

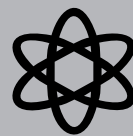
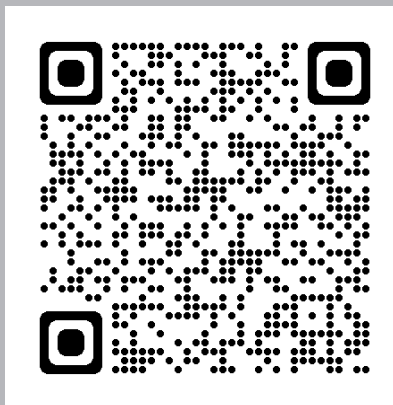
Indiana University South Bend

URC

UNDERGRADUATE RESEARCH CONFERENCE

Friday, April 22, 2022
Education and Arts Building

8 a.m. - 2:30 p.m.



Find us on Twitter @IUSB_URC or online at <https://go.iu.edu.URC>

**2022 INDIANA UNIVERSITY SOUTH BEND
UNDERGRADUATE RESEARCH CONFERENCE
FRIDAY, APRIL 22, 2022**

Conference Program and Abstracts

SCHEDULE

8:00 – 9:00 a.m.	Registration	Education and Arts Building (EA) Atrium
9:00 – 10:00 a.m.	Panel Session I	EA classrooms 1019-1025
10:00 – 11:00 a.m.	Poster Presentations and Coffee	EA classrooms 1013-1017
11:00 – 12:00 p.m.	Panel Session II	EA classrooms 1019-1025
12:15 – 1:15 p.m.	Lunch	SAC 221-225 2 nd Floor
1:30 – 2:30 p.m.	Panel Session III and Poster Presentations	EA classrooms 1013-1025



Council on Undergraduate Research

WELCOME MESSAGE

Welcome to the 2022 Indiana University South Bend Undergraduate Research Conference! Over the years, the URC has grown into a springtime institution on our campus; however, like so many events, the URC has faced challenges over the past two years. There was not a conference in 2020, and a smaller conference was held in 2021 asynchronously online via Canvas. While the quality of student presentations was still remarkably high in 2021, we are very excited to reignite the on-campus version of the URC in 2022! Our students and faculty mentors were ready, too, as the call for the URC in 2022 generated over 70 distinct proposals, including the participation of over one hundred students, faculty, staff, and observers. It is wonderful to witness and experience this sincere commitment to the research process on our campus. The URC is one of many outlets for IUSB students to showcase the academic work they complete in their classes or as part of research teams with faculty. The conference serves as a moment to officially recognize the high quality of students' work.

The conference program this year consists of a wide range of exciting research from several disciplines including Anthropology, Biochemistry, Biological Sciences, Chemistry, Criminal Justice, Dental Hygiene, English, Film Studies, French, Health Sciences, History, Management Information Systems, Nursing, Physics, Political Science, Psychology, Sociology, and Women's and Gender Studies. The 2022 URC features presentations in French, poster topics ranging from lead levels in soil to assessing approaches to healthier lifestyles. This year's presentations cover a range of topics from voting systems in a comparative context, themes in numerous films, research proposing new federal criminal justice policies to reduce crime and victimization, to background music's effects on memory. We encourage you all to attend presentations in many disciplines, and hope you will engage with student presenters, peers, and classmates—asking about their research, methods, and findings.

ACKNOWLEDGMENTS

As co-chairs of the conference planning committee, we have many individuals to thank for their time, energy, and hard work to make this event successful. To our fellow URC Planning Committee members: Molly Block, Jenny Deranek, Brett Labbé, and Mohammad Merhi—thank you for your tireless efforts in planning, preparing, and promoting the conference! To Eileen Villanueva—thank you for all the help and support regarding use of space—we are so grateful. To all the faculty mentors (names in parentheses in this program)—without your mentorship guiding our students, we would not have such a successful conference! We appreciate all your encouragement and hard work! To all the judges and moderators---we greatly appreciate your time and dedication to our students. To Erika Zynda—thank you for your help with budget preparation and assisting in hospitality! To Andrew Harlow—thank you for all your assistance with hospitality! To Ryan Weber and WERC—thank you for your quick work printing out posters for our students! We also would like to congratulate and thank all the students participating this year.

We deeply appreciate the enthusiastic support provided by Executive Vice Chancellor for Academic Affairs Dr. Jill Pearson and Chancellor Dr. Susan Elrod, and the efforts of committed IU South Bend instructors and staff, including the members of the Undergraduate Research Advisory Council. Thank you to Chancellor Elrod, Associate Vice Chancellor for Academic Affairs Dr.

Doug McMillen, and two alumna, Maggie Fink and Heather Richter, for speaking with our students about the importance of research.

Again this year the conference poster and program cover were designed by an IU South Bend student—Taylor Garrett, a graphic design major, developed the design scheme for 2022. Thank you, Taylor!

No conference is possible without the behind-the-scenes work that often goes unacknowledged in the areas of purchasing, facilities scheduling and setup, food preparation and catering, maintenance, information technology, and many more. Thank you to all those who helped make this conference possible!

We hope you all enjoy the experience!

Sincerely,

Drs. Stacie Merken and Jamie Smith, URC 2022 Co-Chairs

PROFESSIONAL COURTESY

Please be considerate by silencing your cell phone and refraining from entering and leaving session rooms during presentations.

CONCURRENT PANELS: SESSION I (9 – 10 A.M.)

Location: EA classrooms 1019-1025

Panel: Interpreting the Natural World Via Experimental Observation in the Physical and Life Sciences (EA 1019)

Moderator: Henry Scott

Acoustic Transducer Sensitivity near Cryogenic Temperatures
CODY CRIPE (Levine)

Analysis of Dynamic Viral Tubulin Protein PhuZ and the Effect Certain Point Mutations have on Polymerization
CATHERINE DUSELIS AND STEVEN FRYE (Rizk)

The Effect of Light Intensity and Concentration of CO₂ on Stomatal Density.
CELYNN CHAN AND ROSE INCHAUREGUI (Marr)

Comparison of Leaf Herbivore Damage Between Invasive Bradford Pear and Native Serviceberry and Hawthorn Trees
JACOB BAYLESS (Marr)

Panel: Crime, Voting, and Memory—A Social Science Medley (EA 1021)

Moderator: Jay VanderVeen

Statutory Rape and Age-Gap Relationships: Prevalence, Risk factors, and Outcomes
HAILEY COLPITTS (Blouin)

White-Collar Crime Bribery: The Overlooked Offense
ALLISON TREVINO (Merken)

Influence of Background Music Characteristics on Performance in a Complex Figure Task
KATHERINE DRIVER (Rodriguez)

Voting in a Constitutional Monarchy
HADI ALAJMI (Gerencser)

Panel: Analyzing Narratives in Film and Education Policy (EA 1023)

Moderator: Jake Mattox

Fatalism, Femme Fatales, and Film Noir: Double Indemnity and Body Heat
PARKER NORRIS (Roth)

Representation in “St. Louis Blues” (1929)
DAVID HAWKINS, JR. (Roth)

How Schools in the U.S Facilitate Underprivileged Students' Decaying Mental Health
NATASHA COLLINS (Mattox)

Heart the Size of a Whale: Exploration of Cultural and Social Meaning in "Whale Rider"
ALLENA PEACOCK (Magnan-Park)

POSTER PRESENTATIONS (10 – 11 A.M.)

Location: EA Classrooms 1013 - 1017

10 a.m.: View the following posters and speak with presenters. Be sure to move through the three rooms in which posters are located!

Natural Sciences Posters (EA 1013)

PhnD 177ND: Phosphonate Binding Protein Mutant
NATALIE FOX AND JESSICA WEAVER (Rizk)

Electroanalytical Performance of Antimony Modified Glassy Carbon Electrode in
Detecting Lead and Cadmium
EMILY BARRERA (Muna)

Effects of the understory shrub *Lindera benzoin* (Spicebush) on maple and beech tree
seeding abundance in an Old Growth Indiana Forest
MARCUS BAILEY, ROSE INCHAUREGUI, BROOKE SHOOP, AND DEBORAH MARR
(Marr)

Survey of Dynein-2 Components in Ciliated Protists
LINA MARCHI (Wilkes)

A Course-Based Undergraduate Research Project: A Correlation Study of Lead Levels
in Contaminated Soil Samples with Source, Home Location and Age.
NASEEM ALFADHL, NICK THURIN, ABIGAIL NOLAN AND ELIZABETH PASK (Muna)

Investigating the Electroanalytical Performance of Bismuth-Antimony Film on Glassy
Carbon Electrode in Detecting Lead and Cadmium
LUCAS ROBINSON (Muna)

Phosphate Removal from Water using Cross-linked Polymer Networks
SABRAH ALAJMI (Clear)

Studying the association of membrane permeable fluorescent probes with anionic lipids
HASAN ALSAYMARY (Clear)

Exoplanet Light Curves and Confirmations
PHILLIP DERRICKSON AND EMILEE EDMONDS (Hinnefeld)

Social Sciences Posters (EA 1015)

IPV and Police Training
HANNAH GOOD (Merken)

Animal Cruelty: The Underdog of the Criminal Justice System
SHANNON BULTINCK (Merken)

Stop Labeling: Rehabilitation for Juvenile Drug Offenders
RHEA EENIGENBURG (Merken)

A Change in Women's Rights
LOVEPREET KAUR (Merken)

Reforming Police Interrogations to Prevent False Confessions
FAITH QUINTANA (Merken)

Behind the Wheel of Accountability: Preventing Safety Recalls Before They Occur
JENNIFER PAULEY (Merken)

Cyber Protection for State and Federal
NIALL MOREY (Merken)

Away for Good
MARIANA GARCIA (Merken)

A Modified Policy for Cyberstalking in Today's World
SOLEDAD BAUTISTA (Merken)

Stop the Stalk: Improving the Effectiveness of Protection Orders with a More Unified Policy
ALECIA BELMAREZ (Merken)

Professional Programs/Health Sciences Posters (EA 1017)

Tooth Talk
PAIGE SEARS (Edmondson)

Healthy Tiny Teeth (Program Implementation)
MADISON FISHER, SAM MILLER, TAHYA BRUCE, AND CASSY MOSLEY
(Edmondson)

Healthy Happy Smiles
YASMIN CORIA LEAL AND CAYLEE GEE (Edmondson)

Cavity Crushers
BROOKE REINHARDT, SARAH KARLSON, AND ALLIE WOODS (Edmondson)

Tigers and Toothbrushes
KAT BESSLER AND AMANDA GEARY (Edmondson)

Dream Big
COURTNEY ESPINOZA AND MARISOL CARMONA (Edmondson)

Heart Failure and Nurse-led Patient Education
HEATHER ROGERS, TAYLA BOTHUN, TATIANA CUETO, AND HEIDI JACKSON (Jones)

CONCURRENT PANELS: SESSION II (11 A.M. – 12 P.M.)

Location: EA classrooms 1019-1025

French Translation in Action (EA 1019)

Moderator: Jeff Luppés

La Traduction de Rythm dans “Le Chanson des Escargots” de Jacques Prévert
HAILIE KULIKOWSKI, MIRIAM FAYAD, AND HANNAH SHANK (Magnan-Park)

Jacques Prévert: La traduction de “Chansons des escargots qui vont à l’enterrement” avec une concentration sur le Style et le Rythme du texte
KEISHA NATAL, MEREDITH TORRES, AND CONNIE KLIMEK (Magnan-Park)

Who Votes? Who Governs? (EA 1021)

Moderator: Steven Gerencser

Voter Participation Determinants, Indiana for the 2020 Election
CHRISTIAN MARTINEZ (Gerencser)

The Constitutionality of Voter Identification Laws
JENNA STANKOVICH (Gerencser)

Voting Systems: U.S vs Bolivia
DANIELA BOZO (Gerencser)

The Power of the Past: How the Communist Party of the Soviet Union Utilized Literature, Newspapers, and Historical Narratives to Assume and Maintain Political Power
SOFIA GLADUN (Spencer)

Feminist Cartographies (EA 1023)

Moderator: April Lidinsky

A Feminist Cartography

JESSICA CLARK BAYER

SARAH WHISMAN

MELINA HENDRICKSON

GABRIELLE HOPKINS (Lidinsky)

The Psychological Effects of Physical Activity (EA 1025)

Moderator: Mohammad Merhi

With Professional Athletes, is there a Correlation of this Paradoxical Effect Under Pressure when Surrounded in a High Elevated Situation?

CONNER SHREVE (Doyle)

Stress it Out

HANNAH AMES, ASHLYN KOPINKSI, AND ELIZABETH SARBER (Edmondson)

LUNCH (12:15 – 1:15 p.m.)

Location: Student Activities Center (SAC) Rooms 221-225

Speakers:

Dr. Susan Elrod, Chancellor, IU South Bend

Dr. Doug McMillen, Associate Vice Chancellor for Academic Affairs, IU South Bend

Alumni Panel

Maggie Fink

Heather Richter

**CONCURRENT PANELS AND POSTER PRESENTATIONS:
SESSION III (1:30 – 2:30 P.M.)**

Location: EA Rooms 1013 - 1023

NOTE: THIS PANEL IS PART OF COMMUNICATION STUDIES DAY AND BEGINS AT 1 P.M.

Panel: Communication and Social Connection (EA 1021)

Moderator: Brett Labbé

The Persuasive Appeal of Televangelism: Religion, Fear, and Celebrity Appeal
CASSIDY MARTENSON, MABEL MYERS, AND GLORIANNA SORENSON (Davis)

Advocacy for Private Facts, Personal Information, and Privacy Law
PARKER NORRIS (Labbé)

Isolation and Connectivity: Online Learning and Perceived Social Capital
CASSIDY MARTENSON (Wilson)

Social Sciences Posters (EA 1013)

Identifying Smithsonian Trinomial Site Numbers in JSTOR: The Potential for Open and Reproducible Text Mining of Primary Literature to Revolutionize Archaeological Information Management
MACKENZIE EDMONDS (Wells)

Online and In-Person Students: Characteristics and Learning Strategies
NICHOLAS HATFIELD (Rodriguez)

Judiciaire of the People
ROBERT TALTON (Merken)

Serial Murder: New Federal Policy
JULIA CLARK (Merken)

Who Owns Guns?
JESSICA JOHNSON (Merken)

The Silenced Survivor: Revictimized in Family Court
ERIN BENSYL (Merken)

Tackling Labor Trafficking
STEVEN MILLER (Merken)

Transportation Management System Analysis and Design
TYLER DAVIS (Merhi)

Professional Programs Posters (EA 1015)

What are the effects of Guanfacine versus Behavioral Therapy on Attention in College aged students with ADHD?
COURTNEY ESPINOZA (Doyle)

Healthy Choices, Healthy Children
EMILY WITTERS, SHEYENNE AUER, AND ANANDA PEEBLES (Edmondson)

Sugar Fighters
LOIDA ACOSTA, KORI BEGGS, AND MWAI CHUTHI (Edmondson)

Mental Health Awareness at IUSB
TERESA ANDRADE, CLAUDIA JACKSON AND VIVIANA GUZMAN (Edmondson)

Wonders of Women
LILY COFFMAN AND ALEXIS MICHALSKI (Edmondson)

Access for All
CHRISTINA LAI AND KENEDY THOMPSON (Edmondson)

Women's Reproductive Health
HOPE KLEMZ, BAYLIE LEE, LILY MEDRANO, AND FLORA NYIRONGO (Edmondson)

Social Science Posters (EA 1017)

Public perception on survivors of sex trafficking: A new policy regarding decriminalization of victims and the take-down of traffickers
SARAH ROBINSON (Merken)

Combatting the Dangers of Environmental Contaminants Through Mandatory Procedure and Policy
CAMERON KINCAID (Merken)

A New Development: DV Shelters
ESMERALDA ESPARZA (Merken)

Agency of Embezzlement Limitation: Decreasing Embezzlement With Governmental Teaching
NATHANIEL PAIGE (Merken)

Insider Trading Policy
KELCIE MCLURE (Merken)

Battling Police Brutality
COURTEN CLARK (Merken)

The Need to Change Domestic Terrorism Policies is Growing
MATTHEW DAVIS (Merken)

Panel: Class, Trust, and Influence in Film (EA 1023)

Moderator: Elaine Roth

Women in Horror: Who is to be Believed
IZABELLA GARDNER (Roth)

Thrillers and their Ability to Force Viewers to View Things Differently
NUNE TASHIJAN (Roth)

“Within Our Gates”
MICAELA TOLER (Roth)

Class Analysis in "Within Our Gates"
ZAKARIA SOHRAB (Roth)

PRESENTATION AND POSTER ABSTRACTS

Sugar Fighters

Loida Acosta, Kori Beggs, and Mwai Chuthi

For our project we thought of working with women in our community. We wanted to focus on women's health where we settled on diabetes and breast cancer. Our presentation was done at the B.A.B.E. store in south Bend where they work with women and provide classes on parenting and women's health. As women walked into the store they participated in our event and we gave them information on how to examine themselves for breast cancer at home as well as information on where to get screened for diabetes and for breast cancer in our community. We had 19 women participate in our event. We gave them a pre-test before giving our lecture to see what they already knew and after the lecture we gave a post-test where we checked what they had learned. We implemented our program online and in person because we knew not everyone would be able to come in person so we wanted to include them in the event. Our project took two days and it was a success.

Voting in a Constitutional Monarchy

Hadi Alajmi

In this paper I will be discussing the process of voting in a constitutional monarchy, and more precisely Kuwait. This paper will involve the development of the voting system in Kuwait, how has in changed in the past 10 or so years. The paper will embark some comparison between the United States and Kuwait, and some of the party themes that both countries share. This paper will be a field analysis, a comparative study, and some history background on the voting theme of Kuwait. One theme of the paper will be talking about the tribal parties that Kuwait has, instead of the parties that people in the United States are used to.

Phosphate Removal from Water using Cross-linked Polymer Networks

Sabrah Alajmi

Phosphate is an essential element for health in all living organisms. Nevertheless, elevated levels of phosphate and its derivatives can negatively affect human health and the environment. This research aimed to synthesize insoluble polymer networks to remove phosphate from water. The starting point was the phosphate-binding drug sevelamer hydrochloride, a polymer of allylamine used to treat hyperphosphatemia in chronic kidney disease. The present study examined the effect of replacing some or most ammonium groups in sevelamer with guanidinium groups and the influence of pH on the phosphate binding capacity. Four polymer networks with different ratios of the guanylating agent (0, 25, 50, and 75%) were prepared, and the phosphate absorption was measured at pH 2.1 and 7.1. The results showed that the binding capacity for the sevelamer is the highest. Replacing some or most ammonium groups in the polymer with guanidinium groups decreased the binding capacity for phosphate. The polymer networks tended to have a higher capacity to phosphate at pH 7.1 than 2.1.

A Course-Based Undergraduate Research Project: A Correlation Study of Lead Levels in Contaminated Soil Samples with Source, Home Location and Age.

Naseem Alfadhil, Nick Thurin, Abigail Nolan, and Elizabeth Pask

Lead is a toxic heavy metal that is present in the environment due to human activities, such as an additive in gasoline, lead-based paint, and lead in ammunition and sinkers. Although lead is no longer used in paints and gasoline; the major sources of lead contamination, once it has been deposited it moves very little through the soil and can persist for a long time. The legacy of its use is evident in soils along roadways and in the cities. The goal of the present work was to correlate lead levels in soils in several homes with the location and the year the homes were built. Lead from the soil samples was extracted using a modified EPA method 3050B and analyzed using microwave plasma atomic emission spectroscopy at 405.78 nm. The data show a correlation between the amount of the lead in the soil with home location and age. Homes located in the city show higher amount of lead compared to homes located in the farms or in newly developed areas. In addition, there is also a good correlation between the levels of lead in soil samples collected from the front yard and those obtained from the back yard in homes located in the city, front yard showing slightly higher levels. The amount of lead in the front yard soils ranged from ~ 6 – 700 ppm, with higher concentrations in older homes. Results from this work will be presented.

Studying the association of membrane permeable fluorescent probes with anionic lipids

Hasan Alsaymary

Fluorescent probes were synthesized to bind to major phosphatidylinositol phosphate lipids (PIPn) and other related anionic lipids. The goal of this study was to determine binding affinities between each probe and lipid type, depending on whether the probe had a zinc(II)-dipicolylamine (ZnDPA) or guanidinium targeting group. The probes also had a boronic acid targeting group and fluorescent dye that increased in fluorescence when bound to the lipid membrane. ZnDPA, Guanidinium and a Control probes were synthesized and for binding to liposomes containing the lipid. PS, PI, PIP, and PIP2 were the anionic lipids tested in this experiment. Results showed that both probes bound tighter to liposomes containing PIP2 than those containing other anionic lipids or the PC (zwitterionic) control. Guanidinium had the greatest increase in fluorescence when binding to anionic lipids, but ZnDPA had a much higher binding affinity.

Stress it Out

Hannah Ames, Ashlyn Kopinski, and Elizabeth Sarber

Our program was tailored for 13-19 year olds struggling with their mental health. Many are unaware of healthy coping mechanisms and we wanted to offer them an easy way to do this by exercising. We offered a yoga and nutrition class at the Walkerton Community center, and collected pre and post test to ensure what was taught was valuable. Participants were allowed to take pictures of poses for future reference.

Mental Health Awareness at IUSB

Teresa Andrade, Viviana Guzman, and Clauro Jackson

Life can be challenging trying to juggle school, work, and your personal life which can take a toll on your mental health. Our goal is to help students maintain a healthy mind by increasing the awareness of mental health, managing and coping skills, and educating students on resources available to them. Because we know how hard it can be.

Effects of the understory shrub *Lindera benzoin* (Spicebush) on maple and beech tree seeding abundance in an Old Growth Indiana Forest

Marcus Bailey, Rose Inchauregui, Brooke Shoop, and Deborah Marr

Bendix Woods Nature Preserve is an old growth maple-beech forest located in St. Joseph County, Indiana. We surveyed the 27-acre nature preserve for diversity of tree species and measured diameter at breast height. A 1967 survey of ten acres of the nature preserve showed that *Fagus grandifolia* was the most common canopy tree and *Acer* species were second most common. The 2021 survey shows that the frequency of *Acer* species has increased so that it is now the dominant tree species making up 37% of all trees, and *Fagus grandifolia* has decreased in frequency to 16%. *Lindera benzoin* (spicebush) is one of the most common understory trees. To determine whether *Lindera benzoin* affects establishment of maple and beech seedlings, we compared twenty 10 m² plots with no *L. benzoin* with thirty 10 m² plots with an average of 12 *L. benzoin* per plot. We found that there was no difference in the number of *Acer* seedlings in plots with low vs. high numbers of *Lindera benzoin*. However, there were twice as many *Fagus grandifolia* seedlings in plots with high numbers of *Lindera benzoin* compared to low density plots (T-test 2.57, DF = 19, P = 0.018).

Electroanalytical Performance of Antimony Modified Glassy Carbon Electrode in Detecting Lead and Cadmium

Emily Barrera

Metals such as lead and cadmium are some of the most dangerous pollutants that can be found in the environment. Due to past human activity, lead had leaked into the environment from gasoline and lead-based paints. Lead poisoning can cause many adverse health effects in humans especially in the neurological development of children. The Environmental Protection Agency (EPA) has a set limit as to how much lead and cadmium are permitted in water sources, which are 15 and 5 ppb for lead and cadmium, respectively. The work that will be presented utilizes a glassy carbon electrode (GCE) modified by electrochemically depositing antimony (Sb) using chronoamperometry technique. In detecting lead and cadmium, the analytical performance of the modified electrode was evaluated using differential pulse anodic stripping voltammetry. The analytical performance of the modified electrode was evaluated in terms of linear dynamic range, sensitivity, response stability, and limit of detection. The developed method using the Sb modified GCE (Sb-GCE) exhibited good analytical performance, for example, the linear dynamic range was 0.1 – 100 ppb and 1 – 100 ppb for lead and cadmium, respectively. The limits of detection for lead and cadmium were 0.1 and 1 ppb, respectively, way below the EPA recommended levels. In future research, experiments will include ways to improve the response stability of the Sb-GCE surface which for lead

is 7.3 % and that for cadmium is 5.4%. The developed method will be applied for real sample analysis of lead and cadmium in soil and water samples obtained locally.

Gatekeepers of the Information Age: A Look at how the Internet Affects Gatekeepers

Soledad Bautista

According to the Bureau of Justice Statistics Special Report, approximately 1 in 4 stalking victims reported experiencing a form of cyberstalking (2009). Currently, there are not any laws that cover a wide range of cyberstalking, which is a concern due to the advancement of technology. Using a content analysis from Welsh and Harris (2016) seven stages of planned change and extensive research, a new federal policy was created to reduce the cases of cyberstalking. The proposed policy will require implantation of a new law, using criteria and a program to target offenders while helping victims and the community. Future research along with the limitations that may occur when implementing this new intervention will be discussed.

A Feminist Cartography

Jessica Clark Bayer, Sarah Whisman, Melina Hendrickson, and Gabrielle Hopkins

In Rebecca Solnit's "City of Women" she discusses the "hordes of deadmen" surrounding us as we walk through our everyday lives: street names, museums, schools, rivers, cities, statues, public art, etc. You name it and it's most likely named after a white man or created by one. She asks us to reimagine a world where we might see places named after the breadth and width of the diversity of humanity that represent the spaces we inhabit. Professor Lidinsky asked us to do the same; reimagine a place of our choosing through a feminist cartography. My classmates and I would like to present a sampling of the visual maps we created, the biographies we wrote, and our reflections on the experience of our research. Some of us found research on women, especially indigenous women, to be challenging. The erasure of women, people of color, and indigenous Nations from the naming of places on our maps is reflective of their lack of prominence in the retelling of history. This is not to say that renaming spaces is *the way* to reckon with our nation's deeply violent and harmful past, but it is *a way* to honor those who have come before. Solnit writes, "many women were never allowed to be someone [...] but some rose up; some became visible; and here they are, [...]" This map is their memorial and their celebration." We would love the opportunity to share our experience with this project and the stories of people worthy of a spot on the map.

Comparison of Leaf Herbivore Damage Between Invasive Bradford Pear and Native Serviceberry and Hawthorn Trees

Jacob Bayless

One of the hypotheses thought to contribute to the spread of invasive plant species is the enemy release hypothesis (ERH), which states that invasive species are primarily successful due to a lack of "enemies" in the form of few herbivores, predators, or diseases. I compared herbivore leaf damage in native and non-native invasive tree species that are in the Rosaceae plant family. Two of the tree species are native to this region Serviceberry (*Amelanchier* sp.) and Hawthorn (*Crataegus* sp.), whereas Bradford Pear (*Pyrus calleryana*) is an invasive nonnative species. It was hypothesized that herbivores would prefer the leaf tissue of the native tree species in accordance with ERH. Data

collected from trees surveyed around the Indiana University South Bend campus appear to support this hypothesis.

Stop the Stalk: Improving the Effectiveness of Protection Orders with a more Unified Policy

Alecia Belmarez

Currently, a restraining order for stalking offenses is decided only by the officers involved. The lack of a more consistent process to enforce a protective order result in uncertainty of repercussions for violations by offenders. While it is not common for stalkers to be violent, there is a false sense of security when the perception of police officers is lowered with their lack of response to restraining orders. A content analysis using extensive research on stalking as a crime will be implemented. The goal is to propose a more unified policy that will impact various stakeholders and allow survivors of stalking to feel safe by revising protection orders. Most violent stalkers will not conform to the specified directives of the restraining order as research shows an increased likelihood they become more violent toward their victim when employed. A new federal policy needs to be created that incorporates criminological theory, research, and the seven stages to execute restraining orders. The new federal policy, awareness of the effect stalking has on society, and limitations will be addressed along with plans for future research.

The Silenced Survivor: Revictimized in Family Court.

Erin Bensyl

Research shows, twenty-nine states in the U.S. do not provide victims of Intimate Partner Violence (IPV) legal protection against litigation abuse (D'Auito, 2020). As a result, batterers continue to abuse their victims in additional ways—through lengthy court proceedings—financially draining them. Custody proceedings result in poor outcomes for the victim and their children as the courts determination is based upon the judges' discretion. A content analysis method and research on IPV and court proceedings will provide the creation of a new federal policy aimed at reducing discretion of the courts, negative outcomes for victims, and decrease the offender's ability of continuous abuse through the court system. A consistent set of guidelines, procedures, and programs will be discussed with the goal of encouraging victims to leave their abusers without fear of financial burden and strengthen the court system regarding IPV victimization. Future research and issues associated with the new criminal justice policy will be addressed.

Tigers and Toothbrushes

Kat Bessler and Amanda Geary

Our program was about teen oral care! We went into Jackson Middle School and presented what was oral health care and how do we take care of it! We were able to send each student home with a new toothbrush, toothpaste, and some floss.

Voting Systems: U.S vs Bolivia

Daniela Bozo

I would be speaking about the voting system difference between the United States and Bolivia. One main point that will surround my presentation is what type of voting system

works better for a country: voting by choice or obligation. By presenting this idea, hopefully there is a conclusion at the end based on all the information provided such as speaking about elections, voters, voter-turnout, political parties, and others.

Animal Cruelty: The Underdog of the Criminal Justice System

Shannon Bultinck

Animal cruelty is a phenomenon often overlooked within the criminal justice system, reflected in the laws and regulations that lack severe consequences for offenders. As pets are such an integral part of so many households, it is important to ensure their safety and well-being by creating laws and regulations that thoroughly punish those who seek to harm them. Research surrounding the topic of animal cruelty and the various legislative attempts made will be addressed through a content analysis. Application of Welsh and Harris's (2016) seven stages of planned change will be utilized to develop a new federal policy designed to reduce animal cruelty better than its predecessors. This policy seeks harsher consequences for offenders to better deter future offenses, while also aiming to address the root causes of offending through counseling and education. Through a combination of punishment and rehabilitation, recidivism will be reduced and potential offenders will be deterred. Possible issues and obstacles to integrating this policy with current legislation and further avenues in the area of animal cruelty that can be explored will be examined as well.

The Effect of Light Intensity and Concentration of CO₂ on Stomatal Density.

Celynn Chan and Rose Inchauregui

Stomata are microscopic pores found on the surface of plant leaves and are generally more numerous on the lower epidermis. These pores function in regulating photosynthesis, transpiration and respiration of the plant. Previous studies have established the relationship between stomatal density and environmental factors such as light intensity and carbon dioxide (CO₂) concentration. We tested the hypothesis that higher stomatal density would be present under low light intensities and high CO₂ concentrations in two tree species: crabapples (*Malus* sp.) and English oak (*Quercus robur*). Leaf samples from *Malus* trees were collected from two sites: Indiana University South Bend (IUSB) campus grounds where CO₂ emissions were minimal and on the traffic island on East Mishawaka Avenue where CO₂ emissions were higher. *Quercus robur* tree leaf samples were collected from two sites: Wiekamp courtyard for low sunlight exposure and south side of IUSB's parking garage for high sunlight exposure. Leaf impressions from each leaf sample were made and the stomatal density from the underside of the leaves were counted and compared between sites. In contrast to our initial hypothesis, we found that leaf samples from sites of low CO₂ concentrations and high light intensity had significantly higher stomatal densities.

Serial Murder: New Federal Policy

Julia Clark

To date there are no current federal policies to appropriately address serial murder. While serial murder is not as common as it is portrayed, in the media, implementation of a federal policy is needed. A content analysis using Welsh and Harris's (2016) seven stages of planned change will provide a new federal policy to prevent serial murder, while also

aiming to prevent victimization based on education regarding psychopathy and personality. An explanation of implementation, programming, and assessment will be analyzed. Limitations are inevitable, especially with new policies, and will be addressed accordingly as well as future research.

Battling Police Brutality

Courten Clark

The U.S. Bureau of Justice Statistics reports that nearly fifty-one percent of Americans who experienced the threat or use of force by police felt these actions were excessive (Harrell & Davis, 2020). However, despite the prevalence of the problem, there is still a lack of comprehensive policies to combat the issue of excessive force being utilized by America's police. In addition, current policies fail to address the various origins of police brutality. As a proposed solution to this issue, a new policy was developed using a modified version of Welsh and Harris's (2016) planned change and elements of Tittle's (1995) Control Balance Theory to reduce police violence. A content analysis incorporating research assisted in the development of the policy. A more comprehensive three-pronged approach will be implemented, instituting measures to correct deficits in police discipline structures, physical tactics training, and de-escalation training to reduce the incidence of excessive force. The challenges of implementing this policy on a national level and further research will be addressed.

Wonders of Women

Lily Coffman and Alexis Michalski

Wonders of Women is a program that educates women on the hormone cycle and how hormones change when one gets pregnant.

How Schools in the U.S Facilitate Underprivileged Students Decaying Mental Health

Natasha Collins

A common belief in the U.S is that a person's shortcomings or attainments are based solely on personal merit, therefore justifying the disparities by blaming the individual and masking the real obstacles. An example of a predominant obstacle that U.S citizens can face lies within the inequalities of the country's education system. Children from affluent families are often placed into schools that are centered around leadership skills and critical thinking. In contrast, children from nonaffluent families typically receive education based on memorization and obedience. These findings support that the stark differences in education by social stratification, and other variables, limits the potential of underprivileged students, as well as being a detriment to the individuals mental health.

Statutory Rape and Age- Gap Relationships: Prevalence, Risk factors, and Outcomes

Hailey Colpitts

Research on age-gap relationships in recent years notes that young people perceive them more negatively the farther apart the age-gap is but they are still relatively prevalent in teens, especially among populations of teens that are more likely to engage in drinking alcohol, using drugs, and other risky activities. Updated information and resources regarding age-gap relationships and at-risk behaviors is recommended to be provided during sexual education and consent discussions, in addition to changing and updating

laws to reflect current knowledge. Further research on the older parties in these relationships is recommended in order to understand their behaviors and what interventions may be used to help them.

Acoustic Transducer Sensitivity near Cryogenic Temperatures

Cody Cripe

IUSB will provide acoustic transducers for the Scintillating Bubble Chamber (SBC) experiment to search for low mass ($0.7 - 7 \text{ GeV}/c^2$) WIMP dark matter using a liquid argon bubble chamber. The transducers, which are the primary instrument for distinguishing radioactivity-induced background events from dark matter-induced events, will need to operate at a temperature of 87 K (liquid argon temperature), while maintaining sensitivity to acoustic waves in the 1kHz to 200 kHz regime. The piezoelectric ceramic Lead Zirconate Titanate (PZT) has been the active element in the acoustic transducers fabricated by IUSB. There is evidence from the liquid-fueled rocket industry that PZT shows losses in acoustic sensitivity at low temperatures. IUSB has identified four possible piezoceramic materials to use for SBC that could satisfy the above conditions: PZT, textured KNN, random-phase KNN, and a PMN-PT single crystal. To study this phenomenon, an experimental apparatus was designed and fabricated to send an acoustic signal to transducers that are being cooled to cryogenic temperatures using liquid nitrogen and observe a change in their signal amplitudes as a function of temperature as they warm up to room temperature. Preliminary results have been obtained from the apparatus using piezos of differing geometry to observe changes in sensitivity as the transducers warm to room temperature after being subjected to liquid nitrogen.

The Need to Change Domestic Terrorism Policies is Growing

Matthew Davis

Currently, domestic terrorism policies lack certain types of criminal acts, weapons, and fail to look beyond certain ethnic or political groups. With the ever-changing world and political landscape, other extremist factions, such as right- and left-wing domestic terrorists are often overlooked, especially when paired with the appearance of intimidation to a civilian population through hate. Using a content analysis through Welsh and Harris's (2016) seven stages of planned change, a proposed new federal policy would include a new definition of domestic terrorism, incorporating more stringent penalties, and widening the types of criminal acts to be included. Research on various types of domestic terrorist groups, combined with a new policy and programming, will allow U.S. federal agencies to increase investigations, make arrests, properly punish convicted individuals, and make the U.S. safer overall. Limitations of the new policy and the need for future research will be addressed.

Transportation Management System Analysis and Design

Tyler Davis

Traffic congestion has presented many challenges in growing cities all over the world. This research aims at developing a traffic management system that enables traffic to flow without complication and to promote sustainability on the road. The analysis of the proposed traffic management app explores the advantages and disadvantages of the

traffic management system that Waze currently uses. The object-oriented method is used to analyze the current Waze system and design a new and improved traffic management system. Other traffic management system elements are used in the design process to help transform Waze's existing system into an accurate and sustainable use of the technology. The use of algorithms to track vehicle CO emission costs, idle costs, time costs, and overall fuel consumption costs will better inform the users on the best route of travel. The algorithms used in the system will show users the cost of each trip. The costing feature will attract users and tell users how much they are spending while driving. Users such as civilians and distribution channels will be able to use this system to lower costs of travel in congested areas all over the world. This will benefit our environment because CO emissions can be directly related to the cost and use of fuel. The app will decrease CO emissions, improve air quality, and save time and money which will be able to be spent in other areas of the economy.

Exoplanet Light Curves and Confirmations

Phillip Derrickson and Emilee Edmonds

Human curiosity began leading us to explore the stars during the 19th century. While we are exploring nearby space with manned missions, we are exploring deep space here back on Earth. MIT launched an observation mission using TESS (Transiting Exoplanet Survey Satellite) (Ricker et al., 2015) in July of 2018 exploring possible exoplanets (planets outside of our solar system) orbiting far off stars. Recently there has been an increased need for ground-based observation to support all-sky, exoplanet surveys such as TESS. One of the main purposes of ground observation for such surveys is to discern real exoplanet transitions from false positives, such as those given off by near-by eclipsing binary systems. We are currently attempting to develop the procedures necessary for the IUSB observatory and physics department to be capable of consistently observing target transitions and interpreting data. Our overarching goal in this research is to choose visible targets of interest to TESS and submit our observations of the data to help determine those transitions that are made by exoplanets from false positives. We will do this through the taking of raw images via the observatory here at IUSB and processing the images through AstroImageJ, a processing software commonly used by amateur observers. This data will give us a graph known as a light curve, measuring the brightness of the star as we can observe it.

Influence of Background Music Characteristics on Performance in a Complex Figure Task

Katherine Driver

Recent research has suggested that certain qualities of background music can be optimized for specific categories of tasks. However, more longstanding data disagree with this claim, suggesting that background music is definitively distracting for many tasks. Newer findings base music characteristic recommendations on the possibility that the key and complexity of music may facilitate certain cognitive functions, such as attention and working memory. This is a promising possibility, especially in the context of occupational resources for individuals with neurocognitive and neuropsychiatric disorders or brain injuries. The present study was designed to explore the efficacy of two types of task-optimized background music (complex task-optimized and vigilance task-optimized) on facilitating both time of completion and accuracy score on the Rey-

Osterrieth Complex Figure (ROCF) task. This task includes a copy and a recall portion, taking place 30 seconds apart. Data from 18 participants in the present study revealed no significant difference between completion or accuracy on either of the two portions of the ROCF task, indicating no effect of the background music on task performance.

Analysis of Dynamic Viral Tubulin Protein PhuZ and the Effect Certain Point Mutations have on Polymerization

Catherine Duselis and Steven Frye

PhuZ is a monomeric protein found in bacteriophage 201 ϕ 2-1 which exhibits treadmilling when forming a three-stranded filament at a critical concentration of GTP. It is distantly related to eukaryotic microtubules, which are important for many aspects of cell function, movement, and signaling. By studying PhuZ, we hope to better understand eukaryotic microtubules. The goal of our work is to introduce point mutations to the structure of PhuZ to influence the critical concentrations elongation and net assembly, thereby regulating the protein's dynamic instability. These mutations were chosen with the expectation of altering longitudinal and lateral bonding and nucleotide hydrolysis rate. Here, we expressed and purified seven PhuZ point mutants, and tested the effect of each mutation on polymerization. We observed polymerization on six of the seven mutants. The only mutant showing no polymerization was I302D, presumably due to the significant difference in properties between Ile and Asp. Other more conservative mutations showed polymerization, yet, the polymerization was different compared to the wild type. For example, D303A shows a faster rate of polymerization followed by depolymerization. Similar results were observed with the D305E mutant. D303E and R290K both show lower magnitude of polymerization compared to the wild-type. Interestingly, while the wildtype shows continuous polymerization over the time course of the assay, all other mutants show significant or modest levels of depolymerization after the initial burst in polymerization. Our data show that conservative mutations do not completely abolish polymerization but alter the polymerization dynamics. Further analysis of the mutants can provide the crucial concentration for polymerization. Electron microscopy will help determine the effect of each mutation on polymer structure, average length, and treadmilling.

Identifying Smithsonian Trinomial Site Numbers in JSTOR: The Potential for Open and Reproducible Text Mining of Primary Literature to Revolutionize Archaeological Information Management

Mackenzie Edmonds

The new JSTOR Constellate portal provides resources to openly and reproducibly text mine the extensive holdings of primary literature in JSTOR, including all of their archaeological and anthropological materials. The Python computer programming language and Jupyter Notebook coding environments are the primary tools for investigators to work with JSTOR/Constellate. Using these tools, the authors were able to identify tens of thousands of Smithsonian Trinomial style archaeological site numbers from a wide range of archaeological and anthropological journals and export them for use with the Digital Index of North American Archaeology (DINAA) Linking Sites and Literature (LSL) project. The methods used to identify Smithsonian Trinomial style alphanumeric strings and to determine authentic site numbers using Python instructions

and other digital tools will be discussed with reference to the JSTOR/Constellate “bag of words” approach for making full text data available. JSTOR/Constellate provide beginner and intermediate lessons and templates to guide new users and suggestions are made for the archaeological community to begin making greater professional and educational use of text mining to better grasp the immensity of the archaeological literature and connect it directly back to primary research, collections management, and various forms of computational modeling.

Stop Labeling: Rehabilitation for Juvenile Drug Offenders

Rhea Eenigenburg

Juvenile drug offenses continue to be a major issue in the United States (U.S.), comprising largely of male offenders between the age of ten-to-seventeen, coming from low-income or abusive homes. Currently, any juvenile aged sixteen and over can be tried as an adult for these offenses as the courts see fit; however, the brain does not fully develop until anywhere between eighteen-to-twenty-five. Using content analysis for Welsh and Harris’s (2016) stages for planned change and research on this issue, a new federal policy was developed to propose all male juvenile drug offenders should not be tried as adults until they are eighteen. The policy also includes more of a focus on rehabilitation and reintegration, rather than incarceration and stringent punishment. Limitations of the new federal policy and future research will be discussed.

A New Development: DV Shelters

Esmeralda Esparza

On average, women who experience domestic abuse tend to continue living with their abusive partners for about two or three years before seeking help (Safe lives, 2017). A reason for this may be due to being financially unstable or for the well-being of their children. Using a content analysis from Welsh and Harris’s (2016) seven stages of planned change and research on this problem, a new federal policy was created to require more safe spaces and resources for women trying to escape intimate partner violence. The goal of this policy is to protect and empower these women, providing a variety of resources for free, maximizing time in these shelters, and making sure no one is turned away due to space issues. A variety of stakeholders are included in the new policy. Limitations of this new federal criminal justice policy and future research will be discussed.

What are the effects of Guanfacine versus Behavioral Therapy on Attention in College aged students with ADHD?

Courtney Espinoza

Attention Deficit and Hyperactive Disorder (ADHD) is a neurodevelopmental disorder that is most common in childhood but can persist until adulthood (Chan et al., 2016). Many are diagnosed with ADHD as a child but more often individuals are getting diagnosed in early to late adulthood. Children have been the predominantly studied group; leading to a gap in the evidence regarding the college aged population on the effects of medication and therapy for controlling ADHD. (Chan et al., 2016). Previous authors have investigated the combination of guanfacine and cognitive behavioral therapy (CBT) among middle aged adults (mean age of 33y.o. Males and 34y.o. Females) but the

literature is absent regarding traditional college aged individuals (Emilsson et al., 2011). Learning more about the issues of ADHD and treatments available for college aged adults will help those individuals better manage their symptoms during a time when focus is necessary for student success. In our proposed study we hypothesize that the combination of the guanfacine and CBT will show the greatest improvement in focus using a patient reported outcome; the Adult ADHD Self Report Scale.

Dream Big

Courtney Espinoza and Marisol Carmona

Our program was called Dream Big which dealt with sleep deprivation that affects junior high students. We implemented our program Mar 16, 2022 at Goshen Junior High School in Goshen Indiana. We were able to pass out information about better sleep habits and had some videos about the importance of sleep and the risks that are associated with sleep deprivation. We did a pretest and a kahoot for our post-test data we found that many of the 8th-grade students did not realize they needed 10- 11 hours of sleep per night to not be sleep deprived. We sent students home with sleep diaries that were to be returned to the teacher for credit. Jennifer Miller the health teacher at that school was still collecting those diaries back. Most of the students learned about the different parts of sleep and were able to do much better on the post-test and told us one area they could improve.

Healthy Tiny Teeth (Program Implementation)

Madison Fisher, Sam Miller, Tahya Bruce, and Cassy Mosley

We are senior dental hygiene students from Indiana University South Bend and we implemented our dental program for the students at Bethel University Lab-K. Our goal was to educate the kindergarteners on the importance of dental health and how to properly brush and floss. The children participated in our program “HEALTHY TINY TEETH”, where they learned how to do a better job of removing plaque with a toothbrush and floss. One activity that we chose to do that was effective in improving the children's skills is disclosing. You may be familiar with disclosing tablets, as many dentists and hygienists use them during regular office visits. By chewing and swishing one of these little pink tablets, students are able to see the plaque and more effectively remove it. We also did a flossing activity where we used a hands-on activity by creating an alligator mouth model with marshmallows as teeth and yarn as the floss to show how to properly use the c shape floss technique.

PhnD 177ND: Phosphonate Binding Protein Mutant

Natalie Fox and Jessica Weaver

The most commonly used herbicide RoundUp contains the active ingredient glyphosate which is a synthetic phosphonate that has been linked to an increase in lymphoma [3]. The phosphonate binding protein (PhnD) is an E. coli protein that binds to a large number of phosphonates. PhnD has a low affinity for glyphosate but a high affinity for a similar naturally occurring ligand, 2-AEP. A previously engineered mutation in the binding site of PhnD substituted glutamic acid (acidic) for an asparagine (polar), which transformed PhnD into a glyphosate binding protein. Using Le Chatelier's principle, specific Fabs were designed to stabilize the bound form of the PhnD mutant. Our goal is to use the PhnD mutant coupled with the Fabs to enhance the affinity for Glyphosate and therefore

produce a more sensitive biosensor for the environmental pollutants. Through the use of Surface Plasmon Resonance (SPR), we tested the ability of the Fab to distinguish between the two conformations of PhnD (in the presence and absence of GP). We found that Fab N5 binds to the closed form of PhnD with a K_d of 4.5 nM and shows no binding in the absence of GP. We also found that the binding of the Fab to the closed conformation of PhnD was successful in producing a more sensitive biosensor using fluorescence spectroscopy.

Away for Good

Mariana Garcia

Sexually sadistic rapists are extremely dangerous and very calculated when offending. Usually, these offenders will commit many rapes before arrest and conviction. In these cases, the offender receives pleasure from the torture of his victims, and the chance of rehabilitation is slim-to-none. Incorporating a content analysis using Welsh and Harris's (2016) seven stages for planned change, a new federal policy was developed to prevent these offenders from ever committing these violent crimes again. Revisiting the case of *Coker v. Georgia* (1977), this new federal policy will require an automatic death sentence for any offenders convicted of this specific crime in court. The policy will not allow any plea deals or time in prison, and will provide closure for victims and their families. In addition, the policy will create a safer environment. Limitations of the new federal policy and future research on this topic will be discussed.

Women in Horror: Who is to be Believed

Izabella Gardner

It has been said by many scholars and filmgoers alike that the horror genre has a complicated history and relationship with women, on and off the screen. There are those who would argue most horror films are made with a male audience in mind, while others, like author Richard Nowell, argue that they target a female audience instead. Considering this conflicting perspective on who horror films are for, the way women are treated within the narrative of these genre films becomes much more interesting. Horror films often center women in the narrative and allow these women to be the exclusive experiencers of the horrors within these films. This creates an environment where the other characters, who are typically male, believe these women to be hysterical and paranoid, which plays into pre-existing misogynistic ideologies about women and makes the women in horror not only the victims of the horrific events but also the trauma of sexism.

The Power of the Past: How the Communist Party of the Soviet Union Utilized Literature, Newspapers, and Historical Narratives to Assume and Maintain Political Power

Sofia Gladun

Following the October revolution, the Bolshevik Party seized control of what was previously Tsarist Russia. Although many citizens were angry or discontented with the Tsarist regime that governed over them prior to the revolution, assuming power was just the beginning of building a stable and successful state. The Party knew it was imperative to make their citizens more sympathetic to their cause in order to discourage the creation of significant opposition forces within the state if they were to remain in power. This

paper explores assuming control of newspapers, literature, and historical narratives as a strategy that the State used to meet this end and provides a short discussion about whether this strategy was ultimately successful in making citizens more sympathetic to the State.

IPV and Police Training

Hannah Good

Intimate partner violence is a serious and constant problem in the United States (U.S.). Historically, the criminal justice system, specifically police, viewed domestic disturbances as a private transaction between the two parties, often not getting involved. Although federal legislation has continued to change, today it is estimated that out of the victims who did contact the authorities, 86% would either not call the police or are unsure if they would in the future (Day One, 2020). Employing a content analysis through Welsh and Harris's (2016) seven stages of planned change and extensive research on the topic, a new federal policy was created to address the lack of training and education regarding IPV victimization. Through this policy, police will be mandated to receive extensive sensitivity training and education for all victim demographics of IPV, including, but not limited to: age, race, socioeconomic status, gender identity, or sexual orientation. The goal is to reduce IPV incidents as a whole, but to also minimize issues such as victim blaming, stereotypes, and discrimination, and to improve community-police relationships. Potential issues and limitations and more extensive research will be discussed.

Online and In-Person Students: Characteristics and Learning Strategies

Nicholas Hatfield

There is a distinct lack of direct comparisons between online and in-person students regarding various characteristics and learning strategies. Included but not limited to, motivation, self-efficacy, and metacognitive and cognitive strategies. Studies will often only have an online or in-person group and will infer that one group will score higher on a particular learning strategy or characteristic than their counterpart without conducting a direct comparison. Various studies found that online students have high intrinsic motivation, self-efficacy and use deep learning cognitive strategies. The aim of this study was to investigate whether there were differences among online and in-person students regarding various characteristics and learning strategies through direct comparison. A survey was disseminated through Qualtrics via the use of convenience sampling and measured online and in-person students on metacognitive strategies, cognitive strategies, motivation, and self-efficacy. A MANOVA was conducted, and the results of the present study were not significant and provided evidence to suggest that online and in-person students are similar regarding various metacognitive and cognitive strategies, motivation, and self-efficacy. Results provide evidence to suggest that both online and in-person students are taking care in their work, are motivated to complete coursework, and are employing helpful metacognitive and cognitive strategies when learning. Further direct comparison studies are needed in this area to better understand the characteristics and learning strategies of an online and in-person learner to potentially help with better course design and student placement.

Representation in “St. Louis Blues” (1929)

David Hawkins, Jr.

The film *St. Louis Blues* (1929) by Dudley Murphy, invites the audience to witness and analyze the United States’ conventional representations and fixed stereotypes of Black women differently; through the focus, agency, and authenticity of Bessie Smith’s performance of the titular song.

Who Owns Guns?

Jessica Johnson

Gun violence in the United States is an ongoing issue that results in thousands of deaths and serious injuries every year. Despite state laws regarding the ownership of guns, the federal gun laws including the Brady Handgun Violence Protection Act has made minor impacts in reducing gun violence. In 2019, gun-related homicide rates have increased by 15%, statistically the highest rate ever recorded, and 32% since 2001 (EFSGV, 2022). Incorporating a content analysis using Welsh and Harris’s (2016) seven stages of planned change and extensive research, a new federal policy was created to address an increase of mandated training for police regarding operation pullovers (OPO)’s on major roadways. The goal of additional OPOs is to reduce the presence of illegal guns in the hands of the public, to decrease violent acts occurring and distribution from illegal gun ownership. Potential limitations from implementing the new federal policy including constitutional rights and research will be examined.

A Change in Women’s Rights

Lovepreet Kaur

Although abortion is legal in some states, there are still states that have made abortion illegal. The case of *Roe v Wade* (1972) provided a women’s right to choose; however, in more recent times, there have been discussions to remove this fundamental right. Even though states operate independently, women should not feel that they cannot make this decision for themselves. Using a content analysis from Welsh and Harris’s (2016) seven stages of planned change and research on all state abortion laws, a new federal policy was created to mandate that abortion should be legal in all fifty states in the U.S. This policy was designed to provide the right to choose for all women, to decrease any health issues resulting from illegal abortions, and to protect all women from laws developed and implemented through political interests. Limitations of this new policy and future research will be discussed.

Combatting the Dangers of Environmental Contaminants Through Mandatory Procedure and Policy

Cameron Kincaid

Environmental contaminants play a major role in the destruction of society... Corporations, industries, and businesses all contribute to the improper care of waste, affecting many communities and creating a multitude of health and living issues... Although previous policies have been implemented by the EPA (2022) such as the P2 Law, The Pollution Prevention Act, and the Clean Air Act providing guidelines, violators are not held accountable for their actions. Implementing a content analysis using Welsh

and Harris's (2016) seven stages of planned change and extensive research, a new federal policy was developed to create more stringent sanctions to hold all parties accountable for the continued emission of environment contaminants. This policy takes into consideration avoidance behavior, monetary elements, and strict scrutiny, while creating a safer and cleaner environment in the United States. Findings, limitations, and future research on this topic will be discussed.

Women's Reproductive Health

Hope Klemz, Baylie Lee, Lily Medrano, and Flora Nyirongo

We have put together a simple program to teach women at IUSB about the importance of reproductive health awareness. Our program includes a QR code that has been posted in the women's bathroom stalls. The QR code includes a pre-survey, a video PowerPoint presentation explaining the most common reproductive health issues, signs and symptoms, treatments, and important preventative measures and finishes with an identical post-survey to evaluate what the participants have learned.

La Traduction de Rythm dans "Le Chanson des Escargots" de Jacques Prévert

Hailie Kulikowski, Miriam Fayad, and Hannah Shank

Nous présenterons notre traduction ainsi qu'une analyse littéraire du poème de Jacques Prévert "Chanson des escargots qui vont à l'enterrement" dans lesquelles nous allons aborder la signification de ce poème et les techniques littéraires qui y sont employées. Jacques Prévert était l'un des poètes français les plus célèbres du 20ème siècle. Il a connu le succès en insistant sur une poésie proche du grand public: sujet de tous les jours et vocabulaire simple. "Chanson des escargots" est un poème pour enfants qui traite de façon implicite de la deuxième guerre mondiale. Les défis qui se sont posés à nous incluent: la traduction des rimes externes et internes, le respect de références culturelles et le ton/rythme du poème. Cette présentation sera faite en français.

Canvas and Cakes: Access for All

Christina Lai and Kenedy Thompson

We have created a program called Access for All that will take place on April 7th, 2022 at the Center for the Homeless. The guests living at the Center will be participating in an educational program that will cover mental and physical health. We plan to discuss many resources that are available to them. This includes things that can be done to maintain and improve their physical and mental health. Access for All's mission is to connect the community with resources that can and will improve mental and physical health if utilized. Our goal is to educate people on how they can improve their mental and physical health every day. We partnered with Wine and Canvas to provide guests with the opportunity to paint, as well as cakes for guests to enjoy. By participating in our painting event, enjoying cakes, and learning about ways to enhance their mental and physical health, the Canvas & Cakes event should offer the guests a happy and emotional experience.

Healthy Happy Smiles

Yasmin Coria Leal and Caylee Gee

We created a program designed to teach oral health prevention methods. We aimed our program at 4th graders in a local Boys and Girls club. We spent months gathering data and planning. When we reached the implementation phase, we spent 3 days working with the kids. We performed pre and post tests so we could analyze what they learned. We also performed presentations, demonstrations, and offered prize incentivizes when they were retaining the information we were teaching. Overall, we were very pleased with how our program went and how much the kids learned. We are still evaluating the results, but we would deem it as a successful program.

Survey of Dynein-2 Components in Ciliated Protists

Lina Marchi, Krithica Ramiah, Rana Hamad, and Zeb Walizer

Cilia are hair-like extensions found on eukaryotic cells that have motile and sensory functions. The structure appears to be an ancient part of eukaryotic cells and to have been present in the last eukaryotic common ancestor. Most cilia are built by the process of intraflagellar transport using the dynein-2 motor during retrograde movement within this process. Dynein-2 is a molecular motor complex comprised of a heavy chain, two intermediate chains, a light intermediate chain, and a light chain. The heavy chain is the force producing component while the others are involved in regulation of the motor. We have searched the genomes of a wide variety of protist species for the presence of each of the dynein-2 components. Most groups of protists have all of the dynein-2 components. However, certain components are missing in specific groups. Our results demonstrate some of the variety that exists in the dynein-2 motor across diverse eukaryotic species.

The Persuasive Appeal of Televangelism: Religion, Fear, and Celebrity Appeal

Cassidy Martenson, Mabel Myers, and Glorianna Sorenson

The persuasive nature of religion has been evaluated to uncover the ways in which religious writing, figureheads, and ideology can persuade individuals to give themselves fully to their faith. Yet, limited research has been conducted on televangelism and its unique approach to religious persuasion. The present analysis examines the relationship between celebrity and fear appeals to better understand persuasive communication in religious messages. Televangelists use their celebrity status and the fear of eternal damnation to convince viewers to join their congregation and, more importantly, donate to keep the religion alive for everyone to enjoy. Many televangelists hold a celebrity status due to their prominence in the community and wealth of perceived religious knowledge. This positions them as a trusted authority figure and further allows them to convince their audience of the consequences of not conforming and donating to their religious group. Through rhetorical appeals and carefully constructed arguments, televangelists combine the persuasive features of celebrity and fear to flourish in the religious community.

Isolation and Connectivity: Online Learning and Perceived Social Capital

Cassidy Martenson

This research addresses the issues of isolation and limited social capital for college students in an online learning environment. The COVID-19 pandemic and emergence of

online courses has changed higher education academically and socially. While many students felt academically disconnected from their studies due to lack of in-person instruction or on-campus resources, others felt the social effects of the pandemic most heavily. Students were forced to take courses online, often spending entire semesters never knowing who their classmates were. This lack of relationship building changed the ways in which college students were able to build and maintain relationships on campus with peers, faculty, and friends. The present research revealed that while students have opportunities to communicate with classmates in their online courses, this does not increase student perceptions of social capital or inclusion. Participants indicated that they experienced feelings of isolation while online learning, and that they have struggled to create relationships in their online courses.

Voter Participation Determinants, Indiana for the 2020 Election

Christian Martinez

Why might voter participation/turnout rates across counties in the state of Indiana differ? While there is a growing body of literature that has analyzed voter determinants at an individual and nationwide level, little research has been done to quantify determinants at a state-county level, especially with respect to the state of Indiana. Additionally, nationwide analysis fundamentally fails to account for the differences in election laws and procedures enacted through state run elections which could impact the strength of voter determinant models. A county analysis within a single state (Indiana) could provide considerable insight into voter determinants and by embracing a more localized approach, provide a greater understanding of policy and its potential impacts on voter turnout. Through embracing a rational choice voter participation model and incorporating variables relevant to both the prior literature and the rational choice model, this paper seeks to answer that question above. Using data obtained from a variety of sources: the St. Louis Federal Reserve; the Census Bureau; and the Indiana Elections Commission; a multivariable linear regression model is performed for voter participation in the 2020 election in the State of Indiana by county. This model finds that the per capita income, the percentage of the population that are high school graduates, the home ownership percentage, the percentage of the population over the retirement age, and the commute time all had a positive impact on voter turnout, while the ratio between number of registered voters and polling places had a negative impact on voter turnout in the 2020 election. The variables within the model explain eighty-four percent of the variations in voter participation by county. This largely reaffirms prior literature, whilst also raising questions as to the role of local and state government in encouraging voter turnout.

Insider Trading Policy

Kelcie McClure

Although more attention is paid to white-collar crimes such as embezzlement, fraud, and money laundering, insider trading occurs more than the public may think. This crime is often ignored and not heavily publicized in the media unless committed by a celebrity. Using a content analysis from a modified version of Walsh and Harris's (2016) seven stages of planned change, and extensive research, a new federal criminal justice policy will be implemented in order to reduce the number of cases of insider trading. All major corporations will be mandated to publish weekly reports about information that will

impact their shareholders' decisions for their investments. This policy will reduce the number of cases of insider trading by making important information regarding the stock market and a company's stock public; therefore, limiting the offenders' investing decisions with that information. Limitations of the new criminal justice policy and future research will be discussed.

Tackling Labor Trafficking

Steven Miller

Forced labor trafficking occurs often and tends to be ignored when compared to sex trafficking. Individuals come to America under the guise of legitimate employment, with the promise of decent pay to send back to their families. However, once they arrive, their identification, passports, and other personal information is confiscated, and they become indentured laborers. In some cases, the victim is apprehended and not the offender, which creates a distrust of the criminal justice system. Using a content analysis from Welsh and Harris's (2016) seven stages of planned change and extensive research, a new federal policy was created to combat this issue. A new policy targeting the buyers who purposely exploit the trafficked victims would deter future buyers from buying trafficked victims. The policy aims to focus on the offenders, creating a new combined task force comprised of the U.S. Border Patrol Department (BPD) and the Federal Bureau of Investigations (FBI) as both agencies have extensive experience in trafficking. Limitations in the new federal policy will be discussed.

Cyber Protection for State and Federal

Niall Morey

The crime of espionage is often ignored in the United States (U.S.). In recent decades, cybersecurity has become a main issue in relation to this crime. Cases such as Edward Snowden and Julian Assange, both contractors for government agencies, sparked a discussion about the lack of policies regarding espionage in the U.S. Using content analysis from Welsh and Harris's (2016) seven stages of planned change and extensive research on the topic, a new federal policy was created to combat this issue. A mandated new security system through an encrypted software program was designed for all federal departments containing top secret information pertaining to national security for all states. In addition, program implementation regarding training and increased background checks will be applied to protect against breaches as well as implementing programs in order to have a suitable defense for state infrastructure as well as sensitive information pertaining to the state. Limitations of the new federal criminal justice policy and future research will be discussed.

Jacques Prévert: La traduction de "Chansons des escargots qui vont à l'enterrement" avec une concentration sur le Style et le Rythme du texte

Keisha Natal, Meredith Torres, and Connie Klimek

Dans cette présentation, nous parlerons du poète français du 20ème siècle Jacques Prévert. Prévert est connu pour avoir utilisé diverses stratégies littéraires pour s'adresser un public très large, y compris les jeunes lecteurs. Son poème « Chansons des escargots qui vont à l'enterrement » fut publié en 1945, peu après la deuxième guerre mondiale. Ce poème parle d'un sujet difficile sur un ton léger : le deuil. Notre présentation va se

focaliser sur la traduction de ce poème, en particulier sur style de Prévert et le rythme du poème. Notre analyse littéraire, nous a permis d'interpréter ce texte afin de déterminer des meilleures stratégies de traduction pour ce texte et nous partagerons notre interprétation avec vous. Cette présentation sera faite en français.

Advocacy for Private Facts, Personal Information, and Privacy Law

Parker Norris

The world, as we know it today, is connected now more than ever before in the history of humankind. Technology has bridged many gaps in regard to how people access and store information in their daily lives, thus creating a society that is defined by the facts and information possessed by its citizens. While the modern intersection between information and technology has made people's lives easier in some regards, it has also created an economy that is built upon the trading of the very details of people's lives. Even though precious metals and rare resources are still highly coveted in the contemporary world of today, information has become a new leading commodity that is highly sought after within the current economical climate. In this context, it is important to examine the history of private facts within communication law, explore both sides of the legal sphere surrounding the publication of private facts and privacy law, and analyze the importance of information privacy laws within today's technologically interconnected world.

Fatalism, Femme Fatales, and Film Noir: Double Indemnity and Body Heat

Parker Norris

Throughout the 20th Century, the medium of motion pictures became a powerful tool that not only entertained audiences but also commented on societal values present in everyday life. The established framework of genre films, motion pictures that contain recurring elements that audiences are aware of, became a vessel to communicate such societal critiques to mass audiences. The genre of film noir is noted for its critique of human actions and commentary on moral suffering, thus making it one of the most potent American genres to explore the flawed nature of human existence. The consequences of sex and temptation also became a major theme in film noir, as emphasized by Billy Wilder's motion picture *Double Indemnity* (1944). However, the impact of *Double Indemnity* reached far beyond its original release, as it became an influential work whose narrative was reinterpreted for a new period of noir in Lawrence Kasdan's directorial debut *Body Heat* (1981). Although *Double Indemnity* was produced nearly four decades before *Body Heat*, both motion pictures possess similar depictions of sex and the consequences of temptation within the genre framework of film noir.

Agency of Embezzlement Limitation: Decreasing Embezzlement With Governmental Teaching

Nathaniel Paige

Embezzlement as crime occurs more often than most think; however, this crime is usually ignored as a serious issue in the United States (U.S.). Due to the lack of care about white-collar crimes in general, punishment is not very strict, which in turn, causes an increase in this crime. Using a content analysis incorporating Welsh and Harris's (2016) seven stages of planned change as well as research, a new federal policy was created to decrease embezzlement. Through the creation of a new government entity, all businesses will be

required to mandate anti-embezzlement training and education taught by the new government agency, and several hubs for the new agency are located throughout the U.S. to work with businesses in each state. All businesses that handle money will be part of this program, implemented through the new federal criminal justice policy. In addition, the government officials will be required to visit each business throughout the U.S. to make sure all anti-embezzlement procedures are implemented. Limitations on this new federal criminal justice policy and future research will be discussed.

Behind the Wheel of Accountability: Preventing Safety Recalls Before They Occur

Jennifer Pauley

According to The National Highway Traffic Safety Administration (NHTSA, 2022), in the next few years a drastic increase in self-driving vehicles (SDVs) will occur, with estimates of significant increases by 2025. Although some may view SDV's as beneficial there is a massive issue regarding federal regulations and SDV's—there are not any policies. Legislation cannot keep up with swift advances in technology, and little legislation exists for vehicle manufactures overall. The NHTSA (2022) reports three major recalls occurring currently, with a lengthy history of deadly vehicle malfunctions, more notably General Motors ignition switch recall, resulting in 120 deaths (Mamidenna & Pasala, 2020). Incorporating a content analysis using Welsh and Harris's (2016) seven stages of planned change and research on the topic, a new federal policy was created to address various issues in SDV's and manufacturer accountability for preventable accidents. More stringent punishment and programming will be included. -Details of this new policy, limitations, and future research will be addressed.

Heart the Size of a Whale: Exploration of Cultural and Social Meaning in Whale Rider

Allena Peacock

I will be exploring the cultural and social significance of Whale Rider written by Witi Ihimaera as well as the Maori community. I will take a close look at the nuances of their culture and expand upon what it means to be a leader in their community and in their world. The subversion of gender roles is a significant part of Whale Rider and therefore I will be determining what it takes to be a leader not only in the Maori culture but also in regards to your own life in looking at Kahu's leadership and journey through the tale.

Reforming Police Interrogations to Prevent False Confessions

Faith Quintana

Throughout history, confessions in court have been viewed as powerful pieces of evidence regarding guilt. However, false confessions are more common than many people realize. According to The Innocence Project (2018), out of 375 DNA exonerations occurring since 1989, 29% involved false confessions. This statistic and cases such as the Central Park Five, have led to discussions about false confessions. interrogation tactics including, but not limited to: lengthy processes, minimization and maximization approaches, and lack of surveillance have been noted as causes of false confessions. Utilizing a content analysis from Welsh and Harris's (2016) seven stages of planned change and research, a new federal policy was created to mandate constraints over the interrogation process. The policy will include programming involved in extensive training of police interrogators and will focus on fair practices—removing many

psychologically harmful tactics currently in place—and required use of surveillance during all interrogations. In addition, the new policy will include sanctions for non-compliance of the new policy to reduce false confessions. Limitations of this new policy and future research will be discussed.

Cavity Crushers

Brooke Reinhardt, Sarah Karlson, and Allie Woods

Cavities are the leading chronic disease in children in the United States. Three dental hygiene students, The Cavity Crushers, have set out to change this statistic. We have chosen to educate parents of children ages 0-18 to prevent cavities from occurring. Parents who come into Indiana University's Dental Hygiene clinic will have the opportunity to scan a QR code and learn about cavity prevention based on their child's age. Topics such as brushing, flossing, sugar exposure, and fluoride are discussed. This QR code will also be posted on Facebook to reach parents who might not be able to come into the clinic. Educating the parents will allow good oral habits to be instilled in their children, and generations to come.

Public Perception on Survivors of Sex Trafficking: A New Policy Regarding Decriminalization of Victims and the Take-down of Traffickers

Sarah Robinson

Although sex trafficking has several federal policies evolve overtime to aid in protecting victims, the United States (U.S.) remains in the top tier of countries with continuous sex trafficking issues (U.S. Department of State, 2021). Most policies cover victimization of minors and tend to ignore the adult women, often sex workers, who were lured into the sex trafficking world at a younger age. Many of these individuals are arrested, resulting in lack of resources needed, and labeled as offenders. Using a content analysis to apply a modified version of Welsh and Harris's (2016) seven stages of planned change, a new federal policy was developed to protect adult women who became victims of sex trafficking. The new policy will require more stringent punishment for pimps and traffickers; however, the policy also aims to decriminalize women forced into sex work, along with criminal offense occurring during their time of servitude. Programming will focus on providing resources for these women, and to educate criminal justice agencies in sensitivity training elements, removing the stereotypes of these victims. Details about the policy, limitations, and future research will be discussed.

Investigating the Electroanalytical Performance of Bismuth-Antimony Film on Glassy Carbon Electrode in Detecting Lead and Cadmium

Lucas Robinson

Development of sensitive methods to detect traces of lead (Pb), and cadmium (Cd) in soil and water is important to ensure a safe environment for the human population. For example, for children, as little as 5 $\mu\text{g/dL}$ found in the blood stream is considered dangerous and may affect their development. In 1974, the Environmental Protection Agency (EPA) introduced the "Safe Drinking Water Act" which states if more than 10 percent of tap water samples exceed the Pb action level of 15 parts per billion (ppb), then water systems are required to take additional actions such as replacing service lines, etc1.

Exposure to 0.5 µg/g Cd is considered dangerous while 2.0 µg/g exposure is considered lethal³. We hereby report on developing a stripping voltammetric method using glassy carbon electrode (GCE) modified by a bimetallic film prepared by consecutively electrodepositing antimony (Sb) followed by bismuth (Bi). Voltammetric stripping measurements historically utilized mercury in the forms of hanging mercury drop and mercury film electrode to measure heavy metal ions. However, because of mercury toxicity and risks associated with its disposal its use as an electrode material for stripping measurements is severely restricted. The performance of the Sb/Bi-GCE modified surface was optimized by examining the effect of the deposition time and potential has on the Cd and Pb analytical signal. The electroanalytical performance of the modified surface was evaluated in terms of the linear dynamic range, response stability, sensitivity, and limit of detection. The modified exhibited excellent figures of merit.

Heart Failure and Nurse-led Patient Education

Heather Rogers, Tayla Bothun, Tatiana Cueto, and Heidi Jackson

According to WHO, cardiovascular disease is the leading cause of death worldwide, resulting in an estimated 17.9 million deaths per year. Heart failure is within the top five common cardiovascular diseases, and it affects millions of individuals each year. The effects that heart failure has on an individual's daily life can be devastating, which emphasizes the importance of adequate patient education. Early recognition of symptoms and when to follow up with a health care provider can be vital to the patient's ability to maintain good quality of life. Due to the severity of the disease, heart failure is one of the most common causes of hospital readmissions. Since hospital readmission rates are so high due to this chronic disease, we investigated how different types of hospital discharge education methods can affect the readmission rates. Our primary focus on nurse-led patient education, led us to analyze five articles to determine how heart failure readmission rates would be affected. In the process of our article analysis, we found a relationship between nurse-led patient education and a decrease in hospital readmission rates in heart failure patients. It is important for nurses to use evidence-based practices while caring for patients to ensure excellent care. We strongly believe continuous nurse-led patient education programs throughout hospitalizations and post-discharge enhances comprehension of the disease and should be the standard for care in heart failure patients.

Tooth Talk

Paige Sears

I implemented my "Tooth Talk" program at St. Margaret's House in South Bend on March 25th, 2022. The goal of this program was to motivate and encourage the low-income/homeless women at St. Margaret's house to take good care of their oral health and to understand the importance it plays in their lives. After collecting primary and secondary data, this population was found to have a low health literacy, a lack of awareness of resources, and does not see oral hygiene as a priority. I educated these women on how to properly brush and floss, when a toothbrush should be replaced, how to prevent cavities and gum disease, how cavities form, how often they should go to the dentist, and the resources that are available to them in the South Bend area. Many of the women were engaged during the program and excited to learn more about their oral

health. We had great conversations and made great connections throughout this Tooth Talk. I was excited to educate these women on something that I'm so passionate about and I was blown away by how rewarding this experience was.

With Professional Athletes, is there a Correlation of this Paradoxical Effect Under Pressure when Surrounded in a High Elevated Situation?

Conner Shreve

As an athlete there are opportunities to perform at this highest peak, but there are these inhibitors that hinder that athlete to achieve that. There is this paradoxical effect that comes along with certain athletes when they are to perform at these clutch moments. As an athlete these common stressors can make you feel as a failure, which makes them feel they are not capable of sustaining this athletic career. It is important to analyze these athletes' past experiences to see if there was some sort of traumatic experience that took place or it could be a genetic disorder. It would be essential to analyze them in the present where they have to perform in the clutch to see how they react and how they feel.

Class Analysis in "Within Our Gates"

Zakaria Sohrab

This paper concerns the 1920 Oscar Micheaux film "Within Our Gates", and analyzes the film from a class-based perspective. The argument being that the film invites the audience to view race differently by also depicting class divisions and distinctions in the film.

The Constitutionality of Voter Identification Laws

Jenna Stankovich

The issue of voter identification laws has been around since the early 2000s, being the most talked about issue during the election of Bush and Gore, which resulted in the infamous court case Bush v. Gore. The issue of voter fraud with the focus on not having proper identification checks has become even more relevant during the 2020 election between Trump and Biden. The idea of having a voter ID law at the federal level could interfere with the state's rights to control the way elections are run in each state, but not having a standard, nation-wide law could result in problems with each state having a different way of implementing this law. Additionally, the issue of who this affects and how it could possibly be implanted arises. Breaking down court cases, political science commentaries on those cases, and other political science research, a solid argument can be made as to how this law could work in the Constitutional Republic of the United States.

Judiciaire of the people

Robert Talton

Presently United States (U.S) comprises of a federal judiciary that serve without fixed term limits. Theoretically these Judges would be insulated from political pressure being an independent branch of government. The conflict is Judges having their own political lens will often occupy the bench and vacate only when their agenda will be ever present. (Curry, Hurwitz 2016). The purpose of a new policy would be to mitigate the political motivation that appointed or elected Judges have. Using a content analysis from Welsh

and Harris's (2016) seven stages of planned change. I propose that Judges on a Federal and State level serve maximum terms of ten and two years. The former serving ten and the latter serving two. This policy would assist in eliminating the motive of Judges seeking to have a long term influence rule on law in the U.S. Factors such as constitutionality and States rights will be addressed in this criminal justice policy in the future.

Thrillers and their Ability to Force Viewers to View Things Differently

Nune Tashijan

Film genres are groups of films that share similar characteristics. Each provoking a unique understanding and interpretation from its viewers. They help the viewers understand, interpret, and experience the film in a certain way. The communication of genre is largely influenced by cinematography which is the image captured by the camera, in addition to elements of mise-en-scene, and the state of the current societal norms. Cinematography is created by the elements of mise-en-scene that are the embodiment of the scene. There are multiple elements of mise-en-scene that aid in the understanding and communication of a film. The mise-en-scene is the characteristics or properties that are captured in the film, and that are independent from the camera's position. These elements include: acting style, costumes, composition, setting, and props. Film genres serve a purpose beyond that of entertainment alone. For example, thriller films push viewers to question the world around them, forcing them to think more critically and openly, as well as challenge their beliefs and what they know.

Paper One (Witin Our Gates)

Micaela Toler and Zakaria Sohrab

Oscar Micheaux's 1929 silent film, *Within Our Gates* was a film that was important and helped move society in America forward with its representation of African Americans on the big screens. Keep in mind that Micheaux wrote, produced, and directed this film in response to D.W. Griffith's 1915, *The Birth of a Nation*. Not only did Hollywood films misrepresent African Americans involvement in American history they also never revealed the truths of the racial injustices, violence, lynching's, and discriminations the black community faced in the early twentieth-century and still to this current day. Micheaux did more than expose these injustices, he portrayed African American audiences that would end up revolutionizing cinema, particularly African American cinema. Based on my viewing of this specific scene from the film, *Within Our Gates*, Micheaux is conveying the distinctions of everyday life between the North and South along with the lack of education available. He uses foreshadowing to tell Sylvia's story and what her life was like in the South. This scene is important as it leads to the misconstructions of the depictions of African American's that supposedly had "freedom" in the South. But that wasn't the case at all, although slavery was abolished in the South it did not stop the white man's maltreatment, rape, and lynchings of African Americans.

White-Collar Crime Bribery: The Overlooked Offense

Allison Trevino

Although bribery occurs throughout different levels in corporations, some types are rarely noticed. Currently, there are little to no policies regarding businesses bribing corporate

officials to ignore regulations on products. This type of bribery can cause major concerns with the safety and welfare of the public, after such products are put out on the market for distribution. Using a content analysis from Welsh and Harris's (2016) seven stages of planned change, a new federal policy was created to help reduce bribery from businesses to corporations that ignore proper procedures, rules, and regulations. This research is scarce in the literature; therefore a new policy was introduced to provide stringent punishments for corporations engaged in this criminal activity, as white-collar crime offenses are often overlooked or met with minimal prison or jail time. A program implemented in this policy required all corporations to engage in mandated training and education on product liability, proper financial responsibility, and facts regarding deaths and injuries of consumers due to product malfunctions. Limitations for this new federal policy and future research will be discussed.

Healthy Choices, Healthy Children

Emily Witters, Sheyenne Auer, and Ananda Peebles

This program is called Healthy Children, Healthy Choices. This program consists of visuals, games, hands-on activity, and base knowledge components regarding nutrition to expand children's engagement and broaden their knowledge about healthy eating habits. After the components of this program are completed, the students will be able to complete a healthy MyPlate on their own and be able to put foods into the correct five food groups. The program will consist of a pre-test of knowledge prior to the lesson plan and a post-test in order to see how well the program has been implemented. The pre-test and post-test are in place to evaluate how well the children have followed the program and if our overall objectives for the program have been met. This program is also meant to bring a sense of fun to the children and their eating habits.