Spatial Analysis of People and Registered Historic Landmarks in New England

**Background**

New England is a region with great pride in its part of national history. Historically, this project attempts to assess spatial relations between landmarks registered by National Park Service and social characteristics of populations in New England. This is to gauge not only access certain populations have to sites of national importance, but also to indicate which sites are worthy of recognition in relation to social factors. The premise of this analysis is to identify whether there is a proportional relationship between the location of registered historic landmarks, non-white populations, or a population at large. Given how the purpose of the NPS Registered Historic Landmarks was to enforce American values and promote patriotic heritage (Lindgren), this analysis explores where state recognized sites align with other social and economic identities.

**Methodology**

The premise of the analysis is to create a landmark density raster and a raster layer for population distributions, and use map algebra to find where the density of one layer is disproportionate to the other. The raster layer of landmark densities was created using an unpopulated point density analysis, then reclassified into 10 quantile groupings. The income, population, and non-white population distribution layers were created by transforming census tract layers into centroids, then joining US Census Bureau ACS data to these points, and using these values in the population field of a dot density analysis which was also reclassified into 10 quantile groupings. For example, the non-white distribution layer joined each census block with the total block population minus the white population. The income layer joined the median family income ($) for each census block. The final steps of the methodology were to use the raster algebra function to subtract the social layer from the landmark layer, then reclassify the results once more.

**Results**

Given the nature of the procedure (linking social attributes to census block geometry) he resulting 3 maps all reveal information about the distribution between population density and landmark density. One trend shows that small towns in northern New England have a higher density of landmarks than people, as evidenced by the light and dark blue centers. Another pattern is the further southwest on the map in Connecticut, there are consistently more people than landmarks. A third observation is how Boston and its local suburbs have the most even correlation between people and landmark density. Figure 2, which displays income distribution, has results very similar to Figure 1, except there are spots of even higher densities of landmarks than income in the center of towns in northern New England. Figure 3, which compares non-white population density to landmarks reveals throughout northern New England, there is a higher density of registered landmarks than people of color. Similarly, large swaths of rural land which are red for the other maps, meaning lower density of landmarks than people or income, are proportional here. Figure 7, the input raster for non-white distribution, proves the lowest density for people of color are in northern New England.

**Conclusions**

The results suggest that there is a bias in Landmark Registration towards mostly white small towns in northern New England compared to the rest of the states. Using this methodology, income does not appear to be a major indicator of landmark density, however, that might be due to income not having a major impact on the point density raster. But the small differences between Figure 1 and Figure 2 suggest there might be a low concentration of wages, but a high concentration of recognized historical importance. This is compared with Southwest Connecticut where there is a high concentration of wealth, but not of landmarks. Limitations to this analysis is using census block centroids as a way to measure where people are, which becomes inconsistent in regions where census blocks are very large. Also, the analysis could be improved if there was data available on when landmarks were certified, which could provide a more insightful conclusion. A potential improvement of this study might compare landmark densities with mundane structure densities, or exploring other factors such as median age to further investigate using the same methodology.