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**Immigrant Communities of Philadelphia: Spatial Patterns and Revitalization**

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Immigrant Communities of Philadelphia

Spatial Patterns and Revitalization

Portfolio by Jake Riley
Introduction

This portfolio is the product of a research studio class at the University of Pennsylvania (SOCI438, 2015). In this portfolio I explore the research question “What is the relationship between immigration and urban revitalization?” by first taking a macro look at the city and then zooming into our area of focus, the Italian Market. I start with an overview of the racial demographics of the city and then look at the immigrant population, and then the relationship of this group to areas considered key factors in revitalization: commercial activity and safety. I then investigate characteristics of the immigrant population by looking at English proficiency and year of immigration into the United States and then, on page 13, I introduce the Italian Market and show maps made from direct observation of stores and signage in the area. At the end of the portfolio I look at the changes in the city over time by examining census data between 1980 and 2010.

I created this portfolio as though I was a consultant and hired with the task of giving an overview of Philadelphia’s immigrant population. The goal of each map is that it can provide direction for people making decisions with regards to the immigrant population. To find out where are there large numbers of immigrants, see page 5. To find where immigrant neighborhoods are located, see page 6. Where do the newest foreign-born residents live? See page 12. Where might officials want to provide multilingual information to residents? See page 9. The hope is that immigrant communities will be acknowledged for their contributions in Philadelphia and that government officials will build policies that consciously support foreign-born residents and those yet to come.

It is also my hope that this portfolio acts as a catalyst for future research. The dominant narrative regarding revitalization is often one of gentrification. Unfortunately, such a narrative generally lacks a nuanced discussion on immigration. My belief is that this portfolio adds complexity to the way we describe the growth of urban areas.
Distribution of Race in Philadelphia

This map shows census data for the racial categories of White, Black, Asian and Latino. Because there were originally 14 categories (shown below), I chose to compress the data into four groups. White consists of those who identify as White non-Hispanic. The category Black is assigned to those people who identify as Black or Black-Hispanic, Asian is those who identify as Asian, and Latino is those who identify as “White-Hispanic” or “Some Other Race-Hispanic.” In the map, one dot represents 10 people. From this you can see areas that are predominately white, predominately Black and predominately Latino. Additionally, there are areas which show more diversity and the Asian community, although relatively small is found throughout the city. The next chart will show a breakdown of census tracts by “largest racial group.” The yellow star, which will be shown in all of the maps, marks the location of the Italian Market.
Largest Racial Group
By Census Tract

This map shows the same demographics as the previous page but identifies which racial group is the largest in each tract. You will note that the distribution of White people can be as low as 28% while still being the majority, and can get as high as 100%. Similarly, predominantly Black tracts can range from 30% - 100%. Latinos, who make up a relatively small part of the population can occupy tracts where up to 92% of respondents identify as Latino. As we saw in the previous map, Asians live in many parts of the city but are only in high enough numbers to be the largest racial group in four census tracts.

My interest here is to look at segregation, voluntary or otherwise. Low percentages indicate that more than one group is present while a very high percentage indicates high racial homogeneity. This distribution likely reflects many intersecting factors such as proximity to shared cultural amenities, discriminatory housing practices, and housing affordability, and are likely to influence where immigrant groups of similar racial identity are likely to settle.

Source: 
2013 ACS 5 Year Estimate
Count of Foreign Born

This map shows the number of foreign born people in each census tract. Census tracts that have more than 219 foreign-born people are identified by a blue-gradient representing the number of people present. This does not show the density of the foreign-born because the tract sizes have great variability. Instead, this map shows where there are high numbers of foreign-born people and would be useful for identifying places one might want to conduct surveys or to inquire about additional demographic information (for example: country of origin, language spoken at home, or year of immigration). We can see that large numbers of foreign-born people live in the Upper Northeast, Lower Northeast, South Philadelphia, and Southwest Philadelphia.

Source: 2013 ACS 5 Year Estimate
Density of Foreign Born

Where the previous map showed numbers of people, this map shows the density of the immigrant population across the city. Here the population of the foreign-born is normalized by the land area in the census tracts. Because the tracts vary widely in size, normalization allows us to show the number of foreign-born people per square mile. This map may be more useful in identifying immigrant neighborhoods. I then used standard deviations from this result to show where there is an average density of foreign born individuals (light blue), a more than average density (medium-blue) and much higher than average density (dark blue). From this, the Upper Northeast stands out less and this causes the Lower Northeast to stand out more. Where census tracts were high in numbers of people, they appear less extreme once area is accounted for. This can be seen in Southwest Philly. Conversely, where there had been non-exceptional numbers of people in Center City, the small area of the tracts make parts of Center City light us as very dense.
Commercial Corridors

In the article “Bringing Vitality to Main Street: How Immigrant Small Businesses Help Local Economies Grow” (2015), the Americas Society/Council of the Americas (AS-COA) and the Fiscal Policy Institute found that immigrant business owners make up 28% of main-street business owners in Philadelphia. To look at the relationship between businesses and immigrant communities I used land-use data provided by the city of Philadelphia rather than zoning maps because the land-use data show how properties are actually being used. To identify a “main street” or “commercial corridor,” I used a search query to find areas where commercial buildings are located within 75’ of other commercial properties (excluding commercial office buildings). This approximates how walkable a commercial area might be.

Once I identified commercial areas, I then calculated their combined square footage and kept those (shown in orange) that have greater than two standard deviations in area. I then plotted this on the immigrant density map (page 6) and it does appear to show that there is higher density of immigrants near commercial corridors. Not every commercial corridor is located near high density census tracts, but in most cases, there is a higher density of immigrants close to commercial corridors. It is not clear what relationship exists between high commercial activity and where immigrants live other than that there appears to a spatial correlation.
Crime

The maps to the left show the density of different crime types in Philadelphia. The color gradient from yellow to brown shows standard deviations in the density of crime (crimes per 1,000 people). The outlined areas show those census tracts which have an above average density of foreign-born people (page 6).

It does appear to be true that the prevalence of violent crimes are lower in areas that have a higher density of immigrants. The “All Crime” map includes non-violent crime, (i.e. theft) and these rates also appear to be lower for high immigrant census tracts. The data here is merely a snapshot of last year’s crime incident report (2014) and the latest census data (2010) and so no conclusions can be made about the impact that immigrant communities have on crime. A further analysis might consider a difference in difference estimation to examine the impact that an increase immigrant communities has on the increase or decrease of crime in an area. This would require time-series data for both crime and immigrant populations.

Source: 2013 ACS 5 Year Estimate

Source:
OpenDataPhilly:
Police Incident Report (2014)
Number of Languages Spoken by Census Tract

The American Community Survey asks a question of “Language Spoken at Home.” Using this data, I identified the number of languages spoken by people in each census tract. Tracts that have high numbers of immigrants (page 5) are shown in blue and those tracts that have more than ten languages present are shown outlined by a thick blue line. The number of languages spoken is then shown in the center of the tract. I excluded any tract that had lower than average numbers of immigrants. I did not use a threshold for the numbers of people speaking a language, so even if just one person speaks the language they are included in the overall count of languages.

This map would be useful for people distributing literature and considering which languages in which to publish. Although this map does not show how many people speak each language (see page 10), it acts as a starting point for further inquiry. The chart on the next two pages shows language and proficiency distribution across the city.
Low English Proficiency

This chart shows how many people speak a language other than English at home (blue) and these categories are arranged by the percentage of those speakers who say that they speak English “less than very well” (orange line). This means, the first three language groups, Vietnamese, Chinese and Russian, have a very high percentage of people who do not speak English well (60-70%). The largest group of people speaking a language other than English is the Spanish-speaking population. While it is likely that the Vietnamese, Chinese, and Russian speaking individuals are foreign-born, the Spanish-speaking group consists of a large Puerto Rican (native-born) population. The groups on the right have very few numbers of people speaking this language as their primary language at home and appear to have higher English proficiency.
Vietnamese Speakers

From the previous page, we saw that Vietnamese are the third largest language group in Philadelphia and they have the highest rate of low-English proficiency. This map plots the number of Vietnamese speakers, as indicated by the size of the circle, and the proportion of those people who speak English well (blue), and those who speak English poorly (orange). Although there were 135 census tracts that had Vietnamese speakers, I chose to map only those tracts that had 40 or more Vietnamese-speaking residents. On average, 69% of Vietnamese speakers state they have trouble speaking English. The areas with the greatest need appear to be the Lower Northeast, South Philadelphia, and Southwest Philadelphia. You can also see that there are several areas that are entirely blue (these residents speak Vietnamese as their primary language at home but also speak English proficiently). Several of these tracts are in West Philadelphia and are likely due to the universities in that area (University of Pennsylvania, University of the Sciences, and Drexel University) each of which draw international students.
Year of Immigration to the United States

This map shows both the size of the immigrant population in each census tract as well as the distribution of years of residence in the United States. The size of the circle represents the total number of foreign-born people in a tract and the colors show the percentage of people that arrived in the following categories:

- since 2010 (pink)
- 2000 to 2010 (dark blue)
- 1990 to 2000 (medium blue)
- before 1990 (light blue)

From this map, you can see that many of the newest immigrants are in the University City/West Philly area. This is likely due to large number of foreign-born students. In the larger pie-charts (higher numbers of immigrants), navy blue is a predominant color indicating that large numbers of Philadelphia immigrants came to the United States between 2000 and 2010. These numbers appear largest in the Upper Northeast, South Philadelphia and Southwest Philadelphia. One interesting pie-chart is in the lower left part of North Philadelphia and is entirely pink (111 people). This shows that immigrants are not always moving where previous generations of immigrants have been established and that some are moving into unestablished areas. This particular tract may be due to Temple University students. Also of note is that the upper North East has very little pink, indicating that the population living there immigrated earlier.
Businesses in the Italian Market

The following maps come from direct observation. Classmates and I walked down 9th Street and noted the stores and signage that were used along the corridor. Some of this data is incomplete. The areas of the Italian Market that are north of Washington Avenue are to the left (purple outline), and the area south of Washington Avenue is to the right (blue outline). The colors in the middle show the type of business in each of the buildings along 9th Street and the extent maps show the name of each of the businesses.

The middle map shows that more discount, produce and meat vendors are above Washington Avenue. The area south of Washington has a selection of those businesses that are north of Washington but more concentration of service businesses (ex. nail salons) and cafes.
This map, again, shows business type (building color) in addition to the language of the outdoor advertising (dots). The data was collected by direct observation and only includes what could be seen from across the street. The map shows that more Spanish-only (blue dots) and bilingual signage (pink and green dots) is used below Washington Avenue and more English-only signage is used above Washington Ave. Because signage can be a strong way for businesses to attract customers, it appears that the businesses above and below Washington Avenue are targeting different clientele.

The relationship between store type and language used is shown further on the following page (page 15).
Language of Advertisements by Business Category in the Italian Market

The chart to the left shows this data from page 9 in a chart format. From this you can see that the cafes and almost all of the meat and specialty stores advertise in English. On the other hand, discount and retail stores show more diversity in the language they use to identify their store. The number of businesses that advertised in each language is as follows:

- 61: English Only
- 15: Spanish Only
- 9: Spanish & English
- 1: Chinese & English
- 1: Vietnamese Only
- 1: Vietnamese & English
- 2: Three or more Languages

You can also see that restaurants are the most popular category (17 buildings), followed by retail (12), and then meat and specialty stores (10 each).
Population Change 1970 to 2010

From 1970 to 2000, Philadelphia saw a decline in population of over 400,000 residents. When people discuss revitalization, it is often assumed that the people who left cities (suburbanites) are being enticed to re-enter the city limits. This process of gentrification is often the dominant narrative in how cities discuss their process of revitalization. In 2010, Philadelphia had its first increase in population since 1970. While this was seen as proof that the city is being revitalized (and it may well be), it is interesting to note, that this growth is only due to a net increase in Philadelphia’s foreign born population; the native born population has actually continued to decline. The following charts use historic census data* to compare the census years of 1980 and 2010 to show the net growth or decline in population for census tracts in Philadelphia.

* Because census tracts change shape and name overtime, not all census tracts were able to be compared. Using historical census data, 294 tracts were able to be used for comparison.
Census Tracts by Native Born Growth

Using National Historic GIS data, I was able to compare the 294 census tracts of Philadelphia. I chose to analyze the gap between the 1980 census and the 2010 census and the net change in each tract’s population. Because I am using aggregate data, I am unable to discern if people are moving from one tract to another, but I can show the growth and loss of individual tracts. The chart to the left shows the change of the native born population in Philadelphia from 1980 to 2010 in the 294 census tracts. From this, you can see that many tracts (223) have lost native born residents and only a handful of tracts (71) have gained native born residents. Further, the net growth (35,446 people) and net loss (261,705) across the city are far from even.
Census Tracts by Native Born Growth

Here, I took the distribution of population for the native born and also plotted the growth/decline of the foreign-born population in the same 294 census tracts. While there has been both growth and loss of the foreign born population, there has mostly been growth and the growth is happening across census tracts. You can also see that some of the biggest spikes in growth for the foreign born are in the 223 census tracts where the native born have declined. This is not, however, a general trend. The foreign born population appears to be growing regardless of native born growth patterns.
Census Tracts by Foreign Born Growth

In the chart to the left, I plotted the growth and loss of the Philadelphia’s foreign-born population between 1980 and 2010 across the same 294 census tracts. Now they are arranged by net growth of the foreign-born population. From this we can see a very different pattern. In this case, the net growth for the foreign born population is happening in nearly three times as many tracts than the native born population (194 instead of 71). The number of tracts that have lost foreign born residents is only 100 tracts, where it had been 223 for the native born. In other words, the foreign-born population is growing in two-thirds of Philadelphia’s census tracts. There are also more tracts that are close to having no net change. This indicates that many tracts have only seen minor changes in terms of growth. The low level of loss and many showing only moderate change might be indicative of limitations immigrants have in choosing where to live.
Here, I plotted the change of the foreign-born (y-axis) against the change of the native born population (x-axis). Tracts to the right of the vertical line, where the native-born have increased, are ones that are often assumed when discussing revitalization: the native born population increases (yellow box, 20 tracts) or where both the native- and foreign-born population increases (green box, 51 tracts). What is interesting, however, is that, while those 51 tracts (green box) do have an increase in their foreign born population, there are 143 other tracts where only the foreign-born population has grown. The Italian Market is one such area. This chart is disaggregated on page 21.

This is important because it adds complexity to the dominant narrative that cities become revitalized through a process of gentrification where richer white people or members of “the creative class” revitalize cities by moving into and investing in poorer, minority neighborhoods. Given that most of the population growth has been from the foreign born population, this narrative does not explain revitalization in a way that acknowledges immigrant communities. This analysis, then, is perhaps a starting point for further research that can look at the dynamics between foreign born residents and the revitalization of urban areas.
Scatterplot of Census Tracts by Population by Net Change 1980 - 2010

Native-Born

Increase

Decrease

Foreign-Born

Both

Native-Born Increase: n=71

Foreign-Born Increase: n=193

Both Increase: n=51

Native-Born Decrease: n=223

Foreign-Born Decrease: n=100

Both Decrease: n=20