

## Beloit College Student Research Symposium, April 16, 2026

50th Anniversary of the Beloit Student Symposium

12:00-12:55 **Schools and Centers Fair** in the Science Center Atrium. Enjoy music and pizza and learn what they have to offer!

**RSVP** by 11:30 PM on Tuesday, April 14.

## Impact Beloit Classroom 109, Library

### Exploring Self, Place, & Career Abroad

Moderator: Kathy Landon, Global Experience Office

9:00-9:05	Kathy Landon	Opening remarks
9:05-9:30	<a href="#">Ella J. Walters</a>	Exploring Spain, Exploring Myself: Within and Without the Lens
9:30-9:55	<a href="#">Rowan Wilson</a>	Abandoned Ireland: The Afterlives of Places Left Behind
9:55-10:20	<a href="#">Isabel Newcomb</a>	Making the Unconscious Conscious by Studying Abroad in New Zealand
10:20-10:45	<a href="#">Allie Banks</a> , <a href="#">Nate Otis</a>	Doctors in Italy: Clinical Shadowing Abroad

### The Art of Filmmaking

Moderator: Joe Bookman, Media Studies

10:55-11:00	Joe Bookman	Opening remarks
11:00-11:25	<a href="#">Emily Lopez</a>	On the Road, Through the Lens
11:25-11:50	<a href="#">Anna J Autumn King</a> , <a href="#">Raphael Solaiman</a>	Cult College: Demystifying Working on a Feature Film

### Plunging into Water Research

Moderator: Jim Rougvie, Geology

1:00-1:05	Jim Rougvie	Opening remarks
1:05-1:30	<a href="#">Lia Dirks</a>	New Insights into Shallow Water Facies of the Eau Claire Formation in its Type Area
1:30-1:55	<a href="#">Simone de Montigny</a>	Investigating the Origin and Water Contamination Potential of Trace-Metal Bearing Sulfides and Oxides in the Cambrian St. Lawrence Formation

### Studying Abroad in Costa Rica, England & Japan

Moderator: Kathy Landon, Global Experience Office

2:05-2:10	Kathy Landon	Opening remarks
2:10-2:35	<a href="#">Alexander Klemp</a>	How Lacrosse Shaped My Study Abroad Experience
2:35-3:00	<a href="#">Cole Miller</a>	Digging Deeper: Examining the Environmental, Social, and Personal Impact of Community Gardens in Curridabat, Costa Rica
3:00-3:25	<a href="#">Cole Conway</a>	Warainoba
3:25-3:50	<a href="#">Anna J Autumn King</a>	Dance, Film, and Humor: Four Months of Artistic Collaboration in Japan

**Of Violence and War**

Moderator: Diane Ray, LITS: Archives

9:00-9:05	Diane Ray	Opening remarks
9:05-9:30	<a href="#">Kipper Bromia</a>	Of Animals and Violence: Addressing Speciesism in Human-Animal Relationships
9:30-9:55	<a href="#">Casper Voca</a>	Beloit College Against War: Alumni Oral Histories of Anti-War Movements
9:55-10:20	<a href="#">Veronica Kaluta</a>	A Decolonial Feminist Analysis of International Responses to Sexual Violence in Eastern DRC

**Political Perspectives - I**

Moderator: Greg Koutnik, Political Science

10:30-10:35	Greg Koutnik	Opening remarks
10:35-11:00	<a href="#">Samuel Shobert</a>	Intra-Executive Norm Erosion, DOJ Weaponization, and the Emergence of Competitive Authoritarian Dynamics in the American Electoral System
11:00-11:25	<a href="#">Marcus Studinski</a>	Temporary Protected Status and Trump: Process Undone
11:25-11:50	<a href="#">Jake Fein</a>	Redistributive Politics: A Look at The Working-Class and Their Political Attitudes

**Political Perspectives - II**

Moderator: Greg Koutnik, Political Science

1:00-1:05	Greg Koutnik	Opening remarks
1:05-1:30	<a href="#">Corina Pope</a>	Women's Political Representation in State Legislatures and Its Impact on Abortion Policy and Women's Health Outcomes in the United States
1:30-1:55	<a href="#">Lucy Monnig</a>	Gender in U.S. Senate Races: How Candidate and Reporters' Gender Impact Media Coverage
1:55-2:20	<a href="#">Casper Voca</a>	No Queer Utopia: How Events of the Late Twentieth Century Broke Queer Radical Organizing
2:20-2:45	<a href="#">Shylee Graf</a>	Public Trust in Broadcast News: How Can Reporters Fix It?
2:45-3:10	<a href="#">Mahdin Ekram</a>	Plato's Republic and its Relevance in Modern Politics

**Poster Session: Second floor bridge, Science Center**

Drop in [Lillianne McCully](#) Preliminary Characterization of Microfossils in the Middle Devonian Charlevoix and Petoskey Formations, Northern Michigan

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## Richardson Auditorium, Morse-Ingersoll Hall

### Psychological Insights

Moderator: Isaac Young, Psychology

9:00-9:05	Isaac Young	Opening remarks
9:05-9:30	Aina Mallorqui Dalmou	The Role of Coach Communication in Moderating Psychological Contract Breaches Among NCAA Student-Athletes
9:30-9:55	Levi Hansen	Stigma of Formerly Incarcerated Individuals with Borderline Personality Disorder Symptoms
9:55-10:20	Ryan McGonagle	Narrative Storytelling About Trauma to Understand Health Inequalities

### From Art to Anthropology

Moderator: Nikita Werner, Logan Museum of Anthropology

10:30-10:35	Nikita Werner	Opening remarks
10:35-11:00	Zoe Goebbert	The Curious Cabinet: Investigations on a Piece of Italian Furniture in the Wright Collection
11:00-11:25	Marino Komai	Curating the Ainu Collection
11:25-11:50	Nell Shay	Entheogenic Religion and the State

### Literary Analysis

Moderator: Tamara Ketabgian, English

1:00-1:05	Tamara Ketabgian	Opening remarks
1:05-1:30	Lydia Williams	Art for Art's Sake: Aesthetic Values and Destiny in The Picture of Dorian Gray
1:30-2:20	Indrayudh Sinha	Epic of the New World: Paradise Lost and the Age of Imperialism

### From Audio Drama to Stage Production

Moderator: Tamara Ketabgian, English

2:30-2:35	Tamara Ketabgian	Opening remarks
2:35-4:00	Casey Barasch, Kendric Chen, Ary Hartman, Jinx Petersen, Tessa Goodman, Levi Gallagher, Brisa Mejia, Amelie Lichte, Hayden Zeleny, Colin Bolger, Quinn	The Beach House: An Audio Drama and Stage Play (Featuring a Panel with the Cast & Crew)

Dworshack-  
Kinter,  
Rowan Wilson

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## Room 150, Sanger Science Center

### Mathematical Applications

Moderator: Katherine Harris, Mathematics & Computer Science

9:00-9:05	Katherine Harris	Opening remarks
9:05-9:30	Sophie Thomas-Dietrich	The Braid Group in Knitting
9:30-9:55	Iman Khan	How Does Quantum Computing Break Cybersecurity
9:55-10:20	Lylah Murrah	A Mathematical Approach to Quantifying Gerrymandering: Moran's I Statistic

### From Boolean Satisfiability to Balancing Returns

Moderator: Ben Stucky, Mathematics & Computer Science

10:30-10:35	Ben Stucky	Opening remarks
10:35-11:00	Ryan Pham	Reducing the Pinning Problem to Boolean Satisfiability via Self-Overlapping Curves
11:00-11:25	Hitali M Kothari	Balancing Returns and Global Health Outcomes

### Seed Germination

Moderator: Claire Milsted, Biology

1:00-1:05	Claire Milsted	Opening remarks
1:05-1:30	Amelia Pullen	Exploring the Effects of Nutrient Supplementation on Seedlings
1:30-1:55	Louis Benard	Preliminary Investigation into Efficacy of Different Laboratory Germination Methods for Native Midwestern Prairie Plant Conservation

### Examining Teeth, Joints, and Hair

Moderator: Helen Werner, Biology

2:05-2:10	Helen Werner	Opening remarks
2:10-2:35	Ellie Debbert, Chelsea Woletz	Osteological Research in Munich Germany
2:35-3:00	Savanna Warthen	Looking at Hair Under the Microscope: Comparing Human, Dog, and Cat Hair

## Room 249, Sanger Science Center

### STEM Research & Graduate School Applications

Moderator: Rachel Bergstrom, Biology

9:00-9:05	Rachel Bergstrom	Opening remarks
9:05-9:30	Braden Hurst, Abby Blum, Evan Muchka, Ethan Hansen	Evaluation of New Options for the School of Health Sciences
9:30-9:55	Corina Pope	The Impact of Cemeteries on Public Health
9:55-10:20	Renée Nguyen	Strategies for Applying to Graduate Programs

### Environmental Issues

Moderator: Pablo Toral, Political Science (Environmental Studies & IR)

10:30-10:35	Pablo Toral	Opening remarks
10:35-11:00	Aislynn Patrick	Climate Change Conversations
11:00-11:25	Josslyn Coveny	Environmental Education Based on Who You are Talking to

### AI: Its Effects and Application

Moderator: Robin Zebrowski, Cognitive Science

1:00-1:05	Robin Zebrowski	Opening remarks
1:05-1:30	Bristan Fialek	ChatGPT Might Be Screwing Up Your Brain: The Cognitive Effects of AI in Education and the Workplace
1:30-1:55	Sristi Halder	Detecting Greenwashing: An Agent-Based AI System for Evaluating Corporate Sustainability Claims

### From Inclusion/Exclusion to Restorative Justice

Moderator: George Dalbo, Education and Youth Studies

2:05-2:10	George Dalbo	Opening remarks
2:10-2:35	Jaime Wedding	The Inclusion Illusion
2:35-3:00	Jules Bargiel	Margins within Margins: Colonial Legacies and Silenced Voices in the American Muslim Experience
3:00-3:25	Damila Hurn, Evelyn Jaime	Restorative Justice: Cultivating Community Trust and Addressing Our Beloit Community's Questions

## Room 349, Sanger Science Center

### Delving into Japanese Culture

Moderator: Susan Furukawa, Modern Languages and Literatures

9:00-9:05	Susan Furukawa	Opening remarks
9:05-9:30	<a href="#">Anna J Autumn King</a>	Sushi's Role in Japanese Culture's Western Expansion
9:30-9:55	<a href="#">Quinton Cooley</a>	Kimono Abandonment and the Redefinition of Japanese Fashion
9:55-10:20	<a href="#">Cole Conway</a>	French Military Influence: Japan's Dominance in Asia
10:20-10:45	<a href="#">Nicolaj Arroyo</a>	Societal Structures in Japanese Culture
10:45-11:10	<a href="#">Zoe Vale</a>	Creating Interactive Worlds: A Cognitive Analysis on Japanese Game Design

### Entrepreneurship Endeavors

Moderator: Brian Morello, Center for Entrepreneurship

1:00-1:05	Brian Morello	Opening remarks
1:05-1:30	<a href="#">Quinton Cooley</a>	How I Started My T-Shirt Brand
1:30-1:55	<a href="#">Brody Bremer,</a> <a href="#">Jordan Rosenberg</a>	Podcasting: An Entrepreneurial Initiative
1:55-2:20	<a href="#">JD Shoniker,</a> <a href="#">Landon Adams</a>	Belmark Associates: The Ten-Mile City Report & Phi Beta Kappa Alumni Survey

### Economic Inquiries

Moderator: Benjamin Adams, Economics & Business

2:30-2:35	Benjamin Adams	Opening remarks
2:35-3:00	<a href="#">Sandhya Pise</a>	Capital-Energy Substitution in India
3:00-3:25	<a href="#">Sristi Halder</a>	Faculty Diversity and Student Success: Institutional Dynamics in U.S. Higher Education
3:25-3:50	<a href="#">Dhriti Nair,</a> <a href="#">Sandhya Pise</a>	Does Homeownership Increase Social Capital? Evidence From Beloit, WI

# Abstracts

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Sponsor: Susan Furukawa

Room 349, Sanger Science Center, 10:20-10:45

## **Nicolaj Arroyo '26**

Beloit, Wisconsin

Major: Japanese Language and Culture

### **Societal Structures in Japanese Culture**

I am a student studying Japanese Language and Culture, and have personally engaged with both in my experiences as a Gyarū. I have consulted photographs, testimonials from practitioners, and writings by peer-reviewed authors on youth and subculture. I introduce the elements of the subculture, its history, its impact and revival. I encourage the audience to join me in navigating themes of societal structures such as patriarchy, caste, colorism, and class, and their subversion.

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Sponsor: Kristin Labby

Impact Beloit Classroom 109, Library, 10:20-10:45

## **Allie Banks '26**

Madison, Wisconsin

Major: Biochemistry

Affiliation: Pre-Health Professionals Club

## **Nate Otis '26**

Shoreview, Minnesota

Major: Biology

Affiliation: School of Health Sciences

### **Doctors in Italy: Clinical Shadowing Abroad**

Doctors in Italy is a fellowship program that connects students from around the world to experience shadowing doctors in Italy over the course of two to five weeks. The different programs include human health, veterinary medicine, and one health.

This presentation discusses our experiences in Milan and Rome, Italy, and the application and shadowing process that took place. This includes the initial application process and day-to-day clinical exposure. Additionally, we provide insight into the structure of our shadowing experience at hospitals, highlighting daily routines, patient interactions, and how this experience helped us to become better culturally-informed healthcare professionals.

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Sponsor: Tamara Ketabgian

Richardson Auditorium, Morse-Ingersoll Hall, 2:35-4:00

## **Casey Barasch '26**

Madison, Wisconsin

Majors: Education and Youth Studies; Creative Writing

Minor: Spanish

Affiliations: School of Media and the Arts; CELEB; English Department; BITE Club

## **Kendric Chen '26**

Superior, Colorado

Majors: History; Education and Youth Studies

Minor: Law and Justice

Affiliation: BITE Club

## **Ary Hartman '26**

Northbrook, Illinois

Major: Anthropology  
Minor: Museum Studies  
Affiliations: LEADS; BCDC; BITE

## **Jinx Petersen '29**

Major: undeclared

Watertown, Wisconsin

## **Tessa Goodman '28**

Majors: Anthropology; Ancient Mediterranean Studies  
Minor: Religious Studies

Lombard, Illinois

## **Levi Gallagher '27**

Majors: Education and Youth Studies; Literary Studies

Austin, Texas

## **Brisa Mejia '28**

Major: Creative Writing  
Minor: Spanish  
Affiliations: ABC Club; Latinx Voices; Student Excellence and Leadership Program

Round Lake, Illinois

## **Amelie Lichte '26**

Majors: Studio Art; Anthropology  
Minor: Museum Studies  
Affiliation: BITE Club

Coodahy, Wisconsin

## **Hayden Zeleny '26**

Major: Political Science  
Minors: Health and Society; English

St. Paul, Minnesota

## **Colin Bolger '26**

Major: Media Studies

Palatine, Illinois

## **Quinn Dworshack-Kinter '27**

Majors: Biology; Studio Art  
Affiliation: BITE Club

Shorewood, Wisconsin

## **Rowan Wilson '27**

Majors: Creative Writing; History  
Affiliation: BITE Club

Watertown, Wisconsin

## **The Beach House: An Audio Drama and Stage Play (Featuring a Panel with the Cast & Crew)**

"Meek, unassuming Eric Satterstan prides himself on being the least interesting member of his family. His wily, flamboyant twin brother Cannon, not so much. Once close, Eric and Cannon have suffered a rift in their relationship. However, when their infamous and absurdly wealthy father, Max Satterstan, is found dead in a tragic loose-chandelier accident, his will reveals that the twins have three additional, mysterious half-siblings. Eric and Cannon decide to put aside their differences and track down their siblings---and their inheritance. In the process, they find alternate birth certificates, an estate attorney with the worst intentions, an orphan who runs a boxing ring, and a noble family under a vow of silence. But as the Satterstan siblings, old and new, come closer to unmasking their father, their bonds are tested, and they are confronted with dark family secrets, a dead body or two... and a beach house."

Last fall, BITE Club produced an original audio drama, written by Casey Barasch and directed by Kendric Chen. With a cast of 16 students as well as many others involved in audio recording and editing at Maple Tree Studio in CELEB, we coordinated a schedule that worked for everyone, meeting weekly for

rehearsal and recording sessions. This spring, we did something even more ambitious: we put *The Beach House* on stage. Performing at the Wilson theater on April 11 and 12, we adapted the script for the stage while working with technical crew to build the set and design sound and costumes.

In this symposium presentation, Kendric and Casey present on their experiences writing, editing, directing, and adapting *The Beach House*. After that, we combine the cast and crew from the radio and stage versions of *The Beach House* to discuss storytelling, theater, dark comedy, the future of performing arts, and more.

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Sponsor: George Dalbo

**Room 249, Sanger Science Center, 2:35-3:00**

**Jules Bargiel '27**

Chicago, Illinois

Majors: Anthropology; Education & Youth Studies

## **Margins within Margins: Colonial Legacies and Silenced Voices in the American Muslim Experience**

I explore and examine how colonial histories and global power structures continue to shape hierarchies and marginalization within Muslim communities in the United States.

While in the United States, looking in from the lens of a western Eurocentric perspective, Muslims are frequently viewed as just “religious/racial” minorities, but within the Muslim community, many more layers of inequality shaped by colonial legacies, migration histories, and racialized understandings of Islam show themselves.

This presentation highlights how colonial frameworks influence both those in, and out of the community. In addition to whose voices, practices, and interpretations of Islam are centered, and those we do not hear from.

Many underrepresented groups have always existed within this space and community, and continue to do so, whose histories and perspectives challenge monolithic representations of Islam in the United States.

Oftentimes, especially in the modern day we see community spaces reflecting patterns of racial, cultural, and linguistic hierarchy. In this presentation I examine these internal dynamics to better understand how within the American Muslim community, you could view this from a framework of “margins within margins” perspective, where communities already positioned at the edges of dominant society reproduce internal structures of exclusion.

By choosing to examine through this lens, colonialism is not only a historical phenomenon but also an enduring system that continues to inform identity, authority, and belonging within contemporary Muslim life.

Ultimately this presentation calls for a more nuanced and inclusive understanding of what it means to exist within the American Muslim community, one that centers historically marginalized voices, and critically examines the colonial structures that shape both external representation and internal community dynamics. Such an approach opens pathways toward a more equitable and self reflective Muslim communal discourse in the United States.

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Sponsor: Claire Milsted

Room 150, Sanger Science Center, 1:30-1:55

## Louis Benard '26

Ann Arbor, Michigan

Major: Biology

Minor: Anthropology

Affiliation: President of OEC

### Preliminary Investigation into Efficacy of Different Laboratory Germination Methods for Native Midwestern Prairie Plant Conservation

In an effort to support ongoing conservation efforts of native mesic prairie and oak savannah species in the American Midwest in general and on Beloit College's campus in particular, this presentation details the results of a preliminary and rudimentary study on the effects of two different popular methods of promoting germination (stratification and scarification) on germination rate and germination time among six species in five genera of native prairie plant seeds: *Baptisia australis*, *Physostegia virginiana*, *Echinacea purpurea*, *Bidens frondosa*, *Liatris pycnostachya*, and *Liatris spicata*.

These methods were investigated via a 30 day germination study conducted in a classroom lab in natural sunlight. While three genera (*Baptista*, *Echinacea*, and *Liatris*) had high rates of germination within 30 days, two genera (*Physostegia* and *Bidens*) had low rates of germination. Statistical analysis found that there was no significant effect of stratification or scarification on germination rates or the time it took for seeds to germinate within and between genera with the exception of genus *Bidens*. The low rates of germination for genus *Physostegia* and genus *Bidens* and a number of experimental limitations and variables may have confounded the results.

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Sponsor: Brian Morello

Room 349, Sanger Science Center, 1:30-1:55

## Brody Bremer '26

Mesa, Arizona

Major: Business Management

## Jordan Rosenberg '26

Leawood, Kansas

Major: Business Management

### Podcasting: An Entrepreneurial Initiative

This podcast is an independently developed media project that demonstrates entrepreneurial initiative through the creation, production, and distribution of original audio content. It involves identifying a target audience, developing a clear concept, conducting background research, writing and revising scripts, recording and editing audio, and organizing episodes into a cohesive series. Emphasis is placed on project management, time planning, creative decision-making, and technical skill development using digital audio tools.

In addition, the podcast requires consideration of branding, audience engagement, and distribution strategies across streaming platforms. As a self-directed venture, the project reflects key entrepreneurial competencies such as initiative, adaptability, problem-solving, and creative execution, while showcasing how independent media production can function as a scalable and sustainable creative endeavor.

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## **Kipper Bromia '27**

Beloit, Wisconsin

Major: Sociology

### **Of Animals and Violence: Addressing Speciesism in Human-Animal Relationships**

This presentation analyzes how human-animal relationships are framed in violence. Although the violence can go in both directions, humans have a monopoly on it. The monopoly is rooted in ignorance and arrogance that has been normalized and made mundane. This violence presents itself in many different forms, including physical violence, anthropomorphic violence, and structural violence, including neglect and deprivation.

I consider unethical human-animal relationships in farming, hunting, and sporting. Even the day-to-day interactions that we have with animals who have grown to be our companions or live in our neighborhoods and cities are often precarious, if not violent. This presentation consists of an undergraduate research project, which grew out of a class titled "Radical Empathy," undertaking a sociological analysis of violence in human-animal relationships.

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Sponsor: Susan Furukawa

**Room 349, Sanger Science Center, 9:55-10:20**

## **Cole Conway '26**

Brianhead, Utah

Major: Japanese Language and Culture

Minor: Health and Society

### **French Military Influence: Japan's Dominance in Asia**

This research project looks into the relationship between the French government and the Japanese government between 1853-1905. In this time frame, France aided Japan in its growth militarily, which led to Japan winning three landmark wars in a brief amount of time. Japan went from isolated country, to military industrialization, to ruling with an iron fist as the strongest Asian country by the 20th century. My argument is that France was the biggest reason for this increase, and I specifically look into the impacts that the French government had on this historic rise in power, as well as the indirect effects caused by the relationship with France.

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Sponsor: Kathy Landon

**Impact Beloit Classroom 109, Library, 3:00-3:25**

## **Cole Conway '26**

Brianhead, Utah

Major: Japanese Language and Culture

Minor: Health and Society

### **Warainoba**

This presentation discusses places in which formality in the Japanese Language gets dropped. Japanese is strict on how to address people above, below and on level with you. In specific places, however, this formality is often toned down or completely removed. During my study abroad I found myself in many of these places, having conversations that felt very foreign from my studies of Japan.

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Sponsor: Brian Morello

Room 349, Sanger Science Center, 1:05-1:30

## Quinton Cooley '26

Portland, Oregon

Major: Japanese Language and Culture

Minor: Entrepreneurship

### How I Started My T-Shirt Brand

How did I develop my brand through a traditional business model, starting with a problem statement?

This is the problem that I identified when starting my brand Driftbane: "Young fashion-interested adults (ages 17-27) are searching for durable, comfortable, well-sewn t-shirts that fit with a variety of styles and are adjacent to their current wardrobe. They seek t-shirts that allow for stylistic experimentation and exploration at a price influenced by their design rather than branding or trends. Concerned about affordability, they are afraid to commit to the pieces they want, ending up buying t-shirts that meet their minimum desires and remaining unable to explore."

I discuss my experience using this statement to develop a product, market, and sell it.

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Sponsor: Susan Furukawa

Room 349, Sanger Science Center, 9:30-9:55

## Quinton Cooley '26

Portland, Oregon

Major: Japanese Language and Culture

Minor: Entrepreneurship

### Kimono Abandonment and the Redefinition of Japanese Fashion

From the 1920s, practices like white face makeup, shaved eyebrows, and teeth blackening began to be abandoned. Alongside these practices, fashion started to shift away from the kimono, toward Western fashion.

Lack of accessibility with regard to kimono during World War II affected a generation growing up during the war and the American Occupation of Japan. This youth had grown up with less of a relationship to the kimono than their generations prior. Influenced by Western fashion and Japanese fashion, famous Japanese designers Rei Kawakubo, Yohji Yamamoto, and Issey Miyake birthed a new Avant-Garde fashion that redefined how Japanese fashion is viewed today.

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Sponsor: Pablo Toral

Room 249, Sanger Science Center, 11:00-11:25

## Josslyn Coveny '26

McHenry, Illinois

Majors: Environmental Justice; Political Science

### Environmental Education Based on Who You are Talking to

My presentation is part of an internship that I am conducting this semester at the Welty Environmental Education Center in Beloit as part of my capstone project for my Environmental Justice and Citizenship major. The main goal of my internship is to learn best practices for environmental education. My presentation puts my internship in the broader context of my major and my Beloit College education, and I explain how my academic experienced prepared me for it. It also highlights some of the lessons I learned from the conduct of the internship and how I reflected on those lessons.

The Welty Environmental Center works primarily, but not exclusively, with K-12 students. Young kids are less guarded when it comes to buzzwords they do not have the experience with, so they are more open to new ideas than the older audience. While this creates a great opportunity to educators, it comes with

challenges, especially the need to tailor the learning strategies to the characteristics of the audience to help them understand and absorb those new ideas.

My main takeaway is that educating people on the environment requires that one understand the group they are talking to so as to relate those ideas to their own experience. For instance, when one is educating certain groups of people who have previous experience with the buzzwords of "climate change" and "global warming," it is most effective to ask the audience if they have experienced any change in weather patterns or noticed any droughts. When educating, it would be beneficial to move to the things they know and relate to rather than discussing the big-picture realities of what climate change will do to the world in the next generation or two. By helping learners build their education on their personal experience, it is possible to help them understand broader societal issues.

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Sponsors: James Rougvie and Jay Zambito

**Impact Beloit Classroom 109, Library, 1:30-1:55**

## **Simone de Montigny '26**

Neenah, Wisconsin

Majors: Geology; Biology

Affiliation: School of Environment and Sustainability

### **Investigating the Origin and Water Contamination Potential of Trace-Metal Bearing Sulfides and Oxides in the Cambrian St. Lawrence Formation**

Sulfide minerals which are locally oxidized have been identified throughout the Cambrian sandstone succession in west-central Wisconsin. This study characterizes sulfide and oxide mineral occurrences from the St. Lawrence Formation in Buffalo and Trempealeau County, WI. Trace metal-bearing mineralization may contribute to metal concentrations in groundwater from the underlying strata, which are a regional groundwater aquifer. Mineralogical and trace metal analysis of sulfides and oxides in the St. Lawrence help determine 1) the role of changing redox conditions in groundwater contamination, and 2) whether they represent Cambrian diagenetic mineral growth or post-Cambrian Mississippi Valley Type (MVT) lead-zinc (Pb-Zn) mineralization.

Samples contain scattered iron oxide- and sulfide-bearing vugs, burrows, and concretions, which were evaluated using XRD, SEM, ICP-MS and pXRF for elemental composition and mineralogy. Trace metal concentrations in these features are variable; some show elevated (>1000 ppm) concentrations of lead, zinc, arsenic, copper, and nickel. Elevated concentrations of lead and zinc in iron oxide-filled vugs indicate MVT mineralization, extending the known distribution of outlying mineralization from the Upper Mississippi Valley mining district.

The presence of similar mineralization in underlying sandstone aquifer units suggests that oxidation of the sulfides may impact groundwater resources. As oxidation of sulfide minerals occurs, trace metals may be liberated; therefore, redox condition changes due to water table fluctuations are possible mechanisms of trace metal mobilization. This study clarifies how sulfide vugs, burrows, and concretions interact with metals during the oxidation process. Oxidized features have greater concentrations of arsenic and nickel, suggesting that these elements may bind to sulfide minerals during the oxidation process. In some instances, these elements were lost during oxidation. This information can be used to inform best practices for well owners.

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**Ellie Debbert '26**

Unknown

Major: Biology

Minors: HEAL; Anthropology

**Chelsea Woletz '26**

Milton, Wisconsin

Major: Biochemistry

**Osteological Research in Munich Germany**

Last summer, under the guidance of Dr. Williams and Dr. Werner, a group of students traveled to Munich, Germany to assist in osteological research. Munich is home to individuals exhumed from the Regensburg Grosses Graberfeld (cemetery). These individuals were buried during the late Roman and early Medieval time period. Our aim for this research was to analyze the dry bone remains of these individuals and catalogue bone inventory, pathologies, demography, and non-metrics in a database created by Dr. Williams.

Ellie worked under the “multiple burials” unit and received individuals from shared, or close graves. The majority of these burials were set in hard clay environments, which did not preserve the individuals and led to highly fragmented remains. The majority of the data collected from these individuals was from dentition. Due to this, her multiple burial unit was focused on determining the frequency and distribution of dental pathologies in order to gain insight on the diet, nutritional status, and quality of life of our subjects. This involved measuring dental caries, wear, periodontitis, and linear enamel hypoplasia. Post cranial dietary indicators such as the presence of cribra orbitalia, and porotic hyperostosis were used to support the data.

Chelsea worked with individual burials focusing on the analysis of major joints in remains and the presence or absence of degenerative joint disease in the individuals. This process involved reassembling skeletal remains, identifying major joints, and assessing their condition based on the presence of bone lipping, bone outgrowths, and wearing of the joint. This data along with other factors can be used to assess the daily activity of the population and some quality of life aspects.

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Sponsors: James Zambito and Jim Rougvie

**Impact Beloit Classroom 109, Library, 1:05-1:30****Lia Dirks '27**

Grayslake, Illinois

Major: Environmental Geology

Minor: Museum Studies

Affiliation: Beloit Paleo Lab

**New Insights into Shallow Water Facies of the Eau Claire Formation in its Type Area**

The Eau Claire Formation is a key hydrostratigraphic unit in the Upper Midwest U.S., serving as an important regional aquitard. Lithostratigraphically, the shaly Eau Claire Formation allows subdivision of the underlying quartz sandstone-dominated Mount Simon Formation from the overlying quartz sandstone-dominated Wonewoc Formation. Recent study of the Eau Claire Formation in the Hi-Crush Proppants Augusta OB-1 rotosonic core (OB-1 Core) has recognized a shallow water facies of this unit that is devoid of features that typify this unit. These features include glauconite, body fossils, and generally fine grain sizes. These observations enhance our understanding of the stratigraphy and facies models of the Eau Claire Formation.

In the OB-1 Core, separating the Eau Claire Formation from the underlying Mount Simon and overlying Wonewoc formations is complicated by the overall sandstone-dominated lithology of the succession. In this study, the formation boundaries are identified through elemental composition from pXRF analysis. As

typically described in its type area, the Eau Claire Formation is a mix of interbedded fine-grained, often glauconitic sandstones with siltstones and blue-grey shales commonly containing disarticulated trilobites and lingulid brachiopods in some beds. The Eau Claire Formation in the OB-1 core differs lithologically in the presence of coarse to granule-sized grains in sandstones that are interbedded with blue-green shales. Visual inspection of the core in hand sample and under a binocular microscope, in combination with XRD mineralogical analysis of various beds throughout the Eau Claire interval, has failed to identify the presence of glauconite. Likewise, visual observation of the OB-1 Core, including splitting along bedding planes and under a binocular microscope, has failed to yield evidence of body fossils, though bioturbation has been observed at various horizons. Our working hypothesis is that the Eau Claire Formation in the OB-1 Core was deposited in a marine setting proximal to riverine input.

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Sponsor: Gregory Koutnik

LITS Classroom 203, Library, 2:45-3:10

## **Mahdin Ekram '26**

Dhaka, Bangladesh

Major: Creative Writing

Minors: Journalism; Political Science; Sports Management

### **Plato's Republic and its Relevance in Modern Politics**

My main goal in this paper is to explore and unravel the tensions that lie at the heart of modern liberal democracy, which is based on popular ideas of equality and representation. Popular sovereignty is held in a very high regard. One would not expect that Plato and his political philosophy are so vividly reflected in this modern form of government. Yet, that idea is exactly what I aim to bring to light in this paper.

Modern democracy, as we know it, is based on consent of the governed and freedom of choice. They would never admit to the fact that a few knowledgeable and wealthy individuals are in charge of making all the important and crucial decisions the government has to make. Job positions such as bureaucratic experts and technocrats are often held by important people who usually stay behind the limelight, making most of the decisions. That is how liberal democracy has been operating smoothly, with a governing elite that reflects Plato's political theory better than it reflects our current theories of liberal democracy. My goal is to provide a clear analysis of Plato's political works and how the current government system is built upon his ideologies, and how that has sustained throughout time.

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Sponsor: Klara Fredriksson

LITS Classroom 203, Library, 11:25-11:50

## **Jake Fein '27**

Northampton, Massachusetts

Majors: Political Science; CRIS

### **Redistributive Politics: A Look at The Working-Class and Their Political Attitudes**

If we would ever like to see a fully engaged electorate and responsive political institutions, one of the first steps must be understanding the political attitudes of those on the margins. This study looks at who is part of the U.S. working-class, what their political attitudes are, and how and why they formed them. Existing research often takes a paternalistic approach to this group and does not adequately account for inter-group diversity. Through a combination of 2024 ANES data, one-on-one conversations, and literature review, this study helps further develop a theory of the often nebulous concept of the working class. Further focus group data is utilized to expand on the conception of the working class and their political attitudes. I develop a theory of conditional class consciousness, and draw out its implications for political behavior, organization, and mobilization.

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## **Bristan Fialek '26**

Crystal Lake, Illinois

Major: Cognitive Science

Minor: English

### **ChatGPT Might Be Screwing Up Your Brain: The Cognitive Effects of AI in Education and the Workplace**

Artificial Intelligence (AI) has suddenly and overwhelmingly flooded our online spaces in the last few years. We have had to contend with it everywhere: from workplaces, where companies purchase premium access for their employees to utilize; through healthcare, in which medical questions are 'helpfully' answered by customer service chatbots; to the classroom, where teachers regularly deal with student plagiarism in AI-written assignments. We cannot avoid interacting with AI in some capacity in our daily lives, and, of course, the research about its benefits and drawbacks lags behind adoption by the tech sector and beyond.

Through my work collecting and compiling studies about AI, I have noticed some troubling trends related to its effects on our critical thinking skills, ability to assess our own biases, and even our writing skills. Now that the first psychological studies on AI are published, here is what they say: while it seems more convenient, AI is damaging our ability to find the facts in an ever-growing world of misinformation.

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Sponsor: Joy Beckman

Richardson Auditorium, Morse-Ingersoll Hall, 10:35-11:00

## **Zoe Goebbert '26**

Algonquin, Illinois

Major: History

Minor: Museum Studies

### **The Curious Cabinet: Investigations on a Piece of Italian Furniture in the Wright Collection**

The Wright Museum of Art holds two pieces of furniture in its collection— one of which is an Italian cabinet that hasn't been exhibited in more than 20 years. There was little information on the cabinet, other than it was purchased in Naples, Italy, and thought to belong to the Italian Renaissance (circa 1450-1585).

Having worked in my family's furniture restoration business for quite a few years, I was particularly eager to investigate, and I did so by researching the history of Renaissance furniture and the provenance of this particular piece. I was able to draw on various experts with generational knowledge of the world of antique furniture to guide my research and assessment of the cabinet.

Because the Wright Museum's focus is not on furniture, my research and assessment culminated in a curatorial recommendation for rehoming the piece in an institution that focuses on furniture and decorative arts, and then identifying institutions where the piece would be better suited.

In this presentation, I summarize my findings on the historical significance of the piece, how I assessed the cabinet for things like material, age, and craftsmanship, and how this ended up informing my recommendation for what the Wright could do with the cabinet in the future.

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## **Shylee Graf '26**

Cortez, Colorado

Majors: Political Science; Media Studies

Minor: Journalism

### **Public Trust in Broadcast News: How Can Reporters Fix It?**

The state of American media continues to shift and fragment, and with it the political landscape. As a result, the public is less trusting of the media. Prior research has suggested that media portraying incivility has negatively impacted the public's views of both politics and the media. Scholars have theorized that these perceptions influence the public's choice of news outlets and information sources.

This case study uses content analysis to examine broadcast television news clips leading up to the 2020 and 2024 presidential elections to measure changes in media coverage that could explain the recent decline in trust. Using data primarily from American National Election Studies, I measure public trust in the news media over time to capture a full picture of the state of American media. The results may suggest that broadcast television news in particular is a contributing factor to observed distrust. The aim of this study is to offer insights into how reporters and news organizations can change their overall practices and regain the public's trust.

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Sponsor: Disha Shende

Room 249, Sanger Science Center, 1:30-1:55

## **Sristi Halder '26**

Dhaka, Bangladesh

Majors: Quantitative Economics; Data Analytics

Affiliations: School of Business; Program of Data Science & Data Analytics

### **Detecting Greenwashing: An Agent-Based AI System for Evaluating Corporate Sustainability Claims**

For my Data Analytics Honors Project, I propose the development of a Greenwashing Detection Agent, an AI-driven system designed to evaluate the credibility of corporate sustainability claims. As sustainability commitments become increasingly central to corporate branding, concerns about greenwashing, meaning misleading or unsubstantiated environmental claims, have grown substantially. Existing Environmental, Social, and Governance (ESG) ratings often rely on proprietary data and opaque methodologies, which limits transparency for journalists, researchers, policymakers, and consumers.

The proposed system functions as a first-pass diagnostic tool that identifies potential inconsistencies between corporate sustainability rhetoric and publicly available external evidence. The agent operates through a multi-stage workflow combining web retrieval, natural language processing, and rule-based scoring. It retrieves corporate sustainability materials, extracts environmental claims, analyzes the language used in these claims, and cross-checks them against independent sources such as news articles, regulatory actions, and public disclosures.

The system then produces an explainable greenwashing risk score ranging from 0 to 100 along with a structured report that highlights potentially misleading claims and the evidence used in the evaluation. This project demonstrates how agent based AI systems can support transparency and accountability in corporate sustainability communication.

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## **Sristi Halder '26**

Dhaka, Bangladesh

Majors: Quantitative Economics; Data Analytics

Affiliations: School of Business; Program of Data Science & Data Analytics

### **Faculty Diversity and Student Success: Institutional Dynamics in U.S. Higher Education**

For my Economics Honors Thesis, I examine whether faculty diversity is associated with graduation outcomes for underrepresented minority (URM) students in U.S. higher education. While prior research shows that students benefit from instructors who share their racial or ethnic background, most studies focus on classroom level interactions rather than institutional environments.

Using institution level panel data from the Integrated Postsecondary Education Data System (IPEDS) covering 2015–2022, I construct measures of faculty racial representation, student demographics, and race specific graduation outcomes across four year U.S. institutions. I estimate two way fixed effects models that control for time invariant institutional characteristics and common year shocks.

Analysis suggests that relationships may differ across institutional environments. In particular, institutions with stronger inclusion-related characteristics exhibit more positive correlations between diversity and student success, whereas in less inclusive institutions, faculty diversity appears to have little to no association with student outcomes. These findings suggest that faculty diversity may operate through broader institutional climate and long run organizational processes rather than immediate year to year changes.

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Sponsor: Suzanne Cox

Richardson Auditorium, Morse-Ingersoll Hall, 9:30-9:55

## **Levi Hansen '26**

Chicago, Illinois

Majors: Psychology; Creative Writing

Affiliation: School of Health Sciences

### **Stigma of Formerly Incarcerated Individuals with Borderline Personality Disorder Symptoms**

The American prison system intends to rehabilitate individuals who have committed crimes that put the public at risk for harm. Ideally, individuals will not re-offend after prison. However, individuals commit crimes for many reasons. This includes mental illness and associated symptoms, and most prisons have systems in place to assist with most major mental health conditions. Some researchers suggest that there are higher rates of borderline personality disorder (BPD) symptoms in prison populations, and that symptoms can be harder to treat, such as impulsivity (Bazanis et al., 2002).

Much of the American public has a negative view of incarcerated individuals (Ferguson, Angela, 2016 as cited in Ahmed et al., 2021). Individuals with BPD symptoms might fall through the cracks and re-offend after prison, such as the case with anti-social personality disorder (ASPD). Assessing if there is a public stigma that prevents individuals from reintegrating into society can help allocate limited prison resources and ultimately help create safer communities.

As part of a senior thesis project, I surveyed American participants about their perceptions of an individual described in a vignette as having BPD symptoms and a history of incarceration, a history of incarceration, BPD symptoms, or neither BPD symptoms nor a history of incarceration. Participants were then asked about how comfortable they would be around the fictional character utilizing a modified version of the Imaginary Stranger Trust Scale (IST, Robbins, 2018). Finally, participants were asked about their feelings on both incarcerated people and mental health in general utilizing a modified version of the

Opening Minds Scale for Health Care Providers (OHS-HC, Kassam et al., 2012). Data were gathered using Qualtrics and Prolific, two software programs widely implemented in social science research. The research findings are discussed in light of stigma of mental illness and the need for policy reform.

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Sponsor: Gloria Bradley

**Room 249, Sanger Science Center, 3:00-3:25**

## **Damila Hurn '28**

Saint Louis, Missouri

Majors: Sociology; Data Science

Minor: Religious Studies

Affiliation: School of Global & Public Service

## **Evelyn Jaime '28**

Naperville, Illinois

Major: Psychology

### **Restorative Justice: Cultivating Community Trust and Addressing Our Beloit Community's Questions**

The Restorative Justice (RJ) Campus Initiative fosters opportunities for community dialogue and conflict resolution by providing spaces for healing and finding ways to make the harmed individuals, as well as the wider community, whole. Restorative Justice is a voluntary process that serves as an alternative to punitive measures for conflict, which can expand or deepen rather than alleviate mistrust.

As Restorative Justice Initiative interns, we are trained in restorative principles and facilitation of restorative circle practices. We aim to inform more campus members about RJ and provide a space for people to openly address questions about RJ, its purpose, and implementation. We conducted community interviews with Beloit College students, faculty, and staff. The interviews speak to the attitudes of RJ on campus, followed by solutions and outcomes that provide methods to address the concerns that community members have. Amplifying the key principles of restorative justice—dialogue, healing, inclusivity, addressing structural issues, and upliftment of community voices—we hope to address the needs of the Beloit College campus community as a whole.

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Sponsor: Rachel Bergstrom

**Room 249, Sanger Science Center, 9:05-9:30**

## **Braden Hurst '26**

Edgerton, Wisconsin

Major: Biochemistry

Affiliation: School of Health Sciences

## **Abby Blum '26**

Edgerton, Wisconsin

Major: Biology

Minor: Kinesiology

Affiliation: School of Health Sciences

## **Evan Muchka '28**

Stoughton, Wisconsin

Major: Biochemistry

Minor: Kinesiology

Affiliation: School of Health Sciences

## **Ethan Hansen '29**

Madison, Wisconsin

Major: undeclared

Affiliation: School of Health Sciences

### **Evaluation of New Options for the School of Health Sciences**

Research was conducted as part of a collaborative team to evaluate new options for the School of Health Sciences. Throughout the project, we gathered information and materials from numerous schools and related it to Beloit College with a primary focus on kinesiology majors. Beyond the major itself, interdisciplinary approaches were analyzed to reflect the values of Beloit College. Throughout the process of program development, we have crafted multiple syllabi which consisted of a course description, potential textbooks, and a brief layout of the course. We have also incorporated planning into space utilization, accreditation requirements analysis, and campus governance processes. Weekly meetings have taken place with the students and faculty sponsor to discuss the progress being made. This is also when the next steps are to be discussed. The focus on kinesiology has opened broader studies for future projects. This focused-on accreditation standards of many programs beyond the undergraduate level consisting of a physician assistant program and Doctor of Physical Therapy.

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Sponsor: Gregory Koutnik

**LITS Classroom 203, Library, 9:55-10:20**

## **Veronica Kaluta '26**

Milwaukee, Wisconsin

Majors: Political Science; Critical Identities Studies

Minor: Law and Justice

### **A Decolonial Feminist Analysis of International Responses to Sexual Violence in Eastern DRC**

Sexual violence remains widespread in eastern Democratic Republic of Congo (DRC) despite stronger international laws and attention. Although it is recognized as a war crime, recent reports show tens of thousands of cases, especially in areas affected by the M23 conflict.

This project examines how international responses, such as United Nations initiatives, international criminal law, and peace agreements, function in practice in the DRC. It evaluates whether these efforts reduce violence or hold perpetrators accountable. The study finds a clear gap between international commitments and realities on the ground, where weak enforcement and ongoing conflict limit their impact.

Using a decolonial feminist approach, the project analyzes how sexual violence is understood and addressed in the M23 conflict. It shows that international responses often overlook local conditions, gendered power dynamics, and underlying causes of violence. It argues that the limited success of these efforts is not only due to weak implementation, but also to problems in how they are designed.

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Sponsor: Katherine Harris

**Room 150, Sanger Science Center, 9:30-9:55**

## **Iman Khan '26**

Nanjing, Jiangsu province, China

Majors: Physics; Mathematics

### **How Does Quantum Computing Break Cybersecurity**

Quantum computers operate in a fundamentally different way than traditional computers. Therefore, research on quantum computation is motivated by the ability to solve problems faster than a traditional computer. Shor's algorithm is a quantum algorithm that can factor the product of large primes much faster than a traditional computer, and, therefore, can break RSA encryption. This is an important encryption to ensure messages are sent securely over the internet.

In my research, I explore classical cryptography and the differences when we move to quantum computers. I investigate the basics of quantum algorithms and present a technical overview of Shor's algorithm.

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Sponsor: Joe Bookman

**Impact Beloit Classroom 109, Library, 11:25-11:50**

## **Anna J Autumn King '27**

Manchester, New Hampshire

Majors: Media Studies; Business Management; Japanese Language and Culture

Affiliations: School of Media and the Arts; CELEB

## **Raphael Solaiman '26**

Unknown

Major: undeclared

### **Cult College: Demystifying Working on a Feature Film**

This presentation offers the dual-perspective working on a feature film as a set assistant and first assistant director. We deconstruct a single day on a feature film set, providing in-depth account of our responsibilities and experience. By chronicling a specific shoot day, moment by moment, we aim to demystify what goes on during a professional shoot: the schedule (when it goes as planned and not), precision, and greater responsibility.

We also share how the immersion in this professional environment not only reinforced our classroom learning, but also reshaped and inspired our own creative ambitions and work ethic. Finally, we contrast the difference between this film and our work on student films, showcasing the shift in stakes, atmosphere and lessons learned.

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Sponsor: Susan Furukawa

**Room 349, Sanger Science Center, 9:05-9:30**

## **Anna J Autumn King '27**

Manchester, New Hampshire

Majors: Media Studies; Business Management; Japanese Language and Culture

### **Sushi's Role in Japanese Culture's Western Expansion**

Sushi entered the US market passively, gaining massive popularity through its adaptation into new, Westernized forms like the now well-known California roll. Noticing this departure from traditional Japanese sushi, the Japanese Ministry of Agriculture, Forestry, and Fisheries (MAFF) attempted to regain control of the narrative. However, their efforts were unsuccessful, prompting MAFF to revise their tactics and provide guidance rather than regulations for sushi restaurants and consumption in the West. Through my research presented artistically through a zine, I explore how this adaptation and deregulation of sushi could have paved the way for the following widespread popularity of Japanese culture across the West, particularly the United States, acting as the catalyst that sparked broader interest and excitement around Japan's cultural exports.

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Sponsor: Kathy Landon

**Impact Beloit Classroom 109, Library, 3:25-3:50**

## **Anna J Autumn King '27**

Manchester, New Hampshire

Majors: Media Studies; Business Management; Japanese Language and Culture

Affiliation: Global Experience Office

### **Dance, Film, and Humor: Four Months of Artistic Collaboration in Japan**

In fall of 2025, I spent four months near Osaka, Japan. Beyond deeply immersing myself in the language and culture, I also was able to collaborate with fellow students and artists from around the world. In this presentation, I break down the creative process and experience for three projects: a marriage of dance and natural forces in Kobe, a spontaneous short film exploring complicated human relations on the streets of Kyoto, and a humorous discovery of the miniature setting on my camera at Osaka Castle.

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Sponsor: Kathy Landon

Impact Beloit Classroom 109, Library, 2:10-2:35

## Alexander Klemp '26

Broomfield, Colorado

Major: Biochemistry

Affiliation: Global Experience Office

### How Lacrosse Shaped My Study Abroad Experience

From pre-game speeches to post-game pints, my time abroad at the University of Sussex was shaped by three things: meeting new people, exposure to a new learning system, and lacrosse.

In this presentation, I describe my time at Sussex from the viewpoint of an NCAA athlete playing the sport that I love in the UK. From talking about the British Universities and Colleges Sports (BUCS) system and the differences from the NCAA, to the social aspects of being a part of collegiate sports in the United Kingdom and the day to day life of a student at the university of Sussex.

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Sponsor: Nikita Werner

Richardson Auditorium, Morse-Ingersoll Hall, 11:00-11:25

## Marino Komai '26

Kyoto, Japan

Major: Anthropology

Minors: Museum Studies; Philosophy; Chinese

### Curating the Ainu Collection

The Logan Museum of Anthropology at Beloit College curates an extensive collection of historic objects from the Ainu culture. The Ainu are the historically marginalized Indigenous people in the northern part of Japan, mainly Hokkaido. As a Museum Studies minor, I came to better understand and appreciate how museums activate their missions. This understanding inspired me to work on a special project this semester, curating the Ainu objects in a bilingual online exhibition in English and Japanese in an effort to make the collection as accessible as possible. My passion for this project stemmed from the course Indigenous Curation in Practice, taught in Spring '25. After learning about different ways museums are indigenizing and decolonizing Native American collections, I began to consider the colonial history of Japan's relationship with the Ainu in relation to the material at the Logan Museum. Revisiting the historic collection allowed me to highlight the features of the objects that were previously overlooked, such as the family marks (shiroshi) and ceremonial cups (tuki). I hope that curating such attributes online will foster both international and intercultural collaboration and dialogue.

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Sponsor: Tom Stojavljevic

Room 150, Sanger Science Center, 11:00-11:25

## Hitali M Kothari '26

India

Major: Quantitative Economics

Minors: Mathematics; Finance

Affiliation: School of Business

### Balancing Returns and Global Health Outcomes

Impact investing seeks to combine financial returns with measurable social outcomes. In global health, outcomes are often measured using disability-adjusted life years (DALYs), which capture improvements in health and longevity. This research explores how health impact can be incorporated into portfolio decision making alongside traditional financial metrics.

Using a simplified portfolio framework, the project compares investment strategies that account for expected return, financial risk, and health impact. By introducing DALYs as an additional dimension of portfolio choice, the model illustrates how investors may evaluate tradeoffs between financial performance

and health outcomes. The analysis highlights how incorporating impact metrics can shift investment allocations and generate different combinations of return, risk, and health gains.

This work contributes to the growing discussion around quantitative approaches to impact investing and suggests ways that tools from portfolio theory can be adapted to incorporate measurable social impact.

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Sponsor: Joe Bookman

**Impact Beloit Classroom 109, Library, 11:00-11:25**

## **Emily Lopez '26**

Beloit, Wisconsin

Majors: Media studies; Studio Art

Minor: Marketing

Affiliation: School of Media and the Arts

### **On the Road, Through the Lens**

Supported by the Bill and Barbara Haseltine Prize in Media Studies, which provides up to \$5,000 for creative work beyond Beloit College, I took on a road trip across the eastern and western United States to visit national parks and produce a body of creative media work. This opportunity allowed me to step away from my hometown and immerse myself in landscapes that hold both personal and environmental significance.

Throughout this journey, I began developing a personal media project focused on capturing nature in a way that reflects the depth of human immersion within it. Rather than simply documenting these spaces, I aim to translate the experience of being surrounded by natural environments—moments of stillness, scale, and connection that are often difficult to articulate.

This ongoing project engages themes of place, memory, and environmental awareness, while also considering how media shapes our perception of landscapes. By presenting both my travel experiences and the evolving creative work, I highlight the beauty and significance of these environments—not only as destinations, but as vital ecosystems and shared cultural spaces. This work reflects my personal perspective, shaped by growing up in Beloit and experiencing these spaces for the first time.

Ultimately, this project encouraged a sense of gratitude and attentiveness toward the natural world. Through the openness, uncertainty, and discovery of traveling on the road trip, I aim to convey the discovery and transformation that defines the road trip experience.

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Sponsor: Isaac Young

**Richardson Auditorium, Morse-Ingersoll Hall, 9:05-9:30**

## **Aina Mallorqui Dalmau '26**

Valls, Catalonia

Majors: Business Management; Psychology

Affiliation: School of Business

### **The Role of Coach Communication in Moderating Psychological Contract Breaches Among NCAA Student-Athletes**

This presentation examines how perceived psychological contract breaches affect college athletes' trust in their coaches and commitment to their teams and institutions. Coaches frequently make promises about playing time, scholarship renewal, leadership opportunities, and academic support. When athletes believe these promises are broken, they may experience a psychological contract breach, which can damage trust, reduce commitment, and influence retention (Barnhill et al., 2013). However, less is known about the way coaches communicate about these situations, such as whether or not communicating with clarity, honesty, or fairness buffers the negative effects of a breach.

Prior research has shown that unmet promises during recruitment affect retention, but little is known

about how communication shapes athletes' responses to the contract breach. With recent NCAA transfer policy changes lowering the cost of leaving programs, understanding these dynamics is especially timely (Durham, 2024).

Using a survey of current NCAA student-athletes, this study examines the relationships among psychological contract breach, trust, commitment, and perceived communication quality. The data will be analyzed to explore the relationships between these variables. Potential implications for athlete welfare and applications to athletic programs will be discussed.

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Sponsor: James Zambito

**Poster Session: Second floor bridge, Science Center, Drop in 10:55-11:55**

**Lillianne McCully '28**

Clinton, Wisconsin

Major: Environmental Geology

Minor: Biology

## **Preliminary Characterization of Microfossils in the Middle Devonian Charlevoix and Petoskey Formations, Northern Michigan**

Samples of the Charlevoix and Petoskey formations were collected with the initial goal of extracting conodonts for refining the biostratigraphy of these units, which are currently understood to be Middle Devonian. Although none of the samples processed yielded conodonts, a microfossil assemblage dominated by scolecodonts was recovered and is preliminarily described herein.

The outcrop at Bay Front Park, formerly Waterfront Park, in Petoskey, Michigan, is a well-studied succession, with detailed stratigraphic examination by various researchers undertaken since at least 1866; indeed, it is the type section for the Petoskey Formation. Up to 2.35m of the Charlevoix Formation is exposed at the base of the outcrop, and is unconformably overlain, with 0.75m of relief on the contact surface, by ~5.5m of the Petoskey Formation. The Charlevoix Formation is composed of gray and brown limestone and dolostone, with a macrofauna that includes clams and gastropods. Black shale interbeds occur in the upper part of the unit as well as small atrypid brachiopod molds. The lower ~5m of the Petoskey Formation observed consists of overturned stromatoporoids in a matrix of brown dolostone with atrypid molds and coral fragments. The upper ~0.5m of the Petoskey Formation consists of light gray limestone with abundant corals and some stromatoporoids, and in the uppermost part, black shale partings.

Microfossils of the Charlevoix Formation include a well-preserved, diverse assemblage of scolecodonts found within various samples. A sample from a bed of black shale within the Charlevoix contains scolecodonts as well as sponge spicules and small crinoid ossicles. Scolecodonts were only recovered from the lowest Petoskey Formation. Microfossils were relatively scarce in the remainder of the Petoskey Formation except for small crinoid ossicles. The results of this study provide a framework for future investigation of Devonian scolecodonts from the Michigan Basin.

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Sponsor: Suzanne Cox

**Richardson Auditorium, Morse-Ingersoll Hall, 9:55-10:20**

**Ryan McGonagle '27**

Frankfort, Illinois

Major: Psychology

Minors: Anthropology; Health & Society

## **Narrative Storytelling About Trauma to Understand Health Inequalities**

Previous literature links exposure to trauma with poor health outcomes (Wachen et al., 2025, Scott et al., 2013). Historically, many populations in the United States have faced past and present forms of oppression and marginalization that produce intergenerational (IT) or historical trauma (HT) (Nagata et al., 2024). Based on a qualitative exploratory study conducted during the McNair Scholars Summer 2025

program, I present findings that reveal the way in which individuals from marginalized groups understand conceptualizations and definitions of intergenerational and historical trauma. Preliminary findings suggested that definitions may be informed by the narrative perspective of personal identity, lived experience, and family stories. Two respondents completed virtual semi-structured interviews designed to gauge participants' perceptions and attitudes towards intergenerational trauma, historical trauma and narrative perceptions of self and family. The content of their answers were coded for prominent themes. The results from the study emphasize key themes around personal identity, status, agency, intergenerational stories, family cohesion, health patterns, and structural inequalities. Further research is needed to explore how individuals conceptualize the difficulty of complex forms of trauma in relation to narrative understandings of personal identity and family stories and health.

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Sponsor: Kathy Landon

**Impact Beloit Classroom 109, Library, 2:35-3:00**

## **Cole Miller '27**

Salem, Oregon

Majors: International Relations; Environmental Studies

### **Digging Deeper: Examining the Environmental, Social, and Personal Impact of Community Gardens in Curridabat, Costa Rica**

This presentation is informed by my recent semester abroad in Costa Rica, where I participated in field work at two community gardens as a part of a course titled "Community Engagement and Sustainable Human Development."

As a double-major in International Relations and Environmental Studies pursuing a Spanish minor, Costa Rica was the ideal location to study environmental sustainability and democracy in Latin America. Through my classwork, fieldwork, and cultural activities, I learned about Costa Rica's world-leading initiatives in sustainable development and social justice. I got to see these initiatives in practice while spending a week at an agroecological farm and through weekly fieldwork at two community gardens. Fieldwork at the community gardens was a component of one of my classes, and remains a highlight of my program.

The Las Huertas Comunitarias is a collection of 12 community gardens in Curridabat, Costa Rica, which are maintained by neighborhood volunteers and funded by the local municipality. These gardens emphasize sustainability, social justice, community empowerment, and food security. The values of the garden were influential in my studies abroad, and I share that they have influenced my academic and personal life back in Beloit.

This presentation examines how the community gardens impacted student volunteers, neighbors, and the community of Curridabat. I discuss my personal experience, including learning to garden, improving my Spanish language skills, and understanding sustainability practices. I also include excerpts from interviews of neighbors and volunteers I conducted while abroad. I believe that these reflections about my time abroad, especially the community gardens, convey the possibilities of personal and communal growth that comes from tackling shared challenges.

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Sponsor: Gregory Koutnik

**LITS Classroom 203, Library, 1:30-1:55**

## **Lucy Monnig '26**

Beaverton, Oregon

Majors: Political Science; Sociology

### **Gender in U.S. Senate Races: How Candidate and Reporters' Gender Impact Media Coverage**

Despite continued work towards greater gender equality, women remain underrepresented in American political offices. In order to better understand the potential barriers to female political participation, this research examines gender differences in newspaper coverage of the U.S. Senate races. In order to evaluate how candidate and reporters' gender influences the amount and type of coverage candidates receive, a content analysis of local and national newspaper coverage from several 2024 U.S. Senate races was performed. The findings indicate that male and female candidates do not receive different amounts of coverage, with reporters gender having little effect on the amount of coverage as well. However, the presence of female candidates increases the amount of mentions of female-stereotyped traits and "soft" policy issues. Articles written by female reporters also contain more references to these male-stereotyped traits. These findings highlight how candidates and reporters' gender shape the framing of political coverage in U.S. Senate elections, further suggesting that media coverage may reinforce the gendered stereotypes contributing to the continued underrepresentation of women in political office.

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Sponsor: Katherine Harris

**Room 150, Sanger Science Center, 9:55-10:20**

**Lylah Murrah '27**

North Pole, Alaska

Majors: Mathematics; Data Analytics

## **A Mathematical Approach to Quantifying Gerrymandering: Moran's I Statistic**

Explore the political and social concept of gerrymandering through the lens of mathematics. I first put into context what gerrymandering is and how it can be framed as a quantitative problem. Then I focus on the mathematics of one particular type of quantifier that is often used by social scientists in their study of gerrymandering in the real world: Moran's I statistic.

I detail the computational approach to Moran's with illustrative examples, as well as describe its limitations in both small and larger examples. I end with a brief description of how mathematicians are currently working to apply more sophisticated techniques involving different choices of spatial weight matrices to find quantifiers for gerrymandering where methods like Moran's fail, an interesting area for further study.

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Sponsor: Benjamin Adams

**Room 349, Sanger Science Center, 3:25-3:50**

**Dhriti Nair '26**

Pune, India

Majors: Quantitative Economics; Computer Science

**Sandhya Pise '26**

Maharashtra, India

Major: Quantitative Economics

Minors: Finance; Mathematics

## **Does Homeownership Increase Social Capital? Evidence From Beloit, WI**

Existing literature suggests that homeowners, due to greater residential stability and long-term investment incentives, are more likely to engage in and contribute to their communities. However, this paper finds that, in the Hackett and Merrill neighborhoods of Beloit, length of residence plays a more important role in shaping social capital and sense of place than homeownership status.

Social capital—manifested through trust, community participation, and neighborhood interaction—is a key determinant of civic engagement and the effectiveness of local institutions. Sense of place refers to the relationship between individuals and the spaces they inhabit, encompassing attitudes, beliefs, and emotional attachments to a locality. Using survey data collected by Belmark Associates in 2019, 2022, and 2025, this paper operationalizes sense of place through measures of community pride.

To examine the causal pathway linking residential stability and social capital, this paper leverages variation in length of residence as a proxy for accumulated exposure to place. The results indicate that longer residence is associated with higher levels of social capital. However, this relationship becomes statistically insignificant once measures of pride are included. This suggests that the effect of residential tenure operates primarily through sense of place, with emotional attachment serving as a key mechanism linking stability to civic engagement. In contrast, homeownership does not exhibit a significant independent effect across specifications.

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Sponsor: Joshua Moore

**Impact Beloit Classroom 109, Library, 9:55-10:20**

## **Isabel Newcomb '26**

Monmouth, Illinois

Major: Physics  
Minor: Japanese

### **Making the Unconscious Conscious by Studying Abroad in New Zealand**

During my time abroad, I took the course *Inventing New Zealand in Literature* where I learned about Aotearoa culture and its development through Pākehā and Māori writers. One of the concepts we focused on was performing identity or how our actions and words appeal to a particular community. Based on my time spent at Beloit College and my semester in New Zealand, I explore this concept through my personal experiences and observations of identity around me. This entails how I recognize myself through my identities as a STEM student, American, and musician, amongst other things, as well as how I recognize others.

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Sponsor: Britt Scharringhausen

**Room 249, Sanger Science Center, 9:55-10:20**

## **Renée Nguyen '26**

Hanoi, Vietnam

Majors: Physics; Mathematics

### **Strategies for Applying to Graduate Programs**

In this presentation, I share my experience applying to STEM graduate programs in the U.S, including strategies that helped me get admitted to the PhD program in Aeronautics and Astronautics at Stanford University. I reflect on my general undergraduate preparation, as well as practical approaches I used before and during the application process, some of which are identifying research fit, preparing materials, and communicating academic interests with potential advisors.

Recognizing that many applicants, particularly those from liberal arts institutions, may lack formal research experience, I also discuss how I highlight my extracurricular activities and interdisciplinary training to strengthen my application, framing a liberal arts background as an asset to demonstrate adaptability, breadth of perspective, as well as intellectual curiosity in a highly technical field.

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Sponsor: Gregory Koutnik

**Room 249, Sanger Science Center, 10:35-11:00**

## **Aislynn Patrick '26**

West Linn, Oregon

Majors: Environmental Justice and Citizenship; Philosophy  
Minor: Political Science  
Affiliation: School of Environment and Sustainability

### **Climate Change Conversations**

Did you know that 72% of Americans believe climate change is happening, and a majority of Americans are worried about the impacts of global warming? However, only 20% of Americans say they discuss

climate change with family or friends.

The first part of this presentation focuses on the individual and social dimensions of climate change: why do people 'self-silence' on an issue they care about? What factors have contributed to the polarization of climate change? Why should we talk about climate change with others, and how can we do so effectively and honestly? Investigating these questions made up the research portion of my capstone project.

The second part of this presentation covers how to put these ideas into practice. I hosted two events this semester where students shared their own experiences with climate change and had a chance to learn new strategies for discussing climate change with others. Reflecting on these events, I share stories from students who attended the discussion and conclude with my own insights on the relevance of this capstone project to our current climate situation.

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Sponsor: Ben Stucky

**Room 150, Sanger Science Center, 10:35-11:00**

**Ryan Pham '26**

Ho Chi Minh City, Vietnam

Majors: Computer Science; Philosophy

## **Reducing the Pinning Problem to Boolean Satisfiability via Self-Overlapping Curves**

This project contributes to an ongoing research project to make the pinning problem computationally tractable through a novel implementation approach. In *The Pinning Ideal of a Multiloop* (Simon & Stucky), the authors proposed a theoretical strategy to reduce instances of the pinning problem to a variant of Boolean satisfiability, with the goal of enabling a SAT solver to compute an approximately optimal strategy. As a concrete step toward this objective, we present a comprehensive Python implementation of the algorithm by Shor and Van Wyk for detecting and decomposing self-overlapping curves in the plane. Our system employs a multi-layered architecture that begins with permutation representations of multiloops, where vertices, edges, faces, and strands are encoded using half-edge data structures. The core algorithm utilizes the Whitney index calculation to determine curve orientation and employs a dynamic programming approach to systematically detect self-overlapping configurations. The implementation successfully processes multiloops with varying complexities, generating corresponding geometric visualizations using a circle packing algorithm by Collins and Stephenson, and identifying critical self-overlapping regions that compute the Mobidisc Conjunctive Normal Form with a complexity of  $O(n^5)$ .

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Sponsor: Benjamin Adams

**Room 349, Sanger Science Center, 2:35-3:00**

**Sandhya Pise '26**

Pune, India

Major: Quantitative Economics

Minors: Finance; Math

## **Capital-Energy Substitution in India**

I am currently researching the Solow growth model with Variable Elasticity Substitution (VES), which focuses on capital-energy substitution in industries, agriculture, and transportation in India. This research builds on "Can Capital-Energy Substitution Foster Economic Growth?" by Itziar Lazkano and Linh Pham, which examined 108 countries.

Lazkano and Pham extend the classical Solow model by replacing Constant Elasticity of Substitution (CES), which assumes that the ease with which we can swap capital for energy is fixed over time, with the VES framework. The VES model is embedded in the Solow Growth Model; there is no population growth, no exogenous technological progress, and no depreciation. Energy stock evolves exogenously, the economy extracts a fixed fraction of the energy stock each period, and the stock regenerates at a rate.

This keeps energy supply independent of the capital-energy substitution decision. Capital accumulation, therefore, determines how substitution dynamics affect growth.

Solow Growth with VES Model:

$$Y_t = A_t (K_t^{a_2} (E_t + b_2 a_2 K_t)^{(1 - a_2)})^{a_1} L_t^{(1 - a_1)}$$

My paper applies the same model as Lazkano and Pham to analyze data from 1990 to 2023 across different sectors. The paper established that capital and energy are complements in developing countries. I examine the level of capital accumulation required for sectors to shift towards substitution, which is important for sustainable growth in the long-run.

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Sponsor: Gregory Koutnik

**LITS Classroom 203, Library, 1:05-1:30**

**Corina Pope '26**

Melbourne, Australia

Majors: Political Science; Biology

Affiliation: School of Global and Public Service

## **Women's Political Representation in State Legislatures and Its Impact on Abortion Policy and Women's Health Outcomes in the United States**

There are currently 2,451 women serving in state legislatures, 32.43% of the total legislators in the 50 states and territories, and the proportion of women serving varies greatly amongst states. This underrepresentation for women raises the question of whose interests are really represented in policy decisions, particularly on issues that disproportionately affect women. For my political science honors thesis, I examine how women's political representation in state legislatures influences the passage of abortion-related health policy in the US and how these policies affect women's health outcomes. By better understanding these relationships, we can begin to address how different types of representation impact abortion policy decisions, and how women's health can be adversely affected by abortion-related health policy outcomes.

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Sponsor: Helen Werner

**Room 249, Sanger Science Center, 9:30-9:55**

**Corina Pope '26**

Melbourne, Australia

Majors: Political Science; Biology

## **The Impact of Cemeteries on Public Health**

This presentation discusses how cemeteries are important to society and public health. Cemeteries serve essential cultural and sanitary roles. The relationship between cemeteries and public health has evolved markedly over time due to increased understanding of infectious diseases transmission dynamics. Burial practices have been shaped at certain points in US history by attempts to mitigate infectious risk while preserving spiritual and social customs. The advent of modern epidemiology and molecular biology has allowed researchers to gain insights from ancient cemeteries, providing unprecedented understanding of virulence, transmission, and evolutionary dynamics. In the United States, the rise of green burial and alternative technologies reflect a growing public desire for sustainable and emotionally meaningful end-of-life practices. Future cemetery design and burial practices should blend ecological responsibility with mental-health-promoting natural spaces, promoting burial grounds as multifunctional urban green spaces.

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Sponsor: Claire Milsted

Room 150, Sanger Science Center, 1:05-1:30

## **Amelia Pullen '26**

New Orleans, Louisiana

Major: Environmental Biology

Affiliation: School of Environment and Sustainability

### **Exploring the Effects of Nutrient Supplementation on Seedlings**

There are many factors that can affect a plant's productivity. These include sunlight, water, and nutrient input. Many botany students have analyzed the impact of nitrogen supplementation in plant productivity as compared to non fertilized soil and found no significant difference in growth. This could be attributed to the quality of the potting soil and the purpose of this project is to disentangle the impact of the fertilizer from the impact of the potting soil.

This semester I am exploring how nutrient supplementation, in the form of fertilizer, affects a plant's productivity in sand and soil to see if the increased nitrogen is making an impact that is not distinguishable when compared to soil. To do this, Kentucky blue grass seedlings are being grown (*Poa pratensis*) in soil, soil with fertilizer, sand, and sand with fertilizer. The sprouting growth is recorded throughout the semester as a qualitative measurement, and at the end of the semester the ground fresh mass will be measured for each of the pots and averaged across replicates to determine if there was a significant difference in plant productivity as a result of nutrient input.

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Sponsor: Tarryl Janik

Richardson Auditorium, Morse-Ingersoll Hall, 11:25-11:50

## **Nell Shay '28**

Unknown

Major: Anthropology

### **Entheogenic Religion and the State**

The psychedelic manifestations produced by DMT within ayahuasca hold cultural significance to South American indigenous groups like the Kuntanawa of Brazil. Ayahuasca entered the U.S. through Brazilian religious movements such as Santo Daime and União de Vegetal UDV in the late twentieth century. These groups introduced ceremonial practices and theological frameworks that defined ayahuasca as a sacred sacrament. The 2006 Supreme Court decision *Gonzales v. O Centro Espírita Beneficente União do Vegetal* allowed the UDV to import and use ayahuasca under federal religious freedom protections.

Following this decision, independent ayahuasca churches began to emerge across the United States. The Soul Quest Ayahuasca Church of Mother Earth (Soul Quest), founded in Florida in 2015, expanded public access to ayahuasca ceremonies and later became involved in legal disputes with federal authorities, specifically the U.S. Drug Enforcement Administration (DEA). The contentious nature of religious freedom and ayahuasca exists within a historical timeline of Brazilian expansion and institutional diversification. Soul Quest's legal battle embodies the broader pattern of ayahuasca churches developing from the historicity of small immigrant religious communities into a visible and contested presence in American religious history.

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Sponsor: Gregory Koutnik

LITS Classroom 203, Library, 10:35-11:00

## **Samuel Shobert '26**

Sautee Nacoochee, Georgia

Majors: Political Science; Health and Society

Minor: European Studies

### **Intra-Executive Norm Erosion, DOJ Weaponization, and the Emergence of Competitive Authoritarian Dynamics in the American Electoral System**

This paper examines whether recent developments in the United States during the second Trump administration are consistent with the mechanisms of competitive authoritarianism as theorized by Steven Levitsky and Lucan Way. Competitive authoritarian regimes are characterized by the use of formal democratic institutions to systematically disadvantage political opposition without fully abolishing electoral competition.

This study utilizes an analysis of three domains: (1) the erosion of Department of Justice (DOJ) independence norms, (2) post-2020 state-level election law changes, and (3) post-2024 federal actions affecting election administration. As a result of this analysis, it can be said that executive pressure on the DOJ during the 2020 post-election period, combined with subsequent institutional developments, aligns with the observable implications of competitive authoritarian strategies found in comparative cases abroad. State-level legal changes further contribute to an uneven electoral playing field, particularly through shifts in election administration authority.

The findings suggest that the United States does not presently meet the full criteria of a competitive authoritarian regime but exhibits an incipient form characterized by legalistic institutional manipulation and persistent electoral asymmetries. Additionally, this is further complicated by the current policy agenda of the second Trump administration, including the tightening of federal election administration and voter registration policies under the SAVE America Act. The country's trajectory and progression of democratic backsliding will both inevitably depend on the durability of institutional resistance from party leaders in Congress, federal courts, state governments, and civil society.

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Sponsor: Brian Morello

**Room 349, Sanger Science Center, 1:55-2:20**

## **JD Shoniker '29**

Burlington, Ontario, Canada

Major: Quantitative Economics

Minor: Finance

Affiliation: School of Business

## **Landon Adams '29**

Brooklyn Park, Minnesota

Majors: Quantitative Economics; Math

Minor: Law and Justice

Affiliation: School of Business

## **Belmark Associates: The Ten-Mile City Report & Phi Beta Kappa Alumni Survey**

Working under Belmark Associates, the student-run market research and consulting firm at Beloit, we had the opportunity to work on two separate projects for real clients. The first project we completed was the Ten-Mile City report, a bi-annual report that has been produced by the Belmark Associates for decades. The concept underlying the report is that markets do not operate in a vacuum: by thinking of Beloit and the surrounding communities as an intertwined "ten-mile city", a more accurate and representative picture of the area's economic strength emerges. Intended for potential businesses, investors, workers, or those not familiar with the area, the report is design-focused and easily accessible, presenting compelling and memorable economic data, with comparisons against other similar sized cities in the Midwest.

In collaboration with the Greater Beloit Economic Development Corporation (GBEDC), we gained experience applying our academic interests to a project for a real-world client. We developed our skills in effective teamwork and communication, meeting deadlines and navigating technological adversity. We picked up software skills in Esri GIS; Microsoft Excel and PowerPoint; and Adobe InDesign. Once we had the final product in hand, we had the opportunity to present our findings and highlight important trends to the GBEDC, Beloit City Council, and Beloit 200.

For our second project, we collaborated with a Beloit alumni with extensive experience in higher education research to develop a survey to be sent out to Beloit College alumni. The survey targeted those who graduated with Phi Beta Kappa status—a national Honor Society recognizing excellence in a liberal arts education—to find out what characterized their Beloit experience. Through this process, we continued to hone our research and analytical skills; connect with Beloit alumni, and learn what made their Beloit experience special.

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Sponsor: Tamara Ketabgian

**Richardson Auditorium, Morse-Ingersoll Hall, 1:30-2:20**

## **Indrayudh Sinha '28**

Kolkata, India

Major: Interdisciplinary Studies

Minor: European Studies

Affiliations: School of Global & Public Service; School of Media and the Arts; Center for Integrative Learning

### **Epic of the New World: Paradise Lost and the Age of Imperialism**

John Milton's *Paradise Lost* is well known among readers and inhabitants of the Anglophone world. It retells the story of Genesis: Satan's temptation of Eve, Adam and Eve's expulsion from heaven, in epic form. In addition to treating this text's revolutionary origins, this presentation seeks to illuminate lesser known aspects of Milton's great epic, including the rise of mercantilism, its impact upon the literature of the colonial spice trade, and its continuing influence upon a wide array of texts, rewritings and cultural interactions. Emerging in contexts ranging from Republican France to Colonial India, these works reveal *Paradise Lost* as a global epic shaped and transmitted by the epoch of colonialism.

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Sponsor: Gregory Koutnik

**LITS Classroom 203, Library, 11:00-11:25**

## **Marcus Studinski '26**

Stevens Point, Wisconsin

Majors: International Relations; Spanish

Minor: Greek, Latin, and Ancient Mediterranean Studies

### **Temporary Protected Status and Trump: Process Undone**

Temporary Protected Status (TPS) holders are an immigrant class in the United States capable of providing significant economic benefit and enabling job creation around the country. Despite this, federal immigration overreach occurs against TPS holders. This is sometimes without proper adherence to administrative procedure, as recognized in court. Over-enforcement approaches risk economic harm and create concerns about TPS holders' due process, placing them in removal proceedings without the right to guaranteed counsel. Immigration law is civil law and does not grant a court-appointed attorney as in criminal law.

Federal immigration enforcement has lost focus. Arresting TPS holders is a waste of time, economic resources, and creates bureaucratic backlog individuals need not be subjected to. All individuals in the United States are entitled to due process in the United States under the 5th Amendment, including immigrants.

By increasing immigration enforcement and using the shadow docket an unprecedented number of times to skirt lower court decisions, the Trump administration's immigration procedure is fast, brutal, and overly focused on results without precision. Although these actions are technically legal, they are a break with past policy. ICE is now the largest federal law enforcement agency, more so than all other such agencies combined.

This presentation aims to identify the threat to TPS holders where dated literature has failed, evaluate the impact on due process, and identify workable solutions to help TPS holders and policymakers determine next steps to preserve legal rights.

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Sponsor: Katherine Harris

Room 150, Sanger Science Center, 9:05-9:30

## **Sophie Thomas-Dietrich '26**

Madison, Wisconsin

Major: Mathematics

Minor: Physics

### **The Braid Group in Knitting**

In the field of abstract algebra, a braid group is a variation of a traditional symmetric group. In this talk, I explore braid groups in the context of cable knitting and describe a mathematical framework that is both group theoretic and physically applicable to knitting.

This work furthers previous work in this field by providing illustrative diagrams, explicitly explaining the group theory definitions and notation, and code for creating diagrams. Most notably, I propose mathematical axioms for knitting stemming from practitioners of the craft that provoke interesting mathematical questions for further study.

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Sponsor: Susan Furukawa

Room 349, Sanger Science Center, 10:45-11:10

## **Zoe Vale '26**

Boston, Massachusetts

Majors: Cognitive Science; Japanese

Affiliation: ANST 351 Class

### **Creating Interactive Worlds: A Cognitive Analysis on Japanese Game Design**

One of the most consistently beloved parts of Japanese pop culture is the country's video games. Ever since the days of the NES (Nintendo Entertainment System) with our "princesses being in another castle", Japanese games regardless of genre have been utilizing the newest technologies to create fun and exciting experiences for their players. But to explore the medium on a cognitive level, we must look at the nature of games and their interactivity in and of itself.

When thinking of games, not only must the relationship between the player and the game be taken into account, but so must that of the player and the world. Being an active participant in the world informs players going on adventures virtually, but so do these adventures inform about the outside. This talk dives into what makes interactivity unique, and explores the boundaries between where the real world ends and the games begin, or if such a boundary exists whatsoever.

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Sponsor: Diane Ray

LITS Classroom 203, Library, 9:30-9:55

## **Casper Voca '26**

West Allis, Wisconsin

Majors: History; Anthropology

Minor: Museum Studies

### **Beloit College Against War: Alumni Oral Histories of Anti-War Movements**

History is often collected and understood through written documents but in many cultures history is passed through the spoken word. In current historical and archival work there has been a push to collect oral histories because we can gain much information from speech patterns and conversation flows. Oral histories are a unique type of historical document, which often add-to and reflect information gained from "traditional" archival documents, and it is when oral histories are in "discussion" with physical materials that a fuller picture of historical moments can be drawn. Some may not consider twenty years ago as history to be studied, but archivists know that if you don't collect in the moment, things that will become history will be forgotten and lost. Oral histories are particularly time sensitive because of the fickle nature

of human memory, and the natural constraints of a human life-span.

This semester I have put together an archives exhibit and there will be a related archives publication exploring Beloit College students' experience during war times, specifically in anti-war organizing. The project explores three different wars, the Vietnam War, the Gulf War, and the 2003 Invasion of Iraq. During all three periods Beloit students made their disdain for the actions of the US government known through protests, vigils, teach-in's, and organized trips to Washington D.C. This project has given me experience in semi-structured interviews, transcribing, and using oral histories in visual exhibits. This symposium presentation focuses on the process of collecting oral histories, the connections between them and physical archival materials, and how I have included them in an exhibit.

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Sponsor: Gregory Koutnik

**LITS Classroom 203, Library, 1:55-2:20**

## **Casper Voca '26**

West Allis, Wisconsin

Majors: History; Anthropology

Minor: Museum Studies

### **No Queer Utopia: How Events of the Late Twentieth Century Broke Queer Radical Organizing**

How did historical events of the late 20th century influence queer leftist thought and organizing in the United States, particularly Marxist thinkers and organizations, from the Mattachine Society in 1950 until the creation of New-Left groups like Queer Nation in 1990?

This is a case study for how radical social movements react to historical events, and an analysis of how historical events shaped activists theories and actions. There is a direct line from the events of the Cold War, the Civil Rights Movement, anti-colonial movements, and the AIDS crisis to the queer rights movement, and the effects are still being experienced in the twenty-first century.

I map the developments and changes of queer Marxist theory and organizing through analyzing primary sources of various queer leftist organizations from 1950 to the early 1990s. I explore the loss of hope, possibility, and utopia that overtook many of the queer radical movements, and how that created the gay rights movement of the twenty-first century that is more focused on assimilation than revolution.

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Sponsor: Pablo Toral

**Impact Beloit Classroom 109, Library, 9:05-9:30**

## **Ella J. Walters '27**

Woodbury, Minnesota

Major: Creative Writing

Minor: Chinese

Affiliation: GEO

### **Exploring Spain, Exploring Myself: Within and Without the Lens**

In the summer of 2025, I journeyed to the Asturias region of Spain for the Global Experience Seminar SPAN 320 01: Building the Green Paradise with Professor Pablo Toral, Professor Amy Tibbits, GEO's Kathy Landon, and sixteen other students to learn about sustainability activities in one of Europe's pioneering areas of sustainable development.

There I brought too many notebooks, my scrappy Spanish, and three cameras: my phone, an old family Nikon Coolpix A10, and a Canon G16 I borrowed from the Beloit College Library. As I traveled through the lush Spanish landscape, learning about this northwestern principality's environmental and cultural sustainability, I took photos. My exploration was guided by a research methodology taught in the course called "visual sociology," which equips the researcher with techniques for mining the the landscape and the cityscape for data, as if it were a "text." Field research also allowed me to continue the practice of

digital photography, which I learned in an earlier course taught by Instructor Mats Rudels. This course made me comfortable with a camera attached to my hip.

Through being surrounded by such complexity and beauty, I attempted to capture and understand the experience around me, as well as navigating my own self doubts, fears, and insecurities. I came away from the experience with a new lens on life and many photos that I = share throughout the presentation to illustrate my experience of academic, professional, and personal growth. The sustainability course also taught me that the skills learned in the classroom can help sustain a life-long journey of learning.

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Sponsor: Rongping Deng

**Room 150, Sanger Science Center, 2:35-3:00**

## **Savanna Warthen '28**

Orfordville, Wisconsin

Major: Chemistry

Minor: Performing & Applied Arts

### **Looking at Hair Under the Microscope: Comparing Human, Dog, and Cat Hair**

At a glance, hair from different mammals can look almost identical. But, under a microscope, it begins to tell a much more detailed story. Subtle features such as scale patterns, pigment distribution, and the medulla can reveal important differences between species. These microscopic characteristics are often used in biological research and forensic science to help classify and compare hair samples.

In this project, I used optical microscopy and scanning electron microscopy to examine and compare hair from two humans, two English bulldogs, and a Maine Coon cat. Differences between the hairs became well visible under the microscope. I was able to analyze and quantify images of the samples, and the morphological features provided a way to quantitatively compare the hair types for the further study of how species, environment, and individual history might influence hair structure. This work demonstrates how even simple microscopy can reveal surprising complexity in everyday biological materials.

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Sponsor: George Dalbo

**Room 249, Sanger Science Center, 2:10-2:35**

## **Jaime Wedding '27**

Roscoe, Illinois

Major: Education and Youth Studies

Minor: English

### **The Inclusion Illusion**

This presentation presents an analysis of intergenerational experiences from three distinct perspectives within the same school district.

The way disability is perceived and managed in public schools often differs significantly from the lived experiences of those in the system. This project explores these discrepancies by examining the intersection of gender, race, accessibility, as well as the role they play in the system. I conducted a series of interviews with three females within one school district: a former special ed employee (para), a current employee who is also the parent of a child who was diagnosed with a learning disability while within the system, and a current student.

By focusing on the specific demographic, I was able to identify shared patterns in how disability is educated, accommodated and tested. I asked participants to detail their personal interactions and institutional support, the efficiency of standardized testing and the social stigmas they encountered. The specific focus on the female perspective allowed for a deeper look into the emotional labor and advocacy often required to navigate this educational ecosystem.

My findings revealed a consistently negative trend across all three generations. Despite decades of

policy change the participants reported systematic failures in clear communication and lack of authentic education regarding neurodivergency. Testing protocols were frequently described as unsuccessful or poorly adapted to individual needs. This presentation breaks down these critiques to argue that 'inclusion' on paper does not always translate to inclusion in practice, suggesting a need for a fundamental shift in how school districts approach the humanity of their students. It also highlights the difficulty of pleasing everybody, when everybody has different opinions from different standpoints.

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Sponsor: Tamara Ketabgian

**Richardson Auditorium, Morse-Ingersoll Hall, 1:05-1:30**

## **Lydia Williams '26**

Chicago, Illinois

Majors: Literary Studies; Creative Writing

Minor: Philosophy

Affiliation: Writing Fellows

### **Art for Art's Sake: Aesthetic Values and Destiny in The Picture of Dorian Gray**

Oscar Wilde is the epitome of the Victorian Aesthetic movement. This idea of art is deeply embedded in Wilde's novel *The Picture of Dorian Gray*. Critics often interpret Wilde's book as a moral object lesson on the costs of narcissism, objectification, and aesthetic experimentation. In this presentation, however, I suggest that the characters in *Dorian Gray* who exemplify Aestheticism (Lord Henry) have a kinder fate than those who betray its values (Dorian Gray and Basil Howard).

After a brief introduction to Aestheticism and its history, I explore Wilde's views on this movement in his novel's preface and other critical essays, as well as their influence upon his fiction. Then, I directly relate Aestheticism to Wilde's novel by considering the successes and failures of his characters as they navigate the relationship between art and 'real' life.

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Sponsor: Kathy Landon

**Impact Beloit Classroom 109, Library, 9:30-9:55**

## **Rowan Wilson '27**

Watertown, Wisconsin

Majors: History; Creative Writing

Minor: Medieval Studies

### **Abandoned Ireland: The Afterlives of Places Left Behind**

Over the fall semester of 2025, I studied at University College Cork in Cork, Ireland. Despite all of my classes centering around Irish culture, language, and history, my most informative experiences were outside of the classroom.

I independently traveled Cork's outskirts and surrounding countryside, sometimes venturing further, and found myself mapping, photographing, exploring, and creating an informal survey of abandoned structures. This catalog detailed the layout, extent of abandonment and decay, and all items found inside. I wrote notes on my estimates of when the structures were lived in and abandoned, use after abandonment, and what might have caused the abandonment.

From here, I noted what could be learned about Irish country life in the time period. My survey ended with 34 locations, ranging from centuries-old ruins to contemporary structures. I explored further by poring over historical maps of the region, discovering how the landscape changed over time.

This pseudo-creative, pseudo-anthropological and historical project deepened my connection and understanding of the land which hosted me. The history of abandonment and emigration in 19th-20th century Ireland is loaded. Ruins of houses are some of the remaining marks of the famine, colonial laws

around tenant farming and land ownership, and without intending to I found myself standing in the weight of history. Along with this context, I present my photographs, creative writing about these places, and the information and conclusions from this catalog.

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## **OUR SINCERE THANKS**

*Thank you to all those who advanced the work of our students through their time and educational expertise, and by funding through a variety of opportunities designated for research support.*



Link to the online program