

# **Class of 1954 Senior Thesis Endowment**

## **2023 – 2024 Recipients**

**Arianna Borromeo '24**

**Ayinde Bradford '24**

**Archie McKenzie '24**

**Clara McNatt '24**

**Alison Parish '24**

**Hope Perry '24**

**Drew Somerville '24**

**Julia Zhou '24**

## Arianna Borromeo '24 | Architecture



**Project Statement:** My thesis research is invested in ephemeral architectures and our broader understanding of temporality in design and construction. While our conventional understanding of ephemeral architecture is one that challenges temporality and encourages innovation through novelty and urgency, and is often understood on an urban scale, my project is especially interested in the circulation of material culture and “ephemera” as a unit of the ephemeral: that is, understanding ephemerality as a condition achieved through the circulation and dissemination of an architecture into traces and vestiges, whether this be the deconstruction or demolition of a building into parts, or its documentation through exhibition catalogs and records. By looking closely at different cases of ephemeral architecture, I am interested in studying what constitutes the unit of the ephemeral, and what we might learn from a new conception of the ephemeral as defined through a unit rather than a definitive state of “loss” or absence.

The impact of ephemeral design on an urban scale is perhaps best revealed through the lens of Japanese Metabolism, a movement that emerged in the 1960s with an embrace of principles of modularity, expansion, and renewal to produce an architecture that not only responds to changing urban needs, but is also dynamic and embedded within a broader trajectory of reconstruction and transformation. Transient architecture seems to extend a project's implications beyond its use-function to instead foreground a particular emotional experience of the built work, and in turn, a broader perception and awareness of architecture as it relates to time and memory. By accommodating temporality with a specific focus on deconstruction, I am interested in extending Japanese metabolic theory's notions of renewal to consider an architecture's “loss”—its absence—as, instead, generative. In this way, ephemerality seems paradoxically tied to permanence, and it is the very deconstruction of objects into parts that produces ephemera with a decided material presence and trace. For this reason, by taking theories of Metabolism as rooted in broader concepts of impermanence and cycles of regeneration, I am specifically interested in notions of ruin and renewal as they relate to the continued adaptation of structures, as well as the ephemera surrounding their production and circulation. Just as a building might be renovated to accommodate a new program all the while being grounded in its former history and use, I imagine architectural ephemera and material cultures as tied to a narrative of renewal: their identity as vestiges or deconstructions looking to both a shared past, but also speculating and unfolding into a new material reality and context. Through this lens then, architecture and its ephemera are both embedded within their precedent histories, all the while projecting themselves into a continued future.

As much of the archival and exhibition ephemera I am interested in is not accessible online or remotely, being able to travel and document this material in person [was] an essential component to understand and analyze these case studies for my thesis.

Key sites of my research included both contemporary and traditional examples of ephemeral architecture, as well as research collections and archives containing material cultures in Tokyo related to both theories of Japanese metabolism as well as the very architectural structures that emerged at the height of this movement in post-war Japan. These include the Ise-Jingu shrine as a key precedent of notions of renewal as embedded within a broader cultural tradition in Japan, ephemeral housing projects and public pavilions constructed in Tokyo (particularly, the Near House, Tree House, and Lucky Drops House in Tokyo as key examples of residential architecture designed to accommodate a cultural tradition of deconstruction and turnover, as well as the Suimei Pavilion), as well as various contemporary museum and library collections, including the Saitama Museum of Modern Art, and the National Museum of Modern Art, Tokyo, whose collections include both remnants of the original Nagakin capsule tower, as well as photographic collections and ephemera documenting pavilion architectures during the metabolism project. The National Art Center in Tokyo, designed by Kisho Kurokawa, a key scholar and architect involved in the metabolism project, was also an important museum collection for my research as a space committed to exhibiting large-scale public and traveling structures at the intersection of art and architectural production.

---

## Ayinde Bradford '24 | Architecture



My thesis research examines the relationship between classical Greek sculpture and the culture around suiting that emerged in the nineteenth century through British nobility's examination and reverence of the intellectual and political legacies of the Greco-Roman civilizations. The work also looks at the tension between the representation of an idealized masculinity in stationary, nude sculptures of divine, often immortalized beings versus the replication of these works of art via the medium of clothing on human beings subject to movement and imperfect anatomical structure.

Much of my research is founded on developing a relationship between fifth century B.C. sculpture—the physical form, choices in proportioning, materiality, and subject matter—and nineteenth century Western masculinity (specifically how it is represented in clothing). London has much of the archival information and artifacts to build this connection. I retrieved objects of study in exhibitions: Greek sculptures, tailored garments, fashion magazines, tailoring materials such as patterns, sketches, and body study drawings, and even documentation on textile mills and factories that emerged on the urban landscape in England.

Funding supported my stay as well as transportation within London and into Paris for day-trips. Funding also provided access to certain exhibitions, and access to spaces/rooms where I was able to examine materials pertinent to the era I was studying.

The libraries and exhibitions included in my visit were: Somerset House; Victoria and Albert Museum in South Kensington (the V&A Archive and Museum); Saville Row, particularly Henry Poole & Co (1846), Davies and Son (1803), and Gives & Hawkes (1771); the British Museum (Library, Archives, and Exhibitions); Fashion and Textile Museum; Palais Galliera.

---

## Archie McKenzie '24 | Computer Science



**Project Title:** Adventures in Synthesis: An Empirical Survey in Using Large Language Models to Train Themselves

**Project Statement:** I am experimenting with taking capabilities from larger language models and imbuing them into smaller, open-source ones. Spellsynth is a system for fine-tuning such specialized language models (LM) from a single natural language prompt or subscale dataset.

How it works: A more capable supervisor model creates synthetic, labelled data, which is used to fine-tune a less capable subject model. Then, the same supervisor model is used to perform reinforcement learning from AI feedback (RLAIF). Entropy (variety in scope) is injected into synthetic data through a new technique called random semantic sampling.

Why it is important:

1. Lower inference costs. As LM-powered systems move into production, I expect inference costs to become a larger and larger proportion of total costs. It is much more energy-efficient to ask a 7B parameter model (that you can run at cost on your own GPUs) to do something instead of a 175B one (that incurs additional OpenAI cost).
2. Lower latency, which is always helpful for production use cases.
3. Open-source. More transparency in how the model works, so better AI safety and reliability, and the ability to make other arbitrary modifications to the model is necessary.
4. Privacy and security. A model which can be run on your own hardware or cloud instance is more private and creates less compliance worries for companies trying to deploy language models with their users' data.

## Clara McNatt '24 | Anthropology



Last summer, I had the privilege of traveling to Buenos Aires, Argentina, where I stayed for nine weeks doing ethnographic research for my senior thesis to fulfill a degree in sociocultural anthropology and a certificate in Latin American studies. I would like to express my heartfelt gratitude to the alumni who sustain the Class of 1954 Senior Thesis Endowment Fund—without this award, I would not have had such an opportunity. These funds allowed me to pay for flights from my home in Sacramento, California to Buenos Aires and back, afforded me a quaint apartment in the district of Palermo, which I came to love, and contributed to my other daily living expenses. It was an unbelievable honor to venture abroad knowing that Princeton supported my work, both financially and in spirit.

I chose to study the Argentine tango, a cultural phenomenon that has opened my eyes not only to the endless wealth of knowledge to be discovered in cross-cultural exchange, but also, unexpectedly, helped me to forge a new understanding of myself as a woman, a dancer, and a fledgling academic. In the field I developed relationships with individuals that I will reflect on forever and learned invaluable lessons about what it means to be an anthropologist. This work, my first (but hopefully not my last!) ethnographic project, taught me to listen curiously and read deeply. Since returning to campus, I have relished the experience of writing my senior thesis on this experience, the working title of which is *Entre Dos: Reflections on the Tango Embrace*. I hope that my final product will do justice to the generosity of those who granted me this award. For providing me with an unparalleled experience as a thinker and creative, I thank you.

---

## Alison Parish '24 | Anthropology



My name is Alison Parish, and I am a senior in the Anthropology department on the medical track earning a certificate in French Studies. With Princeton funding, including from the Class of 1954 Senior Thesis Endowment, I was able to conduct an ethnographic study in Paris, France during summer 2023. My research focuses on immigration and healthcare for people of West African origin who live there. Through this funding, I was able to connect with the people in the local communities to discuss their experiences and interact with organizations pivotal to the work of immigrant care. Also, I visited the National Museum of Immigration and received access to their library to enhance my knowledge on the subject of immigration. I am grateful for the opportunity to have had such a hands-on and meaningful learning experience through the generosity of alumni. My educational experience has been enriched through this senior thesis research and I look forward to how my studies will continue to shape my professional future beyond Princeton.

## Hope Perry '24 | Classics



**Project Summary:** My project compares the exploitation models of Roman chariot racing and American college football. For my research (with these funds), I visited chariot racing sites and museums in Italy and Spain to gain a better understanding of how the Romans thought about their relationship with spectacle sport — and how it manifested physically. My thesis identifies multiple points of similarity between the two sports and how they are received by their respective cultures. In my first chapter, I discuss instances of chariot racing in Roman

literature, as well as its earlier Greek context. Through this, I am able to establish the roots of my thesis in the Classics Department. In my second chapter, I discuss what makes chariot racing unique when compared with other Roman sporting events. The third chapter is where this funding really came into play.

This third chapter mostly focuses on a structural analysis of both Roman circuses and American football stadiums ([using] the American, not Latin, spelling). This analysis is twofold: first, examining how the design of these venues put audiences physically above the athletes, and second, how class creates social stratification among the spectators themselves. This trip, therefore, was a key part of the formation of this chapter. I visited the Circus Maximus, once the largest sporting venue ever constructed. There, I was able to observe circus sites and view archaeological remains and photograph them. Although the Circus Maximus itself is well-documented in modern photography due to its centrality to the city of Rome, there are myriad ways to view the Circus digitally. What these methods lack, however, is the ability to grasp truly how grand the scale of the design is. Furthermore, some of these circuses are far more difficult to view digitally and visiting them is the best way to examine their structures and complete analyses. In particular, my visit to the Circus of Toledo revealed that the size of the circus was quite similar to that of the Circus of Maxentius. Although I could have observed this simply through figures, being there in person was immensely helpful.

My fourth chapter introduces American college football and explains its history and structures, allowing my argument to culminate in the fifth chapter, which explains, in detail, the similar exploitation models that I believe are employed in both sports—specifically, the fact that a few wealthy people (or companies) profit from the dangerous labor of those who are disproportionately from a marginalized group.

## Drew Somerville '24 | Ecology and Evolutionary Biology



The goal of my research is to better understand the works and life of French realist painter Rosa Bonheur to be able to effectively present an exhibition of her work that allows the viewer to interact with the works as if they were animal enclosures at a zoo. Bonheur's works center entirely on animals as subject matters, and the timeline of her works closely aligns with the introduction of zoos in urban cities in Europe in the second half of the 19th century. My primary intent for this research trip was to examine as many of Bonheur's works up close and in person

so that I can best suggest ways to interact with them as a viewer. Many of Bonheur's works are on display at the Musee d'Orsay and The Louvre, and there is an entire museum dedicated to her life and work at her estate in Thomery. In addition to visiting these places and viewing these works, I planned to visit the Jardin des Plantes (Zoo) in Paris, which was established in the era I am studying and spend one day at the Louvre, one at the Musee d'Orsay, and one at the Chateau de Rosa Bonheur.

Thanks to generous funding, I was able to travel to Paris during fall break 2023 and conduct research for my senior thesis, an interdisciplinary study focusing on the artwork of French realist painter Rosa Bonheur. My thesis puts her paintings of exclusively animal subjects in conversation with ecology, zoology, and conservation efforts, both historically and currently. While in Paris, I was able to examine artwork relevant to my thesis and collect material that would help me in further research. During this time, I also traveled to Thomery, France, where the Chateau du Rosa Bonheur operates out of the estate home and studio of Bonheur. I was able to access and analyze archival documents and examine the space in which the artist lived and worked. I also collaborated with the museum staff, discussing Bonheur's life, work, and legacy while facing authentic works from the artist herself. The experience benefited my thesis greatly and allowed me to produce a research work that is informed by the current state of art and conservation as well as the history associated with both.

## Julia Zhou '24 | East Asian Studies



My thesis, tentatively titled “A Tale of Two Universities: Ginling College and Nanking University during Japanese Occupation & Chinese Civil War, 1937-49” explores the spatial politics of higher education and colonial rule in the Republican Chinese capital. Through faculty letters, meeting reports, newspapers, and memoirs, my thesis closely follows the physical usage of these two important universities—one a representative American missionary college, the other an officially designated national university of the Kuomintang—which were evacuated of faculty, students, and important equipment prior to the Japanese invasion in December, 1937. My thesis also follows the political and cultural dialogue surrounding these spaces, as competing regimes.

I am grateful for the thesis funding provided. Starting from Summer 2023, I was able to visit archives in Tokyo, Nanking, Columbia’s Burke Research Library, and Stanford’s Hoover Institute. Through these visits, I was able to acquire newspaper clippings, official reports, photos and personal letters from a wide range of sources and perspectives. I was also able to reference the Iris Chang papers, which included many interview transcripts and research materials related to her *The Rape of Nanking* book project.

Through this project, I hope to make progress in our collective understanding of Sino-Japanese relations, the Japanese empire, and the implications of political instability on higher education through a microhistorical approach. I also hope to offer a nuanced antidote to nationalistic narratives. As the story of Ginling College and Nanking University demonstrates, the staff and students on the ground engaged a wide network of correspondents to make their continued education possible.