

Beloit College Student Research Symposium, May 6,  
2021

8:50	<a href="#">Emily Kratz</a>	Moving to the Mainstream: Far Right Populist Rhetoric in France and the United States
9:15	<a href="#">Luis Rodriguez</a>	Unpacking the Parsley Massacre
9:40	<a href="#">Aryssa Harris</a>	Reagan, Rhetoric, and Racism: Presidential Speeches and the War on Drugs
10:20	<a href="#">Kyle Thompson-Taylor</a>	#FREETHDTHUC: Human Rights Violations & the Arbitrary Arrest of Vietnamese Pro-Democracy Activist Trần Huỳnh Duy Thức
10:45	<a href="#">Timothy Cotter</a>	Advocacy for Human Rights Defender Wang Yi
11:10	<a href="#">Cindy Chen</a>	Human Rights in China: The Case of Xu Zhiyong
12:20	<a href="#">Gabby Watson</a>	The Risk of China's Soft Power and Sharp Power Eroding Human Rights: A Case Study on Sino-Turkish Relations and Turkey's Shifting Position on Uighurs
12:45	<a href="#">Gisela Sarabia-Sandoval</a>	Reckoning with Genocide in Guatemala through Truth and Memory
1:10	<a href="#">Rajvi Thakkar</a>	Suicide as a Form of Protest
1:50	<a href="#">Anirudha Gajula</a>	Privatizing Agriculture in India
2:15	<a href="#">Sy Dragon</a>	Refugee Integration: Syrian Refugees in Neighboring or Close to Neighboring Countries
2:40	<a href="#">María Elvira López</a>	Building Community Resilience and Sustainability in the South of Quito, Ecuador
3:20	<a href="#">Erin Gallagher</a>	Why We Code-Switch: An Observational Case Study of a Legal Services Specialist
3:45	<a href="#">Aryssa Harris</a>	Racial Disparities in Arrests: The Search for Explanatory Variables
4:10	<a href="#">Lincoln Michelle Budasi</a>	Community Action's PREP and its Effect on Adolescent Sexual Health Knowledge, Attitudes, and Behaviors
4:35	End	
8:50	<a href="#">Walker Weyland</a>	Determining the Direction of Environmental Trilobite Migration
9:15	<a href="#">Henry Westly</a>	Establishing a Soil Health Baseline for Prairie Restoration
9:40	<a href="#">Delaney Leigh McCarthy</a>	Devonian Organic Matter Variability within the Appalachian Basin
10:20	<a href="#">Walker Weyland</a>	Making a Guide to the Common Fossils of the Wisconsin Ordovician
10:45	<a href="#">Sophie Glaubius</a>	Exploring Temperature Variation in Wisconsin Springs
11:10	<a href="#">Gabrie Simmons</a>	Life After Pandemic: Lessons from Post-Mortality Crisis German Skeletons
12:20	<a href="#">Mahima Sharma</a>	Using Data Mining Techniques for the Diagnosis of Chronic Kidney Disease
12:45	<a href="#">Phuc Hong Ngo</a>	A Performance Comparison of Three Machine Learning Algorithms for Leaf Recognition using the Text-Based Dataset
1:10	<a href="#">Wadood Alam</a>	Tracking Energy Consumption across Organizations via the Open Energy Dashboard (OED)
1:50	<a href="#">Adam Restrepo</a> ,	Fourier Transforms and Their Applications

2:15	<a href="#">Samantha Faruzzi</a>	The Leontief Input Output Model and the Linear Algebra Behind It
2:40	<a href="#">Brandon Washburn</a>	Derivation of the Black-Scholes Equation using Ito's Lemma
3:20	<a href="#">Julien de Channes de Jouvancourt</a>	Could Pythagoras Hear His Own Comma?
3:45	<a href="#">Bipin Gc</a>	Random Walks and Its Applications
4:10	<a href="#">Phuc Hong Ngo</a>	An Application of NEAT and HyperNEAT in Solving A Sliding Tile Puzzle
4:35	End	
8:50	<a href="#">Meg Kulikowski</a>	"We Shall Overcome," Again: A Case Study of Beloit College's 1969 and 1994 Black Demands
9:15	<a href="#">Eva Laun-Smith</a>	The Forgotten Demands: A Look at Beloit College's Black Activism in 1994 and 2015
9:40	<a href="#">Elsa Cournoyer</a>	Collective Otherness: Enclavement and Self-Essentialization in Jewish-American Communities
10:20	<a href="#">Greta Terfruchte</a>	Soviet Life Seen through Propaganda Posters from the Wright Museum
10:45	<a href="#">Lucy (Huixin) Li</a>	Chinese Trade Paintings in the Wright Museum's Collection
11:10	<a href="#">Lauren Woolf</a>	Lost and Found: The Wright Museum of Art on the Auction Block, 1979-1980
12:20	<a href="#">Qiongyi Feng</a>	Haunting Readerly Desire: Vampiric Reading, Writing, and Communication in <i>Dracula</i>
1:10	<a href="#">Lincoln Michelle Budasi</a>	Understanding Gender, Contraceptive Use, Sexual Activity, and Social Status in Relation to Menstruation on Beloit College's Campus
1:50	<a href="#">Elizabeth North</a>	The Role of Education in France in the Shift of La Laïcité
2:15	<a href="#">Rajvi Thakkar</a>	Bending Nature: Animals
2:40	<a href="#">Isabella (Ike) Johnson</a>	Embodied Agency and its Role in Healing
3:20	<a href="#">Sophia Francis</a>	Frailty and the 14th-Century Mortality Crises in Southeastern Germany
3:45	<a href="#">Lauren Woolf</a>	A Pavilion of One's Own: The Intersection of Transnationalism and Slavic Pride in the Career of Alphonse Mucha
4:10	<a href="#">Kyle Christopher Swinford</a>	The First Try: Allusions to Life in the Soviet Union
4:35	End	
8:50	<a href="#">Paw Wa Victoria</a>	Bursting the Bubble through International Virtual Internships.
9:15	<a href="#">Stella Obeng-Darko</a>	Virtual Internship and Professional Growth

9:40	<a href="#">Umang Garg</a>	Who attended Career Accelerator?
10:20	<a href="#">Ana Kohout</a>	Sustaining an Organization Focused on the Success of Students with Disabilities Post Graduation
10:45	<a href="#">Audrey Claire Daigneault</a>	Understanding of the Lack of Representation of Queer Identities Within Sexual Health Curricula
11:10	<a href="#">Lena Ramsey</a>	Not the Same: An Analysis on the Norm of Whiteness in Mental Health
12:20	<a href="#">Aminah Tatyana May Crawford</a>	Lockdown at the Dorms: A Descriptive Study of Beloit College Students and Covid-19
12:45	<a href="#">Emma Newsham</a>	The Interaction of OCD and the COVID-19 Pandemic
1:10	<a href="#">Isabel Mendoza</a>	Family Life During a Pandemic
1:50	<a href="#">Helen Griffin</a>	Reimagining the Bechdel Test for BIPOC Representation in Video Games
2:15	<a href="#">Galen Alaks</a>	Hearing Fear: A Composer's Talk on Horror in Music
2:40	<a href="#">Abby Bender</a>	Transforming (a person's) Character to (a play) Character
3:20	<a href="#">Alyssa Morris</a>	Pigment Synthesis Optimization and Color Quantification
3:45	<a href="#">Fabian Dauzvardis</a>	Lead Perovskite Semiconductors and their Place in Renewable Energy
4:10	<a href="#">Steven Soli</a>	Performing Scientific Research Through Zoom
4:35	End	

# Abstracts

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Sponsor: Yiheng Wu

2:15-2:40 [Zoom Link](#)

## Galen Alaks '21

Brookfield, Illinois

Major: Music  
Minor: Art History

### Hearing Fear: A Composer's Talk on Horror in Music

To many, music is a way of altering emotions. After a breakup, one may listen to a sad pop song to let their emotions flow freely. Calming music can help one focus on overwhelming homework assignments. Perhaps some energetic metal will accompany one's workout. Numerous emotions can be brought forth through music, but how often do we listen to music to experience fear?

Horror is not a genre of music in the same way as country or rock. Looking for horror music online will lead one either to horror movie soundtracks or to royalty-free music waiting to be used for horror movie soundtracks. Horror music is tied to horror visuals.

What if we changed that? Electronic composer Galen Alaks will present a composer's talk on a selection of his works and how they convey horror without a visual medium. He will discuss compositional tricks he uses to create horror in sound and the motivations behind his music.

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Sponsor: Steve Huss-Lederman

1:10-1:35 [Zoom Link](#)

## Wadood Alam '21

Lahore, Pakistan

Major: Computer Science  
Minor: Mathematics

### Tracking Energy Consumption across Organizations via the Open Energy Dashboard (OED)

Open Energy Dashboard (OED) is an open-source project which records and graphically displays the power consumption for any given organization. Due to the nature of this project, accommodating data in an organized and retrievable way using a database is an essential component of this project. My work in this project primarily consisted of the expansion and modification of the current database to enhance it for upcoming changes. Most of my work revolves around data coming in from meters, which gather the readings for electricity consumption, and writing test code to ensure that my code does what is expected. Alongside electricity consumption analysis, the project is expanding to track and analyze other sources of power as well, for example, natural gas. A component of this expansion consists of custom unit conversion. A thorough evaluation of numerous unit conversion packages was performed in which I carefully assessed the capabilities of the package to perform custom unit conversions and its ease of integration into the OED project. Packages were then shortlisted for final testing before integrating them into the project.

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Sponsor: Amy Sarno

2:40-3:05 [Zoom Link](#)

## Abby Bender '21

Portland, Oregon

Majors: Theatre Performance; Biology

### Transforming (a person's) Character to (a play) Character

The goal of this project was to explore how a theatrical character can be created from the experiences of a real individual, specifically looking at historical nonfiction playwriting. This play, titled *I May Have Killed but I'm Not Crazy*, follows the life of late 1800s serial killer, Jane Toppan and her psychological deterioration in an insane asylum. Preparation included reading the section about Toppan in *Fatal* by Harold Schechter, reading period newspapers about her crimes, reading the original court transcripts from her trial, and various other

internet articles. The piece works to transform Toppan's experience into a playable one woman script. The script is debuting as a staged reading performed by Sage Green and Amy Sarno, directed by Abby Bender. Come join to learn about history, people, and murder.

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Sponsor: Kate Linnenberg  
Morgan Worachek (Community Action, Inc.)

**Wright Museum, 4:10-4:35** [Zoom Link](#)

**Lincoln Michelle Budasi '21**

Mangilao, Guam

Majors: Biochemistry; Literary Studies

## **Community Action's PREP and its Effect on Adolescent Sexual Health Knowledge, Attitudes, and Behaviors**

Community Action, Inc. (CA) is a federal not-for-profit dedicated to creating pathways out of poverty for community members. The Wisconsin Rock and Walworth Counties CA branch has its headquarters in Beloit, WI. One of the many CA programs offered in Beloit is their Personal Responsibility and Education Program (PREP). PREP is free for low-income and/or minority adolescents, and provides the education and resources necessary to 1) reduce the risk of unintended pregnancy and the contraction of STIs/ HIV; 2) build and maintain all types of healthy relationships; 3) understand, develop, and practice financial literacy; and 4) increase self-efficacy.

This study evaluates the effectiveness of PREP on high school sexual health knowledge, attitudes, and behaviors, while also gathering PREP participants' sentiments and behaviors towards sexual health, and participant opinions on PREP's curriculum.

Data was gathered using in-person interviews with randomly selected 17-18 year-old PREP participants enrolled in CA's Fresh Start program. Participant demographics included a range of races/ethnicities, sexualities, sexual experiences, and family backgrounds.

Results suggest that PREP is effective in teaching participants about sexual health. Although participants agreed that the sexual health curriculum was helpful and important, they found the recognizing abuse curriculum the most helpful. Results suggest the following about PREP participant sentiments and behaviors towards sexual health: participants do not openly discuss sexual health with their families; the stigma surrounding STIs/HIV is prevalent; and high school students are not aware of sexual and mental health community resources. Results also suggest that in-person PREP is more engaging than online PREP, and that summer PREP is even more engaging than school year PREP.

Results on PREP's effectiveness will help coordinators know which areas in the curriculum need more or less emphasis. Participant opinions on PREP's curriculum and its inclusivity will provide coordinators with an unbiased evaluation which will lead to overall improvements. Results will also provide insight on PREP participants' sentiments and behaviors towards sexual health, and how these impact or have been impacted by their relationships with their families/ peers. These insights can help PREP coordinators, sexual health advocates, county representatives, and state legislators understand community sexual health opinions and needs.

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Sponsor: Tara Girard

**Career Works, Pearsons Hall, 1:10-1:35** [Zoom Link](#)

**Lincoln Michelle Budasi '21**

Mangilao, Guam

Majors: Biochemistry; Literary Studies

## **Understanding Gender, Contraceptive Use, Sexual Activity, and Social Status in Relation to Menstruation on Beloit College's Campus**

Menstruation is a biological cycle that involves vaginal bleeding and a plethora of health effects within vagina-owning individuals. This research aims to understand the experiences of menstruating Beloit College students, particularly how menstruation has impacted or been impacted by gender, contraceptive use, sexual activity, and social status.

Quantitative research data was gathered through an anonymous survey. Survey participants were

menstruating college students between the ages of 18-22 and of different genders. Qualitative research data was gathered through voluntary in-person and virtual interviews.

Research results suggest that menstruation experiences vary significantly across the Beloit College population. Menstruation has the ability to empower or inhibit gender identity; because of societal expectations of menstruation and gender, individuals who identify as non-binary, transgender male, genderqueer, and genderfluid may experience gender dysphoria because of their ability to menstruate. Menstrual product preference is based on bleeding, comfortability, living conditions, and/ or sustainability. Contraceptives have been used to help menstruation, but it has also positively and negatively affected menstruation in many individuals. Menstruation can impact sexual activity with partners because of physical discomfort, psychological discomfort, clean-up, and partner(s) unavailability. Participants agreed that menstrual products are expensive, marketed towards feminine interests, and should be free and provided by their college institution.

These results can aid on-campus resources and clubs like the Health and Wellness Center (HWC), the Sexual Health and Reproductive Choice Coalition (SHARCC), the Feminist Collective, and the Sexuality and Gender Alliance (SAGA) in their efforts to provide for the needs of menstruating students.

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Sponsor: Beth Dougherty

Wright Museum, 11:10-11:35 [Zoom Link](#)

## **Cindy Chen '22**

Boston, Massachusetts

Majors: Political science; Chinese language and culture  
Minor: Spanish language and culture

### **Human Rights in China: The Case of Xu Zhiyong**

Xu Zhiyong is a Chinese civil rights activist and former university law lecturer who, due to his activism, has been on the radar of Chinese authorities for almost two decades. From his representation of families during the 2008 Chinese milk scandal to his unofficial leadership of the reformist New Citizens' Movement, Xu's profile has only grown since the early 2000s.

In February 2020, after spending two months on the run as he criticized the Chinese government's response to the coronavirus outbreak, Xu was detained. In January 2021, Chinese authorities began investigating him for "subversion of state power." Having previously been arrested and imprisoned on the charge of "gathering crowds to disrupt public order" in 2014, he is looking at a long prison sentence.

In this presentation, I will discuss Xu's importance to China's human rights movement and the worsening crackdown on Chinese civil society, of which Xu's situation is symbolic. In addition, I will propose an advocacy campaign on his behalf that will coincide with the 2022 Winter Olympics.

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Sponsor: Beth Dougherty

Wright Museum, 10:45-11:10 [Zoom Link](#)

## **Timothy Cotter '22**

Chicago, Illinois

Majors: Chinese Language and Culture; International Relations

### **Advocacy for Human Rights Defender Wang Yi**

On 9 December 2018, Wang Yi and over 100 members of his congregation, including his wife Jiang Rong, were detained in a raid of their church, Early Rain Covenant Church. The church was unregistered with the Religious Affairs Bureau as required by the revised Religious Affairs Regulations released by the State Council of the People's Republic of China. Although some members were released within 24 hours, Wang Yi remained in police custody and was later charged by the Chengdu Intermediate Court with "inciting subversion of state power" and "illegal business activity."

This presentation discusses infringements on Wang Yi's human rights, the Chinese government's increased oppression of religious groups, and offers a set of recommendations and strategies to hold China accountable for its actions towards religious groups.

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## **Elsa Cournoyer '21**

Saint Paul, Minnesota

Majors: Religious Studies; Creative Writing

### **Collective Otherness: Enclavement and Self-Essentialization in Jewish-American Communities**

How is a Jewish identity conceptualized? And who should decide?

In an American context, with its emphasis on essentialism and identity politics, many Jewish individuals and communities have answered these questions by essentializing themselves and their Jewishness. The act of Jewish-American self-essentialization comes from fear of a loss of Jewish identity, and to some extent is a powerful tool to protect Jewish people and their lifeways and culture. However, self-essentialization is also informed by white, patriarchal power and is often used by those in closest proximity to that power to maintain norms. This paper explores the motivations for, and impacts and implications of, self-essentialization within the Jewish-American community, engaging with a variety of perspectives on Jewishness, the value of enclavement and its pitfalls, and the necessity of essentialism to maintain Jewish identity in a culture with a paradoxical obsession with the so-called "melting pot." Ultimately, this project questions the efficacy of self-essentialization as a tool to keep the most vulnerable Jewish-American community members safe from violence and disenfranchisement.

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Sponsor: Catherine Orr

12:20-12:45 [Zoom Link](#)

## **Aminah Tatyana May Crawford '21**

Beloit, Wisconsin

Majors: Education & Youth Studies; Critical Identity Studies

Minor: Spanish

### **Lockdown at the Dorms: A Descriptive Study of Beloit College Students and Covid-19**

The Covid-19 pandemic has changed the world. The pandemic has become the major source of people's anxieties because of its merciless ways. Covid-19 has killed over 500,000 people in the United States alone and 2.3 million globally. Accentuated as a new stressor event, it creates fear, worry, and anxiety for one's own and loved ones' health. It has constrained socializing and physical movement and has made new radical lifestyle changes for many people. However, Covid-19, while the biggest threat to our immediate physical health, has been accompanied by increased awareness of the long-standing endemic structural racism in the United States and a new Covid-19 recession that has disproportionately impacted Black, Indigenous, and communities of color. For my senior thesis in education and youth studies, I conducted a research project to offer an unfiltered picture of the personal struggles and collective angst held by Beloit College students due to the pandemic that has completely upended their college career plans.

My study looks at how Beloit College students have acclimatized to these three interrelated phenomena: Covid-19, refocus on structural racism, and Covid-19 recession. Students completed a survey that attempted to address how they have acclimated to the new policy changes in Fall 2020, their first semester back during the pandemic.

This presentation will go over a brief analysis of my findings regarding what students are experiencing, including their perceived stress levels. My research findings support specific preventions and intervention strategies for institutions like Beloit that will be vital in the pandemic's recovery phase and similar situations in the future.

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**Audrey Claire Daigneault '21**

Seattle, Washington

Majors: Psychology; Critical Identity Studies  
Minor: Studio Art

## Understanding of the Lack of Representation of Queer Identities Within Sexual Health Curricula

Depending on the state, a student can start some form of sexual health education in public schools by the fifth grade. This curriculum will typically continue in some form until the end of high school, getting more complex and multifaceted and incorporating issues such as mental health, drug use/abuse, healthy relationships, STD/I, contraceptives, reproductive health, and, of course, physical acts of sex. There are many flaws in the sexual health world to pick away, but my project aims to touch on the lack of representation of queer identities in most of these curricula. Too often, sexual health curricula are invested in gender binaries and heteronormativity, and they are primarily intercourse-based--meaning that the focus is on how a man and woman have sex. This approach means that queer folks and their mental, relationship, and physical health and well-being are ignored. This puts tens of thousands of kids at risk in areas such as contracting STD/I, abusive relationships, and sexual assault. My project looks at the difference between curricula from city and rural high schools, and will then compare this to rates among queer communities. This study will result in taking statements from queer folks who have grown up in small towns about their own experiences and a handbook on how to have queer sex.

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Sponsor: George Lisensky

3:45-4:10 [Zoom Link](#)**Fabian Dauzvardis '21**

Erie, Colorado

Major: Chemistry  
Minor: Physics

## Lead Perovskite Semiconductors and their Place in Renewable Energy

Perovskite solid solutions are of greatly increasing technological importance.  $(\text{CH}_3\text{NH}_3)\text{Pb}(\text{I}_{1-x}\text{Br}_x)_3$  perovskites have tunable color properties based on their chemical composition. The size and color is characterized by x-ray diffraction and visible spectroscopy. Their color matches the solar spectrum, and since they are semiconductors, they make a prime candidate as an emerging material for solar cells with higher efficiencies than the classic silicon photovoltaic cell. This talk presents the basics of solid solutions and semiconductors and how it applies to the chemical that was one of the major scientific breakthroughs of 2013 according to both *Science* and *Nature*.

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Sponsor: Paul Stanley

3:20-3:45 [Zoom Link](#)**Julien de Channes de Jouvancourt '22**

Petaluma, California

Majors: Physics; Mathematics

## Could Pythagoras Hear His Own Comma?

Ancient Eastern and Western music theorists predicted a small musical interval would occur when constructing a scale based on a circle of fifths. This interval, now known as the Pythagorean Comma, can clearly be discerned even by non musicians. This musical system however was an idealized mathematical construct. By examining the nature of ancient Greek and Chinese plucked instruments, we consider whether or not a sufficiently rigorous ear-based tuning system could have constructed a music scale that would have a discernible Pythagorean comma. We account for systematic tuning errors associated with string stiffness, amplitude induced pitch errors, finite observation time effects, and psycho-acoustic effects based on listener perception ability. The physical and technological limitations presented above make it unlikely that a Pythagorean comma would have been heard by the ancient Greeks.

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**Sy Dragon '21**

Los Angeles, California

Major: International Relations

**Refugee Integration: Syrian Refugees in Neighboring or Close to Neighboring Countries**

At the end of 2019, the United Nations High Commissioner for Refugees (UNHCR) recorded 26 million refugees, 73 percent of whom were hosted in neighboring countries. There are three durable solutions for refugees: integration, resettlement, and repatriation. Less than one percent of refugees are able to be resettled each year, and the protracted nature of domestic conflict in refugees' home countries means repatriation is unlikely in the short, and often long, term. Yet local integration is rarely considered as the first or ideal option, leaving refugees to languish in camps in their host countries. Given the protracted nature of many conflicts and of refugees' displacement, this system is under increasing criticism. By examining the efficacy of efforts to integrate Syrian refugees, this paper will argue that the option of integration combined with a right to work should be employed more. A common theme is that host countries with increased opportunities for refugees to access work and services have higher success rates of integration. Further, host countries that work together with the international community on long-term solutions tend to be more successful at integration than those focusing on short-term, unilateral implementations.

Sponsor: Ben Stucky

2:15-2:40 [Zoom Link](#)**Samantha Faruzzi '21**

Mundelein, Illinois

Major: Mathematics

Minor: Physics

**The Leontief Input Output Model and the Linear Algebra Behind It**

We will explore the Mathematics behind the infamous Leontief Input Output Model, most commonly used in Economics. The model, or the production equation, is given as  $x = Cx + d$  or  $(I-C)x = d$ , where  $x$  is the amount produced,  $C$  is the consumption matrix among the producers in an economy,  $Cx$  is the intermediate demand or demand from producers, and  $d$  is final demand or output demand.

While focusing on a small scale economy, we will see how this can be applied to a more realistic large scale economy to determine its required inputs for the two types of outputs, the intermediate demand and the final demand.

Sponsor: Tamara Ketabgian

Career Works, Pearsons Hall, 12:20-12:45 [Zoom Link](#)**Qiongyi Feng '23**

Chongqing, China

Major: Undeclared

**Haunting Readerly Desire: Vampiric Reading, Writing, and Communication in *Dracula***

Bram Stoker's *Dracula* (1897) is a vampiric book, not only because its subject is vampires, but also because even its tiniest details are tainted by a vampiric tinge and can be viewed through the narrative logic of vampirism. *Dracula* is a collage of various written shards: its narrative is structured as a collection of diaries, letters, telegrams, and newspaper clippings, and the interaction among characters relies on the circulation of these different media. In this sense, Stoker's characters are "writers" of their own novel. Meanwhile, all of these writers are predestined to "read" others' texts, which serve as the only means of communication in the novel.

In addition, my project broadens our definition of "vampiric reading" into a readerly desire shared with the audience of the book. Stoker brilliantly establishes a vampire-host relationship with his readers: on the one hand, he makes us voracious vampires who devour private texts with growing voyeurism; on the other hand, he transforms us into victims, whose drive to read is inspired by his thrilling writing and ageless vampiric icon -- *Dracula*.

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Sponsor: Leslie Williams

Career Works, Pearsons Hall, 3:20-3:45 [Zoom Link](#)

## **Sophia Francis '21**

Wilmette, Illinois

Majors: Anthropology; Russian  
Minor: Museum Studies

### **Frailty and the 14th-Century Mortality Crises in Southeastern Germany**

A series of devastating events occurred in Europe during the 14th-century, starting with the Great Famine, followed by the Great Bovine Pestilence, and ending in the Black Death; collectively, these events are known as the 14th-Century Mortality Crises (14CMC). This study examines if the 14CMC served as selection events, resulting in reduced frailty in Southeastern German populations. This was assessed through an analysis of dental calculus (an indicator of frailty) to see if severity, and thus frailty, decreased following the 14CMC. The complete dentition for individuals from four archaeological sites (Altenerding, Oberammerthal, Ochsenfurt, and Speinshart) were analyzed through photographs and dental inventories and scored for dental calculus severity. Although not statistically significant ( $N=167$ ,  $X^2$ ,  $P > 0.05$ ), there was a decrease in the prevalence of moderate-severe calculus, and age-based differences in calculus severity from the pre-14CMC sample to the post-14CMC. These results complement the results from the initial phase of this research carried out for the Pakula Biomedical Scholars in Summer 2020. More research, particularly larger samples, are needed to assess whether there was no change or a potential decrease in frailty following the 14CMC.

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Sponsor: Beth Dougherty

Wright Museum, 1:50-2:15 [Zoom Link](#)

## **Anirudha Gajula '22**

Hyderabad, India

Major: International Relations

### **Privatizing Agriculture in India**

In November 2020, throngs of farmers began to officially protest the set of agricultural bills that had been approved by the Indian Parliament and had gained the President's assent on September 27. Why did they protest? Evidently, the government is pushing for the privatization of the agricultural sector and is decreasing subsidization of food stocks. Research shows that privatization had a strong negative effect on agricultural output in Albania, Bulgaria, and Romania. This effect is primarily due to the decline in technical efficiency. Correspondingly, a majority of the small scale farmers who dominate the Indian agricultural sector do not have the infrastructure and resources to navigate the legal consequences of the new bills.

This paper examines global privatization enterprises similar to the one being implemented in India, including domestic case studies within the country. By examining past successes and failures, the paper showcases the possible scenarios that might arise in India. This paper also examines the possible consequences of increased competition in the labor market in the agricultural sector.

The key to establishing a middle ground between farmers and agribusiness firms is to focus government oversight on the extension of services aimed at educating farmers on doing business with firms. In doing so, farmers are protected from potential exploitation.

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Sponsor: Carol Wickersham

Wright Museum, 3:20-3:45 [Zoom Link](#)

## **Erin Gallagher '21**

Bartlett, Illinois

Major: Sociology

### **Why We Code-Switch: An Observational Case Study of a Legal Services Specialist**

There are some careers where the ability or subsequent inability to codeswitch could cost you your job. How could something so simple as saying the wrong thing in front of the wrong person affect one's ability to do their job effectively? As an intern shadowing a Client Legal Advocate at the Wisconsin State Public Defender's Office, I realized the possibility to be entirely true. I argue that code-switching is the most important skill for a client legal advocate to have. Codeswitching is the primary way by which CLAs gain candid stories and necessary

information from their clients, especially those who distrust the justice system in this country.

Language and communication come in a variety of forms, sounds, and patterns. Codeswitching is the ability to recognize these patterns and shifts and fit the scenario at hand. Effective communication and the ability to talk to people in ways that build rapport are integral in both the personal and professional spheres. There isn't just one way to talk to people. People use codeswitching everyday. Whether it's between meetings with colleagues at work and meeting friends at the bar, or between the way you speak with your parents as opposed to the way you speak with your professors- there's a different code that benefits one the most, according to the scene and the actors at play.

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Sponsor: Ellenor Anderbyrne

9:40-10:05 [Zoom Link](#)

## Umang Garg '22

Delhi, India

Major: Quantitative Economics

Minor: Chinese Language, Mathematics

### Who attended Career Accelerator?

Beloit College Career Accelerator offered students opportunities to attend remote site visits, network with panelists, and receive resume advice from a host of talented alumni and business professionals. This research project aims to analyze the RSVP and attendance data of the two-week-long event. Attendance data was collected manually and RSVP data was collected through the college's website (LiveWhale). I analyzed how effective the event was at reaching a wide audience. To derive richer conclusions, this data was cleaned and matched to student demographic information collected by the college using STATA. The study specifically explores how attendance at events varied by majors, class year, ethnicity, and athlete status. It also summarizes attendance by event theme and learning outcome tags. The results inform planning for next year's Career Accelerator. This research project was conducted as part of my on-campus position as a student analyst at the Institutional Research and Planning Office, and I will also discuss the learning opportunities the role offers.

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Sponsor: Mehmet Dik

3:45-4:10 [Zoom Link](#)

## Bipin Gc '22

Beloit, Wisconsin

Major: Mathematics

### Random Walks and Its Applications

This is an expository paper on the work of William Feller. William Feller was one of the prominent probabilists of his time. He has contributed immensely in the field of probability theory, and a part of that is covered in this paper.

The main focus will remain in Random Walks. Consider an object moving a unit step either left or right (one-dimensional). Random Walk is the study of the probability of this process. These walks pose intriguing properties. For instance, in case of random walks in one or two dimensions, the walk will always return to the initial position. Using the Central Limit Theorem, we shall show the importance of a one-dimensional random walk on the integer number line. Further, two applications of random walks are shown:

Solving the Classical Ruin Problem. We shall determine the probability of losing for a gambler betting sequentially and the duration of the game.

Comparing two dice board games: snake and ladder, and Ludo. We shall show how two seemingly different games actually fall in the same mathematical category.

Both of the above-mentioned applications describe sequentially one-dimensional random walks. We will further try to draw an abstraction between the two different processes.

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**Sophie Glaubius '21**

Wisner, Nebraska

Major: Geology

**Exploring Temperature Variation in Wisconsin Springs**

Variation in groundwater temperature can affect the health of spring dependent ecosystems. This study aims to examine relationships between the shape of a spring source, where groundwater emerges, and the variation in water temperature across a spring pool. Seepage filtration springs and fracture springs are two types of springs. Seepage filtration springs feature groundwater emerging from many small locations in a spring pool. Fracture springs are where groundwater emerges from a crack in the bedrock.

Ten springs were included in the study. Five seepage filtration springs are located in Dane County, Wisconsin, and five fracture springs are located in Wisconsin's unglaciated Driftless Area. Air temperature, water depth, spring discharge, and source area were recorded at each site. Dividing spring discharge by spring source area gives a spring flux value, which distinguishes highly focused spring flow from diffuse spring flow. Seepage filtration springs typically exhibit low spring flux values, and fracture springs have high spring flux values. Low spring flux is expected to correspond to a larger range of temperatures and high spring flux values are expected to correspond to a smaller range of temperatures in the spring pool. Thermal cameras can capture infrared images of the spring pool surface temperature. Temperature values were converted from each pixel of the thermal images to quantify spatial distribution. Histograms and summary statistics provide a visual and quantitative measure of the range of temperature values present in each spring. They reveal that seepage filtration springs generally have more spatial variation of temperature than fracture springs. Most of the seepage filtration histograms showed bimodal or multimodal distributions. Fracture springs generally have lower interquartile ranges and most histograms were unimodal. Generally, springs with lower spring flux values have a larger distribution of temperature across the spring pool and springs with higher spring fluxes have smaller distribution. This means that spring flux can be a useful indicator of temperature variation in springs.

Sponsor: Catherine Orr

1:50-2:15 [Zoom Link](#)**Helen Griffin '21**

St. Peters, Missouri

Majors: Anthropology; Sociology; Ancient Mediterranean Studies; Critical Identity Studies

**Reimagining the Bechdel Test for BIPOC Representation in Video Games**

During a time in which many people have lost access to their in-person communities, video games have been a path to creating virtual communities both in the platforms themselves and in discussion circles and fandoms. Like many storytelling mediums, however, there are certain identities left out of the narrative for most video games.

In response to this perceived lack of representation, this project seeks to reimagine the Bechdel Test (a measure of the representation of women in fiction films) to focus on BIPOC (Black Indigenous and people of color) representation in video games. Issues of representation as a baseline and not as necessarily indicative of a positive BIPOC experience will also be addressed.

Though due to time constraints, this early part of the research will only focus on a measure of single-player RPGs, the end goal of this endeavor is an easily-accessible test that can be applied to any video game for more insight into how well the developers executed a diverse and fairly representational game.

Sponsor: Rachel Ellett

Wright Museum, 9:40-10:05 [Zoom Link](#)**Aryssa Harris '21**

Champaign, Illinois

Majors: Political Science; Sociology  
Minor: Spanish**Reagan, Rhetoric, and Racism: Presidential Speeches and the War on Drugs**



The president of the United States is in a unique position. Often times the President is who we, as Americans, look to for information, inspiration, and guidance. With that being said, we, political scientists, understand that what the President chooses to speak about impacts what citizens deem important. It is also understood that the War on Drugs led to mass incarceration in the US and racial sentencing disparities. This research is taking these two concepts to understand how presidential rhetoric influences the language of the policies written during the War on Drugs. I am completing original research, with a focus on Ronald Reagan and his speeches.

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Sponsor: Charles Westerberg

Wright Museum, 3:45-4:10 [Zoom Link](#)

**Aryssa Harris '21**

Champaign, Illinois

Majors: Political Science; Sociology  
Minor: Spanish

## **Racial Disparities in Arrests: The Search for Explanatory Variables**

The eminent anthropologist Margaret Mead once called the city of Beloit “America in microcosm.” By this, she was referring to Beloit’s demographic make-up and the social problems it faced. When it comes to the issue of racial disparities in arrests and incarceration, Beloit is definitely a microcosm of America. A report by Rock County compiled in June of 2020 found clear racial disparities in arrests for disorderly conduct in Beloit. Black people represent 12% of Beloit’s population, yet they made up 45% of disorderly conduct arrests. Disorderly conduct is a particularly fruitful crime to use to study racial disparities because it relies heavily on police officers’ discretion in the decision of whether to issue the citation. Since October of 2020, I have been using Beloit Police Department data to examine every arrest that occurred for disorderly conduct in 2018 (n=518). I have created a database of over 25 variables for each arrest that allows me to provide a more nuanced picture of the racial disparity data. In my presentation, I will report on what I have found so far.

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Sponsor: Natalie Gummer

Career Works, Pearsons Hall, 2:40-3:05 [Zoom Link](#)

**Isabella (Ike) Johnson '21**

Saint Paul, Minnesota

Major: Religious Studies  
Minor: Health and Society

## **Embodied Agency and its Role in Healing**

How do patients suffering with depression assert embodied agency differently depending on the form of their treatment? In order to answer this question, this paper draws on two different approaches to healthcare—Western Biomedicine and the practice of Vodou—with a focus on the role of patient agency in the treatment of depression and in interactions with healthcare providers. This paper centers its argument about agency and treatment around the distinct relationship of resistance between the two healthcare approaches. In comparing these two approaches this paper does not aim to determine which is better, but rather to analyze the assumptions built into each approach, specifically identity-based power roles, regarding the agency of those who are treated. This paper discusses the different experiences of the spectrum of agency (from active to passive) as a part of our everyday lives, with particular attention to the impact of marginalized identities on experiences of agency. This spectrum of agency is especially evident in those practices we choose to embody—physical or mental practices to which we ascribe a positive state of being. This project focuses on the role of patient agency in the treatment of depression and in interactions with healthcare providers. By analyzing two distinct case studies, this paper demonstrates how power dynamics between the health system and the individual have ramifications for the individual body, and especially for bodies of color. These power dynamics infuse the ways in which we interact with medical systems, as well as the ways in which the systems shape us as patients.

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## **Ana Kohout '21**

Lake Forest, Illinois

Major: Education & Youth Studies and Interdisciplinary Major in Disability Studies

### **Sustaining an Organization Focused on the Success of Students with Disabilities Post Graduation**

I will present on how A Place For Us, a national, disabled student led organization that I started last year, is progressing and what our future plans are for sustaining it after I graduate. A Place For Us aims to create a virtual space for students with disabilities to connect, network, and empower one another through peer mentorship that spans from high school through college. A Place For Us has created a space of belonging, learning, and activism for students with disabilities nationally.

I will discuss how far we have come this past year, as we now have a website, twenty-four college mentors nationally, a Board of Directors, and have put on many successful virtual and international events! I will then lay out our plan for how we plan to expand our network and fully implement our mentorship program, receive nonprofit status, become more intersectional, and how A Place For Us will continue growing once I have graduated. Our end goal is to increase the number of students with disabilities who succeed in higher education and feel confident as they graduate from colleges and universities across the United States!

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Sponsor: Rachel Ellett

Wright Museum, 8:50-9:15 [Zoom Link](#)

## **Emily Kratz '21**

Normal, Illinois

Majors: Political Science; French

### **Moving to the Mainstream: Far Right Populist Rhetoric in France and the United States**

The last several decades have seen a rise in populist movements around the world, and especially a rise in right wing populist rhetoric in the past two decades since 9/11. Particularly in the context of the election and presidency of Donald Trump in the United States and the growing anti-European Union sentiment not only in the United Kingdom following the referendum to exit the EU but also in a variety of other European states, among them the Netherlands, Hungary, and France, the topic of right-wing populism and its implications has resurfaced for political scientists.

What are the similarities and differences between the populist rhetoric of Donald Trump and Marine Le Pen, the leading right wing populist in France? This comparative project reviews the literature on populism, far right political parties, and far right populist rhetoric to examine how such rhetoric has entered the mainstream political discourses since 2001. The goal is not to explain the electoral successes or failures of populist candidates and/or parties for either state, but rather to describe how far right rhetoric has shaped political debates and political parties. The presentation will include considerations about party structure and the role of the media in answering the research question.

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Sponsor: Katherine Johnston

Career Works, Pearsons Hall, 8:50-9:15 [Zoom Link](#)

## **Meg Kulikowski '21**

Garner, North Carolina

Majors: Literary Studies; Creative Writing  
Minor: History

### **"We Shall Overcome," Again: A Case Study of Beloit College's 1969 and 1994 Black Demands**

Between the Civil Rights Movement and the end of the 20th century, the United States saw the end of Jim Crow segregation laws, the passing of monumental civil rights acts and amendments, and growing hope for a post-racial society. Black students, in many ways, were at the forefront of institutional change, including at Beloit College.



The college's Afro-American Union presented a 12-point list of demands to the college faculty and administration in the spring of 1969. Their demands included creating courses centered on Blackness, hiring and recruiting Black faculty and students, and making living spaces for Black students on campus. Despite initial reluctance from College President Miller Upton's administration, the majority of the Black Demands were said to have been met. This period has been thoroughly researched by students and well-documented in the Beloit College Archives.

But only 25 years later, in 1994, the campus organization Black Students United created an eerily similar list of student demands for greater representation across campus—without knowing that the 1969 demands existed until after the fact. Although much had already changed on paper, these demands show that Beloit's Black students faced similar institutional problems to those on campus during the Civil Rights era.

This project aims to narrow the gap in knowledge of student protest after the Civil Rights Movement at Beloit College. I will identify the similarities and tension between the institutional strides said to be made between the 1969 and 1994 demands and what actually changed for students over this period. By combining archival college resources, oral histories, and scholarly research, I hope to highlight the contradictions and limitations of racial reform at Beloit College—against a backdrop of what's seen as a period of great national change.

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Sponsor: Katherine Johnston

Career Works, Pearsons Hall, 9:15-9:40 [Zoom Link](#)

**Eva Laun-Smith '21**

Beloit, Wisconsin

Major: History

## **The Forgotten Demands: A Look at Beloit College's Black Activism in 1994 and 2015**

The 1960s were a period of great change, socially and politically, for many Americans. This activism did not end after the passing of the Civil Rights Act of 1964, but rather increased as conditions stagnated, despite legislation being made to create "equal" conditions. Students in particular operated within a microcosm of national incidents, whether consciously or subconsciously, which forced Black students to become activists and demand change on their seemingly unchanging campuses.

Notably, in 1969, Black students at Beloit College released a set of 12 Black Demands. These demands contained the frustrations of these students, who were operating within an institution that was built on catering to white academics and students. Black students demanded increased representation amongst faculty, spaces for Black students to gather, as well as more recruitment efforts for Black students.

Although these demands were thought to have been "won," subsequent demands were released in 1994, 2015, and more recently 2020; however, when discussing Beloit College's Black Demands, most of the attention is drawn to the 1969 Demands. The lack of research and preserved documentation of both the 1994 and 2015 Demands creates the illusion that student activism at Beloit was momentary when, in actuality, it is a continuous aspect of Black student life.

This project will interrogate why the 1994 and 2015 demands may have been side-lined in the historic record at Beloit College, and it will identify factors that contribute to continued Black student activism despite the issuance of successive demands, allegedly met by Beloit College.

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Sponsor: Joy Beckman

Career Works, Pearsons Hall, 10:45-11:10 [Zoom Link](#)

**Lucy (Huixin) Li '21**

Beijing, China

Major: Art History  
Minor: French

## **Chinese Trade Paintings in the Wright Museum's Collection**

In the late 18th century the Qing Emperor designated Guangzhou as the only trade port of Qing dynasty China, making it a center of international commerce and cultural exchange. Merchants from various countries

gathered in Guangzhou. In this environment, a hybrid style of Chinese painting developed.

The Wright Museum holds a collection of 18th-century Chinese paintings that illustrates the manufacture and trade of porcelain. Produced in Guangzhou, the paintings are interesting examples of Chinese artists using western techniques and materials. In this research, I examine the hybrid nature of these paintings, comparing them with contemporary Chinese folk paintings, French prints, neoclassical paintings, and British watercolors and aquatints. Through a close examination of these eight pieces, I will argue that they combined these different styles to create a new hybrid style.

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Sponsor: Pablo Toral

**Wright Museum, 2:40-3:05** [Zoom Link](#)

**María Elvira López '21**

Quito, Pichincha, Ecuador

Majors: Environmental Studies; International Relations; Russian Language and Culture

## **Building Community Resilience and Sustainability in the South of Quito, Ecuador**

A quick drive across the city of Quito reveals the stark inequality that exists between its north side and the south side. The type of infrastructure, organization, and landscaping changes dramatically from north to south. As a northern Quiteña, the south's cramped concrete facade has always served as a reminder of my own privilege and of the uncomfortable legacy of social stratification and racism left behind from Ecuador's colonial history. The city was designed from its very conception to accentuate social divisions, allowing those in power to funnel institutional resources to the north while ignoring the south. This has not only had social implications, but also very severe environmental consequences. I decided to involve myself in a project called Ayriwa to help address these socio-environmental injustices and create a more inclusive and resilient city.

The Ayriwa project is based in one of the south's most stigmatized neighborhoods, Lucha de los Pobres, and consists of a series of interactive workshops meant to strengthen community resilience through the implementation of sustainability practices such as waste management, food sovereignty, and socio-ecological well-being, culminating in the production of individual vegetable gardens by each participant. My contribution to the project was creating "eco-blocks," defined as neighborhood organizations organized to improve the environmental and health conditions of their block along the lines discussed at the workshops. I developed this idea as a capstone proposal project for my ENVS 380 Senior Colloquium in fall 2020 and presented it to the Quito chapter of WWF Youth Community. In spring 2021, I worked with them as well as with the community to adapt my capstone proposal to their needs and began implementing it. This opportunity has allowed me to put to work the environmental justice education I received at Beloit and start charting the path for my future professional career.

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Sponsor: James Zambito

**9:40-10:05** [Zoom Link](#)

**Delaney Leigh McCarthy '21**

Minneapolis, Minnesota

Major: Geology

## **Devonian Organic Matter Variability within the Appalachian Basin**

The Devonian Plant Explosion, when plants increased in diversity and abundance during the Middle to Late Devonian, is known to have had a wide range of effects on the Earth System. Terrestrial floral ecosystems went from rock-covering moss to multi-storied forests with trees reaching up to 30 meters high. Previous studies have proposed a relationship between the newly evolving forest ecosystems, soil formation, and nutrient runoff to oceans with ocean anoxia, black shale deposition, glaciation, and mass extinction during the Middle to Late Devonian. This shift, which increased nutrient flux into nearby oceans, resulted in a global increase in black shale deposition.

Two hypotheses related to the expansion of forests were tested using weight percent organic carbon and organic carbon isotopic analysis of samples from a 553km transect, consisting of three localities in the Appalachian Basin from the Middle-Late Devonian (Givetian-Frasnian). The first being that as proximity to open-ocean settings increases, terrestrial biomass decreases. The second is that terrestrial organic matter input to marine settings will increase through time as forests expand. Carbon isotope results show that terrestrial biomass does indeed decrease as proximity to open-ocean settings increases. Terrestrial organic matter through

time appears to be increasing, although the pattern is overprinted by both Devonian sediment supply changes and modern carbon contamination of outcrop samples.

Humans today are drastically changing the carbon cycle and are thought to have initiated the current mass extinction. The results of this study provide a baseline for understanding how an abrupt carbon cycle change affects the lithosphere, atmosphere, and biosphere. Furthermore, by comparing the rates and magnitudes of carbon cycle changes in the past to those occurring today, we can better predict the future effects of anthropogenic (human impact on the environment) climate change.

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Sponsor: Suzanne Cox

**1:10-1:35** [Zoom Link](#)

## **Isabel Mendoza '21**

Huntley, Illinois

Majors: Psychology; Spanish  
Minor: Health & Society

### **Family Life During a Pandemic**

The 2020 pandemic, COVID-19, created a scene where businesses, schools, and other aspects of life came to a halt, forcing everyone inside their homes with stay-at-home orders. During this time, parents have had their work responsibilities plus the added task of having to assist their children with their school work beyond what typical after-school homework involves (Griffith, 2020; Humphreys et al., 2020). Moreover, the ongoing COVID-19 pandemic disrupts both the parent and the children's schedules, resulting in a change in routines that is especially difficult for children and may impact their education (Humphreys et al., 2020). With an increase in parents' exposure to their children, parental beliefs are now more critical than ever in regards to providing quality support with their children's schoolwork. Additionally, the level of stress parents experience in their day may or may not impact the quality of effort they provide in assisting their children with their academics.

To investigate the impact of parental stress levels and parental beliefs on the quality of involvement parents provided their children during the ongoing pandemic, I surveyed, interviewed, and observed parents and school-aged children. Parent and child surveys were sent out via social media. The parent survey included questions about demographic background and experiences of stress. The child survey included the child's assessment of the quality of parental involvement in homework. The parent survey provided the option to participate in an interview and a recorded interaction. Those parents who provided interest in and contact information were invited to participate in an interview and recorded parent-child interaction. Preliminary findings from the study will be described on symposium day.

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Sponsor: Kristin Labby

**3:20-3:45** [Zoom Link](#)

## **Alyssa Morris**

Aurora, Illinois

Major: Biochemistry  
Minor: Studio Art

### **Pigment Synthesis Optimization and Color Quantification**

The earliest artists practiced chemistry. From grinding rocks and extracting plant dyes to synthesizing compounds, chemistry and art go hand in hand to provide colors used in everyday life and works of art. Pigments are insoluble particles with distinctive color achieved through a variety of mechanisms, often involving interaction with visible light. My Honors Term research project entails the synthesis of Prussian blue, madder lake, and malachite pigments. These pigments were selected for their safety, low toxicity, and simple procedures for use in the undergraduate teaching lab. The protocols for the synthesis of these pigments have been optimized to limit waste, yet yield enough for analysis and painting (two-three grams). Areas of optimization included details of filtration, stirring, and recipe (starting material ratios). Carmine lake, alizarin lake, and verdigris were also synthesized but would not be ideal for the teaching lab because of poor yield or color similarity. In future CHEM 225/MUST 295 Instrumental Analysis courses, students will be able to use these optimized synthesis procedures to make artists' pigments and analyze their composition by infrared spectroscopy, nuclear magnetic resonance spectroscopy, and X-ray diffraction. Students can use synthesized pigments to create color wheels and quantify the color of the paint using reflectance spectroscopy. Color

quantification is important for the standardization of color, as people perceive color differently and color effects can change under different conditions (e.g., lighting). This work benefits me by allowing me to develop my independent research skills and benefits future students in these courses.

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Sponsor: Gregory Buchanan

12:45-1:10 [Zoom Link](#)

**Emma Newsham '21**

Evanston, Illinois

Major: Psychology  
Minors: Cognitive Science; Health and Society

## **The Interaction of OCD and the COVID-19 Pandemic**

Obsessive Compulsive Disorder (OCD) is a type of anxiety disorder in which a person experiences obsessions, or recurrent unwanted thoughts and sensations, that drive them to engage in compulsions, or repetitive actions and behaviors (APA, 2017). A common type of OCD, obsession over fear of contamination, can result in cleaning compulsions aimed to relieve this stress and fear of contamination. These obsessions and compulsions can significantly interfere with a person's daily activities and social interactions, and are often extremely debilitating (APA, 2017).

The virus that causes COVID-19 most often spreads through exposure to respiratory droplets (CDC, 2020); however, while it is less common for COVID-19 to spread through contact with contaminated surfaces (CDC, 2020), many people continue to wipe down groceries and packages, and have begun to constantly deep clean and sanitize their home and belongings. This cleaning practice, or sanitation theater, can reduce contamination related stress and anxiety, even if it does little to mitigate the spread of COVID-19 (Judkis, 2020).

This study examines the relationship between OCD and COVID-19 related habits and anxiety in a sample of American adults. Through an online survey as well as a few follow-up interviews, I compared participants' common obsessions and compulsions from before the start of the COVID-19 pandemic (before March 2020) to the current date (after March 2020). I expected there to be an increase specifically in checking and contamination obsessions/compulsions. Researching this information allows us to better target relief methods and gives greater insight into which specific groups may need additional support during COVID-19 times.

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Sponsor: Mehmet Dik

4:10-4:35 [Zoom Link](#)

**Phuc Hong Ngo '23**

Can Tho City, Vietnam

Majors: Computer Science; Math

## **An Application of NEAT and HyperNEAT in Solving A Sliding Tile Puzzle**

Neuroevolution is a set of algorithms that use evolutionary algorithms to optimize neural networks without much domain knowledge. We analyze Neuroevolution of Augmented Topologies (NEAT) and its extension HyperNeat in this paper. NEAT evolves both the topology and weight values of a network along with novel ideas of applying speciation, tracking genes, and evolving from simple structures. HyperNEAT uses similar techniques to evolve networks but instead of using direct graph encoding as in NEAT, it uses indirect graph encoding. We use a stochastic single-player game, 2048, as the benchmark problem to compare two algorithms' performance. Even though the game is simple, it has the random factor that may pose a challenge in finding a strategy to achieve a high score. The paper analyzes the strategy and the performance of NEAT and HyperNEAT in 2048 with different parameter settings. Furthermore, code and future work are specified at the end of the paper.

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Sponsor: Donghwoon Kwon

12:45-1:10 [Zoom Link](#)

**Phuc Hong Ngo '23**

Can Tho City, Vietnam

Majors: Computer Science; Math

## **A Performance Comparison of Three Machine Learning Algorithms for Leaf Recognition using the Text-Based Dataset**

Machine learning is widely used for classification in various fields. In this research, we compared and analyzed the performance of three popular machine learning classifiers such as KNN, SVM, and ANN, using the leaf dataset. The original dataset was preprocessed, and the feature selection technique was used to divide the preprocessed dataset into two different types of the dataset. According to experiments, the ANN classifier showed 76.18% of accuracy when all the features were employed, and it outperformed other classifiers. However, when partial features were employed, the SVM classifier showed 73.31% of accuracy that outperformed other classifiers.

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Sponsor: Natalie Gummer

Career Works, Pearsons Hall, 1:50-2:15 [Zoom Link](#)

## **Elizabeth North '21**

Renton, Washington

Majors: Religious Studies; French  
Minor: Philosophy

### **The Role of Education in France in the Shift of La Laïcité**

This presentation examines the role that education has played in redefining the purpose of secularism (la laïcité) in France. There has been a shift in the meaning of secularism in France from Enlightenment thinking about separating the government from Catholicism to recent efforts that equate secularity with a white national identity; public education has played a central role throughout this process.

With the rise of secularism in France came the creation of public education as a way to discourage citizens from voting for a Catholic government. Now, public education is a site of conflict surrounding the secular in France and is used as a tool for France to uphold a white national identity with its roots in Islamophobia. The example of the veil demonstrates how and why education has become a site of ongoing conflict in France surrounding la laïcité.

The conflicts surrounding the veil have been very prominent in public schools following the 2004 ban of conspicuous religious symbols in public in France. The distinction between public and private spheres and the differentiation of “conspicuous” and “inconspicuous” religious symbols both demonstrate the role that education has played in this shift of the meaning of secularism.

This presentation looks specifically at France, however, it sheds broader light on the role of secularism in the state and the effect of secularism on those (both citizens and states) who do not fit into the secular agenda.

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Sponsor: Elizabeth Brewer

9:15-9:40 [Zoom Link](#)

## **Stella Obeng-Darko '22**

Accra, Ghana

Major: Quantitative Economics  
Minor: Computer Science

### **Virtual Internship and Professional Growth**

During the fall Semester of my junior year, I partook in an internship with a property management firm in London, UK. With the current job outlook seemingly virtual, I wanted to use this opportunity to gain some skills that can prepare me for a career where I might not work in an office. My goal was to gain general knowledge of the industry and overall business ethics.

I will take you through what my daily tasks looked like and how the job met some of my expectations beforehand. We'll get a breakdown of the positive aspects and also what can be improved, in my opinion. I will analyze how it might compare to an in-person experience instead.

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**Lena Ramsey '21**

Chicago, Illinois

Majors: Psychology; Critical Identity Studies

**Not the Same: An Analysis on the Norm of Whiteness in Mental Health**

The way that mental disorders are categorized and the required symptoms a person needs to show in order to be considered as having that disorder is based on white experience. The DSM, *Diagnostic and Statistical Manual of Mental Disorders*, is praised as being the "bible" of psychology and is used throughout the world; however, it can offer a very limited view of mental disorders. People do not always present in the same way because everybody's experiences differ. People of color do not always have the same presentation for a mental disorder as it has been represented in the manual, which can lead to a misdiagnosis, further mental health struggles, and biased views of people of color who might be living with these disorders. ADHD does not necessarily present the same way in Black people as in white, and depression does not present the same for Japanese people.

My research aims to look at the spread of white standardization in mental health and how it has affected people from different communities and cultures. This presentation will offer a brief view of my findings to convey that there cannot be one lens that we look through in order to diagnose mental disorders, especially for people of color or different cultures, as it is not an accurate representation of their mindsets or experiences.

Sponsor: Ben Stucky

1:50-2:15 [Zoom Link](#)**Adam Restrepo '21**

Peoria, Illinois

Major: Mathematics

**Saugat Pandey '21**

New Delhi, India

Majors: Computer Science; Mathematics

**Fourier Transforms and Their Applications**

Have you ever wondered how an audio file with lots of noise can be processed to make it sound better? What about fuzzy images which look sharp after a little editing? It turns out that the Fourier series and Fourier transform can play a big role in these processes by identifying specific frequencies. In this talk, we will explore the construction of these useful mathematical tools and highlight some practical applications.

Sponsor: Beth Dougherty

Wright Museum, 9:15-9:40 [Zoom Link](#)**Luis Rodriguez '23**

Santo Domingo, Dominican Republic

Majors: Philosophy; Political Science

**Unpacking the Parsley Massacre**

For four days in October 1937, over 20,000 Haitians were killed in the Dominican Republic at the hands of Dominican authorities and civilians. The killing is known as "Operation Parsley" or the Parsley Massacre because, when in doubt, the perpetrators would test the "Dominicanhood" of their potential victims through the pronunciation of the word "parsley." "Operation Parsley" was also the name given to the operation when it first began in 1937. Dominicans and Haitians in the border region intermingled with each other, however, the Massacre changed all of that. Dominican leader Rafael Leonidas Trujillo propagated a new anti-Haitian ideology and successfully covered up the massacre, using fear to suppress the testimony of the residents around the area where the killing took place. Education in the Dominican Republic today either does not mention or barely touches on the subject. This presentation will explore the perpetrators' motivation and the responses of the domestic and international community. Lastly, I will describe the testimonies of the victims that lived through the Parsley Massacre and how these can help deconstruct lies that spread during the time of the killings.

Sponsor: Beth Dougherty

Wright Museum, 12:45-1:10 [Zoom Link](#)

## **Gisela Sarabia-Sandoval '22**

Milton, Wisconsin

Major: International Relations

Minors: Latin America and the Caribbean; Chinese Language & Culture

### **Reckoning with Genocide in Guatemala through Truth and Memory**

From the 1960s to 1996, Guatemala was scarred by a 36-year civil war. The Commission for Historical Clarification (CEH) concluded that 93% of human rights violations during the war were committed by the Guatemalan government against the Mayan people, a major indigenous group in the country. The CEH estimated 200,000 people were killed or disappeared; 80% of these were Mayan and 17% were Ladino (mixed Spanish-Indigenous descent). The Guatemalan government believed that the Mayans were natural allies of the guerillas, and launched systematic massacres to eliminate guerillas and civilians. My research investigates the actions taken to transition from a three-decade war to peace, as well as the national and international agreements to bring peace to the Mayan community. While Guatemala has used a variety of transitional justice methods, I focus on the work of truth commissions to foster historical clarification of the past and reconciliation within society in the present.

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Sponsor: Eyad Haj Said

12:20-12:45 [Zoom Link](#)

## **Mahima Sharma '21**

Kathmandu, Nepal

Majors: Computer Science; Mathematics

### **Using Data Mining Techniques for the Diagnosis of Chronic Kidney Disease**

Chronic Kidney Disease (CKD) is a growing global health problem that is associated with high healthcare costs and a high mortality rate. Earlier diagnosis is very important since CKD is irreversible in nature. However, its symptoms are difficult to detect until later stages. Data mining techniques can aid physicians in the timely diagnosis of CKD and change the trajectory of the disease's progression. With this goal in mind, five machine learning algorithms- decision tree, random forest, support vector machine, artificial neural network, and a stacked hybrid model- were used to establish CKD diagnostic models. Then, cluster analyses were carried out to identify common trends in the positively diagnosed samples and to answer whether the clusters conform to the clinical stages of CKD.

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Sponsor: Tawnya Cary

11:10-11:35 [Zoom Link](#)

## **Gabrie Simmons '22**

Kenosha, Wisconsin

Major: Biology

Minor: Spanish

### **Life After Pandemic: Lessons from Post-Mortality Crisis German Skeletons**

The 14th-century mortality crisis was a time of great stress for the medieval Germans. These crises included warfare, extreme environmental changes, famine, and the Bubonic Plague. Stress has been associated with inflammatory diseases, such as periodontitis. This study investigates the prevalence of periodontitis from skeletons curated by Staatssammlung für Anthropologie und Paläoanatomie München (n = 86), from early modern Germany. The results revealed that there was no association between periodontal disease and stress in this sample ( $\chi^2=0.59$ ,  $df=1$ ,  $\alpha>0.05$ ), but there was a significant association between periodontal disease and age ( $\chi^2=0.01$ ,  $df=4$ ,  $\alpha$

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Sponsor: Yaffa Grossman

4:10-4:35 [Zoom Link](#)

## **Steven Soli '22**

Cary, Illinois

Major: Biology

Minor: Chemistry

### **Performing Scientific Research Through Zoom**



I joined a virtual research team at King's College Hospital Clinical Biochemistry and Pathology (London, England). Previous research had found a possible correlation between BMI and Covid-19 infection severity. We examined whether patient BMI affected Covid-19 infection severity. Furthermore, we examined if BMI increased or decreased infection severity. I interpreted data gathered by hospital staff on BMI, age, gender, Intensive Care Unit need, days in hospital, and if the patient died in the hospital or shortly after discharge. Patients were categorized using BMI as Normal (BMI less than 30), Obese (BMI range 30 to 39), and Morbid Obese (BMI greater than 40). Initial evaluations were performed using mean, standard deviation, and confidence intervals. Further analyses were completed using nonparametric statistical tests. We found that BMI affected Covid-19 infection severity. Morbid Obese patients had the highest chance of hospitalization but not death. We also found that the mean age for the Morbid Obese patients was the youngest of all categories. We recommend further exploration of this relationship.

My remote internship was done through CAPA International, which placed me with the Clinical Biochemistry and Pathology team at King's College Hospital in London, England. I overcame my initial nervousness by actively communicating with the instructors, site, and regional advisors. Communication involved email chains and periodic Zoom meetings. As an intern, I found that one must go by the supervisor's schedule, which entailed meetings at 4 and 6 am, requiring diligence and maintenance of a strict schedule. I learned about cultural intelligence and also developed my professional portfolio through mock interviews and classes. The biggest takeaway from this internship was learning how to tell my experiences and what I've gained as an interesting story.

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Sponsor: Olga Ogurtsova

Career Works, Pearsons Hall, 4:10-4:35 [Zoom Link](#)

**Kyle Christopher Swinford '21**

Schaumburg, Illinois

Majors: International Relations; Russian Language and Culture

### **The First Try: Allusions to Life in the Soviet Union**

This presentation will explore allusions to life in the Soviet Union depicted in the novella "The First Try" by Victoria Tokareva. The novella deals with a life story of a woman who lived through the Great Patriotic War and Perestroika. The novella offers allusions to the life of everyday people in the Soviet Union which were all tied to politics during the era. I will combine the knowledge which I have gained working on my two majors--International Relations and Russian--to examine these allusions to life and politics in the Soviet Union. Since life in the Soviet Union was behind the Iron Curtain, the West did not know of the life conditions of Soviet citizens. The presentation will cover the events of the War, Stalinist oppression, Khrushchev's "Thaw," the period of stagnation, and Perestroika. I will examine the changes in life in those periods, as well as how Russian culture was influenced by the Soviet system.

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Sponsor: Donna Oliver

Career Works, Pearsons Hall, 10:20-10:45 [Zoom Link](#)

**Greta Terfruchte '21**

Bloomington, Illinois

Majors: Russian; Comparative Literature

### **Soviet Life Seen through Propaganda Posters from the Wright Museum**

The Soviet Union employed propaganda as a means of education in order to inculcate into the masses the ideas that would shape the next generation of new Soviet men and women. Though the effectivity of the propaganda poster as a persuasive tool is dubious, the posters remain informative to a 21st century viewer curious about what was valued in Soviet society and what that society expected from its citizens--not to mention that the works themselves are fascinating, funny, and aesthetically compelling.

Over the last two semesters I have worked on cataloguing three sets of Soviet propaganda posters belonging to the Wright Museum of Art. The cataloguing process has involved translating the posters, composing a concise commentary of each poster to aid the viewer, and writing a short introductory essay for each set explaining its context. All three sets of posters are from the 1970s period and each set centers on a different theme. The propaganda posters in the first set criticize religion in order to promote the Soviet concept of "scientific atheism." The second set portrays the ills of capitalism, arguing the superiority of the Soviet model. The third set

advocates environmentalism, showing the benefit of eco-consciousness for the environment as well as the individual. Many of these works comment, explicitly or implicitly, on the relationship of the Soviet Union with the West.

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Sponsor: Natalie Gummer

Career Works, Pearsons Hall, 2:15-2:40 [Zoom Link](#)

**Rajvi Thakkar '21**

Mumbai, India

Majors: Religious Studies; International Relations

## **Bending Nature: Animals**

How does the modern concept of “the human” create avenues for the exploitation of animals? The modern concept of “the human” relies on the radical separation between “human” and “animal” to reinforce us as the ultimately privileged entities. This paper examines some of the symbolic and practical uses of animals in human society and the ways in which animals are exploited in our attempt to transform nature and establish our dominance. This paper explores the social construction of “animals” to examine human attitudes towards them revealing ideological assumptions in everyday discourse that privilege the human. It explores connections among speciesism, the assumption that humans are the ultimate privileged entities leading to the exploitation of animals, and other “traditional” forms of prejudice such as racism, casteism, and sexism. Emphasizing the importance of not compartmentalizing inequalities, this tendency to treat animals as intrinsically less valuable than ourselves reveals that forms of oppression depend upon and mutually reinforce the other. Finally, this paper considers whether and how the recognition of certain animals as “non-human persons,” redeemed to be sufficiently like “us,” blurs the categorical separation between “human” and “animal.”

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Sponsor: Beth Dougherty

Wright Museum, 1:10-1:35 [Zoom Link](#)

**Rajvi Thakkar '21**

Mumbai, India

Majors: Religious Studies; International Relations

## **Suicide as a Form of Protest**

Why do people choose to commit suicide as a form of protest? This paper explores public perceptions toward suicide protest in contemporary Indian society. In the landscape of Indian culture, both fasting and self-immolation are rife with ritual significance across several different traditions. This paper evaluates the legacy left behind by those who have committed suicide as a form of political protest and possible instances of individuals being mythologized. Finally, the paper takes a look at Potti Sriramulu, who undertook a hunger strike for the creation of the state of Andhra Pradesh in 1952, and the Mandal Commission Protests of 1990, where anti-reservationists self-immolated to protest the government’s decision to grant government jobs based on an individual’s caste rather than merit. These cases will be used to assess whether the speed of the death and the level of suffering endured impact policy outcomes and policy shifts differently. This paper examines (1) the success and failure of suicide protest as a tactic employed by political movements, (2) if it is an effective form of political mobilization in the liminal space between violence and non-violence, and (3) if suicide protest is indicative of alarming levels of political despair within the fabric of the state.

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Sponsor: Beth Dougherty

Wright Museum, 10:20-10:45 [Zoom Link](#)

**Kyle Thompson-Taylor '22**

Cincinnati, Ohio

Major: Political Science  
Minor: Music

## **#FREETHDTHUC: Human Rights Violations & the Arbitrary Arrest of Vietnamese Pro-Democracy Activist Trần Huỳnh Duy Thức**

Trần Huỳnh Duy Thức is a Vietnamese human rights and pro-democracy activist who is serving a 16-year prison sentence for “activities aimed at subverting the peoples’ administration.” Mr. Trần’s sentence is the longest ever given to a political dissident in Vietnamese history. Trần has continued his activism from behind bars, protesting the treatment of prisoners through hunger strikes. His most recent hunger strike lasted 72 days.

Trần's case is not unique for political dissidents in Vietnam; there are currently more than 130 political prisoners in the country. Since 2019, arbitrary arrests of activists have been on the rise in Vietnam. The Communist Party of Vietnam holds a monopoly on political power, repeatedly using this power to violate the civil and political rights of the Vietnamese people.

Using materials created by Mr. Trần's family, Amnesty International, and other activists, I developed an advocacy strategy that could be used on his behalf. The strategy centers around the upcoming anniversary of Trần's arrest on May 24th and brings together many of Trần's previous advocates. This strategy also places pressure on the Vietnamese government through the use of social media and a letter-writing campaign from the international community.

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Sponsor: Elizabeth Brewer

**8:50-9:15** [Zoom Link](#)

**Paw Wa Victoria '22**

Milwaukee, Wisconsin

Major: Biochemistry

## **Bursting the Bubble through International Virtual Internships.**

Although virtual internships cannot substitute the in-person experience of being physically on-site, they effectively provide professional development and the skills necessary to work internationally, whether virtually or in person. The Beloit Integrated Learning Outcomes will be used to assess my internship experiences' effectiveness to "replace" my intended enrollment in Glasgow's pre-med program in Scotland. I will dive into the complications and benefits of interning abroad virtually through evaluating my role as an intern for the two non-profit organizations I worked with. As the two locations are very different regarding the issue they tackle and how the organization is structured, the development of my cultural competency with each experience will also be examined.

The first organization I worked with was the Australian Association of Psychologists Inc. (AAPi), based in Melbourne, Australia. AAPi represents psychologists to the government and to funding bodies. AAPi offers professional development opportunities for the members, aims to increase recognition for psychological expertise, and supports different pathways to registration as a psychologist. Through this experience, I gained insight into the Australian healthcare system, the problematic government policies in place, and the current social issues surrounding them. After this experience, I understood what advocacy means and the skill sets necessary to do so.

The second organization I am currently working with is Malawi Schools Permaculture Clubs (MSPC), based in Malawi, South Africa. This organization deals with sustainability by using the principles of permaculture. MSPC aims to help people care for their natural surroundings. By teaching children the skill set to live a sustainable lifestyle, they hope to inspire others in the community to also care for the natural environment. This organization is expanding, and through working with them, I am developing a better understanding of a non-profit organization's inner working.

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Sponsor: Ben Stucky

**2:40-3:05** [Zoom Link](#)

**Brandon Washburn '21**

Greenfield, Wisconsin

Majors: Mathematics; Economics

## **Derivation of the Black-Scholes Equation using Ito's Lemma**

The Black-Scholes Equation is arguably the most influential financial equation, as it is an effective example of how to eliminate risk from a financial portfolio by using a hedged position.

Hedged positions are used by many firms, mutual funds and finance companies to increase the value of financial assets over time.

The derivation of the Black-Scholes equation is often considered difficult to understand and overly complicated, when in reality most confusion arises from misunderstandings in notation or lack of intuition around

the mathematical processes involved.

In this talk, I aim to take a simple look at the derivation of the Black-Scholes equation as well as the mathematical reasoning behind it.

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Sponsor: Beth Dougherty

Wright Museum, 12:20-12:45 [Zoom Link](#)

## **Gabby Watson '21**

Madison, Wisconsin

Majors: International Relations; Chinese Language and Culture  
Minor: Anthropology

### **The Risk of China's Soft Power and Sharp Power Eroding Human Rights: A Case Study on Sino-Turkish Relations and Turkey's Shifting Position on Uighurs**

Roughly two million Uighurs are believed to be locked in China's detainment camps. Historically, Turkey has provided shelter for Uighurs who have escaped, and engaged in naming-and-shaming China for its abuses against the Muslim minority. Yet as China's oppression has escalated, Ankara's objections towards China's treatment of the Uighurs have quieted. After outlining the history of the Uighur crisis, I will analyze Turkey's position shift as a case study of how China wields its transnational influence. Rather than relying on military power, China has been able to expand its influence to countries in South and Central Asia and project its authoritarian practices outwards by exercising soft power and sharp power. I conclude by considering the broader implications of China's ability to erode the international human rights regime through its soft power and sharp power tactics.

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Sponsor: James Rougvié

9:15-9:40 [Zoom Link](#)

## **Henry Westly '21**

Corvallis, Oregon

Major: Environmental Geology  
Minor: Philosophy

### **Establishing a Soil Health Baseline for Prairie Restoration**

Big Hill Park in Beloit, Wisconsin, is made up of two parcels. The first piece has been a park since the 1920s with some remnant areas appearing to have the vegetation that it did before European settlement. The second piece was added in 1997, after having been used for agriculture as the Kopplin farm since at least the 1930s. There is an ongoing restoration effort by the Welty Environmental Center to bring the Kopplin section from its current "old field" condition back to oak savannah. My project characterizes the current health of the soil in the Kopplin farm section and compares it to remnants not used for agriculture.

Prairie and oak savannah soils store much more carbon than soils used for agriculture. Intensive agriculture strips soils of their nutrients, including carbon. This carbon once released from storage can end up in the atmosphere and contribute to global warming. Soils from the Kopplin parcel were compared to original Big Hill Park undisturbed woodland remnants. This information serves as a benchmark to evaluate the success of the restoration effort in terms of soil health and carbon storage on the soil as well as guide the initial effort.

Spatial analysis shows similar soil characteristics between Kopplin and wooded remnant sections. Variation in compaction relates to current use. However, results suggest a difference in the nutrient levels between paired data points. There are four soil units in my study area, each with slightly differing features.

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Sponsor: James Zambito

8:50-9:15 [Zoom Link](#)

## **Walker Weyland '21**

McHenry, Illinois

Majors: Geology; Biology  
Minor: Studio Art

### **Determining the Direction of Environmental Trilobite Migration**

Trilobites fossils first appear in the Early Cambrian (~520 million years ago) and subsequently become a crucial part of ocean ecosystems for a nearly 270 million year time interval. Their abundance and complexity, as well as the existence of modern analogous organisms such as isopods, have made them popular as subjects of study. This study tracked the deepwater adaptations of early trilobites to investigate the relationship between morphology and environment, and to test if early trilobites evolved in deepwater settings before emigrating to shallow environments. It was found that modern assumptions of the morphological differences between shallow and deep water arthropods do not hold true in the Early Cambrian. A possible explanation for this is that the modern ecosystems which generate these depth-related relationships were not yet present. In future studies, the addition of more species and a longer time frame of analysis will be needed to conclusively determine the direction of early trilobite environmental migrations.

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Sponsor: Yaffa Grossman

10:20-10:45 [Zoom Link](#)

## **Walker Weyland '21**

McHenry, Illinois

Majors: Geology; Biology  
Minor: Studio Art

### **Making a Guide to the Common Fossils of the Wisconsin Ordovician**

During the Ordovician period, 485.4 to 443.8 million years ago, Wisconsin and much of the Midwest were covered in a shallow warm ocean. Diversity was higher than ever before and today there are abundant fossils from this time. The Milwaukee Public Museum is a natural history museum that has an extensive collection of local fossils from the Ordovician. I was hired as a digitization assistant on a grant from the Institute of Museum and Library Services to catalog and take pictures of the thousands of fossils within the collection. During my time at the museum, I created a guide to the local fossils using the specimens that I identified within the museum's collection. The guide includes the most common species found in the museum, including trilobites, brachiopods, and corals. The guide includes more enigmatic species as well, such as receptaculites, tentaculites, and conulariids. The presentation will go over the ecosystem of the Wisconsin Ordovician and the process I used to identify the hundreds of species in the museum's collection. I will also quickly touch on how these specimens were collected and then talk about some of the more difficult identifications that required me to locate primary literature from their first discovery in the 1800s and to contact curators around the country. I will conclude with a quick look at the final guide.

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Sponsor: Joy Beckman

Career Works, Pearsons Hall, 11:10-11:35 [Zoom Link](#)

## **Lauren Woolf '21**

Souderton, Pennsylvania

Majors: History; Art History  
Minor: Museum Studies

### **Lost and Found: The Wright Museum of Art on the Auction Block, 1979-1980**

The implementation of a new academic structure, called the Beloit Plan, revolutionized Beloit College between 1963 and 1978, introducing cultural shifts and a changing student demographic, whilst simultaneously draining coffers and leaving the school in financial jeopardy.

As Beloit tried to recover from these impacts, the Wright Museum of Art's collection became a casualty of attempted recovery. A decision was made to auction off a fair portion of the existing permanent collection. The press release from 1980 claimed that all the artwork sold off was repetitive or of subpar quality. Though this is true for a portion of the items, further investigation shows this claim to be convoluted. The process of deciding on which items to let go began in 1974, culminating in four separate sales at the Phillips' auction house in New York between February and March of 1980. In total, 527 lots of items were sold for a disappointing amount of profit. Though the school's dire straits justify these decisions on a surface level, the aftermath of the sales only resulted in a monetary gain of \$115,099.73, whilst producing a loss of resources, including paintings, prints, and decorative arts, that would have benefitted the students, faculty, and community long after the echoes of the Beloit Plan faded.

This research investigates the circumstances surrounding the events and seeks to contextualize the significance of such decisions. Rich documentation, including reports from art historians and conservators,



correspondence between on-site staff and off-site collaborators, auction catalogues, and receipts reveal a timeline that is especially eyebrow raising as the issue of deaccessioning becomes even more prevalent in the pandemic affected industry. How does this case at Beloit College leave a legacy locally and reflect questions more broadly asked?

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Sponsor: Daniel Brueckenhaus

Career Works, Pearsons Hall, 3:45-4:10 [Zoom Link](#)

## **Lauren Woolf '21**

Souderton, Pennsylvania

Majors: History; Art History  
Minor: Museum Studies

### **A Pavilion of One's Own: The Intersection of Transnationalism and Slavic Pride in the Career of Alphonse Mucha**

Alphonse Mucha was an extremely influential figure in the development of poster culture and the Art Nouveau movement in the late 19th and early 20th centuries. His career appears to be an ideal image of the flourishing artist. Appearances, however, can be somewhat deceiving. A consistent undertone of Mucha's portfolio is the conflict of cultural pride and a capitalist art market. This research considers Mucha's career as a microhistory of the modern transnational art world and as a case study of personal Slavic pride seen in internationally distributed media.

Born in 1860 in the Moravian region of Czechia, Mucha cultivated a sense of Slavic pride from a young age. Moravia, a part of the Austro-Hungarian Empire, was one of many culturally autonomous Slavic regions to experience oppression by ruling powers. The limited opportunities in his homeland resulted in Mucha seeking experience, artistic training, and success in Western areas of the continent, like Vienna, Munich, and Paris. Additionally, he built an extensive personal network with prominent figures, such as Paul Gauguin, Sarah Bernhardt, and many others. His professional prospects were based in Paris and American metropolises, but his personal investment in the glorification of Slavic culture kept him going until he could return home.

Mucha's early career is shaped by commissions that removed the visual influence of his Moravian upbringing or utilized his knowledge of Slavic cultures for imperialist purposes. He did not have the individual autonomy to solely produce Slavic imagery until much later in his career. This research focuses on the professional life of Mucha, whose work is so widely disseminated in style, while recognition of his aims has fallen to the wayside.

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Link to the online program