            I arrived at Northwestern enrolled in the school's Mathematical Methods in the Social Sciences (MMSS) program, which promised to combine social science study with rigorous mathematical and statistical modeling. However, when I completed my program after two years, it was with a hollow feeling. Rigor within MMSS represented a desire to understand the mechanisms behind the development of the theories; I could prove why a game theory mechanism held to be true, but I had never felt further from the actual application of ideas. I experienced a similar feeling while working as a research assistant in Northwestern's Department of History. I was captivated by the puzzle that the research posed, but I still struggled to tie my work back to the inequities that I saw through my work in the community. For a period, I strayed away from research. When I took Dr. Nichole Pinkard's learning ecosystems class my senior year fall, however, it felt like discovering that I could have my cake and eat it too. Her participatory, community-informed design work represented a brand of research that felt personally sustainable to me. It expanded my understanding of research from a process that is done to individuals and concepts to a process that could be done in partnership with individuals and communities.

            Reflecting on my prior experiences helped me reframe my relationship with research. Centering my community work—treating research as a component, rather than the whole—provided a foundation upon which I could shape my research; it relieved the pressure I felt to love research intrinsically. With this foundation, I was able to identify aspects of my prior research that I had foregone and adapt them to add depth to my research. In my current work, I am able to apply concepts from social network analysis, an approach that I was introduced to in MMSS, to understand how collaboration networks can be leveraged within out-of-school time (OST) learning ecosystems to address opportunity silos and future vulnerabilities. Through my experiences with history research, I was able to hone my skills of pulling together throughlines from disparate sources or periods and assembling a narrative to represent them. The interdisciplinary emphasis of learning sciences has allowed me to flex this muscle; I've had the privilege of working with industrial engineers, sociologists, educators, and community members to try and tackle the question of promoting a sustainable future for learning. I am drawn to Harvard not only by the undeniable interdisciplinary strength of the faculty, but also by the explicit opportunities to take courses across Harvard's other professional schools.

My research interests center around learning ecosystems and community-centered design—understanding how city-wide infrastructure and resources affect individual learning journeys. I seek to develop tools that aid community members in understanding the resources available to them and embolden them to leverage the data, responding to gaps they identify. For example, the social network tool that I am developing aims to identify local vulnerabilities within an ecosystem; for a given OST organization, users can see which schools would lose access to the service that the organization provides if it were to dissolve. Users are also able to see who is collaborating in their neighborhood, which organizations are providing specific types of programming, and so on. By placing the tools directly in the hands of community members, and providing scaffolding in the form of training and community conversations, I aim to understand how communities can be empowered to fortify their own opportunity infrastructures. At the same time, these conversations are crucial to ensuring that our data representations are congruent with community members' lived understandings of their own environments; that our tooling is addressing questions relevant to the everyday work of community stakeholders. At Harvard, the opportunity to learn from similar bodies of work in education, such as that of Dr. Ebony Bridwell-Mitchell, would be instrumental in continuing to operationalize this work.

            Much of learning ecosystems work focuses on static infrastructure, a natural entry point to understanding the nature of a community's opportunities. As we begin to develop an understanding of what opportunity looks like in relation to what is already built, I feel that the natural next step is to consider co-design of infrastructural development and learning opportunities within a city. We've seen emerging examples of this in the field already: a school redistricting design attempting to understand how school busing affects student learning opportunities; pop-up interventions on roads to understand how movement through a community is affected by feelings of safety. I would like to delve deeper into understanding how we can center learning experiences in the development of urban infrastructures—how smaller interventions such as bike lanes can increase student confidence in reaching learning destinations, or how transportation schedules can be aligned with out-of-school time opportunities for students. I would like my work to both document and champion the interconnectedness of learning ecosystems; here, I look towards the work of Dr. Bianca Baldridge. Her emphasis on centering youth work within an understanding of urban change and displacement is crucial to considerations of community-centered infrastructural development.

            With a PhD, I hope to explore the possibility of furthering my research in a faculty research position. I am lucky to have been exposed to productive research practice-partnerships in my time at Northwestern, and I would like to be able to situate my own research in the context of collaboration with local civic and community stakeholders. Just as my conceptions of research evolved throughout my undergraduate career, I am confident in my ability to flex and adapt my understanding of research implementation and usage throughout my PhD; in doing so, I will pursue the path that allows me to continue the balance of community and research work that I’ve continuously strived to maintain.