# Introduction

Asian American comprises a panoply of differing and unique intersectional identities, histories, and experiences, yet Asian Americans are essentialized as a group and broadly stereotyped as the model minority, which shapes information to college access and campus resources (Museus & Truong, 2009; Palmer & Maramba, 2015; Poon & Byrd, 2013). Scholars and researchers have frequently called for the disaggregation of Asian American data to ensure that ethnic minorities are supported within the Asian American racial category (Museus & Truong, 2009).

In the pursuit of data disaggregation, I hope to map the different experiences of Asian American ethnic groups across Philadelphia and their access to higher education. I’m particularly looking at East Asians in Central Philadelphia and Southeast Asians (broadly) in South Philly.

# Literature Review

### Asian American Geographic Differences

Liu's (2018) ethnography highlighted highlights the differences in Asian American perspectives, they built a framework that includes three parts. One part of that framework is the discourse on Xi Jinping's "Chinese Dream," which emphasizes class advancement and ethnic empowerment through market liberalization and expansion of, specifically, Chinese capital. The Chinese Dream can be applied to the Chinese immigrants' movement that moved into ethnoburbs following Japanese and Mexican Americans, which fundamentally reshaped the ethnoburb (Cheng, 2013).

Race as a geographic cultural construct shapes how students experienced being Asian American. In Chan’s (2017), study on geographic differences in being Asian American the theme of race as a social identity was broken updivided into four subthemes: (1) distancing racial identity, (2) the strategic use of racial identity, (3) shifting experiences of race and racial identity to describe the importance of students' hometowns and high schools, and (4) how they now felt about their racial context. This theme described how some students felt closer to their identity, while other students felt more distanced because they no longer were the only Asian American identifying person in their hometown.

The literature on Asian American geographic differences is not extensive, but the literature that does exist indicates that there are differences in access to locations and socialization. Patterns of immigration and discourse also shaped where Asian Americans could move to, and the environment that Asian Americans occupy also shape their own ideas perceptions of self. Geography plays an important role in shaping the Asian American experience; however, very little has been done to explicitly understand geography and its relationship to college access for Asian American populations.

## College Access Frameworks

Postsecondary institutions in the United States are critical for developing a workforce and providing individual opportunities for development. Although the need for postsecondary education is evident, the need is often mismatched by various factors (Dache et al., 2021). Perna (2006) offers a conceptual model of higher education which encompasses four layers: (1) habitus, (2) school and community context, (3) higher education context, (4) social, economic and policy context. Although this framework does consider context, it does not explicitly address the geographic context (Turley, 2009). Turley argues that college choice must be situated in the geographic context and found that high school seniors had a wide range of colleges within commuting distance, zip code had a small but significant increase in the odds of applying to college. Finally, schools that are more conveniently accessible had higher application rates.

# Framework

Hillman (2016) builds upon the geographic distance of higher education institutions to argue for the existence of education deserts — places where there are no educational opportunities. These education deserts show that place shapes the decision-making process in deciding whether to attend and where to attend college. The idea of applying the term geography of opportunity is to show that there are unequal opportunities to higher education. Like food deserts, education deserts are constrained along the lines of race and class. Individual choices to go to college are shaped by their geographic context, which constrains the options of school context, community context, and their social habitus. Dache-Gerbino (2016) argues that geographic context is critically important using a Critical Geographic College Access (CGCA) framework to visually show how urban development and modernization failed black communities and that locations of colleges are not just coincidences but socially constructed around a history of residential segregation.

Although geographic analysis considers the way residents and communities can see and access higher education (Dache-Gerbino, 2016; Turley, 2009), Colleges and universities must recognize and reach out to these communities. Jaquette and Salazar (2018) found that college recruiters strategically select high schools for recruiting, typically picking high schools that are whiter and wealthier. Even when schools primarily made of students of color performed well on tests, colleges would still visit the predominately white high schools. This proposed study challenges college access from a student perspective to the responsibility of higher education institutions. College access is not just about what school students visually see and are conveniently close to, but what schools have taken the time to reach out and recruit.

# Methods

To understand the geographic context of the data, I am pulling from five different sources of data, (1) U.S Census Bureau data (TidyCensus), (2) Integrated Postsecondary Education Data System (IPEDS) database, (3) SafeGraph, (4) Carnegie classification, and (5) Open Trip Planner (OTP) - SEPTA Metro and Bus GTFS files. I will be utilizing the U.S. Census bureaus five year American Community Survey (ACS) data using the Tidycensus package in R. The U.S. Census Bureau provides 5 year estimates from 2011 by census track, I plan to use this data to provide a context to the importance of Asian Americans to the Philadelphia region, and more specifically the growth of specific Asian ethnic groups in Philadelphia county. IPEDS data is collected by the National Center for Education statistics (NCES), and it is required that higher education institutions submit their data to receive federal funding. SafeGraph is company that collects data point data to track how many people come in and out of a space. With this they also have data based on the North American Industry Classification Systems (NAICS). I requested data for all the education related industries in Philadelphia. This dataset has been coded to separate different kinds of institutions from each other. Carnegie classifications are ways that higher education institutions are organized, this can vary by variable. This data is not included in the IPEDS dataset and needs to manually be added. Lastly I am using OTP, to predict estimated travel times using SEPTA rail and bus times. The current proposal does not include any data from this section, because more data exploration needs to be done to find what locations are important to understand transit. OTP is time consuming in running the code, and to ensure efficient use of resources I want to make sure I have my location and goals in mind before use.

# Findings and Analysis

## Summary statistics

Based on the datasets above, I have compiled three sets of data: (1) enrollment of higher education by race, (2) racial demographics of Philadelphia, and (3) geographic higher education context of Philadelphia. The findings from overall enrollment of higher education show that from 2003 to 2020, there has been an overall decline in percentage of white students who have enrolled in higher education. This percent is a breakdown of racial category divided by the total population, and as such indicates that of the total population there has been an increased enrollment of non-white students in higher education. Upon closer examination of non-white enrollment in higher education, in 2020 Asian or Pacific Islanders made up 15% of total enrollment while Black non-Hispanic students made up 11.6%. In 2003 Asian or Pacific Islander students only made up 9% of the total population. Although there is an increase in Asian or Pacific Islander populations in the United States, it is unclear which ethnic groups are represented in this population.

To try and understand the ethnic identities represented in the dataset I looked through the census data on Philadelphia to understand the breakdown of frequencies of racial groups. In 2019, Philadelphia primarily consisted of 665,333 black people, 642,060 white people, followed by 114,315 Asian people. Of the 114,315 Asian people 37,588 of them identified as Chinese, and 23, 443 identified as Indian. The Chinese and Indian population in Philadelphia have grown the most in comparison to other ethnic groups in Philadelphia. In 2011, there were 26,494 Chinese people in comparison to now 37,588 over the course of 8 year. The increase in Chinese and Indian populations may be related to globalization factors; however, before making this assertion I will need to find more literature to support this argument.

Although I have found Asian ethnic group demographic frequencies, the challenge is relating this directly back to higher education enrollment. Although the ACS 5-year survey does provide this data, the data is consolidated by census tract, and it is unclear of what the experiences of individuals or households are in these census tracts. To remedy this, I am considering using Public Use Micro Sample (PUMS) data, to have a more careful look at the individuals in each census tract. PUMS data is also data collected by the US census bureau and provides data by household and individual rather than by census tract. I am continuing to explore PUMS data to understand how I can relate this back to higher education enrollment.

In addition to the demographic data, I have begun to plot the demographic data in the context of Higher Education institutions and other educational institutions. These maps have helped me identify areas in Philadelphia where the Asian American population is highest. These have shown interesting findings in that, Asian Americans are densely populated in South Philadelphia rather than the Chinatown area. From my own qualitative research, I have found many of the Southeast Asians that I have been working with located in South Philadelphia, in contrast to Central Philadelphia and Chinatown, I expected more East Asians there. To address this inconsistency, I have engineered a feature that is a ratio of ethnic group to Chinese population. What this feature will tell me are what areas primarily consist of Chinese Americans in contrast to other ethnic groups. With this I hope to be able to identify the census tracts that have a higher ratio to identify areas in the city that have a larger ratio to ethnic Chinese, then I can map their travel times to higher education institutions or other education institutions. With this I hope to be able to identify the census tracts that have a higher ratio of ethnic group that is not Chinese to Chinese in the city that have a larger ratio to ethnic Chinese, then I can map their travel times to higher education institutions or other education institutions.

## Future Methods

With the other geographic features that I have included in my dataset like education institutions and higher education institutions, I hope to apply k-clustering analysis. Currently the data is coded to include identify K-12 institutions, higher education institutions, and charter schools. I will need to code through the data by hand to build categories for other types of educational institutions. Additionally with the census tract geographic features that I Have, I hope to be able to use Moran’s I. Moran’s I will identify what characteristics are spatially autocorrelated.

Lastly to capture the overlap of different populations, it may be necessary to create a fishnet grid over Philadelphia. This fishnet grid would allow me to mix the point data with the census tract data to have a better understanding of what is included in a smaller area. The methodological tradeoff would be ambiguity with the census tract data. One square could occupy two census tracts and as such there would be confusion about the statistics of the one census tract.

Although, I am pulling from many data sources, I have yet to build a cohesive story about Asian American access to higher education institutions. To address this, I believe there are two steps that need to be taken (1) continue working through the data and analysis, (2) reading more literature. Regarding data analysis, I am also looking for data on Philadelphia’s k-12 public schools’ system. I would like to use this data in conjunction to the census tract data to provide context as to how students are doing. This data in conjunction to the PUMS data would provide a detailed understanding of college access. Second, I need to continue reviewing the literature. Although I am finding data, these data have no context without some theoretical backing or past research. Although I do have some literature, I will be continuing to review the literature.

The literature is being reviewed as a comprehensive literature review, and I will apply epistemic network analysis (ENA) to the data set. This will allow me to visualize the themes in the data and the relationship that themes have to each other. Once I understand these themes, I can identify gaps in the literature, and I can begin to shape my data analysis around the gaps to address them.

# Final Deliverable

The final deliverable for this course will be a proposal for the Association for the Study of Higher Education. The proposal submissions closes before the last day of this course.

Citations

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