

# MAPPING RACIAL DIVERSITY USING GRID-BASED RACIAL DOT MAPS AND RACIAL DIVERSITY MAPS

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## ETHNO-RACIAL GEOGRAPHY

Mapping spatial distribution of racial segregation and/or diversity is of keen interest in the American society. As attention has recently turned to spatial analysis, the issue of how to design maps to best depict racial distribution becomes increasingly important. While some maps serve as visualizations, other also double as datasets for quantitative spatial analysis of racial distribution within a city.

Majority of maps illustrating demographic data are chorecloth maps. They divide a study area into U.S. Census aerial agglomeration units (for example, tracts) and color these units to depict spatial variability of a demographic variable (for example, the percentage of a given race, or a racial diversity category). Chorecloth maps suffer from low spatial resolution and from the modifiable areal unit problem (MAUP). They are also restricted to the visualization role.

High resolution grids, like those provided by the SocScape project at <http://sil.uc.edu>, have higher spatial resolution, don't suffer from the MAUP, and double as data which is in the format that allows for a more thorough spatial analysis than the original census data does.

This goal of this poster is to popularize hi-res grids for use in racial segregation/diversity research. We show a series of examples featuring comparisons between maps obtained on the basis of census units and maps obtained on the basis of hi-res grid. By examining these examples the advantage of using hi-res grids becomes clear.

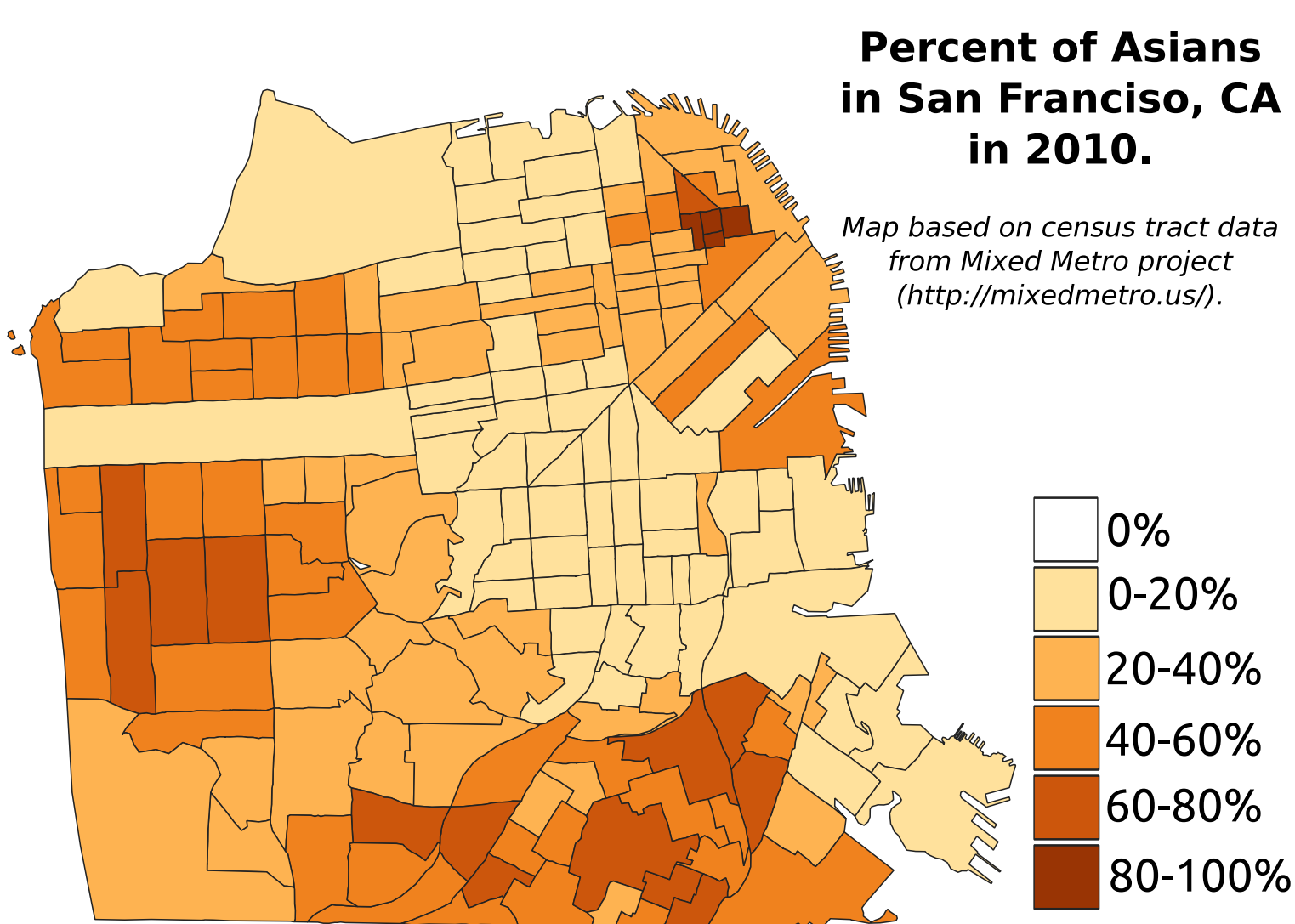
## HOW TO MAP RACIAL SEGREGATION AND DIVERSITY?

### Spatial distribution of race - percentage maps

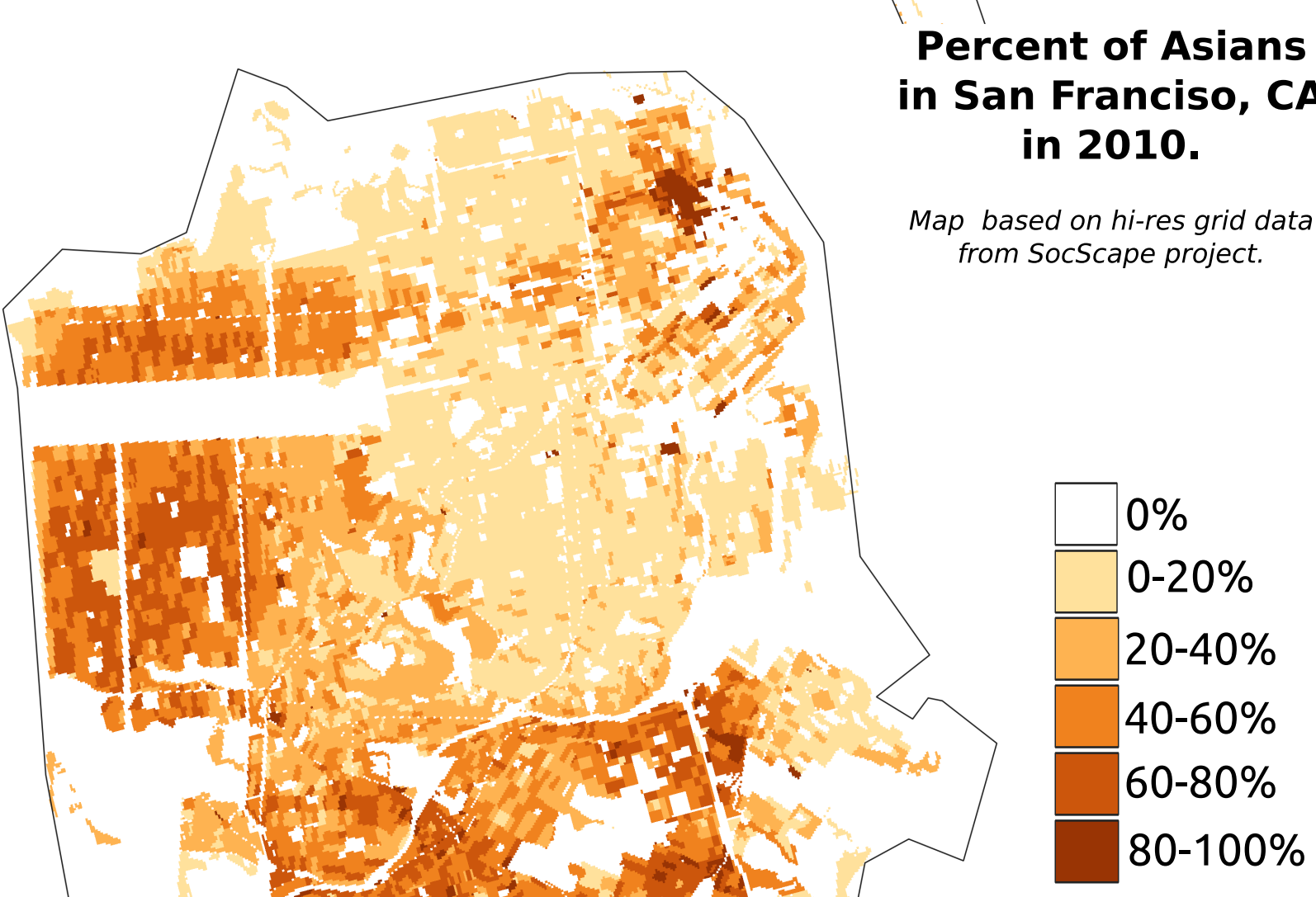
A map showing the spatial distribution of the percentage of people of a given race. The hi-res version of the map has clearly a better spatial resolution, but, at the scale of the entire city, both maps convey the same message.

Such map can illustrate a distribution of a single race/ethnicity group at a time; to show the racial composition of a study area the set of percentage maps is required.

### CENSUS BASED MAP



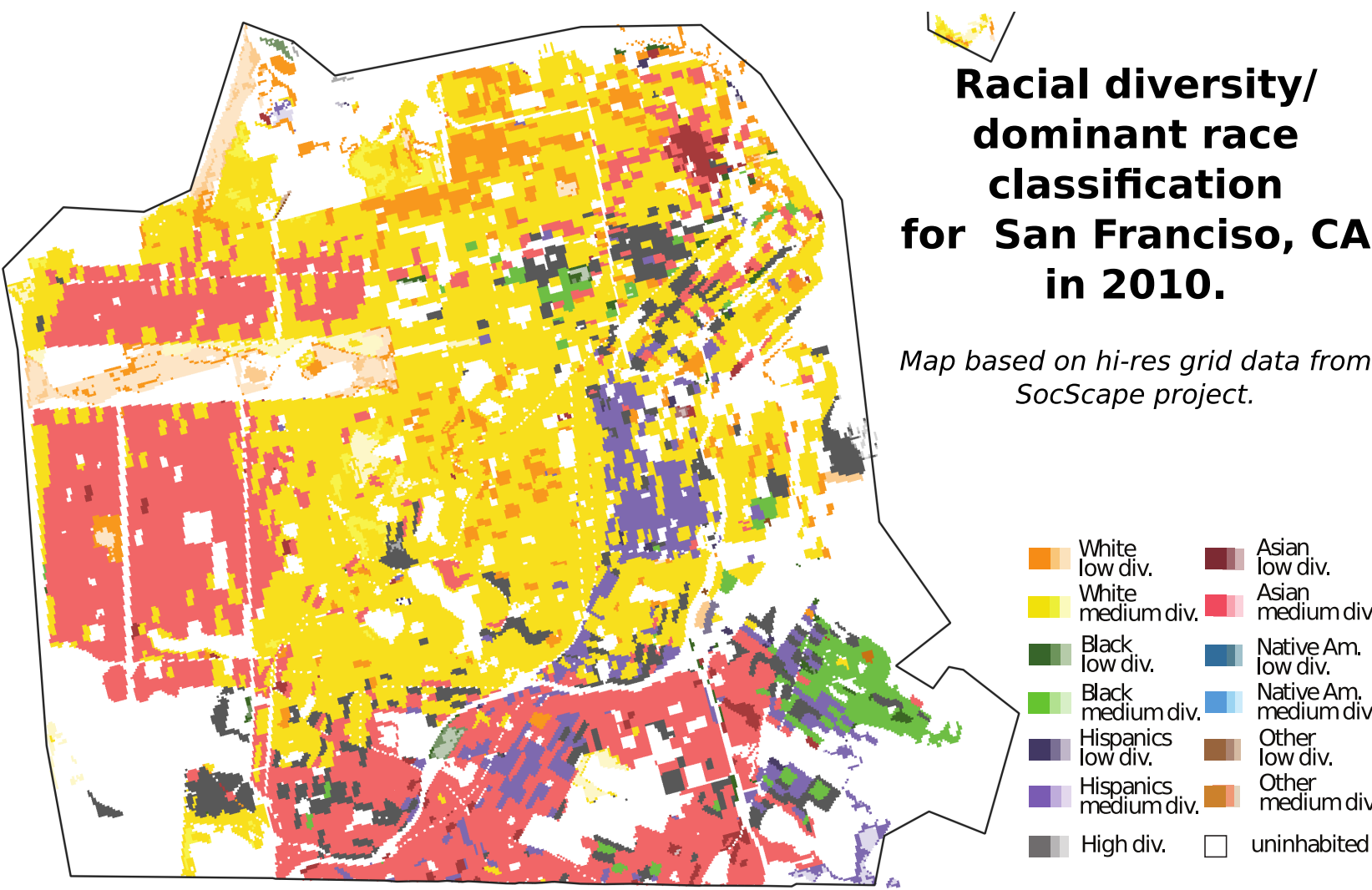
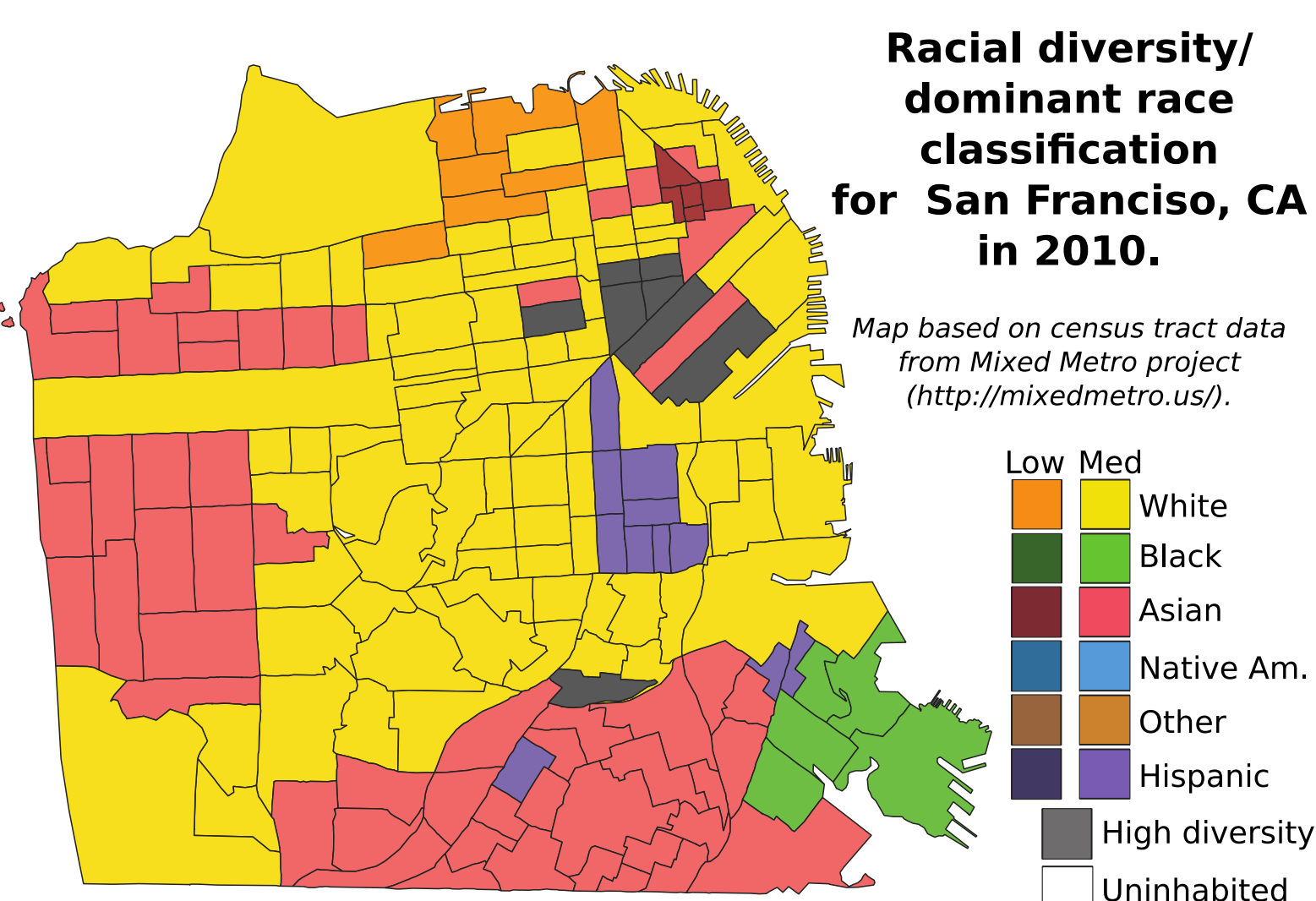
### HI-RES GRIDS



### Diversity/dominant race category map

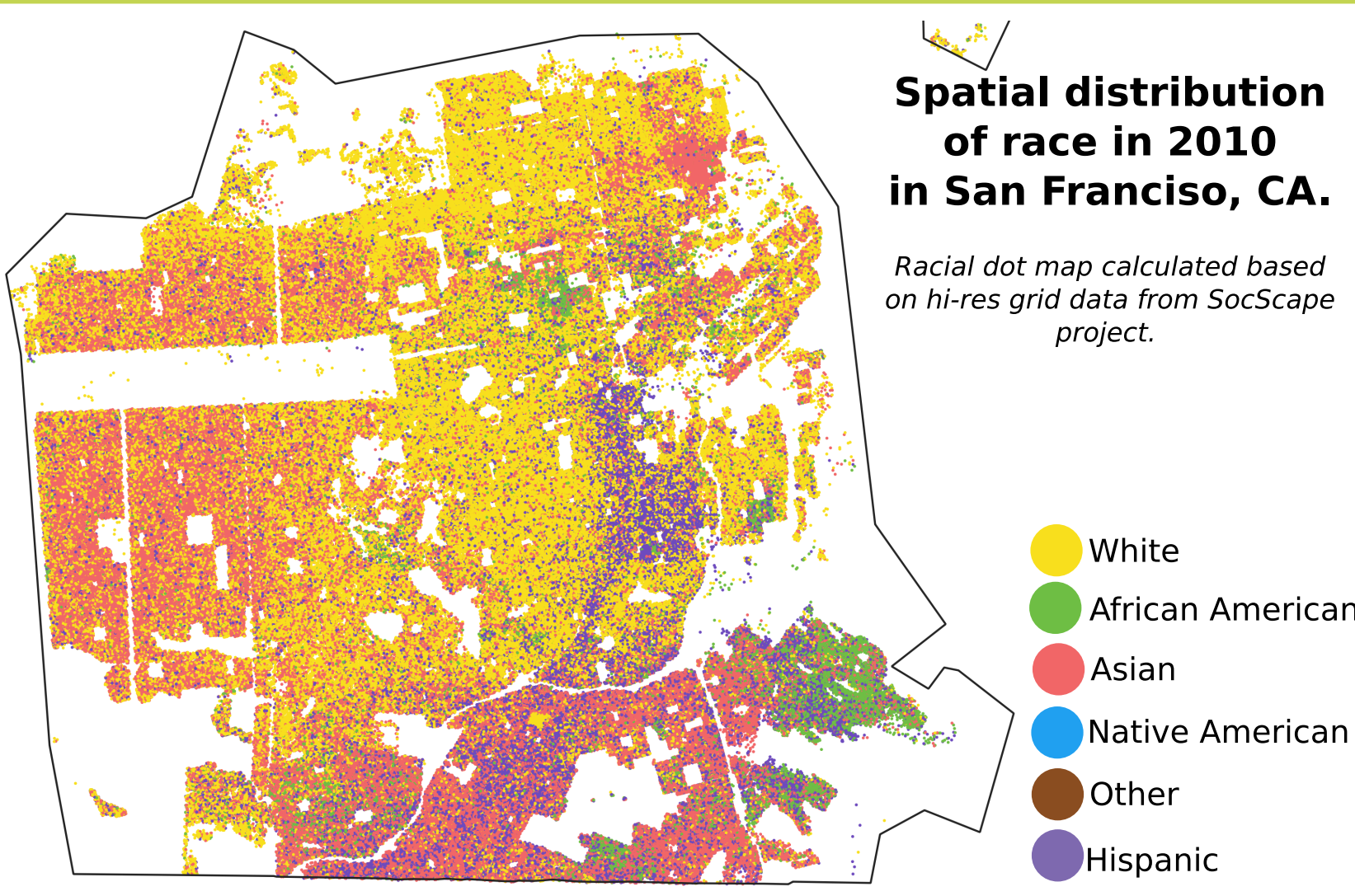
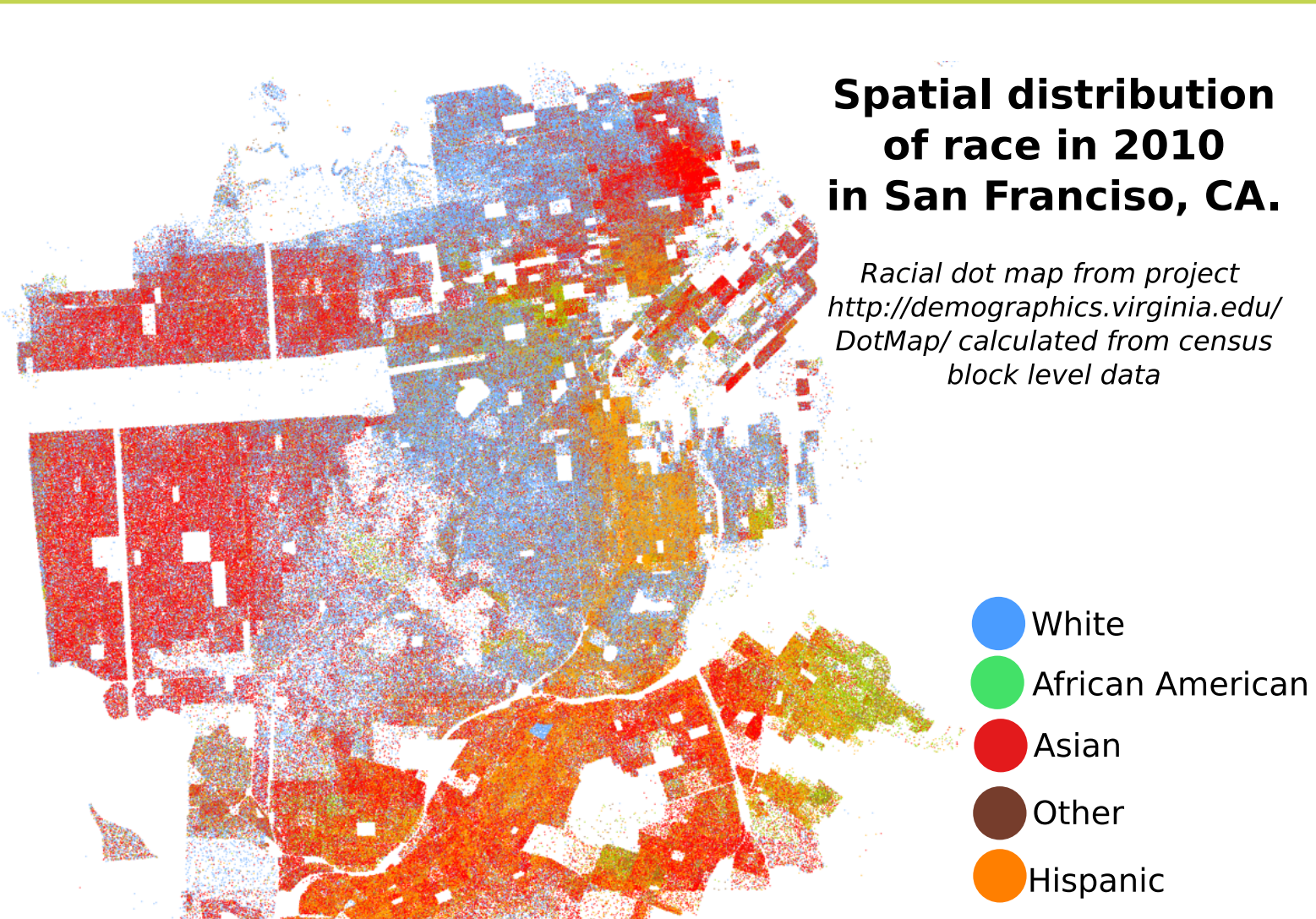
A map showing spatial character of neighborhoods in a single, easy-to-understand map. Each category, depicted by a color, codes the level of diversity and a dominant race.

Such map conveys most important information about racial geography but it only indicates a dominant race leaving identities of minority races unknown.



### Racial dot map

In the racial dot map each person in the mapped area is represented by a dot. The dot is placed as close to the person place of residence as the data allows for and its color represents person's race. Thus, a dot map conveys spatial distribution of population density and the full racial composition in a single map. In the block-based map dots corresponding to people inhabiting a given block are placed randomly within this block, whereas in the grid-based map dots are placed in a grid cell. The difference is clearly visible when investigating areas smaller than the entire city.



## UNCOVER SUB-TRACT RACIAL DISTRIBUTION

