history of painting and convert that medium to a form for anime. Specific colors and drawing are constantly used to portray feelings, emotions, and themes in animation. These colors could also be used to portray themes, attitudes, and attributes in characters based on a color that they are identified with. While all characters are identified with a specific color, their relationships with the other characters can be understood with the art theory that Japanese animation is known for using.

Faculty mentor: Ms. Cassandra Brown

Eric Svoboda

“The Effects of Media Viewership on Political Beliefs and Decision-Making”

In an age where politics is more polarized than ever, it is important to understand how people form their beliefs and how they make decisions based on them. The media, in particular, has become increasingly more present in everyday life, leading many to debate how impactful it is in shaping individuals' political behavior. For many, the growth of partisan media is a major cause of recent polarization, while others believe that its role is minimal and that the true cause of polarization instead lies in human nature. By examining political and psychological theories and by examining data on voting behavior and media viewership, it is the aim of this study to uncover just how influential media really is in shaping the beliefs and decisions of average American voters.

Faculty mentor: Dr. Josh Bowman

Maxine Trout

“Remote Work and Mental Health”

Remote work has become increasingly popular in the last year due to the COVID-19 pandemic. Many companies were forced to shut their doors and require their employees to work from home. Throughout the year it has been evident that the mental health of those who work remotely have taken a toll.

This study will consist of surveying 30 adults who have worked remotely for at least a month. The survey will consist of questions pertaining to some personal information, their experiences, their previous and current mental health situation. In this study, the basic feelings of one will be analyzed and used to understand the effects of remote work on an individual.

Faculty mentor: Dr. Mark Veal

Jamie Whitney

“History of Women in Sports”

The abundance of sports today is not nearly what it used to be. Women were rarely allowed to participate in any organized sporting events in early years. In the following years, there were many women who were pioneers for the women in sports today. In searching for some of the most influential women in sports, there are a few names that stand out. In early years, Billie Jean King and Lisa Leslie were pioneers for their respective sports. King for tennis was one of the front runners of the case in favor of Title IX and is a big part of why Title IX is so prominent today.¹ Leslie was a successful player in women's basketball, but she is also the first woman to be a head coach for a professional men's basketball team and she was the first woman to dunk in a WNBA game.² Fast forward to some more recent and familiar names, Serena Williams and Sue Bird have continued to make strides in hopes to continue leading women to bigger and better accomplishments in athletics. Williams is well known as one of the best tennis players in history and is fighting for equal rights for women within tennis and athletics as a whole. Bird is one of the most successful

and decorated women's basketball players in America. Recently she has been fighting for different causes including Black Lives Matter and Say Her Name, but also the equivalence of men's and women's teams within the NBA and WNBA.^{3,4} Currently with March Madness games occurring within the NCAA for men's and women's basketball, there has been media coverage of the blatant inequalities between the genders venues and amenities during the tournament.

References

1. Billie Jean King. Women's Sports Foundation. Accessed April 9, 2021.
<https://www.womenssportsfoundation.org/athlete/billie-jean-king/>
2. March 8 U, Am 2019 9:10. Women pioneers in sports history. Newsday. Accessed February 25, 2021.
<https://www.newsday.com/sports/women-s-sports/women-pioneers-in-sports-history-1.4711159>
3. Top 5 Influential Women in Basketball. 360 Hoops. Published March 6, 2020. Accessed February 25, 2021.
<https://www.play360hoops.com/blog/top-5-influential-women-in-basketball/>
4. Basketball Star Sue Bird Says WNBA Players' Activism Is "Nonnegotiable." NPR.org. Accessed April 9, 2021.
<https://www.npr.org/2020/10/25/927492785/basketball-star-sue-bird-says-wnba-players-activism-is-nonnegotiable>

Faculty mentor: Ms Morgan Harrigan