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2021 URSCA Abstracts

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Angel Alcantar

Faculty Mentor: Jonathan Burton

Challenging the Canon: Implementing Young Adult Fiction in Secondary American Classrooms

In the last decade, there has been a substantial growth within the young adult fiction genre with increasing numbers of publications and changes in the style of writing that has been implemented. However, there is no proportional study of genre due to perceptions the genre holding very little literary merit allowing for classroom inclusion at the secondary level. It has been delineated to pleasure reading or commercial fiction due to the high popularity of such titles as Harry Potter and Twilight as well as its history as middle school literature. However, the current state of Young Adult (YA) fiction far surpasses these perceptions through challenging the very essence of what a great text is providing several avenues to meet standards set by the Common Core developed by the U.S. Department of Education. YA fiction uses three strong characteristics to increase textual complexity without the need for increasing difficulty: formal experimentation, diverse experiences, and complex political narratives informed by literary theory, such as Marxism, Gender Studies, and Sexuality Studies. YA fiction, however, can do more than simply meet standards; its inherent benefits lay in its appeal to young readers allowing for the implementation of educational pedagogies attempting to use interconnectedness to form bonds with students to raise student engagement, and thus achievement. Using the Common Core State Standards at the secondary level as a metric for understanding textual complexity this project uses a survey of young adult fiction novels alongside literary analysis to demonstrate the literary merit within the genre that makes young adult literature equally worthy of inclusion in classrooms as canonical text and sometimes offering more within a single novel through surpassing goals of the Common core and meeting goals of pedagogy.

Audrey Armienta

Co-author: Kat Garrison

Faculty Mentor: Gary Gold

Age Discrimination in the US and Japan

This research project undertakes a comparative assessment of the contours of workplace age discrimination in the United States and Japan. We explore laws and procedures to compare how these countries promote and deal with inequalities in employment. The exploration has a limited focus on examining age discrimination through the legal framework set in the United States court of law and the standards that Japan holds that inherently promote or hinder age discrimination. We found it essential to investigate two fundamentally different countries to gain a broader sense of employment law and the improvements that can be made for future employment and social welfare. In the United States, there are protections against age discrimination for those over the age of 40; whereas, in Japan, there are no regulations for age discrimination, making it difficult for those over 30 seeking to find employment. When dealing with an increasingly older workforce in the United States and Japan, it is important to understand the measure by which the law can protect older workers from being discriminated against and work towards social acceptance. We explore each country's history of addressing inequalities through cultural norms, societal standards, and legal proceedings. The research was conducted through an empirical approach, using both qualitative and quantitative data. Statistical records, literary criticisms, and interviews are used to gain a greater sense of the need for equal employment protections for older workers. Through the data, we were able to find that societal standards limited the progress in expanding legal protections. In conclusion, we found that the social conditions reaffirm international business theories, primarily Hofstede's Dimensions of National Culture and Social Structures, that help to define different social operations and explain the complications in establishing

comprehensive legal protections. Our comparative study concludes with a final assessment summarizing some of the significant commonalities and dissimilarities between these two countries, and identifying prospective age-focused developments that might foster continued improvements in employment equality.

Michael Astudillo-Ash

Faculty Mentor: Marie-Magdeleine Chirol-Hill

"Wallay" (2017) de Berni Goldblat: Entre Tradition et Modernité / A Balance Between Tradition and Modernity

The beautifully crafted bildungsroman (coming-of-age) film, "Wallay", first takes place in France, where thirteen-year-old boy Ady lives with his widowed father. As Ady becomes increasingly non-compliant with the law and his father begins to run out of resources to help take care of him, he sends him to Burkina Faso to stay with his Uncle Amadou for the summer. Originally, Ady assumes that he is there on vacation, but unbeknownst to him, his father's intentions for sending him there are much different. Eventually, he learns that his father has sent him to stay with his Uncle Amadou so that he can learn to mature. His father felt that being under the supervision of his uncle that he would be able to grow into a proper young man. However, many of his uncle's methods were a little unconventional and most of the growth he experienced was through the help of his grandmother. The purpose of my paper is to examine how Ady, a spoiled and disrespectful teenager, can resolve his issues with the traditional values that his Uncle Amadou attempts to instill in him and force him to undergo, while also growing into a modern young man. First, we consider his rebelliousness towards his uncle and the traditional circumcision rite of passage that he wishes Ady to undergo. Secondly, we consider how his grandmother instilled in him new teachings. Lastly, we demonstrate how

Ady can reconcile with the traditions he learns and how he transforms into the young man that his father dreamed he would become. Through learning respectfulness from his grandmother along with finally having that motherly figure in his life, Ady was able to grow into the young man that he needed to be. His immersion into more traditional life in Burkina Faso and through the guidance of his uncle, cousin, and grandmother, Ady was able to transform into a mature modern young man when he returned to France.

Nancy Avila

Faculty Mentor: Marie-Magdeleine Chirol-Hill

La Liberté des Femmes Oubliées dans "Atlantique" (2019) de Mati Diop

In Mati Diop's 2019 debut film, "Atlantique", the fates of many Senegalese men and women are portrayed through a supernatural romantic drama. The film features the life-threatening odyssey many young men choose to endure in exchange for a prosperous future. Diop's feminist perspective of this issue focuses on the struggles of the women "ghosted" by the men in their lives. I analyze how the main character, Ada, tells an empowering story for the women who are left behind and choose to make the most of their situations within their culture. As the audience follows Ada through her journey of self-discovery, filled with grief, confusion, and finally enlightenment there is a heavy presence of the Atlantic Ocean. I first focus on the juxtaposition of the lives of other women within Ada's community and that of her own to establish the distinction of power within Ada. Secondly, I draw upon the correlation between Ada's journey and the Atlantic Ocean. The soundscapes of the ocean serve as a leitmotif, while its presence serves as an overall symbol and engine for change, growth, life, and death in Ada's life. Lastly, I go over the use of reflections within the film as Diop's tool to emphasize Ada's self-discovery. The ending scene where Ada breaks the fourth wall

works to connect and deepen the message of self-empowerment throughout the film.

Mariella Ayala-Gallegos

Faculty Mentor: Rebecca Overmyer-Velázquez

The Impacts COVID-19 has had on Undocumented Workers

COVID-19 has negatively affected undocumented workers, but the question remains: how has COVID-19 influenced pre-existing barriers to ideal living/working standards for undocumented workers? For example, non-citizens have previously struggled to access healthcare services out of fear of federal repercussions in general, but with the current pandemic has it only further instigated the need for healthcare assistance? Undocumented workers play a vital role in our society, but because of their undocumented status, many undocumented workers are left to bear the struggle of not having basic human rights. Prior research depicts undocumented workers as the highest population to be uninsured and to lack proper health care, along with being the most vulnerable to be working in hazardous and low-paying jobs. Lack of legal status has left many to retract from basic human rights out of fear of repercussions from current negative immigration policies and reforms built upon xenophobia. This is viewed as increasing enforcement and incarceration, and disciplinary policies, like the separation of families at the border (GCIR 2020). The impacts of COVID-19 on undocumented workers can be divided into four variables: access to health care, working conditions, immigration policies, and immigrant contributions such as paid taxes and product generation. I found that in the U.S. there is a lack of resources and policies in all four categories which affect undocumented workers. Working with a non-profit organization that has been working around immigration for over 36 years in Southern California, I sent out 30 surveys to undocumented members within the organization

and received 24 responses. Grass-rooted organizations that understand and advocate for the communities around them are vital because they are strong sources to supporting community growth wherein communities who do not have these resources/organizations often struggle. The responses show undocumented workers reported an increase in barriers faced in their daily lives because of the COVID-19 pandemic. Statistics depict that 58.3% of undocumented workers do not have health insurance, 70.8% do not participate in public programs due to fear of public charge, and 66.7% have an ITIN and pay taxes while not receiving federal aid. To help this population, our immigration policies must be improved to create a just immigration reform, funds must be allocated for non-citizens especially in pandemic times.

Dynette Chavez

Faculty Mentor: Rebecca Overmyer-Velázquez

Tribal Museums in the 21st Century: A Review of the Literature

Since the 1900s, Native American communities have often disregarded the idea of museums on reservation lands because museums reflected a history of colonial disenfranchisement and cultural suppression. Before the twentieth century, the representation of Native Americans in museums was decontextualized and stereotypical. How can we begin to decolonize museums when it was Western colonial values that became so intimately linked to the museums? How can tribal museums challenge the stereotypical representations of Native American history produced in the past? This review of the research into tribal and community museums includes Native voices and what they think about museums in the present day, with a focus on how twenty-first-century tribal museums are resisting and shifting the Western colonial museum model towards one that is Native- and community-centered.

Norma De la Rosa

Faculty Mentor: Alma Bezares Calderón

Should I Stay or Should I Go? The Effects of Crossing Migrants in the Local Communities in Mexico

The interactions between migrants and Mexican local communities have positive and negative outcomes. A report by Human Rights First found that more than 630 violent crimes against asylum seekers were reported in the first few months of the "Remain in Mexico" policy. Still, some migrants have been able to assimilate and stay in Mexico, particularly in large cities such as Tijuana, Baja California. This research project uses unique qualitative data collected through interviews with local NGOs between September 2020 to February 2021 and looks into the living conditions of migrants who have stayed in Mexico. Particularly, the study looks into the context that these migrants face when arriving in a community in Mexico and decide to establish there, either because they are in the process of waiting for their asylum-seeking process to take place in the United States or because they decide to stay in Mexico. In the project, I look at the effects of the "Remain in Mexico" policy and the new challenges migrants have faced since the start of the COVID-19 pandemic. Overall, the project finds that migrants in Mexico are exposed to continuous violence, both from the state, from criminal groups, and even from groups that are in charge of their protection. This context increases the vulnerability of migrants and reduces their capacity to access resources that are already scarce. This situation got exacerbated after the start of the pandemic, with the closure of the Southern border. This is the first part of a more extensive project that looks into the interaction between migrant groups and local communities and the violence that emerges from these exchanges and it was funded by the Mary Davis Fellowship.

Shan Deneen

Faculty Mentor: Christina Bauer

VASP Energetic Study of the Thermodynamics, Surface Structure, and Self Assembly of Thiol-Capped Silver Nanoparticles

Noble metal-derived nanoparticles have been widely studied throughout the chemical literature due to their vast number of scientific applications. However, AgNPs have been studied on a much smaller scale in comparison to their gold counterparts. This is because the structure of AgNPs is characteristically unstable, and the formation of silver aggregates that negatively impact solubility is common. Additionally, AgNPs have been known to spontaneously oxidize when exposed to air during the reaction process. A commonly implemented solution to this problem is the addition of capping agents to the surface of NPs, which has been known to improve NP stability in dry air conditions, and solubility in solution. Thiol-derivatives are commonly investigated capping agents that have been shown to hinder particle aggregation and promote a more ordered surface structure. The binding energetics between thiol groups and surface-level Ag atoms are of interest to this study. Thus, this research study in progress aims to determine the tilt angles, bond dissociation energy (BDE), enthalpy, and entropy of these thiol-silver bonds. VASP-based computational models of these binding interactions, such as the determination of binding energies and angle strains, would provide a great deal of information in the mechanism by which capping agents interact with individual silver atoms, which can allow for optimization of synthesis techniques.

Cole DiGrazia

Faculty Mentor: Rebecca Overmyer-Velázquez

Transgender Students in Higher Education Housing

While offering Gender-inclusive Housing (GIH) or Gender-neutral housing, in which students can room with other students of a different gender has become a "best practice" and has been adopted by many colleges and universities, there is no standard procedure for how to institute this practice. Previous research indicates some of the barriers that are faced by institutions trying to implement GIH, as well as the different forms of GIH policy, but very little research has been done on how housing policies affect the experiences of transgender and gender non-conforming students. My research focuses on how the housing policies and practices at their colleges impacted the experience of trans and gender non-conforming students in on-campus housing. I conducted qualitative interviews with twelve transgender students from nine different colleges and eighteen housing and residential life professionals from seventeen different colleges. Interviews with students focused on their experiences in on-campus housing to find a correlation between certain housing practices and a positive, neutral, or negative experience for transgender students. Interviews with housing and residential life professionals focused on the specific housing policies and practices that affect trans and gender non-conforming students, as well as the challenges encountered in trying to institute more trans-inclusive policies. Subjects were found through personal connections and through emailing the housing and residential life departments and LGBTQ+ resource centers of colleges that provide that information online. I found that while there were some similarities between colleges, each had unique policies and practices for gender-inclusive housing, so transgender students at different colleges could have vastly different experiences in housing even though their colleges offer gender-inclusive housing. In speaking with housing professionals, I found that geographic location and if the school has any

religious affiliation had an impact on the ability of housing departments to institute transgender-inclusive policies. Suggestions and recommendations are offered for housing and residential life departments looking to make their policies and practices more inclusive for transgender students. However, it is important to note that this research has a small sample size that lacks significant racial and geographic diversity and should be expanded upon to make any conclusive findings.

Sarah Dorsey

Faculty Mentor: Margo Kaatz

The Effects of Chronic Illness and Mental Health

Chronic illness and mental health are two very prevalent problems in our world. There have been numerous studies done on the effects and relationships between chronic illness and mental health. The rhetoric of these studies reflects the importance of the treatment of mental health alongside the regular treatments used for chronic illness. The combination of mental health treatments and regular treatments contributes to the overall quality of life in patients with chronic illness. Although it was found that mental health treatments were beneficial, patients seldom utilized the tools they had unless they were specifically prompted to do so. It was also found that many facilities are not prepared to handle regular and extensive mental health treatments, as their focus is mainly on treating the primary illness. In this paper, there is a discussion of Cystic Fibrosis and mental health, Type 1 Diabetes and mental health, cancer, and mental health, and various mental health treatments for those with chronic illness.

Elan Garfias

Faculty Mentor: Doreen O'Connor Gomez

Se Pude?: La Izquierda Electoral Ayer y Hoy

(En Español) La izquierda española ha pasado por numerosas encarnaciones durante la democracia fracturada del siglo XX, del republicanismo progresista al gobierno contestado a la oposición clandestina. Sin embargo, puede ser un poco simplista hablar de una "izquierda" discreta en un país como España, que ha presenciado muchos partidos y coaliciones intentando ocupar el espacio. Mientras la alianza frágil del Frente Popular de los años treinta se esforzaba por unir a unos dispares compañeros de cama desde todo el espectro político de izquierda-derecha, el novato partido del siglo XXI, Podemos, intentó explícitamente trascender la vieja división de izquierda-derecha, si bien volvió a sus raíces al final y se alió con varios partidos izquierdistas más pequeños. El estilo presentacional y contexto programático de la izquierda electoral en 1936 y 2019 ilustran bien el contexto sociopolítico diferente en que España se encuentra. A pesar de orígenes comunes y un progresismo básico, los manifiestos de las dos plataformas son distintos en pequeñas maneras que van tener efectos mucho más grandes cuando sean implementados.

(In English) The Spanish left has gone through numerous incarnations during the fractured democracy of the 20th century, from progressive republicanism to embattled government to clandestine opposition. However, it may be all too simplistic to speak of a discrete "left" when it comes to a country like Spain, which has seen numerous parties and coalitions attempt to occupy the space. Whereas the Popular Front coalition of the 1930s strove to unite disparate bedfellows from across the left-right spectrum, the 21st-century newcomer Podemos party explicitly tried to transcend the left-right division, even if it eventually returned to its roots and allied itself with several smaller leftist parties. The presentational style and programmatic content of the electoral left in 1936 and 2019 do much to

illustrate the vastly different sociopolitical context in which Spain finds itself. Despite common origins and baseline progressivism, the manifestoes of the two platforms differ in small ways that go on to have much larger effects when implemented.

David Gomez

Faculty Mentor: Jeffrey Hanlon

Political Efforts and the "Super Wicked" Problem of Climate Change

Since its inception at the time of the Industrial Revolution, a catalyst for modernization, the burning of fossil fuels started to swell dramatically and began to modify the climate by raising the planet's temperature and creating more extreme atmospheric events. This serious problem has become "super wicked" not only because it is resilient to simple resolutions and becomes unmanageable politically, economically, and socially, but also because many believe it to be unsolvable. Therefore, challenges on multiple levels present themselves. Without a clear statement of the problem, ideas for possible solutions become very broad and open-ended with hardly any agreement on how to solve it. First of all, it is getting worse as time passes. Secondly, it affects everyone, and thirdly, with the declining global influence of the United States and the diminishing authority of the United Nations, there is not a single international agency in place that is drawing in the reins. Moreover, those countries that are more interested in solving it are sometimes the main contributors to their spread. Over the years, as out of control fires, frightening floods, horrendous heatwaves, violent storms, and persistent droughts affect larger sections of the population, the discussion about climate change has grown significantly and has become a progressively relevant issue in the political agenda of many governments, including the United States. Deciphering challenges, like climate change, will unquestionably depend on a blend of public-sector funding and private-

sector innovation. In this paper, political obstacles encountered as well as the approaches that have been taken towards tackling climate change at the national and international level are discussed.

Lisette Gomez

Faculty Mentor: Sara Angevine

Forced Sterilization of Latinas: An Issue of Reproductive Justice in the United States

In the field of reproductive justice, many scholars fixate on the issue of accessibility of abortion, centering reproductive justice research on cases such as Roe v. Wade, and simplifying reproductive rights in America to the binary of the pro-choice and pro-life debate. I frame reproductive justice in connection with the issue of sterilization abuses. Specifically, the history of forced/coerced sterilization of Latinas in the United States. The structure of this project is a dual case study analyzing the 1970s USC-County Medical Center scandal in Los Angeles, and the 2020 Immigration Customs Enforcement (ICE) Sterilization scandal in Georgia; both cases involve Latina women, many of who did not speak English, being sterilized without full and knowing consent by the medical professionals who were meant to provide them care. The main methodology of this project is the exploration of newspaper articles. For both cases, such articles are primarily from the Los Angeles Times, although other newspapers may also be included, such as Spanish newspapers. Additionally, this project also aims to contact and conduct interviews with individuals who are familiar with the cases, or who may contribute to the discussion on reproductive protections for Latinas in general. Consequently, this project centers around the question of what is the Latina struggle for reproductive rights in the United States? Has this social situation bettered or worsened as of 2021, and are these new abuses

recent, or is it simply just a situation of such abuses that have been long-occurring, but have just received minimal coverage?

Amelia Gregorio

Faculty Mentor: Laura McEnaney

The Role of Fallout Shelters and Civil Defense in Public Education (1949-1965)

The Cold War was a political arms race between the Soviet Union and the United States from 1947-1991. While the tension lasted for over 40 years, the period where anxiety appeared the most apparent was from 1949, when the Soviets successfully developed the atomic bomb, until the mid-1960s, after the Cuban Missile Crisis. To combat this fear, the government started to implement a tactic they branded as civil defense. Civil defense promoted alertness and mobility among all Americans, however, the Federal Civil Defense Administration focused their attention and resources on the public education system. The government utilized public schools as a way to implement civil defense because schools were an easy way to reach a large, captive, and malleable population. Sources including government reports, school board plans, articles in periodicals such as The Elementary School Journal, government-promoted films, and public opinion polls, confirm the government's intentional use of schools as an agent in promoting national preparedness. These documents paired with the historiography on civil defense education in public schools, advance the argument that the government saw schools as an important and cooperative entity that contained an easily accessible, captive audience. Scholars have researched and written on the Cold War and civil defense, however not many have focused on the subtopic of education. While not as prominent in the corpus of historical work on civil defense, the government's use of education as a proponent of nuclear preparedness was a huge undertaking in the late 1940s

and throughout the 1950s. Those who have written on the subject all appear to agree that the government was using public education as a way to efficiently disseminate civil defense 'propaganda' to its civilians. This presentation examines these different historical works and then utilizes them to create an argument about how objects symbolizing nuclear readiness, like the fallout shelter, found their way into America's public schools.

Anthony Gutierrez

Faculty Mentor: Tony Barnstone

The Grassling

In this short story about a Grassling trying to make it back home and survive the deadly wilds of the world Aterra after losing their owner to human soldiers, I experiment with combining scriptwriting and novel writing format to create a graphic novel script. It is my belief and my hope that by experimenting these two aspects of written media that a graphic novel can be written in a way that it can be both enjoyed in a drawn and written format due to ease of reading and the ability to picture the events of each panel in the readers' minds. During this panel, I discuss my beliefs and research on why I believe that writing a script in the spirit of a novel might be beneficial in bridging the gap between writer and artist in the development of comics and graphic novels as well as the benefits of graphic novels when it comes to world-building.

Elizabeth Hernandez

Faculty Mentor: Peter Peterson

Monitoring of NO2 using MAX-DOAS in Whittier California

Air pollution is a growing problem that scientists all over the world have monitored for years. Understanding air pollution levels is essential because of its role in climate change as well as the health hazard it poses for humans, more specifically the respiratory problems that long-term exposure can cause. According to the World Health Organization, around seven million people per year die due to the effects of air pollution, exemplifying the importance of the subject. Monitoring air quality allows the government to create informed standards for the concentration of air pollution components and propose limits on anthropogenic sources for human safety. Nitrogen dioxide (NO2) is a known compound, emitted mainly by fossil fuel combustion, that contributes to air pollution and plays a central role in the formation of ground-level, or tropospheric, ozone. As of now, there is no available data for atmospheric trace gases in the city of Whittier, so measurements taken here can further both studies and understanding of Los Angeles county's air pollution. Here, I present NO2 data taken from the roof of Whittier College's science building using Multi-Axis Differential Optical Absorption Spectroscopy (MAX-DOAS). The measurements in this paper were taken during August 2019, and notably represent the first vertically resolved NO2 measurements in the city of Whittier, California. The comparison of these data along with Pico Rivera NO2 data, available on the California Air Resources Board website, shows any general differences between the air quality of the nearby city. It was found that, despite the proximity of Pico Rivera to Whittier, there are significantly large differences in the amount of observed NO2. The possible causes behind this dissimilarity will continue to be explored. Additionally, evaluating temperature data from Whittier reveals a probable correlation between the amount of NO2 and temperature.

Salvador Hinojosa

Faculty Mentor: Rebecca Overmyer-Velázquez

Strengthening Community Relations: A Police Officer's Perspective

The relationship between law enforcement and the public can be strained due to many different factors. In recent years, reports of inappropriate conduct and excessive force by police officers have further widened the gap between law enforcement and civilians. This major social issue continues to be a problem, because the community does not trust the officers who are responsible for protecting them, and law enforcement agencies often struggle to find ways to educate the public on their role and responsibility. While research has been conducted to learn why the community mistrusts police, it is also important to gather and analyze the perspective of law enforcement agents regarding this issue. Obtaining this information helps identify ways to strengthen community relations in a collaborative and co-learning approach. This research project seeks to gain a better understanding of specific factors that contribute to the mistrust of police, and the types of activities and programs that can help strengthen community relations. Through the completion of in-person and phone interviews with 10 active and recently retired law enforcement agents located throughout Southern California, the responses to 10 open-ended questions were collected. The majority of the participants responded how social media has contributed to the misrepresentation of interactions with police. In addition, publicized videos and audio recordings often fail to show events in their entirety, which further influences the public's perception. Participants also stated calls to defund the police will have negative results, such as limiting the number of resources, personnel, and training opportunities for law enforcement agencies, as well as reducing events and programs meant to educate and collaborate with the public. Participants emphasize that funding is needed to further train officers on de-escalation techniques, while still adhering to

policies and procedures meant to protect the public. Recognizing conversations around this social issue often fail to include the perspective of law enforcement, the results of this project can be beneficial to stakeholders including police officers, communities, sociologists, lawmakers, and other key decision-makers.

Kelsi Ikeda

Faculty Mentor: Rebecca Overmyer-Velázquez

Green Building Laws/Policies and their Benefits

As climate change becomes more prominent across the world, policymakers are implementing more changes to our communities. Although green buildings are primarily developed to reduce buildings' ecological impact, the buildings also socially and emotionally benefit their occupants. The social benefits of green buildings for occupants include comfort, health, well-being, academic achievement, and ecological literacy. It is important to acknowledge the direct social and emotional benefits that green buildings provide to people in the implemented policy. Stating the direct benefits of green buildings for inhabitants may cause people to be more willing to comply with the implemented changes and for policymakers to add or amend the specifications. Thus, green building policy may become more quickly integrated into the development of communities to allow more environmental and social benefits. Previous studies analyze how green building policy and laws lead to positive environmental impact. Fewer studies have been done on the relationship between policies and laws with social benefits. This study seeks to uncover the extent to which state and local policy and law enable the benefits of green building to its occupants. I use data from codes, ordinances, and policies organized into summarized tables where they are analyzed and compared. Specifically, the California Green Codes is compared to Hawaii's most recent 2018 Building Codes

update, then compared to the local green building codes of Sacramento and San Mateo. Similarly, the 2018 Hawaii Building Codes are compared to the local codes of the city and counties of Honolulu and Maui. The findings demonstrate the importance of green building policy and law in enabling the benefits of green buildings to its occupants and further analyze the relationship between state and local policy. State and local policy work together to provide benefits to people, but there are vast opportunities for both levels of policy to implement green building requirements based on the social benefits they offer to its occupants rather than focusing on only the environmental benefits. Although the study is limited by the narrow range of green building policy, this study is a deep dive analysis of implemented state and local policy.

Alexander Jelloian

Faculty Mentor: Laura McEnaney

Red Power and Richard Nixon: A Review of President Nixon's Native American Policies

Marginalized groups that have had successful civil rights movements throughout United States history have often been able to grasp the national spotlight and inform the masses about the troubles and trials that they have endured. The abolitionist, women's suffrage, and Civil Rights movements are just a few that a typical American citizen could likely name. One movement that is usually overlooked in American history courses is the Native American rights movement (sometimes referred to as "Red Power") that transpired in the second half of the 20th century. The national spotlight likely focused on more dramatic headlines such as the Vietnam War, Martin Luther King Jr's assassination, the growth of Soviet Communism, or the perilous Cold War. While all of these other events are important and deserve to be studied, it is unfortunate that so few Americans know the struggles of

Native Americans. This group of people has a long and storied history in America and they deserve to be studied in our nation's schools and appreciated on the national stage. This paper is an analysis of the Native American movement during President Richard Nixon's administration. I begin with a summary of events leading up to the Nixon administration to build context for President Nixon's time in office. Consequently, I highlight various key events and pieces of Native American legislation that occurred during the Nixon Presidency. Finally, I discuss how tribal leaders interpreted Nixon's actions and what they thought of his outreach to Native peoples. Based on the overarching tone of most scholarly and non-scholarly works, it is clear that while Nixon certainly perceived Native American policy as a potential "victory" for the Republican Party, he certainly felt sympathy for Indigenous Americans and was compelled to aid their plight at the federal policy level.

Amy Johnson

Faculty Mentor: Rebecca Overmyer-Velázquez

Exploring Multiplayer Gaming Habits in Response to COVID-19

From the earliest introduction of multiplayer video games, players have formed communities around those games based on the play mechanics and the intended audience. The largest and one of the oldest examples of this is the community surrounding World of Warcraft (WoW). For the most part, the gaming community has remained consistent with the foundation set by WoW players, but with the introduction of COVID-19, and the worldwide quarantines put in place, many people who had not previously been active in multiplayer game communities were given the chance to join. This research examines how the gaming habits of participants have been altered by the quarantine and whether new participants were brought into the gaming community as a result of the quarantine. The research uses an online

survey distributed through social media to users who have participated in the game Animal Crossing: New Horizons. A total of 34 participants were surveyed from gaming-focused discord servers and the Animal Crossing section of Tumblr. Participants were asked to complete an anonymous survey that asked questions about their past and current gaming history. Preliminary findings show that, of the participants surveyed, those who had not been active in similar game communities before quarantine were more likely to take part in the trading and social communities of Animal Crossing: New Horizons.

Jezebel Kline

Co-authors: Destiny Trinh, Nicole Roxas, Joanne Hash, and Ayesha Shaikh

Faculty Mentors: Ayesha Shaikh and Joanne Hash

Coping with COVID-19: Exploring the Relationship between Social Media Use, Mental Health & Behaviors

This study examined the effects of the COVID-19 pandemic on social media use (SMU), mental health, and coping behaviors. We hypothesized that there would be significant relationships between SMU and feelings of loneliness, anxiety, fear of missing out (FOMO), stress, and compliance with pandemic-related CDC guidelines. Online surveys were distributed through the authors' social media networks. Based on preliminary analyses of 160 adults in the US (68.1% female, 30.6% male, and 1.3% non-binary; ages 18-89, M=40.32, SD=18.19), 19.5% of the sample reported living with someone who had experienced COVID-19 symptoms. Of this group, 81% were tested with 51.7% receiving a positive test result and 6.7% requiring hospitalization. Additionally, 8.2% of all participants had a family member that passed away from COVID-19, while 41.8% knew someone outside of their family that had passed away from COVID-19. There were significant correlations between SMU and the following: anxiety (r = .258, p < .01), stress (r = .172, p < .05),

depression (r = .251, p < .01), and FOMO (r = .365, p < .001). There was also a significant correlation between stress and looking to online news sources (r = .212, p < .01) and social media (r = .212, p < .01) for COVID-19 information. The degree of adherence to CDC guidelines was negatively correlated with dismissive attitudes toward COVID-19 (r = -.400, p < .001), and positively correlated with stress (r = .287, p < .001), and the degree to which participants found COVID-19 information from online news sources (r = .164, p < .05). These preliminary results appear to indicate that experiencing a moderate degree of pandemic-related stress is associated with better adherence to CDC guidelines and that online and social media news sources may contribute to this stress and other negative mental health outcomes. We are continuing to collect data through March and will then further explore motives for SMU behaviors related to the pandemic, and how they may mediate/moderate the relationships above. From this research, we are hoping to have a better understanding of how people use social media to cope with repercussions from COVID-19.

Daewon Kwon

Co-author: Charles T. Hill

Faculty Mentor: Charles T. Hill

Correlates of Racial Ethnic Prejudice Among College Students

Correlates of perceived racial-ethnic prejudice were explored using data from a Multiple Identities Questionnaire at an ethnically diverse small liberal arts college in a suburb of Los Angeles. The questionnaire was completed for extra credit by students in Introductory Psychology. Data for these analyses were available from 2,078 women and 1,240 men. Students were asked, "To what extent have you felt that others have been prejudiced (had a negative attitude) against you because of your nationality, race, or ethnicity?" Responses were on a scale from 0 = Not at all to 8 = Completely.

The mean response was 3.17 for the women and 3.18 for the men. Both men and women reported greater perceived prejudice if their grandparents were not born in the U.S. and if English was less likely to be used by their parents when they were growing up. They were also more likely to say that they experienced prejudice because of their social class background, religious background, political views, and gender. They reported that ethnicity had become more important for their self-concept since childhood. In general, ethnicity is less relevant until one encounters others who are different, especially if one experiences prejudice. They felt that they are more in competition with others of their gender, and they are more anxious about forming relationships with others. And they reported being more anxious in general, and less happy. If they could change who they were, they would be more likely to want to change their national, racial, or ethnic background, as well as their social class background. On the other hand, some were more likely to have developed pride in their ethnicity as a way of coping with prejudice.

Kristen Laulette

Co-authors: Logan Leathem, Danielle Currin, Melanie Blair, Ashley Moyett, and Katherine Karlsgodt, Ph.D.

Faculty Mentor: Katherine H. Karlsgodt

Relationship of Anxiety Attachment to Paranoia in Subclinical Psychosis and the Role of the Inferior Fronto-Occipital Fasciculus

The importance of the relationship between a child and their caregiver goes beyond childhood, creating a distinct attachment style that can affect the socioemotional development of an individual for a lifetime. This impact is especially apparent in schizophrenia patients with an anxious attachment style, as evidenced by a greater prevalence of paranoia symptoms (Lavin et al., 2020). Subclinical populations can also experience lower level psychotic-

like experiences (PLEs), such as paranoid beliefs (Berry et al., 2006); however, there has been a lack of consistent research on the mechanisms that link attachment style and PLEs in a subclinical population. In this study, we collected neuroimaging and behavioral data from healthy youth (n=100) and those with psychosis over two years. We examined measures of anxious attachment using the Experiences in Close Relationships scale and PLEs using the Community Assessment of Psychic Experiences measure and then used diffusion tensor imaging data to evaluate whether the structural connectivity of neural circuits implicated in emotion acts as a mediator of this relationship. We hypothesized that in subclinical patients, higher anxiety attachment would predict higher endorsement of paranoia and that the structural connectivity of the inferior fronto-occipital fasciculus, a tract implicated in emotion (Liao et al., 2014), mediates the relationship between anxiety attachment style and paranoia. A linear regression analysis confirmed our hypothesis that anxious attachment significantly predicted paranoid beliefs for healthy youth, even while controlling for sex and age (β=.488, p<0.001), and accounted for 23.8% of the total variance in paranoia (R^2=0.238). Mediational analysis showed that the inferior fronto-occipital fasciculus does not mediate this relationship; however, it did show that decreased structural connectivity of the inferior fronto-occipital fasciculus significantly predicts paranoia in healthy youth as well (β=-.245, p<0.05). These results contribute to our understanding of psychosis as a continuum, the importance of anxious attachment as a predictor of paranoia, and suggest a neural basis effect involved in the development of paranoia in subclinical populations. These findings also highlight the need to further research the potential role of emotion in the inferior fronto-occipital fasciculus pathway.

Farrah Luu

Faculty Mentor: Roger White

Insurance and Economic Growth: Controlling for Cultural Differences

Insurance and economic growth tend to exhibit a positive relationship. We examine whether the measure or type of insurance influences the statistical and practical significance of the relationship. Interestingly, we find that insurance and economic growth predominantly exhibit a negative relationship across 88 countries over the period 2007 to 2017. Aside from investigating the general relationship across the whole sample, we observe how the United Nation's development classification and Project GLOBE's uncertainty avoidance societal practice affect our results. By introducing a control variable for cultural differences, we find that it yields the most statistically and practically significant results.

Helen Macdonald

Faculty Mentor: Kate Albers

Komar and Melamid: The People's Choice

Vitaly Komar and Alexander Melamid, two Russian artists, challenged the definition of what art can be. In 1994, they polled different countries to determine their most- and least-wanted painting. Once all the data was collected, they used this information to create them. In 1997, the series of paintings, The People's Choice, was presented in New York City. The project however was not well received. Gallery-goers could not get past the pedestrian appearance of these works, and those who took their survey said it was severely flawed. People could not fully appreciate what it set out to accomplish. The People's Choice was a commentary on polling practices at the time. Corporations, and those in positions of power at this time, were grossly misusing polling for their gain. Questions would be too narrow or

guided towards specific answers, samples were not random, and data would be interpreted to benefit those running them. Yet corporations still claimed that they were taking what the people had to say into consideration with this "science" of polling. This group of works is an important addition to the library of knowledge that contributes to our understanding of "What is Art?". The paintings themselves were not the art but simply a byproduct. The real art was the commentary they made by using the polling process to create them. The People's Choice is a series that deserves attention for the new form of conceptual art that is created.

Ashley Magana

Faculty Mentor: Alvin Alejandrino

Temperature and Oxygen Rates affecting the Abundance of Anthopleura Elegantissima in High and Low Tidal Zones

Many organisms rely heavily on oxygen and certain temperature ranges to survive and thrive; oxygen and temperature can help with a species' biodiversity and abundance. Abiotic factors such as oxygen and temperature may affect the abundance levels of the species and if it's at damaging levels, it can affect the species. For this experiment, the species Anthopleura elegantissima, which is a type of sea anemone, is used to correlate its varying water temperature and oxygen levels. This type of sea anemone was selected because it lives on rocky intertidal zones, which allows us to observe. In general, this is important because the lessening of the abundance of the sea anemones can affect the ecology within the area and they are vital for interactions with other organisms. Anthopleura elegantissima plays a vital role in mutualistic symbiotic relationships because the sea anemones provide protection and nutrients for many neighboring species. The problem is with growing rates of global warming and human activity, there are a variety of levels in oxygen and temperature and too much or too little

factor can destroy the Anthopleura elegantissima population. The temperature trend is rising in an upward trend while the oxygen rate is decreasing. Also, we don't understand well the correlation between oxygen and temperature levels with abundance. My main objective in this project is to find a correlation between water oxygen and temperature levels the Anthopleura elegantissima is located in and how it affects it. This study aims to detect what degree of oxygen and temperature rates affect the Anthopleura elegantissima and how it can reduce their abundance level. We would use ten 61cm*61centimeters quadrats to observe the sea anemone abundance and split the quadrats based on it being in a high tide or low tide zone. We would measure the oxygen and temperature via a Labquest device and use the data to find a correlation between the rates and a possible trend line. The duration of this experiment would be about 3 years based on seasonal changes. The results of this study would allow us to gain perspective on the abundance of sea anemones and learn more about oxygen and temperature levels on the effects on abundance and overall biodiversity. The results can drive society into taking preventative measures in preventing the loss of biodiversity and abundance of a species.

Rhianna McConnell

Faculty Mentor: Rebecca Overmyer-Velázquez

Local Action in California: Challenges for Cities Fighting the Climate Crisis

With climate change becoming a growing concern and local regions experiencing individual consequences of climate change, local governments have begun to implement climate mitigation or adaptation policies. Mitigation refers to the effort to reduce greenhouse gases and adaptation refers to the adjustment to current or expected effects of climate change. Many of these local governments have faced challenges in implementing policy due to either resources or backlash from the community. In searching

the literature, I found that local climate policy in California has not been extensively researched. To have a better understanding of this type of local action within the state of California, this research uses publicly available data. In 2020, the Governor's Office of Planning and Research used an Annual Planning Survey to find the progress of each local jurisdiction in the state of California in regards to several issues including climate change mitigation and adaptation. In this research, the responses from the survey were used to find overall trends in California local climate change action to create a picture of challenges local governments face implementing this kind of policy. This research also found how much progress jurisdictions that have taken action have been able to make. Overall, the jurisdictions that were studied each had limitations, many saying that while they had some resources, they did not have access to adequate resources. These resources include the staffing each jurisdiction has or technical support. A significant portion of local jurisdictions in California do not have greenhouse gas emission reduction targets or strategies. Around a quarter of local jurisdictions do have targets or strategies but do not have ways in which to track the progress of implementation. The majority of the jurisdictions in California do not have adequate staffing and funding for consultants and the majority also lack intern or fellow support. The research reinforces the lack of resources available as a challenge to these local jurisdictions that I found within the literature. Limitations for this research included missing responses in the survey and limited data as only one state was studied.

Ricardo Mendoza

Faculty Mentor: Rebecca Overmyer-Velázquez

The Chinese Communist Party's Global Strategy: The Fusion of Cultural Identity, Military Doctrine, and Economic Investments

The world continues to witness the global expansion of the Chinese Communist Party's (CCP) influence. This expansion should concern the international community and those who advocate for human rights, environmental preservation, and global cooperation. Unlike most of the world's democracies, the CCP does not prioritize individual liberties, the advancement of less-developed nations, and degrades the environment and ecosystems with impunity across the globe. The CCP further ignored international norms and laws at the onset of the global pandemic. Political scientists, diplomats, politicians, and human rights groups seek to understand the methodology and end state of the CCP. This literature review examines the many facets of CCP soft power implementation. By analyzing the growing amount of literature from academia and government sources, and the very limited number of ethnographic works, this review contributes to the enormous amount of CCP globalization literature. Notwithstanding, few recognize the CCP's soft power strategy as a precise balance of political, economic, military, and cultural inputs formulated over several decades by a unitary government. My research examines the fusion of Weiqi, "Unrestricted Warfare", and soft power to better understand CCP's global strategy. The CCP first became interested in soft power in 2000. In 2007, the CCP declared that soft power is central to their international diplomacy. The concept of soft power was first introduced by Joseph Nye in the late 1980s. Joseph Nye defines soft power as "getting others to want the outcomes that you want, co-opts people rather than coerces them". Coincidentally, in 1999 two Chinese People's Liberation Army (PLA) colonels published "Unrestricted Warfare", which is defined as "warfare which transcends all boundaries and limits". This omni-dimensional warfare

strategy shares theoretical elements with Weiqi, an abstract strategy board game for two players in which the aim is to surround more territory than the opponent. Weiqi has been played in the Middle Kingdom for more than 2,500 years continuously and is one of four essential arts in China. Therefore, to better understand the Chinese Communist Party's global strategy, we must examine the fusion of cultural identity, military doctrine, and economic investments.

Ricardo Mendoza

Faculty Mentor: Michael McBride

King Leopold's II Ghost Lives through Xi Jinping: The Continued Sufferance Endured by the Congolese People to Meet the World's Demands

The practices by the Chinese Communist Party (CCP) in the Democratic Republic of the Congo (DRC) bear resemblance to the practices employed by King Leopold II at the turn of the nineteenth century, under the guise of a benevolent campaign. "Crimes against humanity" was first introduced to the public sphere by George Washington Williams as he witnessed the atrocities by King Leopold's Force Publique in the Congo Free State in 1890. The world would essentially ignore the mass killings and suffering of the Congolese people at the hands of King Leopold because Leopold was supplying the world with much-needed wild rubber to support the global industrial revolution. Over the last two decades, the Chinese Communist Party has become the latest neo-colonial master of the DRC. The CCP has been extracting critical minerals from the DRC without regard for human rights violations or ecosystem preservation. It is estimated that 40,000 children work as artisanal miners for Chinese mining company supply chains. This form of child labor represents some of the worst human rights violations. Child artisanal miners are susceptible to unsafe living environments, respiratory diseases, radiation contamination, violent crimes, sexual abuse,

and assault. My research conducts a comparative analysis of the practices and processes currently employed by the Chinese Communist Party and King Leopold II's reign, more than a century ago. My paper argues that the strategy employed by the Chinese Communist Party in the Democratic Republic of the Congo is consistent with Chinese Unrestricted Warfare. More international attention needs to be brought to this humanitarian crisis.

Yasmin Mendoza

Faculty Mentor: Jonathan Burton

Banning Without Bans

The First Amendment prevents the government from making laws that oppress speech amongst other basic values of the American citizen. Even though this amendment prevents the legal banning of any literature, it does not mean that all books are equally accessible. Instead, it means that certain books are "challenged." Challenged books are taken out of circulation through several formal, informal, and extralegal means. This can range anywhere from not being placed in public libraries or needing a petition to be placed in a K-12 curriculum, to publicly burning the books, and even threats to the author. Conditions like these make it virtually impossible for people to read challenged books and therefore these pieces of literature are effectively banned without bans. This leads to my question: How can censorship in America be traced as a form of societal control through the repeated restriction of literature that contains the values of oppressed or minority groups within the last century? I hypothesize that challenged literature exists because the literature itself challenges the oppressive values and beliefs of governmental systems in power. The patterns I initially seek have to do with the groups or types of authors and books that get challenged and who challenge these works. The case study that I have conducted over summer 2020 analyzed the roles of violence, sex, and sexuality within

American society and the role they play in censored literature. The novels in the case study are Kurt Vonnegut's Slaughterhouse-Five, Alice Walker's The Color Purple, and Alison Bechdel's Fun Home. These are all multiple award-winning novels that have been censored, banned, and publicly burned for their open discussion of the realities of subjugated communities. This research is important because literature is an outlet in which individuals can express their views creatively or in an informative way. Literature reflects the society at the time and when those voices and points of view are stifled, a piece of history is lost. Many of the changes that have occurred over just the last century were once controversial and unheard-of ideas, such as feminism and desegregated schooling. These advances were made because courageous leaders expressed these controversial ideas and did not allow their voices to be silenced.

Liana Miera

Faculty Mentor: Alma Bezares Calderón

Evaluating the Risk to Education that Low-income Students Face, A Case Study of Denver Public Schools

This project investigates the added risk of receiving a lower quality education that students in areas with higher concentrations of low-income households in grades pre-K through 12 face as compared to students from areas with higher-income households. An important part of understanding the results found in this paper is to understand how schools are evaluated. Thus, this project examines how schools may be evaluated differently based on who is doing the evaluation, based on previous research. This project uses three sources of data: The School Performance Framework for Denver Public Schools, data from the Denver government that reports income by neighborhood, and data from the Education Data Explorer from Urban Institute. The focus on one school district is due to the availability of the data,

as well as the author's connection to the community. Stata software is used to run a linear regression model to determine if there is a significant difference in school performance at low-income schools compared to higher-income schools. These results are then examined and combined with the results of the analysis of existing research. Through the combination of these results, this project determines not only the risk to their education that these students take on, but also how their parents can help reduce that risk through a better understanding of each school's performance. This project has important implications in education and risk. It shows how students facing financial hardship face a higher risk of missing educational opportunities. If left alone, these students could face long-term consequences in later life.

Destiny Munoz

Faculty Mentor: Rebecca Overmyer-Velázquez

Policing Gender in Law Enforcement

Law enforcement has always been a male-dominated profession. Gender discrimination in law enforcement is an important topic because researchers have found that police departments will respond better to community needs when they can draw on the strengths of both women and men on the force. Female law enforcement officers can bring in skills that would be useful and complementary to male law enforcement officers, such as talking their way through a situation instead of using force. Nevertheless, previous research shows that female law enforcement officers are still stereotyped as weak and incapable or discriminated against for not appearing as masculine or following the masculine norm that appears within law enforcement culture. Female law enforcement officers placed in positions of power are most likely to create and promote diverse policies and procedures which would suit the needs of the communities they serve. The research question being studied is

what limitations do female law enforcement officers face which affect their job performance? How can law enforcement agencies increase the ranks of female officers? What obstacles and challenges do female officers continue to face on the job? This study was conducted through qualitative interviews which took place via phone call and took approximately 30-40 minutes each to complete. The study sample included 10 women of color female law enforcement officers, three African Americans, one Jamaican, and six Hispanics. Each officer has a college degree higher than an Associate Degree and over 10 years of experience in law enforcement. The recruitment process was reaching out to female law enforcement officers through email and then asking them if they knew any female law enforcement officer that would be willing to participate. Preliminary findings show that the main challenges that female law enforcement officers have faced in their career are: trying to balance work and family life, learning how to work within law enforcement, and trying to maintain expectations such as female law enforcement officers being capable of performing their position. Another find within the study is that seven out of 10 interviewees have not been discriminated against within their agency, while three out of 10 interviewees have been discriminated against.

Shanti Nelson

Co-author: Charles T. Hill

Faculty Mentor: Charles T. Hill

Self-Ratings of Physical Attractiveness

What influences how we rate our physical attractiveness, and how do these perceptions impact our lives? This topic was explored using data from the Multiple Identities Questionnaire (Hill, C.T., Voices of Diverse Identities: Prejudice and Well-Being Among College Students, in preparation). These data were available from 2,062 women and 1,230 men who completed the

questionnaire for extra-credit in Introductory Psychology classes over eighteen years, at a small liberal arts college in Southern California. Both women and men who rated themselves as having higher physical attractiveness were more likely to rate themselves as being more self-confident and satisfied with themselves. They had higher self-esteem, as well as greater life satisfaction and happiness, and less depression and anxiety. In addition, they reported being more assertive and competitive, and more willing to take risks, and seek out meeting new people. As a result, they had more sexual partners and more frequent sexual intercourse. A major concern in self-ratings of physical attractiveness is body satisfaction. Those who self-rated as more physically attractive had more pride in their body and were more satisfied with the sexiness of their body. A major factor in body satisfaction is weight. Those who considered themselves to be overweight were more likely to rate themselves as having low physical attractiveness. To explore this, participants were asked to report their weight in pounds and their height in inches, which were used to calculate their Body Mass Index. Those with a higher body mass index are more likely to rate themselves as less physically attractive. It is likely that being attractive leads to positive experiences that build self-confidence and create a positive attitude toward oneself and life. One is more confident to take risks, such as being assertive and seeking sexual partners. But it is also likely that feeling confident and having high self-esteem can lead to positive reactions from others that lead one to consider oneself more attractive. The mean self-ratings of physical attractiveness, were higher than the scale midpoint, indicating a self-bias in the self-ratings. Multiple regression analyses revealed that self-confidence is a much more important predictor of self-ratings of physical attractiveness than BMI.

Dorian Peña

Faculty Mentor: Paula Radisich

Fashioning of the Self: The Significance of Dress, Expression, and Identity in Impressionist Era Paris

In this essay, I argue that an individual's dress was a means of proclaiming and expressing identity in 19th century France as evidenced in the works of the Impressionist movement which so valued and celebrated fashion as a symbol of modernity. I argue how Claude Monet's Camille Monet on a Garden Bench reflects the desire of both the artist and his wife to cultivate an identity of aware, modern, and affluent bourgeois individuals of taste participating in Parisian society. By her dress, Madame Monet claims her place in society, a woman of fashion knowledgeable of the aesthetic developments of her time, a participant in the circles of artists and bourgeoisie society alike. Their choice in dress demonstrates their financial ability, while Monet's choice of setting demonstrates its significance as a delineator of status and as a contribution to modern life. Berthe Morisot's Sisters I argue to reflect the personal sentiments and struggles of the artist, a woman in 19th century Paris. The traditionally feminized realm of dress and fashion has long been an area in which women historically repressed and discouraged, were allowed the opportunity of expression and agency through their dress. Thus, I prove the significance of Morisot's dress, as well as that of her sister, in claiming an identity, a self which she, unique as both a woman and artist, can cultivate in both her art and her dress. It is a tool used to delineate the cherished relationship she shares with her sister, Edma, as well as the desire of the artist to create an image she struggles to legitimize herself. This relationship with the female roles enforced by her society continues to be expressed in Edouard Manet's Repose. In this work, a portrait of Morisot, I argue Manet to render her as an artist, an individual familiar with the painter of her portrait. By her style of dress, I argue Manet has attributed to Morisot an identity which she at this time desired to

cultivate, yet depicts her in a pose which defies the accepted feminine aesthetic, reflective of the complex relationship she possessed with the conventional expectations of women in her modern society.

Brandon Ramos

Faculty Mentor: Alvin Alejandrino

How Does Temperature, Salinity, Oxygen, and pH Effect on Cabrillo Beach's Hermit Crabs and Its Relation for Future Climate Changes?

Global climate change has significantly impacted marine ecosystems throughout the globe as we speak, and it is unclear if marine organisms in rocky intertidal zones are affected by this change of climate. Over the last decade, global climate change has caused a decrease in biodiversity in marine environments, causing a reduction of society's resources and altered ecosystems across the globe, and putting many animals in danger of extinction. Global climate change has affected rocky shore tide pools in four significant ways: species had experienced a rise in temperature, increasing salinity due to temperature rise, low oxygen levels in tide pools, and ocean acidification. These main abiotic factors are overwhelming many rocky intertidal animals. However, understanding how these organisms are affected by such drastic changes in these four abiotic factors is essential to explore how the biodiversity in rocky shore habitats will change in the future. There have been multiple studies on hermit crabs on these abiotic factors; however, little is known on how they could manage these changes throughout all species of hermit crabs. Hermit crabs are essential for their recycling of nutrients back into the ecosystem are found in many intertidal environments throughout the globe, making them a perfect species to study for our understating of global climate change in these areas. Hermit crabs are well known for their easy health care; they require to be in a habitat that is high humidity, temperature (75-85 degrees Fahrenheit) and are easy to

supervise and set up an artificial habitat for experiments. They are also low-maintenance pets such that they require a small tank for space, a sandy and mixed substrate for bedding, and simple cleanup techniques. This proposal aims to investigate 1) both temperature and salinity levels and 2) oxygen and pH levels on hermit crabs to understand better which degree of abiotic variables is potentially suitable habitat for hermit crabs. To do so, I examine how hermit crabs would, in which degree of the abiotic factors would hermit crabs be struggling by measuring their mortality rate and observe their lively hood in those conditions in which give us an insight into how they behave and survive during future global climate changes.

Gitzel Razo

Faculty Mentor: Rebecca Overmyer-Velázquez

21st Century Young Couples Ideologies: Traditional versus Egalitarian

For as long as society can remember, traditional gender roles have benefited the patriarchal world. In heterosexual relationships, there is the ideology and practice of either traditional or egalitarian relationship dynamics and expectations. Within couples, there is also a rise of people moving in together before marriage – also known as cohabitation. There is little research done on whether college students are cohabitating and as to why they are cohabiting. There is also a lack of research about young college students in heterosexual relationships and their gender roles within their relationships. This study consists of students in Southern California liberal art college, who are the next generation and who may give a small glimpse into the gender role expectations in heterosexual relationships. College students in heterosexual relationships prefer egalitarian relationships rather than traditional relationships. The study looked upon gender ideologies within their relationships and existing and/or future children, cohabitation, and the housework division of chores. The study conducted an online anonymous

survey in collecting 69 college students of all grades. Qualitative and quantitative questions were used to create charts and graphs to understand the complexity of the dynamics of a heterosexual relationship. The vast majority of students (97.1%) who participated believed in gender equality, only 11.6% of students live together with 41.3% plan to live together. For those who do live together, 62.5% have equal household chores; of those who responded not having an equal household chore, females were more likely to report this. It is to be seen that less than a quarter of the participants still believe and implement a traditional dynamic in their heterosexual relationships. Men have a higher percentage in still believing in traditional relationships. The results were consistent with my hypothesis, in that the majority of students have more egalitarian values and have a household with more equal chore division. The current and emerging generation of college students is more egalitarian than traditional in ideology and practice. But a small percentage of college students in heterosexual relationships live together. The reasons for cohabitation were due to the pandemic of COVID-19, it was the next step into their relationship, and for convenience. Limitations of the study include that only one college was involved and the sample collected was small.

Jeremy Resnick

Faculty Mentor: Lizardo Herrera

Los Inmigrantes en América

Immigration is a very large and complicated subject. There are a lot of people focusing on the number of people trying to get over into the country, and all the while, there are a lot of immigrants who are already here and struggling to assimilate. There are many obstacles that first-generation immigrants in this country that we focus on. What's important about being able to figure out immigration and solving the many problems associated with it in

perspective. There's the perspective of the people already living in this country, the government, the immigrants in the process of getting in, the immigrants living here, and several very opinionated people. I think it's important to get personal perspectives on the immigrants living in this country, so the backbone of this paper is based on the book "The Undocumented Immigrants". This book gives a perspective of immigrants living in this country, specifically undocumented immigrants, but many stories do include comparisons to legal immigrants. Undocumented immigrants face a lot of problems, for one, since they are all hired under the table, companies can pay these workers as little as they want, while the undocumented immigrants are subject to hard labor, and numerous OSHA violations. It's also next to impossible to acquire the language of the United States due to the lack of resources available. The main focus of this paper is all about how we can help these people. In reading this book it is clear that there is a large discrepancy in the opportunities available for legal vs illegal immigrants. This paper looks into what incentivizes people to come to this country despite this and explores two perspectives to help out anyone who wants to live in this country. Every single person in this book deserves the opportunity to live a good and assimilated life. On one hand, we can do this by giving these people a path to citizenship, better job opportunities, welfare, and accommodations. On the other hand, we can tighten our border security, stiffly penalize any businesses that hire undocumented immigrants, de-incentivize illegal border crossing, and make it easier for people to get visas and green cards, thereby leading to a natural path to citizenship. While there certainly are more popular and more extreme perspectives, these two seem like they could be a better solution to the overall problems rather than a solution to just the symptoms.

Raquel Rivera

Faculty Mentor: Lori Camparo

Outcomes of Domestic Violence on Children and Women

Thirty percent of women worldwide have experienced intimate partner violence (WHO, 2017). Continual abuse is affecting the lives of women and children and may lead to immediate and long-term mental health, emotional, cognitive, and behavioral problems (Herring, 2018). For example, children's numeracy learning and reading ability are gravely hindered and they have trouble in academic environments. Additionally, domestic abuse (DA) is associated with a decrease in mental health in women such as depression, high anxiety, and PTSD. In some places, divorce is not an option; this is an important point because, if possible, the women and their children exposed to DA need to get out of the house where the abuse occurs. Resources for women and children in dire need, need to be increased. This review covers how women are affected physiologically, psychologically, and socially then examines how children are affected mentally, behaviorally, and through their education.

Leslie Tanaka

Faculty Mentor: Peter Peterson

Comparing Satellite Column NO2 Concentrations with Ground-based Measurements in Whittier

Nitrogen dioxide (NO2) is an anthropogenic air pollutant that can participate in atmospheric chemistry, impacting environmental and human health. High concentrations of NO2 in the tropospheric layer of the atmosphere pose adverse health complications and impact ozone production. Due to the severe impacts of high concentrations, it is important to monitor both NO2 concentration and spatial variability. This can be done

using both ground and satellite-based measurements. Satellite data is considered to be well-calibrated and an easily accessible source for global measurements. However, studies have found that in highly polluted areas, the satellite column NO2 measurements from the Ozone Measuring Instrument (OMI), tend to be underestimated. We present a comparison of measurements between ground-based and satellite-based NO2 observations in eastern LA, with an emphasis on the Whittier, California area during August 2019 and between March 2020 to June 2020. During August, seven out of the thirty days monitored had ground-based NO2 column density values around $1×10^{16}$ molecules · cm^{-2} greater than those recorded by the satellite measurements. March 2020 to June 2020 data yielded six days out of sixty-four days where the ground-based measurement values were around $1×10^{16}$ molecules · cm^{-2} greater than those recorded by the satellite measurements.

Brent Valentine

Faculty Mentor: Rebecca Overmyer-Velázquez

Why Youth Join Gangs: A Review of the Literature

Youth gang affiliation is prevalent in various cities throughout the world. This review examines the research into the causes of youth gang affiliation and the differing opinions on how to solve the problem. Studies have used qualitative and quantitative methodologies to identify the complexities that lead inner-city youth toward a gang-banging lifestyle. Some researchers have considered the cultural influences that exist as well as the socio-economic factors that leave young people with little hope to stay on a positive life track. A conclusive answer to this difficult problem requires a collaborative effort that involves participation from families, school officials, ex-gang members, as well as local law enforcement and/or community

leaders to establish preventative measures that stop gang influence in its tracks.

Nicole Vargas

Faculty Mentors: Trish Van Oosbree and Kristyne Wiegand

The Effects of Maximalist Shoes on Lower Extremity Mechanics and Injury Risk: A Review

Maximalist shoes (MAX), characterized by a thick midsole (20-30mm), were created to combat RRIs by reducing the forces experienced by the lower extremities upon impact. However, there is a lack of consensus regarding the influence of MAX shoes on RRI. Therefore, the purpose of this review was to examine the effects of MAX shoes on lower extremity mechanics and injury risk. Electronic literature searches were conducted in December 2020 and January 2021 across six databases. The following keyword combinations were used: "maximal shoes" OR "highly cushioned shoes" AND "running mechanics" OR "biomechanics." Studies were included in the final review if they were full-text, peer-reviewed, and investigated the effects of MAX shoes on lower extremity kinetics and kinematics. Articles were excluded if they were not written in English, involved orthotics, and/or examined non-running footwear. Fifteen articles were included in the final review. Of the four studies that investigated peak eversion, two found no significant differences between MAX and traditional shoes (TRAD), while one observed significantly greater peak eversion in MAX (12.27 ± 3.69°) and minimal (MIN) footwear (12.60 ± 3.76°) compared to the TRAD condition (10.76 ± 3.70°; p=0.012, f=0.559; Hannigan & Pollard, 2020). Only one study reported eversion duration, finding it to be significantly greater in the MAX condition (99.05 ± 5.13%) compared to MIN and TRAD footwear (MIN: 87.43 ± 11.54%; TRAD: 88.67 ± 10.45%; p=0.002, f=0.688; Hannigan & Pollard, 2020). The vertical instantaneous loading rate was significantly higher in MIN shoes

than MAX footwear in two studies (Agresta et al., 2018; Law et al., 2019). The effects of maximalist shoes on lower extremity mechanics and injury risk remain inconclusive as a result of varying measurement methods, shoe manufacturers, and small sample sizes. Despite the lack of consensus, MAX shoes may be helpful for runners recovering from metatarsal strains or fractures and less desirable for runners with patellofemoral pain and injuries associated with excessive eversions such as Achilles tendinopathy and tibial stress fractures. This review highlights the need for more research on MAX shoes and their effects on female running mechanics and eversion duration.

Stephanie Whang

Faculty Mentor: Rebecca Overmyer-Velázquez

Refuting the Model Minority Myth: Asian American Social Media Activism

Social media has become a significant aspect of many peoples' day-to-day life and has notably emerged as one of the crucial ways in which people participate in political activism and advocacy in the contemporary. Activism and political consciousness have shifted since the mass popularization of social media platforms and the Internet, and as such, established methods of activism have shifted as well. This is a significant moment in the research because the summer of 2020 provided the unique conditions under which activists utilized social media as a key part of their political participation. Asian Americans have historically combatted the 'model minority myth', the stereotypical idea that Asian Americans have achieved greater socioeconomic success than other minority groups because they are hardworking, intelligent, and apolitical. Drawing on the fields of Asian American studies and Social Media studies, this project asks how Asian Americans undermine the model minority by participating in activism through social media. I analyzed 11 Twitter posts and 15 Instagram posts ranging from January 1, 2021, to February 8, 2021. On Twitter, I utilized the

search function to track hashtags, keywords, and phrases. On Instagram, due to the lack of chronological organization, many of the collected posts were generated on the explore page based on previous engagement with similar hashtags, accounts, or infographics. The use of the infographic on Instagram, a site dealing in images, aesthetics, and visual culture, primarily functions as a depositor of digestible information through the aforementioned infographic. This differs from Twitter insofar that it does not always adhere to the presentability of information, but the turnaround of the most relevant and direct information. A limitation of the research is that the analysis focused primarily on looking outward to see how Asian Americans advocate for other minority communities rather than inward to how the Asian American community advocates for itself. In the wake of the steep rise of Asian American hate crimes since the beginning of the COVID-19 pandemic, this is a significant weakness in the research.

Paige York

Faculty Mentor: Marie-Magdeleine Chirol-Hill

Mauvaise Herbes (2018) par Kheiron Comment Survivre: de L'arnaque à la Confiance en Soi

This analysis concentrates on a subject of worldwide magnitude: the aftermath of childhood innocence sullied by various abuses at the hands of malicious adults. The purpose of this presentation is to show how traumatized children -represented through the main characters of young Waël, Shana, and Ludo- survive after experiencing life-altering suffering: the journey from scamming others to having self-confidence restored. First, I discuss how the main characters' regretful actions (particularly to swindle others and continue harmful habits) instill fear into a society that its pure members will also become flawed, which leads to the exploited youths' ostracization. Neglected children like this trio hope to one day have the self-

confidence they once had, embarking on an arduous journey inward to fix their anguished spirits. Second, the healing process allows burdened children -such as the trio plus prior gang rivals Ludo and Karim- to be able to find unity in others who understand what it is like to be mistreated. The possibility of being able to give their trust and unburden their heart with this person allows for a two-person bond to form and shows the growth outside of their individuality which has shielded them from additional pain but has also excluded them from society. Finally, together with a community instead of as a two-person team or individually, each survivor attending this summer class has the necessary support to stop their abusers by telling a trustworthy adult (young Waël's, Shana's, and Nadia's experiences) and/or the police (Ludo's situation). Presented in French.