

Risk in Colors



Caption

This is a data visualization of the CalEnviroScreen 3.0 Data released by OEHHA (Office of Environmental Health Hazard Assessment) in 2017. California Environment Screen is a California Communities Environmental Health Screening Tool that identifies California communities by census tract that are disproportionately burdened by, and vulnerable to, multiple sources of pollution. This data visualization utilizes longitude, latitude, CES score percentiles, and disadvantage community identification data. The height of the polygons represent the CES score percentile (the lower the percentage the less environmental hazards) and the color of the polygons represent whether the neighborhood is predominantly identified as a disadvantaged community or not. The data visualization is a web-based application that utilized the Mapbox token as its base map. The layering was done through implementing Deck.gl.



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Chae, Yoo. 2019. "Risk in Colors."

In "Toxic Data Infrastructures: Emission and Ridesharing." In Visualizing Toxic Subjects, curated by James Adams and Kim Fortun. The Center for Ethnography. May.

<https://tinyurl.com/y6e8muvq>

Design Statement

I created this data visualization in order to provide a pollution visualization schema that focuses on the idea of 'scale.' Conventional data visualizations, especially geospatial visualizations, that deliver information about air pollution in Los Angeles tend to quantify emission data without pointing to how such hazards might affect neighborhoods quite differently. These visualizations convey correct information about air pollution (that pollution is higher in areas where major freeways pass by, etc) but without denoting the potential scale of its effects. For instance, the height of these polygons are not drastically different, which means that the CES score percentile themselves among these communities are not drastically different. While this means that environment hazard, including air pollution, is significant in all areas of Los Angeles, it does not guarantee that the effects of hazards are felt similarly across different neighborhoods as well. In order to represent this problematic, I decided to differentiate the colors of the CES score percentile according to whether the neighborhood is a disadvantaged community or not.

Project Statement

My work is centered around the formation of civic data about vulnerable communities, primarily focused on the practices of categorizing and classifying transportation and pollution data in in Southern California. My work is committed to furthering research on civic infrastructures and human-computer-interaction by revealing the complex data economy among emerging transportation infrastructures, such as Uber and Lyft, and its social consequences. I am particularly interested in how information infrastructures, while making certain data visible, selectively renders others opaque. The invisibility of the link between transportation problems in Southern California and related risks, ranging from air pollution to governance, creates a kind of grey politics that is especially harmful to marginalized communities in the area. The images I propose attempt to capture this link through various data-driven work including; 1) visualizing data sets accessible from OEHA, 2) found images, and 3) and a short analysis of the visualizations.



Toxic Data infrastructures:
Emission and Ridesharing