

Welcome to the  
**21st Annual Massachusetts College of Liberal Arts**  
**Undergraduate Research Conference**  
Thursday, April 20th, 2023

**Schedule of Events**

**8:30 AM – 10:00 AM**

Conference Registration\* (Bowman Lobby)

**8:45 AM - 9:00 AM**

Welcome Remarks from  
Dr. Anna Jaysane-Darr,  
Chair of Undergraduate Research, and  
Dr. Carolyn Dehner, Dean of Academic Affairs

**9:00 AM - 10:00 AM**

Paper Presentations I A (Bowman 201)  
Paper Presentations I B (Bowman 203)  
Paper Presentations I C (Bowman 205)  
Special Session (I D): A Black White Supremacist:  
The Case of Chris Harper-Mercer and the  
School Shooting at Umpqua Community  
College (Bowman 122)

**10:15 AM - 11:45 AM**

Poster Session (Venable Gym)

**12:00 PM – 1:15 PM**

Welcome Remarks from President Birge  
Feigenbaum Scholars Award  
Keynote Address by Jenna McElroy ('16)  
Lunch  
Meet the Keynote

**1:30 PM - 2:30 PM**

Paper Presentations II A (Bowman 201)  
Paper Presentations II B (Bowman 203)  
Paper Presentations II C (Bowman 205)  
Special Session (II D): Explorations of Visual  
Culture (Part 1) (Bowman 122)

Artist Talk (II E): Creative Collaboration as a  
Means of Community Bridging (Bowman  
Gallery)

Performance (II F): Highlights from *Urinetown*

**2:45 PM - 3:45 PM**

Paper Presentations III A (Bowman 201)  
Paper Presentations III B (Bowman 203)  
Paper Presentations III C (Bowman 205)  
Special Session (III D): Explorations of Visual  
Culture (Part 2) (Bowman 122)  
Special Session (III E): Creative Writing (Murdock  
218)  
Performance (III F): Milestones of Musical  
Theatre

**4:00 PM – 5:00 PM**

Philosophy Mini-Conference (Murdock 208)

**5:00 PM – 7:00 PM**

Liminal Spaces: The Overlooked & the  
Otherworldly (Senior Art Exhibit, Gallery  
51)

*\*Conference Registration will be moved to  
Venable Gymnasium during the poster session  
from 10:15 AM – 11:45 AM, and then Campus  
Center Gym 12:00 – 1:15 PM.*

*\*\*Please remember to complete the attendee  
survey – follow the QR code below or available  
throughout the conference space \*\**

## Paper Presentations I A

### Bowman 201 9:00-10:00 AM

**Title:** The Effects of Politics on Superhero Fiction: The Evolution of Joker

**Author(s):** Hannah Yeasley

**Advisor:** Hannah Haynes

**Abstract:** My research is an interdisciplinary study of the character development of Joker from an insignificant villain in *Batman* (1966) through *Batman* (1989) and *Dark Knight* (2008), to the sympathetic anti-hero main character of an origin story in *Joker* (2019). Using critical discourse, I analyze the political atmosphere and social movements of each era and how they affect or are reflected in Joker as a character. My research findings imply that American culture is shifting, and that shift is reflected in the media being made and consumed. My research suggests that the character arc of the Joker in US culture not only reflects the socio-political climate, but has the potential to influence the ways that pop-cultural audiences reflect and understand those political moments.

**Title:** Evolution of British and Indian Women Living in the British Empire

**Author(s):** Casey Young

**Advisor:** Anthony Daly

**Abstract:** In the late nineteenth century, social norms were changing in Great Britain and in India, which was then part of the British Empire. In both countries, society was male dominated, with few opportunities for women. My research centers around evaluating these changes for the life of British women living in Great Britain and Indian women living in India during within the British Empire. I will be analyzing changes in education, job professions, and women's rights in the law. Specifically in India, I will be addressing changes to laws in to provide protection for women in marriages and how the education system becomes more progressive. In Great Britain, my research focuses on education reform, women's rights in the law, and employment changes due to attitudes towards making English society more blended. This presentation will show how reforms and progressive ideals women had during this time helped to integrate them into society.

**Title:** The Wild Psychological Ride of the Film *Gone Girl*

**Author(s):** Molly Wojnicki

**Advisor:** Sharon Claffey

**Abstract:** Hollywood is known for its role in portraying psychological issues in varying ways. *Gone Girl*, a movie starring Ben Affleck and Rosamund Pike, follows a twisted story of a husband who gets caught up in his wife's supposed murder. It stresses the difficulties of marriage, dealing with the media and the power of words as well as the malleability of the human mind. This presentation discusses the psychological aspects of the film including but not limited to narcissism, manipulation and the possible diagnoses of Pike's character, Amy Elliot Dunne. Also highlighted in the presentation are the film techniques utilized to portray the complicated characters, the overall themes of character development and aspects of how influential the media is in cases like Amy's.

## Paper Presentations I B

### Bowman 203 9:00-10:00 AM

**Title:** Student Athlete Experiences

**Author(s):** Sophie Elser

**Advisor:** Maria Bartini

**Abstract:** Most research on NCAA collegiate-level student-athletes has been conducted at the Division I or II level and indicates that these athletes continue playing their sport because they rely on extrinsic motivators, particularly scholarship funding (Amorose & Horn, 2000; Medic et al., 2007; Tapps, Beck, Cho, & Volberding, 2013). Research does not shed light on what influences division III student-athletes to continue playing their sport as they don't receive athletic scholarship support. The purpose of this study is to better understand persistence in division III student-athletes. NCAA division III athletes (N=76) were asked to complete a survey assessing their athletic and academic identities, motivation, and coach autonomy. The analyses indicate that athletic identity is strong in athletes that are persistent, coach-autonomy is significant, and gender differences in relation to coach-autonomy are small.

**Title:** Influence of Music in South Africa

**Author(s):** Victoria Tynan

**Advisor:** Anna Jaysane-Darr

**Abstract:** I will be looking at the usage of music in South Africa to better understand expression through rhythm and words as it brings together cultures in different ways. I will take note both through academic sources of how this is displayed on a cultural level and how these pieces become brought together, while also diving in physically to their culture and hearing this music firsthand in Cape Town. This research will be completed with both observation methods and academic methods with available resources.

**Title:** *Girl Interrupted*: Looking at the protagonist and antagonist

**Author(s):** Vincienza Alicandri

**Advisor:** Sharon Claffey

**Abstract:** *Girl Interrupted* is a film that is based on the memoir of the same name written by Susanna Kaysen. The protagonist of the movie is Susanna Kaysen who is diagnosed with borderline personality disorder. The antagonist is Lisa Rowe, who is diagnosed with antisocial personality disorder. The two meet at a local psychiatric hospital in 1967 and develop a close relationship that eventually falls apart. In my presentation, I will be analyzing Lisa and Susanna, the elements of their personalities, aspects of their relationship, and the impact of psychiatric care during the time period on the two characters from a psychological perspective.

## Paper Presentations I C

### Bowman 205 9:00-10:00 AM

**Title:** *Encanto*: The Effects of Generational Trauma and Groupthink

**Author(s):** Vincent Giacomozzi

**Advisor:** Sharon Claffey

**Abstract:** The Disney movie *Encanto* revolves around the life of the Madrigal family who live in their magical house. Most of the family, excluding the main character Mirabel, have some sort of magical power, e.g., super strength, controlling the weather, and healing sickness/injury through food. Not all is as it seems. As the family uses its powers to help the community, it becomes evident that generational trauma has impacted their lives and is hurts their relationships with each other and the town. This

presentation will explain how generational trauma is at play in the film, who it impacts the most, how the characters deal or do not deal with it, and how the family works on healing themselves and each other. It will also explore how groupthink can lead to toxicity and mistrusts.

**Title:** South Africa: Told Through Spaces not Places

**Author(s):** Jheneay Watkins

**Advisor:** Anna Jaysane-Darr

**Abstract:** During our time in South Africa, we encountered countless places. Mandela's cell on Robben Island, mother's garages, Signal Hill, townships, and a plethora of museums. But in all these places, beautiful spaces are created by the community: sons are converting the mother's garage into the township's first official coffee shop, young people coming together to paint informal housing structures to protect the house from rusting and advertise young artists, and churches that were rooted in segregation now display the horrors of district 6 relocations and forced removals through the voices of those affected. In so many of these instances, the government control from apartheid brainwashed the people of South Africa to believe they simply amounted to a racial label. It wasn't until 1994 that the first democratic constitution was ratified permitting the public to see all persons in South Africa as one race, the human race.

**Title:** *The Hunger Games* Through the Lens of Social Psychology

**Author(s):** Emma Carpenter

**Advisor:** Sharon Claffey

**Abstract:** In a dystopian country once known as North America, the elitists of the Capitol maintain their grip on the twelve Districts of Panem by forcing each of them to send two young Tributes off to an annual televised 'game' full of bloodshed, murder, and misery where only one Tribute can survive and return home as a 'Victor'. Katniss Everdeen volunteers in place of her younger sister, believing that she has no chance of winning the Games and will die as a pawn in the Capitol's callous game of life and death. This film demonstrates multiple aspects of Social Psychology through its characters along with their actions and decisions. Concepts that will be discussed in this presentation include conformity, cognitive dissonance, and outgroup homogeneity, as well as what type of effect minority influence can have on a compliant society.

## Special Session (I D): A Black White Supremacist: The Case of Chris Harper-Mercer and the School Shooting at Umpqua Community College Bowman 122 9:00-10:00 AM Sponsor: Carter Carter

*Christopher Harper-Mercer was a 26 year old, mixed-race, Neo-Nazi that shot and killed 20 people before taking his own life at Umpqua Community College on October 1st, 2015. Our research is a continuation of the Columbine School Shooting dissertation research done by Dr. Carter. In this study, we discuss how the shooter's humiliation and shame due to low social status, and his rumination coupled with his inability to express his feelings relate to his struggle with mentalizing, and how others mentalize him. Much data in this research has been referred to as "cringe" due to his childish nature, hyper-focus on low social status,*

*and narcissistic rage within his manifesto, blog posts, and dating profile. We dissect his perception of his whiteness, and how “whiteness” affected him. “Whiteness” is the internalization of shame and humiliation due to America’s historical genocide, and institutionalized racism. More simply put, it functions like an ego.*

**Presenters:** Ava Dunville, Armoni Ellerbee-Berkeley, Mae Hall, Alexander Holcomb, Trinity Luther, Kaitlyn Reil, Alexis Robie, Juliana Rodriguez, Ryan Taylor, Ellie Walter-Goodspeed, Maxwell Zimmer

## Poster Session

### Venable Gymnasium 10:15-11:45 AM

#### *Poster 1*

**Title:** Identification of two environmental unknowns

**Author(s):** Mahad Ali

**Advisor:** Ann Billetz

**Abstract:** The purpose of this project is to isolate and identify, to the level of genus, two bacteria that are likely to be found in everyday environments. The first bacterium was swabbed from a non-disinfected, post-normal-use in-ear headphone, and the second from a consistent twice daily use, approximately one-month-old toothbrush that had been covered in a toothbrush protector. The headphone bacterium was found to be non-motile, gram-positive cocci tetrads, that were seen to be arranged in clusters of 2-4. Their bacterial colonies were small, punctiform, had smooth margins, were convex, and appeared to be white, slimy, and moist. The toothbrush bacterium was found to be non-motile, gram-positive rods, that were arranged in singles or in pairs. Their colonies were observed to be relatively larger, round, had smooth margins, were flat, had a white color, and looked to have a dry texture. Both samples are currently undergoing further microbiological analysis.

#### *Poster 2*

**Title:** Investigation into a novel method to create Hydrogen gas

**Author(s):** Mahad Ali

**Advisor:** Yavuz Ceylan

**Abstract:** Most of the world’s energy is produced via carbon-based fossil fuels. This is unsustainable in the long term due to the inevitable depletion of natural resources and the environmental harm caused during production. A promising alternative to carbon-based fossil fuels is the use of hydrogen-based fuel. However, current methods of producing fuel from hydrogen are inadequate as they need an undesirable amount of energy and do not supply ample benefits to justify the complete transition from carbon to hydrogen fuels. This project looks to investigate a novel method of producing hydrogen fuel using a gold atom-based catalyst, where dimeric gold catalyst was designed under the light of the super-atom concept. Our catalyst demonstrated great thermodynamic parameters, which are supported by the optimized geometrical structures. The preliminary findings are promising and further analysis of kinetic parameters will be conducted.

#### *Poster 3*

**Title:** Differential Migration in Dark-Eyed Juncos using Stable Isotopes

**Author(s):** Lacey Anderson

**Advisor:** Daniel Shustack

**Abstract:** Migration allows birds to take advantage of seasonal environments. Interestingly, some species exhibit differential migration. Females tend to overwinter farther south than males and older birds winter farther south than younger ones. Because Dark-eyed Juncos (*Junco hyemalis*) grow their feathers on their breeding grounds, juncos' feathers reflect the isotopic ratios of hydrogen of that breeding latitude regardless of where the junco is later sampled. I used stable isotope analysis (SIA) on junco feathers in order to estimate the breeding latitudes and distances migrated by juncos sampled in Berkshire County, Massachusetts. I predicted that feather isotope ratios indicate that older females migrated the farthest and older males, young females migrated intermediate distances, and young males migrated the shortest distances to overwinter in Berkshire County. Initial results suggest there are no age or sex differences in junco migration distances.

*Poster 4*

**Title:** Unknown Bacteria: Townhouse Tabletop

**Author(s):** Solaima Antunez

**Advisor:** Ann Billetz

**Abstract:** The purpose of our experiment is to use morphological and biochemical testing to identify an unknown bacterium. The source of my unknown bacteria came from a tabletop surface of a townhouse, and after I allowed my unknown to incubate for a week, I was able to observe that my unknown had multiple different sized colonies. But when I focused on one, I was able to see under a dissecting microscope that its shape was round, had an opaque/milky color, and raised elevation. Furthermore, I observed my unknown at a cellular level and found that their morphology were rods, they appear in chains, they're gram positive, and I haven't been able to determine their motility. But I will, as well as doing a biochemical analysis to identify the genus of my unknown.

*Poster 5*

**Title:** Important Factors that Predict College Student Success

**Author(s):** Maya Bachmann-Delgado & Kristina Tatro

**Advisor:** Maria Bartini

**Abstract:** There are many factors that can predict the success of a college student. The purpose of this study is to see which factors are most important, along with the role they play. The focus will be on academic self-concept, motivation, eating habits, sleep habits, and family background. We hope to provide local administrations ways to understand health factors, and allow students an opportunity to reflect on their own habits. We are taking a unique approach by concentrating the study on all influencing variables instead of just one, which will show the real differences among all. We hope to find that these factors play a significant role in the success of college students and their GPA's and lead to more solutions for academic success.

*Poster 6*

**Title:** Comparing two models of indirect calorimeter gas analyzers for use in resting metabolic rate measurements

**Author(s):** Marie Balan

**Advisor:** Andrew Best

**Abstract:** This study compares the precision and repeatability of two models of indirect calorimetry gas analyzers for the measurement of resting metabolic rate (RMR). RMR is an important parameter in energy expenditure and weight management. The study investigates differences in readings between the two models and evaluates the potential benefits of using a research-grade analyzer. The research-grade

analyzer is assessed through repeated fasting RMR and respiratory exchange ratio (RER) measurements of the same two subjects. The results show significant differences in the precision and repeatability of the two analyzers, with the research-grade analyzer providing more accurate and precise measurements of RMR and RER. This study highlights the importance of using high-quality equipment for accurate and reliable measurement of RMR. The findings have implications for clinical and research settings where RMR measurements are crucial in assessing metabolic health.

*Poster 7*

**Title:** Microbiology unknown sample

**Author(s):** Marie Balan

**Advisor:** Ann Billetz

**Abstract:** This study is aimed at identifying the bacterial culture obtained from a mobile phone screen. The colony morphology of the culture was identified as nonmotile, cocci-shaped, and as Gram-positive clusters. Further biochemical analysis will be performed to aid the identification of the bacterial genus. The study provides insight into the potential bacterial communities found on mobile phone surfaces and highlights the need for regular cleaning to minimize the spread of pathogenic bacteria

*Poster 8*

**Title:** Sequencing MC1R in Alpacas

**Author(s):** Marie Balan

**Advisor:** Justin Golub

**Abstract:** Phenotypes such as hair color are genetically controlled, and show wide variation across populations, for example, human hair color is highly diverse. Genetic homologs are genes found across species with similar control patterns; although genetic sequences are species-specific. The Mc1R gene homologs affect hair color in humans and similarly fiber color in alpacas (*Lama pacos*). The objective of this study was to sequence the Mc1R gene in alpacas to identify the region of variation, i.e., the sections of the gene most likely responsible for coat color variation, and to try and identify each variant with the coat color produced. A total of ten alpacas were sampled from Tybush Mountain Alpaca Farm in Brunswick, NY using buccal swab samples. DNA samples were purified and sequenced, and a pair-wise alignment was used to identify regions of variation. The study was approved by the Institutional Animal Care and Use Committee (IACUC).

*Poster 9*

**Title:** Cameras or Classmates: Aspects of Preference for In-Person or Online Learning in a Post-Covid Educational Setting

**Author(s):** Lydia Beeler & Ella Arthur

**Advisor:** Maria Bartini

**Abstract:** As society begins to return to “normal” following COVID-19, there is a need for research concerning the shift back to in-person education. Many students have vastly different opinions on their experiences in online learning and which modality they prefer. Utilizing an online survey, information will be collected concerning student’s propensity for introversion or extroversion, perceived social supports, mental health, and preferences for online or in-person learning. We hypothesize that increased levels of perceived social support, increased levels of introversion, and decreased levels of mental health concerns are associated with preference for online learning over in-person learning. Given that online education provides less opportunities to connect with other students socially and emotionally, it can be helpful to understand the mental health and social experiences of students who prefer one modality over the other.

Understanding the personality aspects behind this preference can also help colleges better cater to their students.

*Poster 10*

**Title:** Misperceptions and attitudes of recreational drug use on college campuses and effects on academic achievement

**Author(s):** Alana Berard & Armani Rios

**Advisor:** Maria Bartini

**Abstract:** Our research study will investigate how prevalent recreational drug use is on our campus. Along with this, we will be examining how students perceive their peers' recreational drug use and how personality type correlates to this. Participants will take an online survey through the platform Survey Monkey. This survey is 74 questions long and will take about fifteen minutes to complete. From this study, we expect to find that students will overestimate the number of drugs and alcohol other students consume on campus and that those who partake more are going to achieve less academically. We also expect to find that those who are more extroverted and agreeable are going to partake more and that those who are more imaginative will perceive more drug use than there actually are. This study is important as it will shed light on how prevalent drugs and alcohol are on our campus, and if they affect the academic achievement of our students.

*Poster 11*

**Title:** Weather in the Berkshires: Snow and Pathogens

**Author(s):** Quray Clarke

**Advisor:** Ann Billetz

**Abstract:** Due to climate change and an increase in natural disasters there has been an increase in awareness and panic surrounding the changing environment. This led me to an interest in contaminants and bacteria that may be present in rain and snow. Snow specifically is readily available here in North Adams. With a sterile swab dipped in sterile, distilled water, I took a sample of day-old snow fall from the top layer, swabbed it onto a nutrient agar plate, and incubated it at 37 C for 48 hrs. The bacterium I isolated has the following characteristics: rod-shaped gram-Negative bacterium with flagellum mediated activity, Gram-negative rod. Perfect for navigating plants, this small sample gives a good idea of what you can expect from snowfall in the area.

*Poster 12*

**Title:** Discriminatory Identities of Multiethnic Women

**Author(s):** Mahoganye Davis

**Advisor:** Anna Jaysane-Darr

**Abstract:** My project will analyze the impact of colorism affecting the construction of identity with those who specify themselves as multi-ethnic due to the apartheid system labeling those in this category a "crime" because it was illegal for a child to come from an interracial relationship. This holds importance for those in these predicaments tainting their sense of belonging in South Africa from racism and other forms of inequality that remain ingrained in the society My research methods include in-depth observations and personal conversations with Cape Town locals but also incorporate outside investigations from library sources to acquire a greater sense of the topic being examined. I will also reflect on my own experiences being a mixed woman of color. Conclusions can interpret the essence of race remains a notable factor in forming certain ideologies in Africa.

*Poster 13*

**Title:** CSI Aquaponics

**Author(s):** Lexi Fappiano-Whalen

**Advisor:** Justin Golub

**Abstract:** Aquaponics is the combination of aquaculture (growing/raising fish and other aquatic organisms) and hydroponics (the growing of plants without soil). When the two techniques are used in combination, they create a symbiotic relationship in which fish waste provides nutrients for the plants, and the plants help remove harmful waste from the water. With our growing human population, the strain on the agricultural system continues to grow. The need for more food increases the demand for land to traditionally grow crops, threatening at-risk natural habitats; however, aquaponic systems require significantly less space to produce a much higher yield. We are transforming the aquatic system in the CSI Greenhouse. The combination of deep-water raft, nutrient film channels hydroponics, and native plant cultivation will be used to build a balanced system. The Aquaponics system will serve as a teaching tool for students and help feed animals in the Department of Biology.

*Poster 14*

**Title:** Long-term Population Monitoring of Eastern Red-backed Salamanders (*Plethodon cinereus*).

**Author(s):** Lexi Fappiano-Whalen

**Advisor:** Jonathan Clinger

**Abstract:** Climate change has resulted in large population declines for many amphibian species (Hernández-Pacheco et al., 2019). With this global trend projected to continue, the need for long-term monitoring of known populations is imperative. Research on the occurrence of amphibians at the MCLA Forest has been on-going since 2013. This research simply documented what species inhabit the forest and was not designed to monitor any species-specific populations. The goal of this research was to critically evaluate the data collected from 2013-2020 and use the information to design a long-term study to monitor the most common amphibian at the MCLA Forest, the eastern red-backed salamander (*Plethodon cinereus*). It is important to examine common species as they provide insight on how populations respond to environmental changes, and provide a substantial sample size that would be difficult to assess with rare or less frequently occurring species (Hernández-Pacheco et al., 2019).

*Poster 15*

**Title:** Hazardous Waste Collection with NBSWMD

**Author(s):** Andrew Ferrara, Connor Diehl, Elliot Pratt, Helen Kahn, & William Shanahan

**Advisor:** Elena Traister

**Abstract:** The Northern Berkshire Solid Waste Management District is a partnership across 13 municipalities in Berkshire County with goals to assist municipalities in their waste management programs and infrastructure, as well as provide education and outreach to community members. Each year, the NBSWMD holds a hazardous waste collection day at the Adams Public Works Department. Our contribution to this project is primarily community outreach and awareness. Forms of outreach include the creation of a press release to local newspapers, the creation and distribution of flyers to local institutions and businesses, and in-person outreach at the Hinsdale transfer station. Our goal is to recruit more people to participate in the hazardous waste collection day this year. Making it a well-publicized and widely participated event will increase the rate of diversion of hazardous wastes from the regular waste stream, minimizing the associated leaching or emission of potentially toxic chemicals in the environment.

*Poster 16*

**Title:** Odin's Mystery Ear Bacteria

**Author(s):** Dylann Hardee

**Advisor:** Ann Billetz

**Abstract:** Bacteria is found everywhere in the environment, and by using specific techniques we can determine what they are. My bacteria sample was collected from the left ear of a Labrador Retriever using sterile swabs and sterile water. The collected sample was aseptically placed on an agar plate and incubated at 37°C. A streak plate was then created from a colony grown on the agar plate. The colony morphology is entire, milky, flat, matte, and round. A streak plate was created, and with a grown isolated colony, I conducted a gram stain. The gram stain showed that the sample is pure and gram positive. A wet mount slide was created and that showed the morphology is rods, the arrangement is chains, and the bacteria is non-motile. We will do biochemical tests and the end results will allow us to determine the bacteria to the genus.

*Poster 17*

**Title:** An image of Cape Town

**Author(s):** Taylor Hope

**Advisor:** Anna Jaysane-Darr

**Abstract:** The way society and the media present South Africa is warped and lacks a nuanced, contemporary picture of what it actually is. The misconceptions about what Africa is prevents outsiders from being informed of the current problems and hardships. I will use photography to convey a more detailed perspective of what is there by traveling to Cape Town. I will be able to counter the more unfavorable and dehumanizing perspective of Africa through visiting numerous locations and communities. My pictures are meant to be a display of what is seen, a simple reflection of what Cape Town is right now and how the past has influenced it. I'm interested in how people engage with their surroundings.

*Poster 18*

**Title:** A demonstration of chaos theory for double pendulum with Poincaré section

**Author(s):** Corey Jakacky

**Advisor:** Thomas Burton

**Abstract:** The simple pendulum is characterized by curved harmonic oscillation, and when adjoined with another forms a system of dynamical behavior. As a result of the complexity of the motion of coupled pendula, the use of numerical methods of calculation is required. This double pendulum system enacts motion which will become non-linear and chaotic when large displacement is created. This experiment will make use of video analysis software to graph chaotic motion in phase space for a system of oscillating circular pans. In this continuous mapping of changing angular velocity and angle of displacement, the plot of a Poincaré section will be made for a double pendulum of large pans.

*Poster 19*

**Title:** Cuisine of Cape Town

**Author(s):** Sydney Johnson

**Advisor:** Anna Jaysane-Darr

**Abstract:** South Africa is home to many different groups of inhabitants, and the food of South African culture reflects this diversity. I am interested in learning about the history, preparation, ingredients, and social significance of cuisine in South Africa. I will go to Cape Town as part of my research and participate in a cooking class. I will also be researching online and gathering verbal information from locals. I expect to broaden my own knowledge and that of others through this process, and foster curiosity for the art of food.

*Poster 20*

**Title:** Small Businesses in Cape Town

**Author(s):** Rebekah Julmiste

**Advisor:** Anna Jaysane-Darr

**Abstract:** In this presentation, I'll be concentrating on small businesses in the Cape Town area to observe and document their challenges as small businesses and how they manage their enterprises.

My research strategy includes interacting with individuals and asking them questions that would highlight their business practices. To have a comprehensive grasp of how businesses are run, especially when it comes to home-made products, I would like to locate three different types of enterprises. By doing this, I will showcase their devotion and affection for their company and show what they have to offer.

*Poster 21*

**Title:** Does feather quality change as a bird ages?

**Author(s):** Azalea Kardi

**Advisor:** Daniel Shustack

**Abstract:** Slate-colored Juncos (*Junco hyemalis*) replace their feathers once a year in a process called molting. They will also regrow if lost or torn out, typically traumatically. We have collected feathers from each bird we've banded each time they are caught. My research goal is to compare the secondary feathers from the scheduled molt time and those that grow opportunistically. I will look at the lengths, barb density, and distance between the barbs. My prediction is the feathers grown opportunistically will be of lesser quality (shorter with lower barb density and greater distance between barbs). This is because the feathers are grown out of the typical molt season. I will measure the feathers on a ruler, cut a section 3 mm long, and photograph them under a microscope. I will use ImageJ to compare the images and count the barbs on the feathers. The results are yet to be determined.

*Poster 22*

**Title:** Earth Week

**Author(s):** Olivia Leasure, Caitlin Briell, Austin Meyette, Zachary Morin, Conall Mannion, Lacey Anderson, & Joshua Jean-Rene

**Advisor:** Elena Traister

**Abstract:** Earth Week is a valuable time to help students become aware of the importance of being sustainable. From April 10th through April 14th, students volunteered to prepare a variety of sustainable activities that encourage and promote environmentally friendly lifestyles. Some of these activities included book swaps, local businesses showing their environmentally friendly products, students teaching community members about healthy lifestyles and skills. By organizing events, we learned skills in budgeting, logistics, community outreach using social media and posters that were created by student volunteers. Although this is only the second year of having Earth Week after a long hiatus, we hope this is just the beginning of a long-running tradition on the MCLA campus that encourages healthy lifestyles.

*Poster 23*

**Title:** Optical Measurement of Birefringence in a Liquid Crystal

**Author(s):** Robert Leonard

**Advisor:** Thomas Burton

**Abstract:** A liquid crystal is a sort of intermediate phase of matter between liquid and (crystalline) solid. Some materials have interesting properties in this phase, such as birefringence. A birefringent material separates refracted light into two rays based on polarization. The light rays can be thought of as having two indices of refraction: one for horizontal polarization and another for vertical. In this project, an apparatus for measuring the birefringence of a liquid crystal was constructed and tested. The birefringence of 5CB (an organic liquid crystal) was investigated as a function of temperature and the electric field in the material. This was done by measuring the intensity of light emitted by the material,

with horizontal or vertical polarization. Each pair of intensities (horizontal and vertical), measured under the same conditions, was used to calculate birefringence.

*Poster 24*

**Title:** The importance of art as a form of culture & South African art

**Author(s):** Kathleen Najarian

**Advisor:** Anna Jaysane-Darr

**Abstract:** This project looks at the importance of art as a form of culture and preserving history in South Africa. It is important that people accept art for its cultural/historic background as well as accepting it for its beauty and meaning. I plan to explore art in South Africa during my travel to Cape Town in March and through web and library research. I hope to learn about the role that different forms of visual art have played in a South African society.

*Poster 25*

**Title:** Diverting Restaurant Food Waste to Compost with Williamstown Composts!

**Author(s):** Brannon O'Donovan, Nathan Haley, Chad Trottier, Seth Dupee

**Advisor:** Elena Traister

**Abstract:** When in the landfill, organic matter, like food waste, is cut off from oxygen, causing anaerobic decomposition. This releases methane gas, or CH<sub>4</sub>, and is 23 times worse than carbon dioxide as a greenhouse gas. By keeping this out of the landfill, it saves this gas from being released into the atmosphere, and will provide compost, and that energy can be used for growing more food. It also brings more awareness to the community by introducing them to eco-friendly practices. Our project is teaming up with Williamstown Composts!. We are planning on visiting eight different businesses that have food waste, and our goal is to get a minimum of two on board. The town has allocated some grant money to encourage the businesses' willingness to try out composting. In separating their food waste from other waste, we are keeping it out of the landfill, while keeping the community in the fold.

*Poster 26*

**Title:** Empathy and Academics: Student Perceptions of Teacher Empathy

**Author(s):** Calvin O'Neill & Eli Monaghan

**Advisor:** Maria Bartini

**Abstract:** Inspired by prior research conducted at MCLA, in which it was found that students theoretically feel more comfortable in classes with instructors who are empathetic, we plan to further investigate how students at this institution feel about their instructor's capacity for empathy and whether empathy influences students' academic success in the real world. Using a survey, we will offer students an altered Self-Rated Emotional Intelligence Scale, and the Academic Self-Concept Scale. We hope to find a significant positive interaction between students' perception of their instructor's emotional intelligence and their academic performance. If this interaction is found, then it could encourage instructors to make it easier for students to perceive them as empathetic, which could increase academic performance at institutions.

*Poster 27*

**Title:** Environmental Unknown Bacteria

**Author(s):** Emilie Raymond

**Advisor:** Ann Billetz

**Abstract:** Over the course of the semester, I have been studying bacteria that were collected from a door handle in my home and on my phone case. The bacteria were collected by rubbing the door handle and phone case with sterile swabbed dipped in sterile water. The bacteria were plated on nutrient agar and

incubated for 48 hours. The bacterium from my phone case are nonmotile, Gram positive cocci in clusters. The bacterium from the door handle are nonmotile, Gram negative cocci in cubes. Additional biochemical tests will allow me to make a tentative identification of the genus of each bacterium.

*Poster 28*

**Title:** Isolating and Identifying Genera of Unknown Environmental Bacteria

**Author(s):** Courtney Romeo

**Advisor:** Ann Billetz

**Abstract:** The purpose of this project is to isolate and identify bacteria in our environment. Bacteria were collected from the bottom of a water bubbler in the Feigenbaum Center for Science and Innovations and the rainbow piano outside of Amsler Campus Center. The bacterium isolated from the water bubbler is a nonmotile, Gram-negative rod. The bacterium isolated from the piano is Gram positive. Additional testing will allow us to identify the genera of the bacteria.

*Poster 29*

**Title:** Public Bacteria Properties Dependent on the Site of Isolation

**Author(s):** Finley Root

**Advisor:** Ann Billetz

**Abstract:** This experiment identifies and compares two environmental bacteria isolated from the lab faucet head from an MCLA lab and a resting pole inside a public transport bus. Swabbed samples were streaked on nutrient agar plates and subsequently incubated. While all the faucet bacteria were identical yellow punctiform bacteria, the public bus gave rise to many different colonies of bacteria - yet all circular colony morphology. White colonies of interest from the bus sample were isolated. Gram-staining revealed sink bacteria as single gram-negative rods and bus bacteria as gram-positive streptococci. Wet mounts were inconclusive yet suggested both as nonmotile. The isolated bacteria will be subjected to additional biochemical testing to allow for identification at the genus level.

*Poster 30*

**Title:** Measurement of Berkshire County Water Hardness by Inductive Coupled Plasma (ICP)

**Author(s):** Andrea Roy and John Wright

**Advisor:** Yavuz Ceylan

**Abstract:** The total water hardness is the measure of the  $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$  cations, and is an important index to measure the quality of the water. Upon the presence of the high amount of minerals ( $\text{Ca}^{2+}$  and  $\text{Mg}^{2+}$ ) in the water, plenty of problems could be triggered, which are the difficulty of removing dirt and irritation on the skin. Thus, by softening the hard water, certain health issues could be improved. In our study, total hardness was separated into permanent and temporary hardness with the help of Inductive Coupled Plasma (ICP). Upon measuring the total hardness of the samples (collected water all over Berkshire County), samples were treated with heat to remove the temporary hardness, which leads us to find the permanent hardness. We will present total, permanent, and temporary hardness in the poster presentation.

*Poster 31*

**Title:** Oral Bacteria from Cat's Mouth

**Author(s):** Anna Rynkowski

**Advisor:** Ann Billetz

**Abstract:** The purpose of this experiment is to identify bacteria associated with the mouth of a cat. The bacteria were collected using a sterile swab, dipped in sterile water, and then gently rubbed in the cat's mouth. The sample was swabbed onto nutrient agar and incubated for 48 hours. Microscopic

examination showed singular cocci that were nonmotile. Biochemical tests will also be done to allow identification of the bacterial genus.

*Poster 32*

**Title:** Colonial Veterans of Color from Western Massachusetts

**Author(s):** Viral Shah & Amanda Purello

**Advisor:** David Eve

**Abstract:** The Pocumtuck Valley Memorial Association (PVMA) is a museum located in Deerfield, Massachusetts. Recently, the museum launched an online exhibit titled "Colonial Veterans of Color from Western Massachusetts," which was made possible with support from the MA State Historical Records Advisory Board and the National Endowment for the Humanities. The exhibit was created using the ArcGIS StoryMap feature, and it was developed with the assistance of MCLA Computer Science majors who provided technical support during their internships from Spring 2022 through Spring 2023. The project has now been completed, and the story map is available online for viewing.

*Poster 33*

**Title:** Scientific Investigation Into Sexing Dark-Eyed Juncos

**Author(s):** Katherine Tomasetti

**Advisor:** George Hamaoui

**Abstract:** Dark-eyed junco songbirds, a common songbird in the Berkshires, are difficult to sex using morphological features in the field. The main goal of this research is to sex the birds using molecular biological methods. The process of this research is to extract these birds' DNA from provided blood samples, and then to use the DNA in polymerase chain reaction (PCR) testing to target avian sex chromosomes. The PCR testing results are interpreted to determine the sex of the juncos. The data on the sexes of the birds are then used to investigate whether there are any morphological traits that statistically align with the sexes that can be used to easily identify the birds' sexes in the field.

*Poster 34*

**Title:** What's That Smell: Testing the Abilities of Olfactory Discrimination in Rats

**Author(s):** Ellie Walter-Goodspeed, Lydia Beeler, Kevin Chen, Ava Dunville, Ryan Taylor, Olivia Zaleski

**Advisor:** Thomas Byrne

**Abstract:** Inspired by the work of APOPO's landmine-sniffing HeroRATS, we are exploring the olfactory capabilities of laboratory rats. They will be tested with many different plant-based odorants, including several herbs and cannabis. We will train two Sprague Dawley rats to dig at the location of an odorant buried in commercial rodent bedding in a large open-field container. In the latter phase of the study, the two rats will be placed in this bedded area with a container containing one "correct" odorant and one "incorrect" odorant. This will be done using a runway where rats will choose left or right alleys based upon the location of the "correct" odorant, which will be one paired previously with an edible reinforcer. The results of this research can be applied broadly to the understanding of the characteristics of cannabis, the capabilities of rats, and their potential usage in future regulation and quality control of cannabis.

*Poster 35*

**Title:** The White-Hero Initiative

**Author(s):** Jheneay Watkins

**Advisor:** Rita Nnodim

**Abstract:** Across the history of Marvel Cinematic Universe's movie productions, a changing politics of representation can be observed, one that has led to shifts in cultural practices of fans and general audiences, at times voiced in a displeased rhetoric of failure. My research takes an interdisciplinary approach to trace changes in character representations, plot lines, and narratives to consider how audiences respond to the representation of diversity in a white male audience-dominated medium.

*Poster 36*

**Title:** Growing Healthy Garden Program

**Author(s):** Maxwell Whalen & Jalyssa DeLuca

**Advisor:** Elena Traister

**Abstract:** Northern Berkshire County has a problem. 10.3% of the population is food insecure, but The Growing Healthy Garden Program is making a difference. We will be participating in starting seedlings for the Growing Healthy Garden Program for local community gardeners. The Growing Healthy Garden Program, based in North Adams, coordinates a network of community gardens in the Northern Berkshires; a program vital in facilitating a more sustainable community. We are planting seedlings in mid-March, watering and monitoring the budding plants in the MCLA Greenhouse. This task is completed daily, with each participant acting, in turn, to ensure the greenhouse is running optimally. Once the project is completed at the end of the semester, the seedlings will be transplanted into community gardens in May to help reduce the number of food insecure residents of Northern Berkshire County and encourage healthy eating.

*Poster 37*

**Title:** Identification of an Unknown Bacterium

**Author(s):** Michelle Williams

**Advisor:** Ann Billetz

**Abstract:** Bacteria are widely found in the environment. Various techniques can help identify these bacteria, such as making a wet mount, gram stain, simple stain, etc. The source of unknown bacteria I chose for this experiment is my cat, Grayson. In order to collect the bacteria, I rubbed a sterile swab soaked in sterile water all over his fur. Then swabbed the bacteria onto a Nutrient Agar plate. The bacteria have the colony morphology of rhizoid/filamentous, flat, milky, and moist. For the cellular components, I found the morphology to be rods, the arrangement of chains, no motility, and a gram-positive reaction. In order to discover what bacteria I collected, I will perform biochemical tests. The combined information will allow me to identify the bacteria as to its genus.

*Poster 38*

**Title:** Antibiotic Resistant Gene Transfer Across Bacteria Species

**Author(s):** John Wright

**Advisor:** Ann Billetz

**Abstract:** Antibiotic resistant bacterial strains have created many new public health emergencies in recent history, not least of which are MRSA and VRE. One of the reasons behind this is the ability of many bacteria to perform horizontal gene transfer. While this mechanism is well studied in bacteria of the same species, it is poorly characterized in bacteria of varying phylogenetic relation. This leads to a concern about the ability of bacteria to transfer these resistant genes to species that are more pathogenic to humans. Due to this concern, we are transforming two well-studied model bacteria, *Bacillus subtilis* and *Escherichia coli* with antibiotic resistant plasmids and examining their ability to perform horizontal gene transfer to other species of bacteria of varying phylogenetic relation in two different environments to further characterize how this may factor into public health concerns due to the growing antibiotic resistant epidemics.

Poster 39

**Title:** Characterization of Environmentally Obtained Bacteria

**Author(s):** John Wright

**Advisor:** Ann Billetz

**Abstract:** Bacteria and other microorganisms permeate our entire environment without fail. It is for this reason that we chose to culture and isolate unknown bacterial species for characterization and identification. Unknowns were cultured from everyday items, including an administrator's work keyboard and a professor's coffee cup. Current characterization includes cellular morphology and arrangement, colony morphology and gram reaction. Further environmental and metabolic characterization will be done leading to at least a genus identification of each isolate. Current findings include Gram positive reactions of both species. Keyboard isolate is a filamentous bacteria which grows in large filamentous colonies, opaque colony while coffee cup bacteria is sarcinia cocci which grows white, rounded colonies. Neither unknown demonstrates motility. Characterization of bacteria encountered in everyday situations helps develop our understanding of the micro world that lives all around us.

## Lunch Campus Center Gym 12-1:15 PM

Lunch is provided for URC presenters, their faculty advisors, and guests. Lunch may be eaten on site or taken away in boxes.

*Welcome Remarks from President Birge  
Feigenbaum Scholars Awards (presented by Emil George)  
Keynote Introduction (TBD)*

***Keynote Address (Jenna McElroy '16)***

12:30-1:00 PM

Campus Center Gym

Jenna McElroy is a former MCLA student (Class of 2016) who pursued their first MA degree in the field of Gender/Cultural studies at Simmons University in Boston, MA, and then their second MA degree in Sociology at DePaul University in Chicago, IL. Jenna specializes in Foucauldian studies and qualitative methodology - which frames the majority of their research. Being tickled by French philosophy and the Frankfurt school, Jenna's first thesis and defense compared the rise of Nazi Germany post-Weimar Republic, with the rise of contemporary fascism in the United States under Donald Trump. The thesis was a thick analysis of how conversion therapy on LGBTQIA+ individuals was deployed as a weapon of war in Nazi Germany, which made the existing practice in the United States even more popular post-WWII. Contemporarily, the heinous practice of conversion therapy thrives with the growing religious and far-

right extremism in the United States, which can only serve as a dangerous warning. Jenna's second thesis and defense was an extensive research project that focused on far- and alt-right social movements (groups promoting beliefs for anti-abortion, anti-evolution, flat-earth, anti-vaccinations, anti-LGBTQ, men's rights, white supremacy, and anti-climate change). Adopting an investigative approach, while bringing Foucault into the study of social movements, Jenna personally and strategically moved through these circles to understand how far- and alt-right movements co-opt "the truth" to wreak havoc in our sociopolitical sphere. While Jenna continues to pursue their research interests, they are able to now pragmatize their knowledge for the realm of public health. After living in Chicago for five years, Jenna now resides back in Massachusetts with their spouse, working at Tufts Medicine within the Population Health department. Their goals are to make the Massachusetts healthcare world and its policies more LGBTQIA+ inclusive while simultaneously broadening gender-affirming care, and separately, to work towards eliminating conversion therapy nation-wide. Jenna regularly participates in activism and advocacy for a variety of reasons - including but not limited to anti-1% movements, domestic abuse, sexual assault, LGBTQIA+ rights, and through serving as an ally for BIPOC movements. Aside from this, Jenna regularly enjoys long cross-country roadtrips with their spouse, going to shows/concerts, oddity hunting, and having the privilege to trace their genealogy.

## Paper Presentations II A

### Bowman 201 1:30-2:30 PM

**Title:** A Psychological Dive into *The Menu*

**Author(s):** Trinity Luther

**Advisor:** Sharon Claffey

**Abstract:** In the 2022 satirical comedy and horror film *The Menu*, a group of rich consumers visit an exclusive, remote island to eat cuisine made by and under the supervision of Julian Slowik, a revered gourmet chef. Only one of the guests understands what Chef Julian's extravagant plan is for the evening, which is revealed as the movie progresses. This presentation will discuss the psychological concepts that are demonstrated in the film, such as obedience, conformity, obsession, and cult mentality. This movie has many instances of the social psychology of obedience to authority that Stanley Milgram's infamous experiment studied. This is displayed by the interactions between Chef Julian and his staff that are eerily militant in response to his orders.

**Title:** High School Leadership Positions Impact on Women's Local Political Participation and Ambition

**Author(s):** Casey Young

**Advisor:** Samantha Pettey

**Abstract:** Extant research finds gender composition in legislative bodies shape policy outcomes. For example, when more women are elected to office, constituents are more likely to see policies broadly related to social welfare spending like childcare and healthcare. Yet, men make up a large portion of elected officials at all levels of government. Research focusing on narrowing the gender gap in legislative bodies can have significant impacts on policy outcomes. We theorize that leadership opportunities at a young age can significantly increase the likelihood of political involvement later in life. One of the purposes of our research is to see if high school leadership clubs and activities can help change this outcome. It could be useful to know if being involved and experiencing leadership roles could assist oneself to be involved in local government and school-related positions. We sent our survey to all local

office holders in Berkshire, Hampden, Hampshire, and Franklin Counties (Massachusetts). Results haven't been finalized, but we find evidence that supports our hypothesis that leadership opportunities in high school (and beyond) have a positive impact on women's future desire to seek elective office.

**Title:** *Silver Linings Playbook*

**Author(s):** Kristina Tatro

**Advisor:** Sharon Claffey

**Abstract:** *Silver Linings Playbook* is an interesting film that shows a new look at mental illness. Everyone in the movie shows some type of mental illness or struggle. The film portrays a different idea of how everyone is a little "crazy" in their own way and how no one is really an outsider when it comes to mental struggles. The types of mental health struggles shown in the movie are OCD, Depression, manic episodes, and more.

## Paper Presentations II B

### Bowman 203 1:30-2:30 PM

**Title:** *Don't Worry Darling* Deep Dive: A psychological review of a recent film

**Author(s):** Alexander Holcomb

**Advisor:** Sharon Claffey

**Abstract:** *Don't Worry Darling* (2022) is a movie about an "ideal society" based on 1950s views. In this utopian society named Victory, the men of this society go to work, while the women stay home to clean the house, make dinner, and socialize with the other women. However, as time moves along in this utopian society, the main character Alice begins to question if this society is really "perfect" due to a series of deeply disturbing events. As the end of the movie draws near, dark secrets about this utopian society emerge, leaving the viewer in a state of psychological shock. This deep dive will explore psychological concepts such as social conformity and manipulation, a synopsis of the movie, and connections between the psychological concepts and the film.

**Title:** Gendered Representations: Art as Gender Resistance During Apartheid, and Post-Apartheid

**Author(s):** Ian Crombie

**Advisor:** Anna Jaysane-Darr

**Abstract:** Gendered Representations: Art as Gender Resistance During Apartheid, and Post-Apartheid is an oral presentation that looks at South African artistic representations of gender during and after apartheid. It analyzes how gender is represented in protest during and after apartheid, and the qualities of these gendered representations (both in regard to masculinities and femininities) in relation to protest and resistance, as well as arts' influence and impact on South African society.

**Title:** *Boyhood*: A Cinematic Case Study

**Author(s):** Maia Rice

**Advisor:** Sharon Claffey

**Abstract:** *Boyhood* was filmed with the same actors over the course of twelve years, allowing it to accurately depict the life of a middle-class family in Texas from 2002 to 2014. It is a case study of Mason Evans Jr. and his family as they struggle with poverty, divorce, constantly moving, abusive alcoholic stepfathers, and the struggles of growing up. The movie isn't plot-driven, which allows the characters to

grow in a genuine way. In this presentation, I will examine how multiple variables, including parenting styles, poverty, moving around, etc. impacted Mason's development.

## Paper Presentations II C

### Bowman 205 1:30-2:30 PM

**Title:** *Pan's Labyrinth*

**Author(s):** Juliana Rodriguez

**Advisor:** Sharon Claffey

**Abstract:** The movie *Pan's Labyrinth* is an intricate film created by Guillermo del Toro that transports you to a point in history that is full of turmoil. I will be discussing in depth the main character, Ophelia's journey of dealing with all the changes in her life and how they manifest in these chaotic times. This movie does not touch on the subjects of mental illness. Still, throughout my presentation, I will be showcasing specific actions of the main character and how they can fit into today's diagnosis criteria in psychology.

**Title:** Conditions and Causes for the Boxer Uprising

**Author(s):** Willard Hodgkins

**Advisor:** Anthony Daly

**Abstract:** The Boxer Uprising 1899-1901 is a significant event in modern Chinese history. It gained great notoriety for being a violent movement made up of primarily peasants working to expel foreigners and Christians from China, reaching such a scale that several western nations had to mobilize to stop it. While smaller in scale than the Taiping Rebellion that preceded it, the Boxer Rebellion gained infamy due to its anti-foreigner nature. The Boxer Rebellion eventually led to the eight colonial powers mobilizing and working together to crush the uprising and protect their interests in China. The second half of the 19th century is marked in humiliation and weakness for China, as the world seemingly began pulling far ahead of the once great nation. The uncertainty of the Qing court along with the aggressive imperialist endeavors of foreign nations in China provided fuel for resentment for outsiders. This, coupled with the unique conditions of the Shandong province, provided the conditions for the Boxer movements' growth and path towards large-scale violence.

**Title:** Social Media Impacts on Mental Health Across Age Groups

**Author(s):** Jack Vezeris

**Advisor:** Sara Steele

**Abstract:** The use of social media has increased rapidly through the evolution of technology (Lin et al., 2016). Popular social media platforms include Twitter, Instagram, Facebook, Snapchat, and TikTok. This increase in usage seems to have some potentially negative consequences. For example, one study found a positive correlation between social media usage and anxiety/depression levels (Mundy, 2021). Unfortunately, research in this area is generally targeted at younger individuals. The purpose of this study was to examine how social media usage impacts perceived depression levels across age groups. This study utilized a survey that was sent out to the MCLA community and the general public. The results of this research suggest that social media impacts on depression levels may be similar for all age groups, not

just younger people. Future research needs to focus on the impacts of social media regardless of an individual's age.

## Special Session (II D): Explorations of Visual Culture (Part 1) Bowman 122 1:30-2:30 PM Sponsor: Victoria Papa

*Everyday life is saturated with visual imagery. Our encounters with images profoundly impact our experiences of the world. This session explores key concepts of visual culture, including the social dynamics of visibility and representation, power structures of looking, and phenomena of spectacle. Presentations will examine how images encode race, gender, sexuality, class, and ability while investigating whose vision is reinforced or discarded and what is seen or unseen.*

**Title:** Decolonization of Museums

**Author(s):** Angie Carias

**Advisor:** Victoria Papa

**Abstract:** Decolonization of museums refers to the process of acknowledging and addressing the ways in which museums have been complicit in colonialism and imperialism and taking steps to undo their legacies. This involves rethinking the ways in which museums collect, interpret, and display cultural artifacts and histories, and prioritizing the perspectives and voices of communities that have been historically marginalized and excluded. My presentation, "Decolonization of Museums," examines the necessity of reparations in the art world by analyzing three prominent museum exhibits and their collections and a case study that investigates museum demographics. Alongside images, I provide evidence that these museums struggle when it comes to identifying problems of inclusivity. While, for the most part, these museums have implemented new programs regarding inclusivity, it is only after facing criticism for their neglect of multiculturalism. More often than not, these museums' efforts stem from criticism rather than their own moral compass. I will also focus on highlighting the benefits and positive changes that these museums have implemented in hopes of bettering their environments. The decolonization of museums is an ongoing process that requires commitment, dialogue, and engagement.

**Title:** Art and Documentary Photography in the #NoDAPL Movement

**Author(s):** Finley Root

**Advisor:** Victoria Papa

**Abstract:** This presentation, "Art and Documentary Photography in the #NoDAPL Movement", is adapted from an essay that delves into the visual activism associated with the 2016 Dakota Access Pipeline Protests. My research focuses on five images from the movement and analyzes the visual meaning behind these images. Some topics explored include political imagery, humanitarianism, and "the spectacle." I then break down the importance of art, photography, and combination work. Scholarly accounts have been incorporated, in addition to personal analysis to provide a varied view of the imagery of the movement. This presentation intends to inform audiences of the importance of the visual in modern activism and the injustice of the construction of the Dakota Access Pipeline.

**Title:** Moving Forward: Artists Challenging Museum Culture

**Author(s):** Audrey Perdue

**Advisor:** Victoria Papa

**Abstract:** This presentation is based on a visual essay titled “Moving Forward: Artists Challenging Museum Culture.” This work reflects on the concept of art as activism precisely when it comes to protesting museums and museum culture, particularly in reference to the representation of the other as seen in museums. In this presentation, I cover the protest at the Boston Museum of Fine Arts against their previous “Kimono Wednesdays” event, the impact of artists Coco Fusco and Guillermo Gómez-Peña with their 1992 exhibit Two Undiscovered Amerindians Visit the West, the work of the anonymous group The Guerrilla Girls, and artist Parker Bright’s protest against Dana Schutz’s work Open Casket at the 2017 Whitney Biennial. My presentation aims to spark a dialogue about how the decolonization of museums can be done through the very things that make them: art and culture.

## Artist Talk (II E): Creative Collaboration as a Means of Community Bridging Erick Ramos-Jacobo

*Erick Ramos-Jacobo was awarded the prestigious Feigenbaum Scholars award in 2022 to support an ambitious creative & research project. His exhibit will be on display in Bowman Gallery.*

**Advisor:** Lisa Donovan

**Abstract:** This art-based study will be observing the ways in which artistic collaboration can serve as a framework for social-bridging between artists and Immigrant communities of the Berkshires. The Berkshires have been identified as the second most arts-vibrant medium-sized community in the US. Despite this, 83% of Immigrant residents feel a disconnect with the arts and culture assets that the region holds (Berkshire Taconic Community Foundation). This research is being shared through a collaborative art show that brings together five multidisciplinary artists and five Newcomers on campus to explore the question: can bringing Immigrant people closer to practicing artists make them help them feel closer to the arts and culture sector of the region? We seek to understand the role of the arts in documenting experience.

We are asking:

- How can art...
- Be an effective way of building cross-sector relationships?
- Be used to create cross-sector collaboration?
- Serve as a framework for social bridging?

## Performance (II F): Urinetown: The Musical - Preview Venable Theatre 1:30-2:30 PM Sponsor: Laura Standley

*The cast of Urinetown: The Musical perform highlights from their upcoming production of the show that opens Apr. 21 and runs through Apr. 30 in Venable Theater. Winner of three Tony Awards, three Outer Critics Circle Awards, two Lucille Lortel Awards and two Obie Awards, Urinetown: The Musical is an irreverently humorous satire skewering corporate greed, love, revolution, and the musical theatre genre itself! Afterwards, the cast and creative team will discuss the process of producing their first musical theatre production since the pandemic.*

Comfort Acheampong - Billy/ UGC Executive  
Zurie Adams - Little Sally  
Emily Baker - Josephine "Ma" Strong  
Alison Blakeslee - Hope Cladwell  
Madilynn Brothers - Mr. McQueen  
Howard Brown - Caldwell B. Cladwell  
Ysabel Cardona - Soupy Sue/ Cladwell's Secretary  
Georgia Dedolph - Assistant Director  
Katherine Diguardia - Stage Manager  
Caitlyn Falzone - Little Becky Two Shoes/ Mrs. Millennium, Assistant Director, Assistant Choreographer, Dance Captain  
Bee Kelsey - Officer Lockstock  
Rachel Lamarre - Penelope Pennywise  
Aedan Maginnis - Joseph "Old Man" Strong  
Jax Marer - Bobby Strong  
Tyler Miller - Tiny Tom/ Butcher Bill/ Dr. Billeaux  
Bunny Moreau - Assistant Stage Manager  
Kathleen Najarian - Senator Fipp  
Jaden Nesmith - Robbie "The Stockfish"/ UGC Executive  
Ahmed Reda - Officer Barrel

Music Director: Trevor Wheelock  
Director: Laura Standley

## Paper Presentations III A

### Bowman 201 2:45-3:45 PM

**Title:** *Split*: The Inner Workings of DID

**Author(s):** Alexis Robie

**Advisor:** Sharon Claffey

**Abstract:** The movie *Split*, released in 2016, unravels the innerworkings of a person who suffers from severe dissociative identity disorder (DID). The main character, Kevin Wendell Crumb, lives with twenty-three different personalities. The bad personalities work together to kidnap three girls so that the 24th personality, referred to as The Beast, can consume them to gain extreme power. This presentation will discuss the elements of DID that the film successfully portrayed, and the elements that it did not. The film shows that Kevin does fit the 3 DSM-5 criteria for DID, but Kevin would not have had such an angry and

vile personality like The Beast because these personas are meant to be a coping mechanism, not a weapon. In conclusion, the film portrayed DID very well, but they did overstate a couple elements to liven up the story. Overall, this is a good “psychological” movie.

**Title:** The Racially Targeted Socioeconomic Differences in Cape Town During & Post-Apartheid

**Author(s):** Kaiya Cocliff

**Advisor:** Anna Jaysane-Darr

**Abstract:** The apartheid government of South Africa existed throughout the 1940s to the 1990s and was an institutionally discriminatory form of government that affected the lives of all racial minorities within South Africa. The aim of my research is to compare the differences between socioeconomic classes and how racial categories play a role in these differences during and post-apartheid. To conduct my research, I will be travelling to Cape Town, South Africa to observe these differences, as well as doing extensive research on historical data. This project will contribute to our understanding of the impact of apartheid on South African society. By examining the socioeconomic differences that existed, we can gain insights into the progress that has been made in reducing socioeconomic disparities in South Africa.

**Title:** Why did the British Empire continue to colonize in the nineteenth century?

**Author(s):** Serena Wiita

**Advisor:** Anthony Daly

**Abstract:** The nineteenth century was a time of revolution, industrialism, and imperialism; it is from this time period that we start hearing the phrase, “the sun never sets on the British Empire.” The British Empire was large and unafraid to colonize new places to gain power, but why did the British colonize? Why did a small island, surrounded by bigger territories, seek to control so much of the globe? In this presentation, I will take a closer look at reasons that the British Empire started on its path of “New Imperialism” in the late-nineteenth century, such as striving for power over other nations, searching for resources, economic development, expansion, the spread of religion, and the belief that it was their mission to “civilize” non-European peoples.

## Paper Presentations III B

### Bowman 203 2:45-3:45 PM

**Title:** *The Blind Side*: Discrimination and Prejudice

**Author(s):** Sophie Elser

**Advisor:** Sharon Claffey

**Abstract:** *The Blind Side* is a film based on the true story of National Football League (NFL) player, Michael Oher. In the film, Michael is a seventeen-year-old African American living in Tennessee, who has been through the foster care system until Leigh Anne, a white woman, takes him in. All Michael wants to do is play football in high school and in college but he is faced with many challenges he must overcome to get to that point. In this presentation, I will dissect the story of Michael Oher and explain the ways in which discrimination and prejudice have impacted it, and the types of motivation it must take to overcome the many challenges he faced in his life.

**Title:** South African Youth in the Age of Apartheid

**Author(s):** Téa Caravello

**Advisor:** Anna Jaysane-Darr

**Abstract:** In this project, I will address the generation of South African people who were born towards the end of the apartheid regime and how growing up in this specific time frame affected their personalities and attitudes towards race. This topic is important to understand some of the lasting effects of the apartheid regime and the ways it impacted South African youth into present day. I will meet and discuss this topic with people while visiting Cape Town, as well as reading and library research. I will explore the ways in which one's childhood taking place at the end of Apartheid shaped their mindset about race and racial issues in South Africa. I intend to better understand how this generation of South Africans think about their race and racial issues in post-apartheid South Africa.

**Title:** *Miss Americana: The Inner Workings of Fame*

**Author(s):** Luis Rivera

**Advisor:** Sharon Claffey

**Abstract:** *Miss Americana* is a Netflix original documentary that takes a deep dive into Taylor Swift's life. Throughout the documentary, Swift discusses her journey into becoming the person "everyone wanted [her] to be." Her ambition for songwriting led her down a never-ending rabbit hole in an attempt to please the masses. Public perception of disordered eating, misogyny, and the extent people are willing to go to in order to conform are seen throughout the film.

## Paper Presentations III C

### Bowman 205 2:45-3:45 PM

**Title:** "I identify as male in the same way tomatoes are fruits": Identity Distress and Social Support in Transgender and Gender Non-Conforming Individuals

**Author(s):** Jake Wedge

**Advisor:** Maria Bartini

**Abstract:** Those whose gender identity lies outside of the binary, as well as those whose gender identity is the opposite binary option of their assigned sex, often suffer from poorer mental health outcomes than those whose gender identity and assigned sex at birth align. However, social support is often a predictor of more positive mental health outcomes and those who are transgender or gender non-conforming (TGNC) have been found to follow this trend. My study was conducted on college students to examine how these factors interact. I expect that the trends will hold that TGNC students will have worse mental health outcomes than will cisgender (gender-conforming) students. TGNC students who struggle the most with their identities will report the worst mental health outcomes. Finally, those who report higher levels of social support will report more positively on how they are perceived by those around them and more positive mental health outcomes.

**Title:** Cool-lex Order for Triangulations of Polygons

**Author(s):** Emily Downing

**Advisor:** Elizabeth Hartung

**Abstract:** Cool-lex order is a successor rule that generates all objects of a given type. The Catalan numbers are a sequence of numbers that count numerous types of objects: binary trees, stacks of coins in a plane, balanced parenthesis, etc. An open question is which types of objects can be generated by Cool-lex order so that there is little change from one object to the next. We focused on the Catalan object: triangulations of polygons, where the  $n$ th term of the Catalan sequence counts the number of different

triangulations of an  $(n+2)$ -gon. Using python programming and computation by hand, we explored the bijection between balanced parenthesis and triangulations of polygons as well as their generation in cool-lex order to observe the change from one triangulation to another and determine whether the cool-lex generation produces little change between them. This research was conducted jointly with Elizabeth Hartung and Aaron Williams.

**Title:** "Riding in Cars with Boys" Can (Potentially) Lead to Generational Trauma

**Author(s):** Olivia Zaleski

**Advisor:** Sharon Claffey

**Abstract:** *Riding in Cars with Boys* is a biographical film based on the autobiography by Beverly Donofrio, a single teen mother in the 1960s who overcame many adversities and obtained a master's degree while raising her son despite her circumstances. The film spans across Donofrio's life and portrays the struggles of a young mother facing sexism, poverty, addiction, and domestic violence; the film also shows how those types of adversities can be generational through how Donofrio's personal struggles have affected her son and his relationships as an adult. Through the lens of this film, I will analyze how insecure attachment styles can form between parent and child and the ways that addiction can foster insecure attachment leading to generational trauma.

## Special Session (III D): Explorations of Visual Culture (Part 2) Bowman 122 2:45-3:45 PM Sponsor: Victoria Papa

*Everyday life is saturated with visual imagery. Our encounters with images profoundly impact our experiences of the world. This session explores key concepts of visual culture, including the social dynamics of visibility and representation, power structures of looking, and phenomena of spectacle. Presentations will examine how images encode race, gender, sexuality, class, and ability while investigating whose vision is reinforced or discarded and what is seen or unseen.*

**Title:** Inclusion in the Teen Television Shows

**Author(s):** Dalena Soun

**Advisor:** Victoria Papa

**Abstract:** This presentation explores a case-by-case analysis of teenage television shows, including but not limited to *Glee*, *One Tree Hill*, *Gossip Girl*, and *Degrassi*. In this presentation, I use Stuart Hall's concept of "circuit of culture" as explained by Marita Sturken and Lisa Cartwright in *Practices of Looking* as a foundation for my analysis. Woven into the essay are images of the cast in very important storylines. I will end the presentation on how modern teenage television programs have become more diverse. By highlighting this topic at the URC, I hope people will see how important mass media is in shaping the next generation.

**Title:** Visual Culture and the Creation of Identity

**Author(s):** Hannah Yeasley

**Advisor:** Victoria Papa

**Abstract:** My presentation explores the intersection of visual culture and the creation of identity on an individual and societal level through an analysis of three films, *Vertigo* (1958), *Black Panther* (2018), and *Joker* (2019). My research investigates how identities are portrayed by the actors and directors, and in turn, how those identities are received by American audiences. Through interdisciplinary methods of film studies and cultural studies, I integrate scholarship about these movies and aspects of cinema with my own creative writing based on these films alongside film stills. In doing so, I study themes of the various gazes at play in these films including the male gaze and the Black gaze as well as the notion of a split-identity. Since there is a jump in time periods between *Vertigo* and the other two films, I also review how the visual aesthetic of cinema has evolved over the last 60 years and process how this evolution is then mirrored—or denied—by the methods audiences use to explore their identification with film.

**Title:** The Oppression of Women in Religious Artwork and its Impact on Society

**Author(s):** Rachel Houghtaling

**Advisor:** Victoria Papa

**Abstract:** This presentation explores the impact that sexism in religion has had on society as a whole based on its presence in artwork and visual imagery. In the presentation, I will be focusing on how important it is to highlight religious sexism due to religion being so ingrained in society. Religious sexism is a major issue in modern society. By bringing attention to this important area of visual culture, it will allow society to change and grow in a progressive manner.

## Special Session (III E): Creative Writing Murdock 218 2:45-3:45 PM Sponsors: Zachary Finch & Caren Beilin

*Please join us for this special celebration of Creative Writing at MCLA, as up to ten students will be reading and performing their work in poetry, prose and other forms.*

Participants: Salimatu Bah, Alison Blakeslee, Aurora Bullett, Micaela Carey, Thailia Chee, Fallon Maloney, Cassidy Patnode, Jasmine Sardos, Dylan Slonka, Casey Vieira

## Performance (III F): Milestones of Musical Theatre Venable Theatre 1:30-2:30 PM Sponsor: Laura Standley

*Students from Advanced Acting: Music Theatre perform musical scenes highlighting major milestones of music theatre history. The crowd-pleaser, "With Cat-like Tread," from Gilbert & Sullivan's *Pirates of Penzance* (1880) showcases the contemporary Broadway musical's roots in comic operetta. "The Farmer and the Cowman," from Rodgers and Hammerstein's *Oklahoma* (1943), marks the first fully integrated musical play that used song and dance to develop character and plot. And "Sunday - Finale" from *Sunday in the Park with George* (1984) shows how influential composer, Stephen Sondheim, refocused the genre*

*by introducing musicals written around a concept or theme. After the performance, students will discuss this uniquely American theatrical art form.*

Participants: Zurie Adams, Madilynn Brothers, Ysabel Cardona, Georgia Dedolph, Katherine Diguardia, Sara Elser, Caitlyn Falzone, Bee Kelsey, Rachel Lamarre, Aedan Maginnis, Jax Marer, Tyler Miller, Bunny Moreau, Kathleen Najarian, Shawn Prince, Ahmed Reda, Nico Rivera

Staff Accompanist: Matt Thomas

## Philosophy Mini-Conference Murdock 208, 4:00-5:00 PM Sponsor: Paul Nnodim

**Title:** Formless Reflections of Matter: Philosophy Through the Kaleidoscopic Lens of the Grateful Dead

**Author(s):** Benjamin Ross

**Advisor:** David Braden-Johnson

**Abstract:** The Grateful Dead were not just a rock band — they embodied an experimental form of artistic expression which was as intimately tied to the dynamic microcosms which they created through their live performances, settings which have been repeatedly described as facilitating the birth of existential communitas and catalyzing momentous mystical experiences of togetherness. The Dead’s music is heavily oriented around lengthy improvisational sections which routinely teeter between order and chaos, and its exploratory and expressionistic nature produce a distinctive synthesis with the listener in a live setting, particularly in the context of a massive dancing audience. Referring to the remarkably prolific pieces of academic writing published on the subject, I intend to investigate a philosophy of life which I suggest lies embedded within the heart of the Grateful Dead — as a communitas, a cultural phenomenon, an act of artistic creation, and above all else, a mystical experience.

**Title:** Investigation into the Philosophical Underpinnings of Copyright and Intellectual Property

**Author(s):** Starly Donati

**Advisor:** David Braden-Johnson

**Abstract:** Drawing from Karl Marx and Friedrich Engels to Peter Drahos, my presentation will address philosophical debates around the definition and use of intellectual property in the public domain with historical and contemporary examples. People enjoy art and benefit from medical research, and philosophical arguments that defend legal regulation of creative processes will affect both constituencies and practices. The concepts of intellectual property and the public domain deeply impact the domains of science and art, often in ways counter to the goals of incentivizing the creation of more creative works or medical advances. Since intellectual property is based in private ownership and the public domain is vital, I will argue that the length of copyright should be reduced or eliminated.

## Liminal Spaces: The Overlooked and Otherworldly (Senior Art Exhibit)

## Gallery 51, 5:00 – 7:00 PM

### Sponsor: Gregory Scheckler

Graduating senior Art Majors present 'Liminal Spaces: the Overlooked and Otherworldly.' This art exhibit showcases imagery and ideas of being between spaces or times, such as ending college and beginning life outside of school, or finding one's way through changes of the pandemic's impacts on our lives, to subtler states of being that are often overlooked or fantasized. Each student approaches these larger themes in different ways through their artworks. Eloise Baker's installation relates to hidden computer code made apparent through weaving; Tiffany Ferriera's collage-paintings pull together common elements from nature, living, and dying; Rachel Zemsky's imagery activates considerations of burn-out and recovery; whereas Deinara Seamans' colorful rabbits implore us to consider folklore passing through our attention; Joseph Vigiard's drawings imply dreams of the past and the future; and Delano Mill's comics detail stories of moving through revenge to difficult truths.

**Student Artists:** Eloise Baker, Tiffany Ferriera, Delano Mills, Deianara Seamans, Joseph Vigiard, Rachel Zemsky