

Socio-Historical Assessment of Geneva's Food Access

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Background

The USDA defines a food desert as lacking access to both affordable and healthy food options, like fresh fruit and vegetables. **Geneva, NY, experiences issues of food insecurity and food deserts, specifically in the impoverished areas of the city.** Having been familiar with Geneva's food issues, we were curious as to how Geneva became a food desert.

Methods

We extracted data regarding downtown Geneva from both US **Census Tracts** and the **Dickman Directory** of all businesses in the county. We located the Dickman Directories from Ontario County for 5 different years (1980, 1990, 2001, 2010, 2017). We recorded all food sources in downtown Geneva, located on 5 different streets in proximity to downtown. We grouped all food resources into three unique categories: **grocery store, specialty store, and convenience stores.** We operationalized grocery store as a large store that primarily sells food, specialty store as an upscale boutique store specializing in a specific food, and finally, convenience stores as small stores offering limited groceries. For the current year, we found all food sources throughout all of Geneva, both town and city. Finally we mapped these current food sources on a map of collected US Census data of the racial makeup of Geneva.

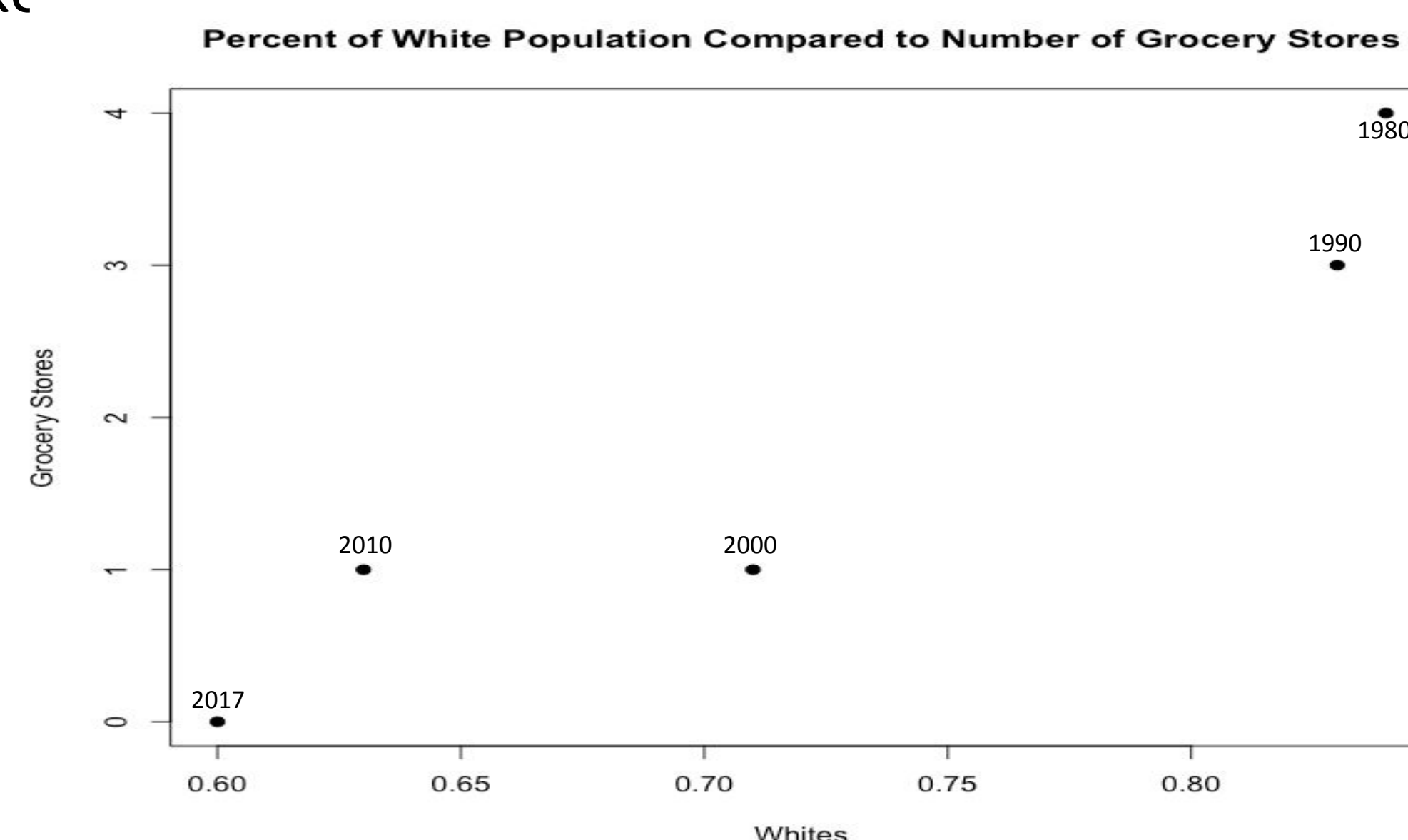


Figure 1. Grocery Stores and White Population in Downtown Geneva

- Positive linear relationship
 - $y = -8.38 + 14.10x$: For every increase by 10% in the population of white people there would be 1.41 more grocery stores
- $r^2 = 0.90$: 90% of the change in number of grocery stores can be attributed to the percentage of white population.
- r coefficient = 0.95
 - A r coefficient of 0.95 indicates a very strong correlation between the variables

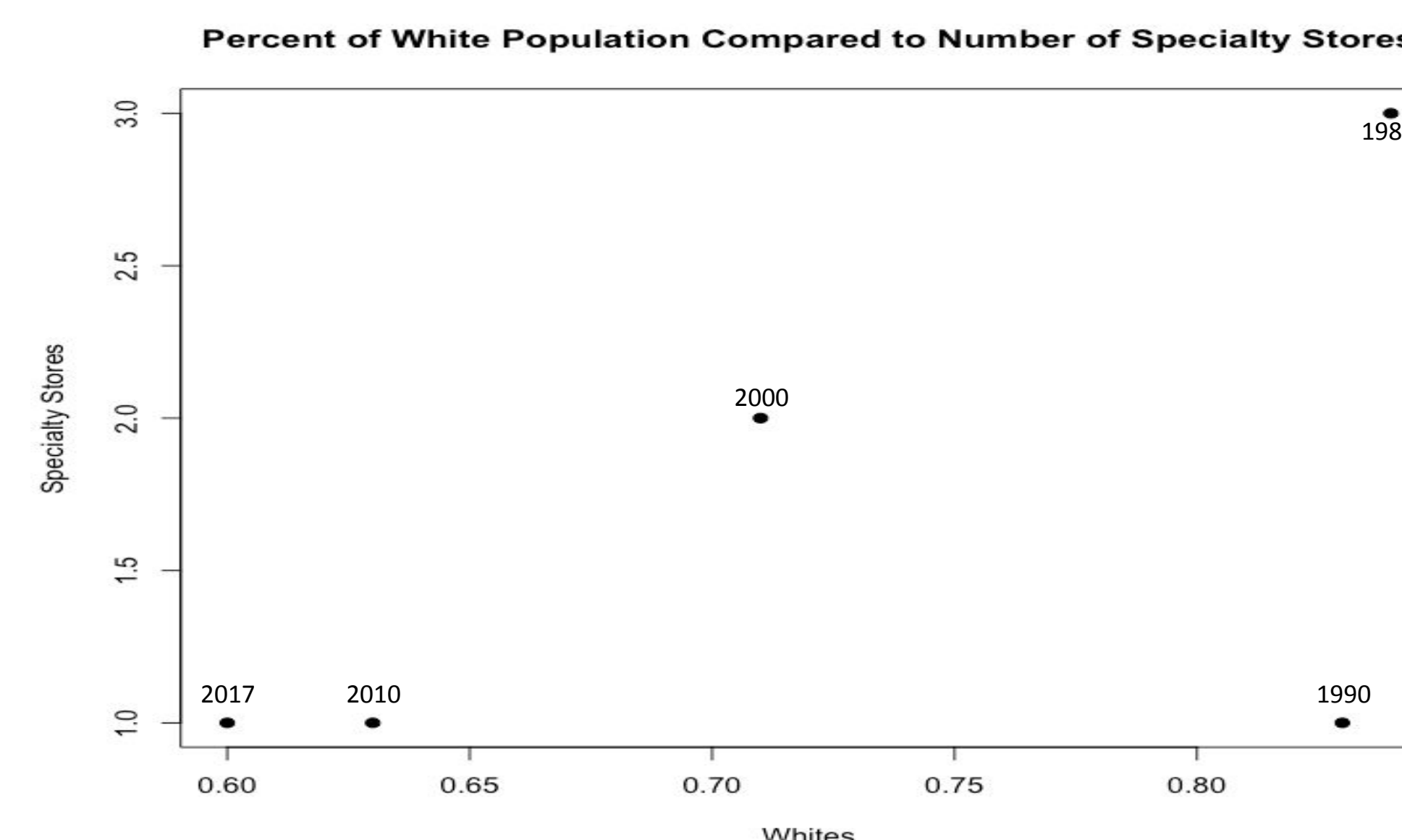


Figure 2. Specialty Stores and White Population in Downtown Geneva

- Positive linear relationship
 - $y = -3.08 + 6.76x$: For every increase by 10% in the population of white people there would be 0.46 more specialty stores
- r coefficient = 0.57: A r coefficient of 0.57 indicates a very strong correlation

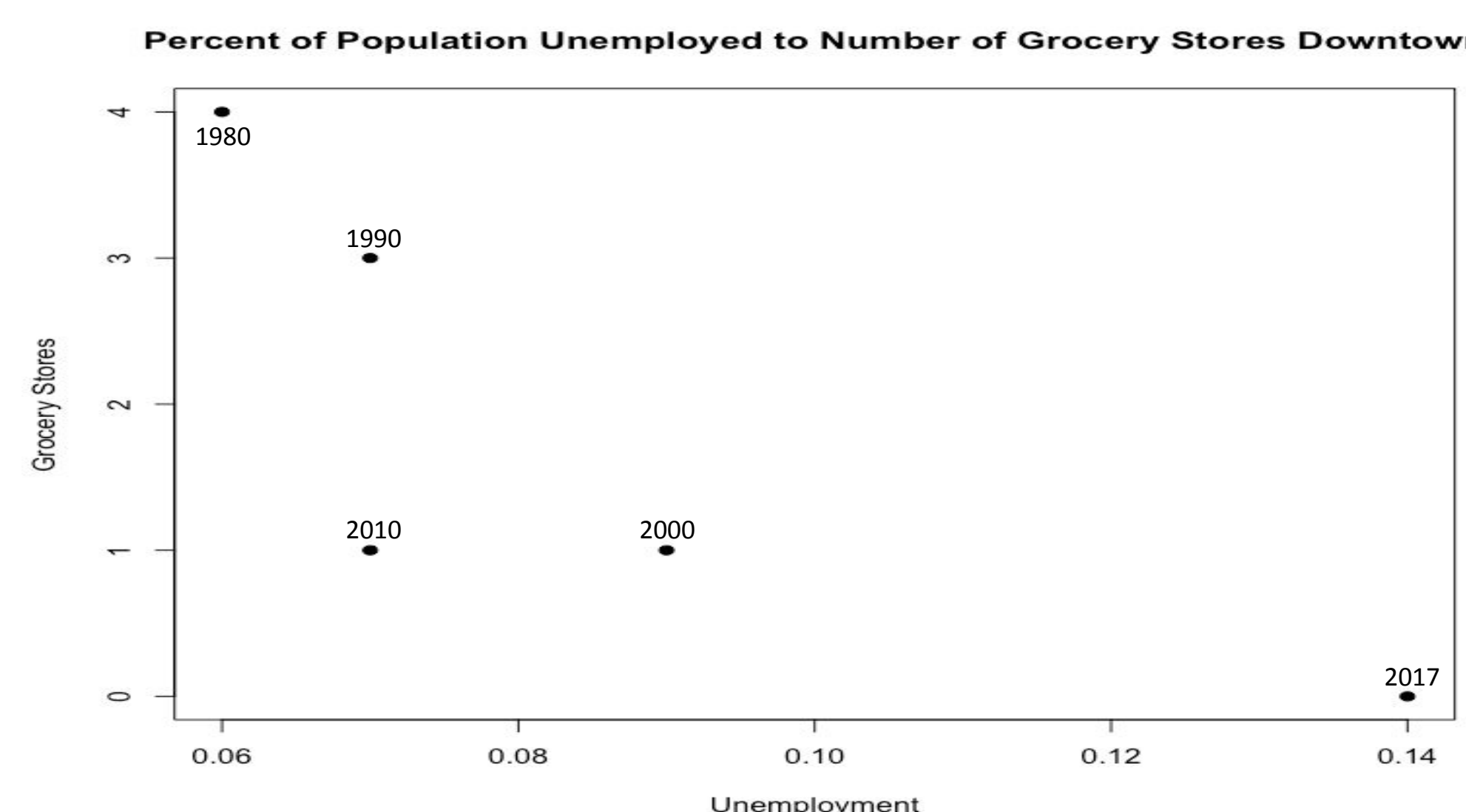


Figure 3. Grocery Stores and White Population in Downtown Geneva

- Negative linear relationship
 - $y = 5.22 - 39.80x$: For every increase by 2.5% in unemployment there would be 1 less grocery store
- r coefficient = 0.78
 - A r coefficient of 0.78 indicates a very strong correlation between the variables

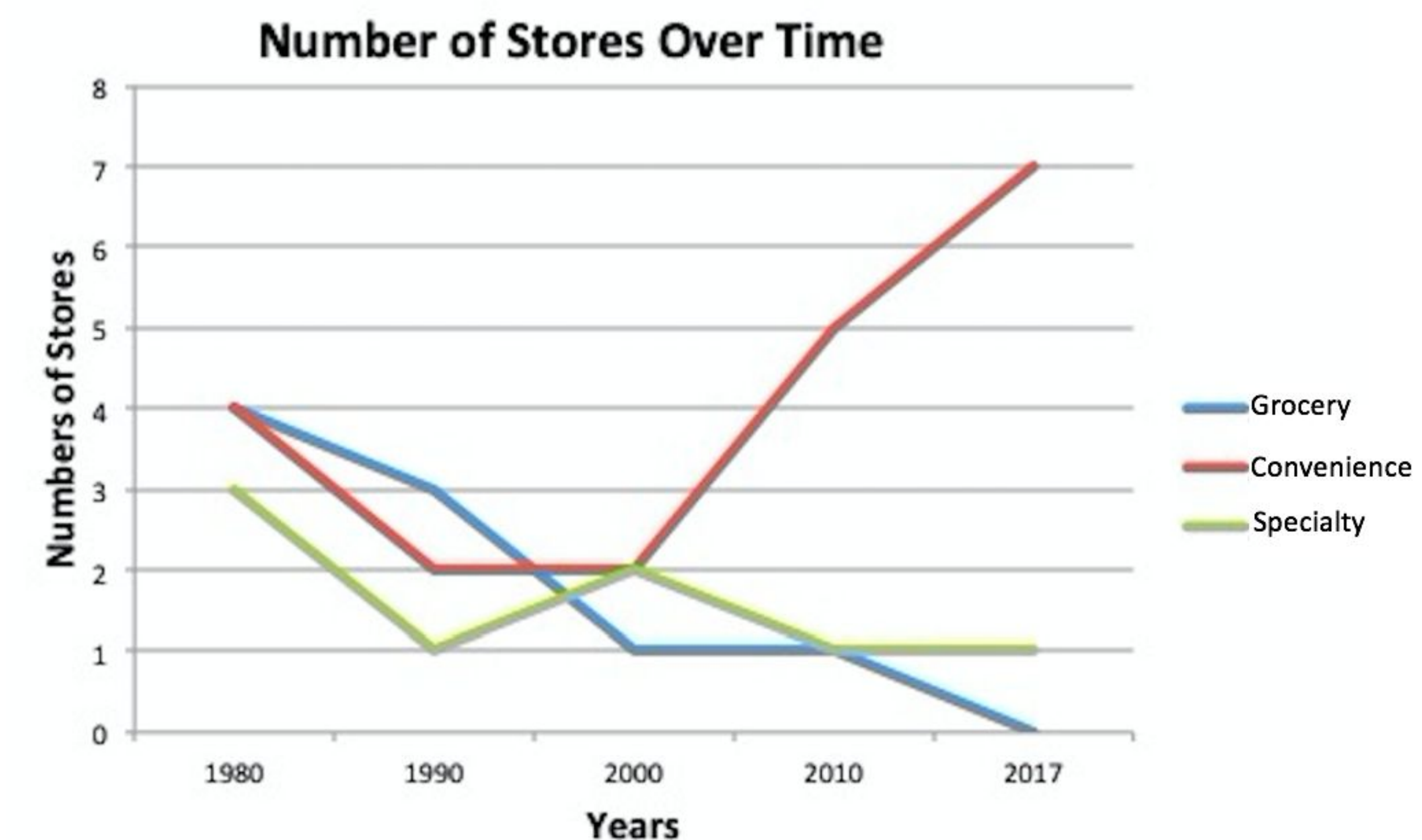


Figure 5.

Percentage of Whites in Downtown Geneva Over Time

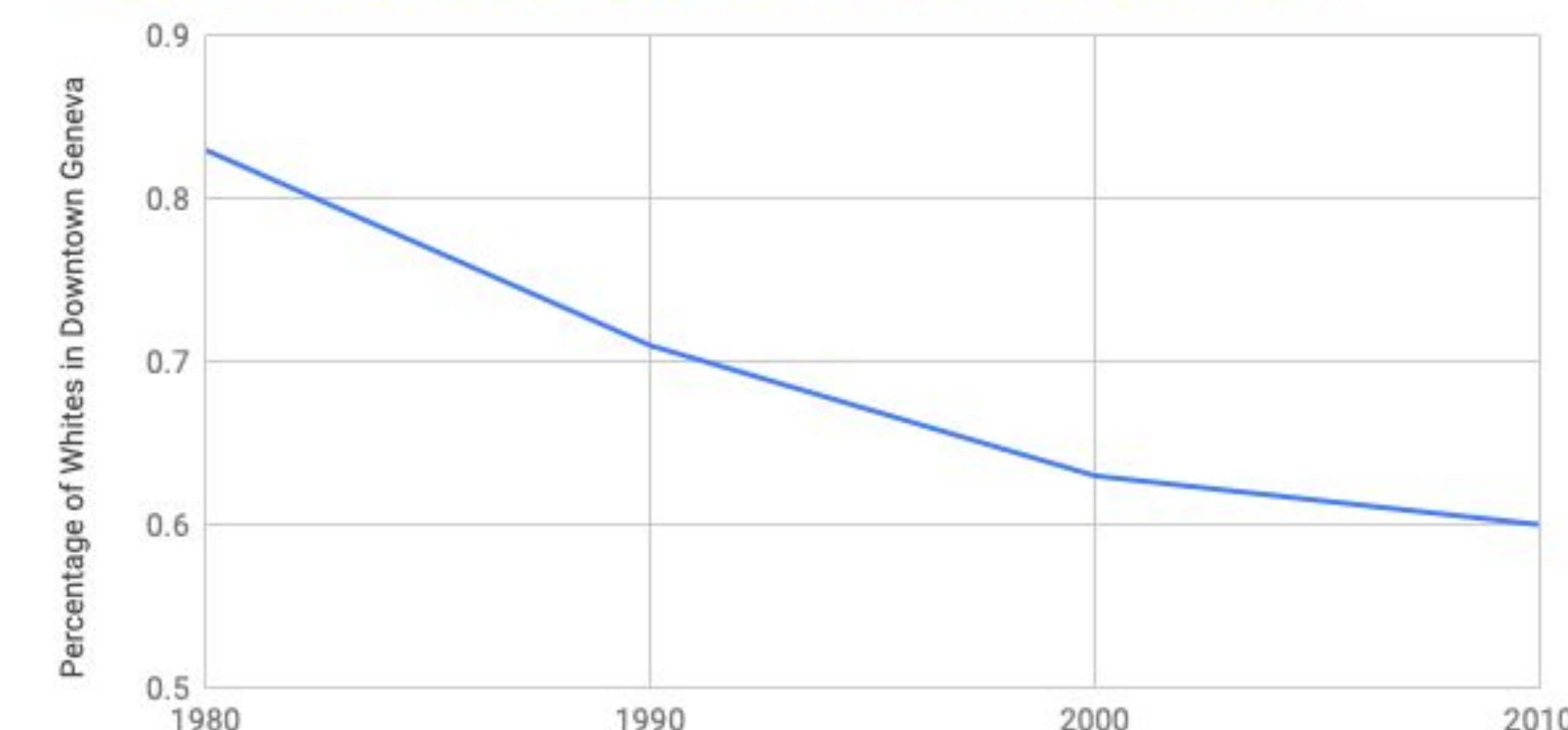


Figure 6.

Discussion

Based on the literature and census-directory comparisons, there are specific implications about the characteristics of Geneva's food security in the downtown area that link race and unemployment to food options. The departure of white people from urban centers, known as "white flight", created rapid social and economic disparities. Across the United States, financially insecure and non-white communities frequently have a higher density of unhealthy food options and less access to grocery stores than white and affluent communities. In Geneva, access to healthy food is becoming more dire as grocery stores disappear and convenience stores flood into the city.

The decline of white people in Geneva's downtown is correlated with the decline in grocery and specialty stores and an increase in convenience stores. Other research has shown that "white flight" has the effect of dramatically pulling resources and investment out of a community. Non-white populations do not have the same agency to invest in more expensive projects like grocery and specialty stores due to racism in real estate and banks. Consequently, we see a rise in convenience stores as white people leave and non-white populations move in. For non-white residents, convenience stores make more economical sense since they do not require as much investment and upkeep. The result is a food swamp, in which an area has an excess of unhealthy food options and limited comprehensive supermarkets.

The correlation of unemployment in downtown Geneva with the prevalence of grocery stores demonstrate the relationship between access to healthy food and financial security. We are unable to determine causation but have two potential theories. Since people with less financial security do not have the resources to invest in local business and access to reliable transportation, unemployment creates a food swamp/desert. However, it could also be argued that a lack of healthy food options could lead to health issues that inhibit work. Either way, Geneva's financially insecure and non-white populations suffer from the disparity of food access while white and affluent populations have easier access to supermarkets. The placement of the current grocery stores is closer to areas populated by white residents and are not easily accessible without a car. The consequences are devastating, as they perpetuate health issues, racism, poverty, and inequality. The history and current layout of food options in Geneva should be alarming for residents and those dedicated to making Geneva a more equitable city.

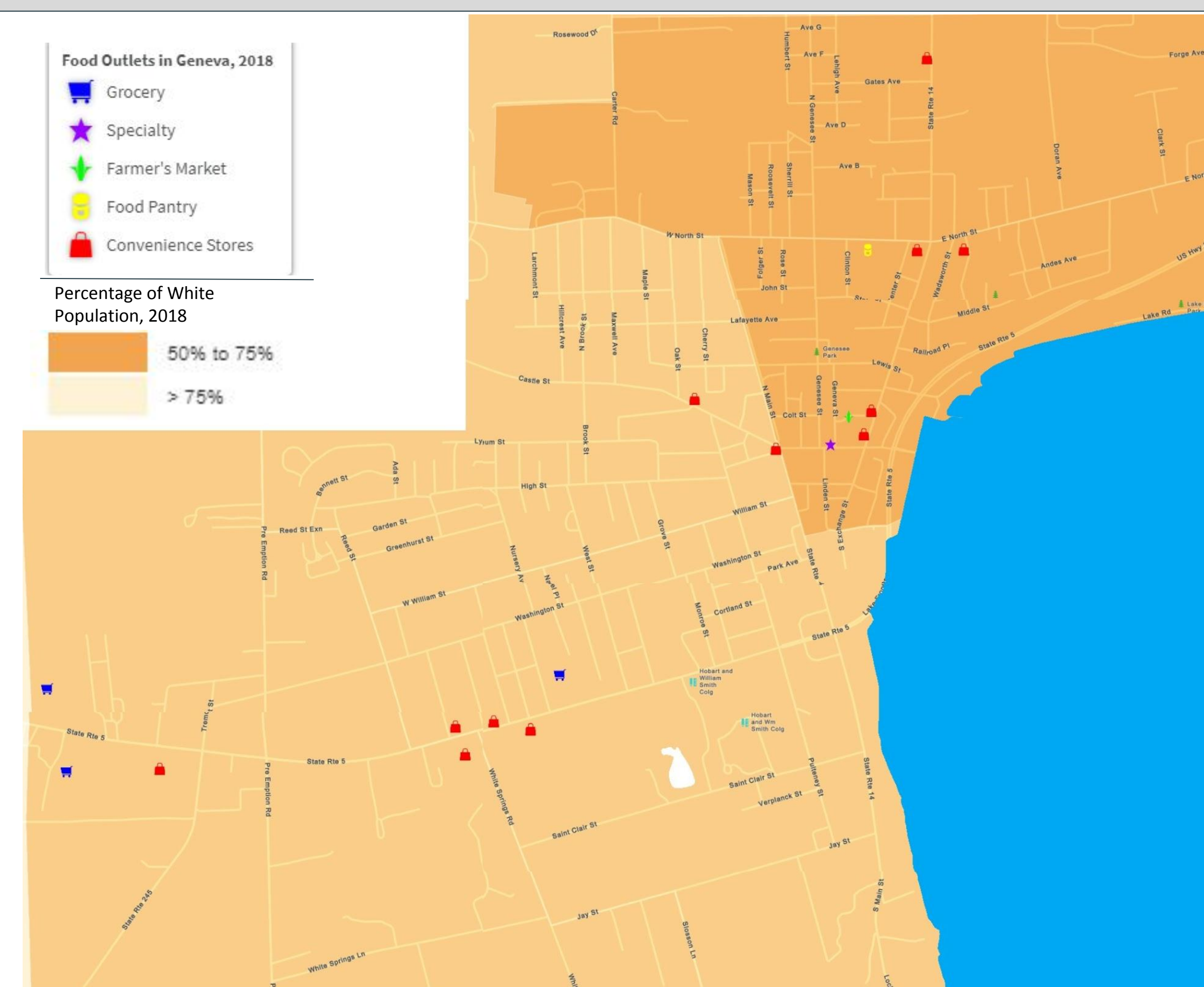


Figure 4. Current map of Geneva Food Sources