



UNIVERSITY OF
NOTRE DAME

ARTS & LETTERS



2023

SENIOR THESIS PROJECTS

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Hello, friends!

I am thrilled to present the 2023 College of Arts & Letters Senior Thesis book, highlighting the 226 students who devoted a significant portion of their final year at Notre Dame to producing an original work of research or creativity.

While reading these synopses, I've been delighted to see that a number of students were again able to travel — throughout the state and around the world — to inform original research and enrich their experience. I hope that you enjoy perusing these yearlong projects. They showcase the academic and innovative skills, as well as the wide-ranging talents and interests, of the Class of 2023.

For instance, students visited the Peace Walls in Ireland, translated a portion of the *Odyssey* into the Hawaiian language, staged a late-night comedy show, analyzed the function of the coxsackie-adenovirus receptor, tested the accuracy of predicting commodity spot prices, designed sustainable dental floss, examined political rhetoric, performed a recital that included *Quatuor pour la Fin du Temps: III. Abîme des oiseaux*, and studied minimal surfaces within differential geometry.

As is the case every year, I'm grateful for the faculty members who have so generously shared their expertise and provided support to students undertaking this invaluable undergraduate academic experience.

While I will miss these seniors, individually and collectively, I am heartened that they'll continue to follow their dreams, contribute to scholarship, and serve their communities. Just as they've made the University of Notre Dame a better place, I'm confident they'll make the world a better place.

Sarah A. Mustillo

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I.A. O'Shaughnessy Dean
College of Arts & Letters

**Ariana Arce**

Hometown: Cedar Lake, Indiana

- Majors: Biological Sciences and Anthropology
- Glynn Family Honors Program and Lilly Endowment Community Scholarship Program
- Advisor: Xin Lu

The Role of FOXA1 Mutations in Prostate Cancer Aggressiveness

This project explores the role of a mutant FOXA1 pioneer transcription factor in prostate cancer. It focuses on filopodial structures that are present in FOXA1 mutants and how that phenotype contributes to increased rates of metastasis, higher rates of cancer recurrence, and an overall increase in cancer aggressiveness. The project looks to identify specific cancer pathways involved in this process, with the hope of identifying potential therapeutic targets.

Twelve percent of all prostate cancer patients possess a mutant FOXA1 transcription factor, which makes their prostate cancer more aggressive and harder to treat. Individuals typically have high levels of metastasis, which drastically decreases prognosis, so identifying potential causes and therapeutic targets are essential in increasing survival rates of individuals.

Received funding from the College of Science Summer Undergraduate Research Fellowships and the Glynn Family Honors Program.

**Angela Betz**

Hometown: Hicksville, Ohio

- Majors: Classics and Anthropology
- Sorin Scholars Honors Program
- Advisor: David Hernandez

Athens Under Augustus: A Merging of Cultures

This project evaluates how the major building projects constructed under Augustus changed Athens' physical and socio-cultural landscape. An analysis of the Roman Agora, the Temple of Roma and Augustus, the Odeon of Agrippa, and the Temple of Ares demonstrates how the Romans emphasized their own interests over Athenian tradition and agency to further their imperialistic agenda, although Hellenistic ideals were still bolstered through the Roman province in other ways.

Ancient Greece has had a piece of my heart since I was a kid, running around performing skits about the gods and reading every mythology book I could get my hands on. Now, as I look toward a future in classical archaeology, Athens feels like the perfect city to explore.

**Nicholas (Nick) Clarizio**

Hometown: Arlington Heights, Illinois

- Major: Anthropology
- Advisor: Susan Blum

'Swallow'-ing Change: African Immigrants' Food-Based Identity Formation in South Bend, Indiana, and Rome, Italy

I probed African immigrants' food-based identity formation through a multi-sited ethnography of West Africans in Rome and Southern African immigrants in South Bend, Indiana, paralleling the two to uncover commonalities and differences. Employing participant observation and semi-structured interviews, I discovered the two groups simulate home through similar means — namely, frequenting African restaurants and ethnic markets or food importers, as well as by engaging in traditional foodways and food habits at home and at community events. However, the groups varied in how their simulations were influenced by the host culture. In Rome — where I conducted fieldwork while studying abroad — West Africans' simulations of home were inflected by cultural pressures. In South Bend, Southern Africans' simulations of home were influenced by cultural contrasts.

I've been fascinated with African cultures and societies since I began studying French language and culture. (More than 47% of Francophones in the world live in Sub-Saharan Africa.) During the pandemic, I began cooking and eating a variety of cuisines as a way to travel while staying home. I became curious about identity when I started my studies in anthropology. This topic is a marriage of all these things.

Traveled to Rome, Italy.

**Grace Ducat**

Hometown:

Kernersville, North Carolina

- Major: Science Preprofessional Studies
- Minors: Anthropology and International Development Studies
- Advisor: Catherine Bolten

Inclusion of Disabled Children in Education in the Bombali District of Sierra Leone

My senior thesis looks into the inclusion of disabled children in education in Sierra Leone. It highlights instances of symbolic, structural, cultural and, in some cases, direct violence, toward children with disabilities. It also looks at the intersectionality of challenges faced both by children and their teachers, surrounding their inclusion into primary and secondary schools, specifically in the Bombali District of Sierra Leone. I traveled to Makeni, Sierra Leone and lived for seven weeks at the University of Makeni. I focused my research in the city of Makeni and five surrounding villages, all in the Bombali District of the Northern Province. Additionally, I spent a weekend in the capital city of Freetown.

My anthropology and international development studies courses have fostered my interest in education in Africa. Additionally, in 2021, I worked at a summer camp, Victory Junction, for children with serious medical conditions, special needs, and other forms of disability. I chose this topic to combine these interests. In addition to my yearlong anthropology thesis, I have written my international development studies capstone paper, "Challenges with Inclusive Education of Disabled Children in Mainstream Schools in the Bombali District of Sierra Leone" on the research I conducted this past summer.

Traveled to Makeni, Sierra Leone, and received funding from the Kellogg Institute for International Studies.

**Madeline Foley**

Hometown: New York, New York

- Major: Anthropology
- Supplementary major: Arts & Letters Pre-Health
- Notre Dame Scholars Program and Stamps Scholars Program
- Advisor: Lee Gettler

Social and Structural Determinants of Adverse Maternal and Birth Outcomes in Northern Indiana

My project evaluates adverse maternal and birth outcomes in the Northern Indiana hospital region from a social and structural perspective.

I chose this topic because the Northern Indiana hospital region has a significantly higher rate of infant and maternal morbidity than the rest of Indiana. I wanted to research why this might be occurring in the community that surrounds Notre Dame.

**Gabriela Gunka**

Hometown: Burbank, Illinois

- Majors: Biochemistry and Anthropology
- Questbridge Scholar
- Advisor: Eric Haanstad

Polish Highlanders or Górale : Adapting Folk Culture and Identity to Changing Times and Global Influences

My thesis explores the culture and identity of Górale from the Podhale region and how they were perceived and portrayed, especially in the period between the late 18th century and today. It describes the impact the outsiders had on “creating” the culture of the Podhale region, from the early interests in Tatra Mountains, up to modern times. It also includes the analysis of the portrayal of Górale in modern media, as well as the significance of the culture for those who have emigrated.

As a Polish highlander myself, I wanted to explore how Podhale became such a popular tourist destination and how Górale adapted their cultural practices to accommodate said tourists. I also wanted to see how the perception of Górale has changed over time, and where the modern-day negativity comes from.

**Carolyn Homolka**

Hometown: Avon Lake, Ohio

- Major: Neuroscience and Behavior
- Minor: Anthropology
- Glynn Family Honors Program
- Advisor: Lee Gettler

Marital Conflict, Parental Well-Being, and Hormone Reactivity During the Post-Partum Period for U.S. Mothers and Fathers

This project investigated how marital conflict was associated with psychosocial well-being and hormone reactivity among couples with young infants in Indiana. I analyzed survey data about parents' mental well-being, parenting behaviors, and relationship conflict, in addition to salivary hormone data collected before and after a contested marital interaction. The study provided valuable information about differences between mothers' and fathers' conflict-related physiological profiles and mental health in a Euro-American social context.

I chose this topic because parental well-being can have wide-reaching effects on an entire family's health. I hope to better understand the combination of biological and psychosocial factors that contribute to the greater prevalence of relationship conflict and poor mental health for many parents during the postpartum period.

Received funding from the Glynn Family Honors Program.

**Julia Johnston**

Hometown:

Colorado Springs, Colorado

- Major: Anthropology
- Advisor: Susan Sheridan

Bioarchaeological Evidence of Care Through Analysis of Antemortem Cranial Trauma: A Case Study of Two Individual Crania from EBA II-III Bab edh-Dhra's Skeletal Collection

This research aims to look deeper into the site of Bab edh-Dhra's high frequency of trauma to specific portions of the skull, such as the frontal bone and the occipital bone, creating a bioarchaeology of care in order to analyze the prospective consequences and the possible long-term effects of antemortem cranial depression fractures (CDFs) on two individuals as case studies.

I am interested in bioarchaeology as a field and its ability to aid in the anthropological understanding of past cultures through biological analysis.

Received funding from the Undergraduate Research Opportunity Program (UROP).

**Anna Lee**

Hometown: Oklahoma City, Oklahoma

- Major: Anthropology
- Supplementary Major: Arts & Letters Pre-Health
- Kennedy Scholars Program and Kellogg International Scholars Program
- Advisor: Rahul Oka

Tiger Mom Network: Stressors of Asian American University Students and Parental Networks

The purpose of this project is to understand the role of parental aspirations and peer pressure within the parental networks in the Asian American community. I explore how inter-parental rivalries and peer competition within parental networks affect the stress levels of their children. I hypothesized that more extensive networks of parents result in higher stress levels in their parents, and the source of the stress for many Asian American college students is the parental network rather than the parent specifically. This topic was something that was personal to me due to my experience as an Asian American.

Received funding from a Kennedy Scholars Fellowship.

**Sarajane Smith**

Hometown: Laredo, Texas

- Major: Anthropology
- Supplementary Major: Latino Studies
- Mary E. Galvin Science and Engineering Scholars Program
- Advisor: Sue Sheridan

New Perspectives: Enteseal Changes of the Lower Limbs of the Monks from Byzantine St. Stephen's Monastery

I have been using the Coimbra method (2015) to analyze the entheses, or muscle attachments, in the leg bones of monks from the Byzantine-era St. Stephen's monastery in Greece. Previous studies of the monks have shown they suffered severe damage to their knees, presumably from repeated genuflexion. Enteseal changes have been found to more accurately reflect repeated muscle usage, so this project aims to provide a new perspective into the activity patterns of the monks.

I was trained in enteseal change analysis at my National Science Foundation Research Experiences for Undergraduates (REU) in summer 2022. Professor Sue Sheridan and I thought it would be interesting to see what perspectives this new method of analyzing muscle attachment sites would provide, compared to previous studies on the lower limbs of the monks.

**Madeline Solkey**

Hometown: Granger, Indiana

- Majors: English and Anthropology
- Advisor: Essaka Joshua

Female Romantic Writers on Male Madness: Literature, Insanity and Environmental Affect

I am exploring environmental affect, or how emotions are seen through the physical environment, using three texts written by women: Mary Shelley's *Frankenstein*, Mary Robinson's "The Maniac," and Charlotte Smith's "On Being Cautioned Against Walking on an Headland Overlooking the Sea." I believe these female authors use the environment to reflect the inner turmoil of their "mad" subjects, which I am exploring within the context of Romanticism.

I chose this topic because I was inspired by some of the English courses I have taken here at Notre Dame, which encouraged me to explore some of the Romantic Period texts and ideas that had been introduced to me in class in a deeper and more expansive way through my senior thesis.

**Emily Swiatek**

Hometown: Auckland, New Zealand

- Major: Anthropology
- Minor: Theology
- Kennedy Scholars Program
- Advisor: Susan Blum

Tourism and Language Preservation

Combining tourism and language has the ability to provide a new preservation technique of cultural identities. Focusing on the touristic experience in Wales, I investigated the potential ability for this multi-billion-dollar industry to provide a foundation for increasing the prevalence of a language and preserving cultures. I traveled to Conwy and Cardiff in Wales to conduct ethnographic research and interview people working at tourist sites to learn about the use of language in the tourism industry. Through this ethnographic fieldwork and historical research, I investigated the pathway to creation of an endangered language and the impact on communal and personal identity-building.

Language has always been a large part of what makes us human, and seeing countries lose this component of their identity is saddening. I wanted to investigate ways that the language could be preserved and shared through a country (Wales) that has experienced high levels of colonialism and oppression.

Traveled to Wales and received funding from the Kennedy Scholars Fellowship.

**Meredith Wilson**

Hometown: Katonah, New York

- Major: Anthropology
- Supplementary Major: Global Affairs
- Glynn Family Honors Program, Hesburgh-Yusko Scholars Program, and Kellogg International Scholars Program
- Advisor: Laura Miller-Graff

Potentially Strategic and Perpetually Shapeshifting: Sexual Violence as a Possible Weapon of War in Congo

Sexual violence is endemic in the conflict in Congo, and it is broadly understood by scholars and nongovernmental organizations to be a weapon of war. Some, however, have begun to examine this narrative more critically. This project builds upon such voices. It concludes that to the extent to which sexual violence is truly a weapon of war in Congo, it should be considered a shapeshifting one — that regularly changes forms, changes hands, and changes targets.

Throughout college, sexual violence prevention and response work have become primary passions of mine. As such, bringing these interests into the academic arena seemed a natural and necessary development, while situating them within an international context helped me apply lenses I have gained through my international peace studies education.