



Paving the Way: A Study of Historic Redlining and Contemporary Transportation Emissions in U.S. Cities

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Day/Time: Friday, Oct 7th: 2-3pm ET

Location: PSTC Seminar Room 205, Mencoff Hall

Abstract: In the late 1930s and early 1940s, the Home Owners' Loan Corporation (HOLC) conducted a survey of urban neighborhoods to rate their investment worthiness. The maps generated by this survey provide a data source that reflects the link between enduring residential segregation and structural racism in housing policy during a critical era of urban development in the U.S. Redlined areas were commonly referred to as “blighted” by HOLC surveyors, due to the presence or threat of “racial hazards.” A-graded neighborhood, or “greenlined” areas, often protected whiteness via the implementation of racial covenants, ensuring that these areas remain racially uniform. Structural racism via redlining has intensified differential exposure to pollution, toxins, and other environmental harms. Recent research documenting the pathway from redlining to present-day environmental externalities demonstrates both the spatial and temporal complexity of environmental justice struggles. Government supported segregation from decades ago has influenced the development pathways of cities, contributing to environmental injustice. Although not framed as such, these pivotal studies underline the importance of critical environmental justice’s (CEJ) call for scholars to place a greater emphasis on the multiscalar nature of both the causes and consequences of environmental inequity, including the temporal dimensions. The current study connects research on the environmental significance of redlining to both CEJ and broader literature within environmental sociology that investigates the relationship between economic development, or affluence, and emissions. Specifically, I use census tract level data on redlining from the Mapping Inequality Project, contemporary demographic indicators from the American Community Survey (ACS), and on-road transportation emission data from Project Vulcan to explore how structural racism, measured as HOLC score, impacts the relationship between affluence and transportation emissions across 196 U.S. cities. I hypothesize that redlining is positively associated with on-road transportation emissions, and that the relationship between transportation emissions and neighborhood affluence is moderated by redlining.



Bio: Rachel McKane received their PhD in Sociology from Vanderbilt University and is currently a postdoctoral research associate in the PSTC and S4. They have research and teaching interests in environmental justice, urban political economy, housing inequality and mutual aid. Their primary research agenda explores the connection between environmental justice and processes of urban change rooted in racial capitalism, city development, and present and historic housing inequality. Their other interests include exploring transformative approaches to environmental justice through mutual aid networks and coalition building. You can find some of their work in *Environmental Research Letters*, *Environment and Planning*, *Local Environment*, *Energy Research and Social Science*, *Environmental Sociology*, and *Mobilization*.

