

Environmental Justice & Green Space Access: Socio-Spatial Inequities at the Intersection of Disability, Race, & Class

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ABSTRACT:

Green space access is a critical public health issue in the context of climate change and urbanization. Plant life filters polluted air, regulates heat and humidity, mitigates noise, and improves overall quality of life. As green spaces trend downward in the U.S., it becomes increasingly important to measure disparities in green space distribution among marginalized populations and to identify localities with a significant lack of green space. In this talk, I present novel findings on the spatial distribution of residential green space in the continental U.S. along the axes of disability, race, and class. By considering disability, this work builds on and bridges scholarly research in two distinct domains: one quantifying disparities in green space access among racialized minorities and socioeconomically disadvantaged groups, and the other utilizing qualitative methods to demonstrate that most green spaces remain inaccessible and unwelcoming to disabled visitors. Using generalized additive models (GAMs) that control for demographic factors and climatological characteristics, we find that residential areas with a higher proportion of disabled residents are greener while also having a greater share of White residents with lower household income. These statistical results run counter to expectations from the literature, thus complicating the prevailing narrative and indicating a need for mixed methods research to examine multiple dimensions of access and environmental justice. Using cluster analysis to assess spatial trends (specifically collocation bivariate local join count statistics in GeoDa), I detect residential clusters of high disability and low green space located in predominantly non-White, urban, and more socioeconomically disadvantaged neighborhoods compared to clusters of high disability and high green space. The cluster analysis results suggest inequities in green space access at the intersection of disability, race, and class, as well as across the urban-rural continuum.

KEYWORDS: *green space access, environmental justice, climate justice, disability, cluster analysis, GAMs*

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