



Responsible Lighting at Night in Urban Areas: Bridging the Inequality Gap

Thurs., Dec. 9, 2021

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Light Pollution



Environmental Justice: Light Pollution Inequities

Light pollution inequities in the continental United States: A distributive environmental justice analysis

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Environmental Justice: Light Pollution Inequities

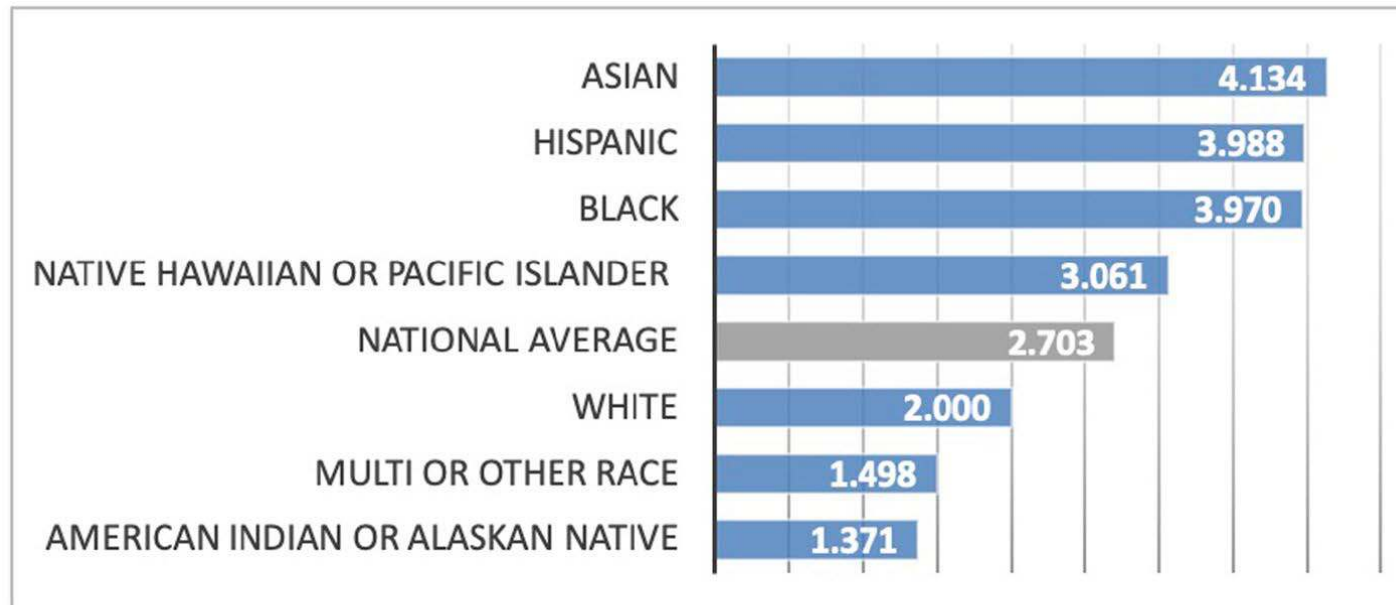


Fig. 4. Population-weighted mean exposure to ambient light pollution for racial/ethnic groups in the continental United States in mcd/m² (n = 310,323,507 people).

Environmental Justice: Light Pollution Inequities

... the US-based EJ literature has documented a concentration of residentially undesirable land use activities, which often emit high levels of artificial light at night, within Black, Hispanic and Asian communities.

Environmental Justice: Light Pollution Inequities

As artificial nighttime light becomes increasingly undesirable, darkness emerges as an environmental amenity, and desires to promote darker skies become more influential in planning initiatives privileged rather than socially disadvantaged neighborhoods are more likely to experience darkened nights. Our results indicate that neighborhoods with high rates of owner-occupancy experience darker nights than those with a high prevalence of renter-occupants, likely due to the collective power of homeowners to repel sources of acute light pollution from their neighborhoods.

We also presume that our nonlinear findings for reduced light pollution at the higher-end of the income distribution (esp. in suburban areas) are suggestive of a trend that will accentuate in the future, given the increasing social desirability of dark nights.

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Third, the criminalization of particular US racial/ethnic minority groups (e.g., Black and Hispanic Americans) and efforts to control their populations through urban design specifically through the deployment of artificial lighting to facilitate nighttime policing and surveillance by law enforcement authorities—may also explain disparities in exposure to light pollution.



Omnipresence

Omnipresence in NYC

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REDUCING CRIME THROUGH ENVIRONMENTAL DESIGN:

EVIDENCE FROM A RANDOMIZED EXPERIMENT OF STREET LIGHTING IN
NEW YORK CITY

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Omnipresence in NYC

Abstract:

This paper offers experimental evidence that crime can be [successfully reduced by changing the situational environment that potential victims and offenders face](#). We focus on a ubiquitous but surprisingly understudied feature of the urban landscape – street lighting – and report the first experimental evidence on the effect of street lighting on crime. Through a unique public partnership in New York City, [temporary streetlights](#) were randomly allocated to public housing developments from March through August 2016. We find evidence that communities that were assigned more lighting experienced sizable reductions in crime. After accounting for potential spatial spillovers, we find that the provision of street lights led, at a minimum, to a 36 percent reduction in nighttime outdoor index crimes.

REDUCING CRIME THROUGH ENVIRONMENTAL DESIGN: EVIDENCE FROM A RANDOMIZED EXPERIMENT OF STREET LIGHTING IN NEW YORK CITY

The intervention deployed temporary lighting towers to housing developments across NYC. These towers emit approximately 600,000 lumens - a measure of brightness- making them extraordinarily luminous.

Towers were equipped with an automatic timer set to switch on at sunset and off upon sunrise. A schematic photo of an Allmand™ lighting tower as well as a photo of towers in the field can be found in Appendix Figure 1.





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