Day 13: Urban Ecology

Greenest Challenge

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Gentrification in Brooklyn: A General History

Brooklyn was one of the major cities that got swept up in the federal government's 1930 process of **redlining**. During this process, the government designated certain parts of major cities to be poor investments for banks, leading to residents in these neighborhoods being unable to obtain mortgages or loans to fix or repair their homes.

Standards for which cities were deemed "poor investments" were often created along racial lines, with African American communities being valued as higher risk and less fruitful.

1930s Brooklyn, New York- Zone D3

According to Home Owners' Loan Corporation (HOLC) Area Description:

- *Demographics*- 60% Italian, 30% African American
- *Occupation*- "Unskilled laborers, merchants with questionable characters"
- *Trend of desirability*- "Static"
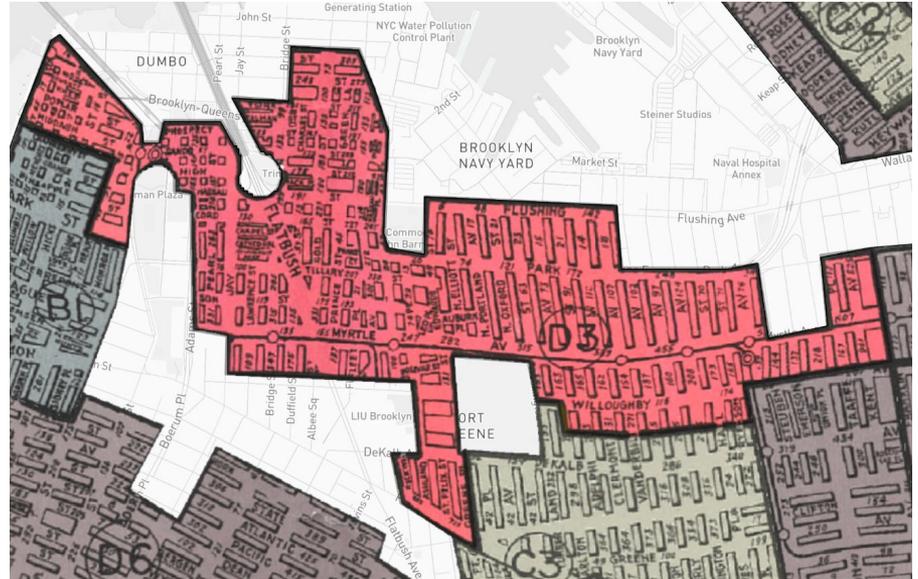
Brooklyn Now

- More trees especially in the area around Long Island University
- No greenery around either The Brooklyn City Hospital or New York Methodist Hospital in the redlined zone (Forte Green park is a few blocks away but out of the zone)
- Still many undeveloped dirt plots and parking lots that absorb heat during the day and release it at night, raising the temperature in the area

Improvements have been minimal, and although trees have been added in certain places, such as near the university for the purpose of drawing in more students, residential and other areas still suffer from a deficiency of greenery.

Comparison: A D3 and a B1 Zone in Brooklyn Today

Context: A "D" grade is classified as "hazardous," while a "B" grade is characterized as "still desirable."

Striking differences between the amount of tree coverage in these two zones can be seen. In the B1 Zone located directly to the right of the Pier 3 Greenway Terrace, *nearly every block is green*, whereas in D3, trees are scattered along streets. On a street where apartments can be found in the D3 zone, there's only one to two trees per block. Zone D3 and B1 have almost equal amounts of scaffolding covering the sidewalks, however B1 still has trees on the edge of the streets that are grown in crates while D3 has no greenery around the structures.

This is not nearly enough tree coverage to produce the beneficial cooling effect trees can bring.

Solutions

Utilizing Rooftops, Sidewalks, and Empty Plots

- Plant trees in **undeveloped land plots** and **parking lots** as they unnecessarily absorb heat and can be used for shade and cooling purposes.
- Take advantage of the **empty tops of scaffolding** by putting smaller, yet effective, heat-absorbing shrubs.
- Utilize the **crate system used in non-redlined neighborhoods** like Zone B1 to add trees to the street where it is too costly to plant them in the concrete.
- Convert unused rooftops into **cool roofs** or **green roof**s to help lower temperatures, purify the air, and create natural habitat.

General Benefits of Increasing Tree Cover

1. *Trees decrease energy consumption and mitigate the urban heat-island effect by absorbing CO2,* yielding both economic & environmental benefits. For example, according to weforum.org, "a single tree within five years of planting can bring 3% energy savings for one household, and 12% within 15 years."
2. *Healthy tree cover brings physical and mental health benefits for nearby residents,* as trees reduce the risk of pollution-related diseases, premature death, and worsened immune system functioning. Better health means less medical expenses, fewer sick days, and higher productivity.
3. *Urban trees can promote social equality and inclusion in cities.* By planting trees in lower-income areas, which can have lower tree cover by 30% compared to more affluent neighborhoods, we can begin to close the gap in levels of heat and pollution experienced in different neighborhoods.

Citations

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https://www.weforum.org/agenda/2022/06/cities-urban-trees-climate-change/

https://www.google.com/maps/place/Brooklyn

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goatsquadpgc This area in Brooklyn means a lot to me as it was where my mother did her pediatric residency after immigrating to America. It is incredibly disappointing to see the effects of 1930s redlining still affecting the community today in the form of climate inequity. New York policymakers need to do better to improve the communities of the marginalized. Check out our post to see possible solutions to this issue!

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