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“Trees and Trash”: Environmental Justice and Atlanta’s Urban Forest

Atlanta: “City in a Forest”

- City has 47.9% canopy cover
(GA Tech Center for Quality Growth and Regional Development 2008)
- Population: 463,878
- In-migration of middle class from suburbs
- Increasing demand for in-town housing



Two ways of looking at Environment Justice

- **Distributive justice:**

- How is the urban forest distributed across the city?
 - i-tree canopy
 - i-tree eco



- **Procedural justice:**

- How do local people participate in the creation of the city's urban forest?
- How might people's engagement be influenced by social stressors associated with local spaces?
 - Procedural justice scale

Procedural Justice Scale (Cronbach's Alpha= 0.80)

Household Efficacy

1. Someone in my household spends a lot of time caring for trees.
2. At least one member of my household feels that it's important to personally care for neighborhood trees.
3. Participating in environmental cleanup activities in this neighborhood is important to the people who live in my home.
4. People in my household are very interested in increasing the number of trees we have in this neighborhood.
5. No one in my household is interested in personally caring for neighborhood trees.
6. No one who lives here knows how to get involved with neighborhood improvement groups.



Morehouse student collects data for household survey.

Procedural Justice Scale (Cronbach's Alpha= 0.80)

Community Efficacy

1. I see a lot of people caring for trees in this neighborhood.
2. Residents in my neighborhood work with tree experts to help decide what kinds of streets trees the city should plant in this neighborhood.
3. The city council representative for this district is interested in preserving neighborhood trees.
4. My community is connected with other communities across the city that are concerned about preserving trees in Atlanta.



Morehouse students collect data for household survey.

Neighborhood Context Matters

“360° Analysis” (9 items)

- Dumped garbage
- Litter
- Dilapidated houses
- Discarded furniture
- Dumped tires
- Junked autos
- Graffiti
- Boarded up houses
- Discarded shopping carts

“Illegal dumping the focus of new lawsuit against Atlanta” Atlanta Journal-Constitution, Sunday, Nov. 1, 2015



Neighborhood context matters

“...I’m in a running group and we were talking about runs in Southwest Atlanta. We had a whole discussion about...Cascade Nature Preserve and, I promise you, you can talk to people who go up and down Cascade [Road] every single day...I promise you 90 percent of them ...don’t even know it’s there.... I made it a point to go running there [Cascade Nature Preserve] once and, you know, my aunt is retired so sometimes she’ll walk there, but even out of my family who’s been around this community for 50 years, we’re the only two that I know for sure have been in there.”

“Where the sidewalk ends”: examining the potential for Climate change mitigation in Atlanta’s Cascade community. City and Society, Forthcoming.



Field trip to Cascade Nature Preserve sponsored by West Atlanta Watershed Alliance 2009

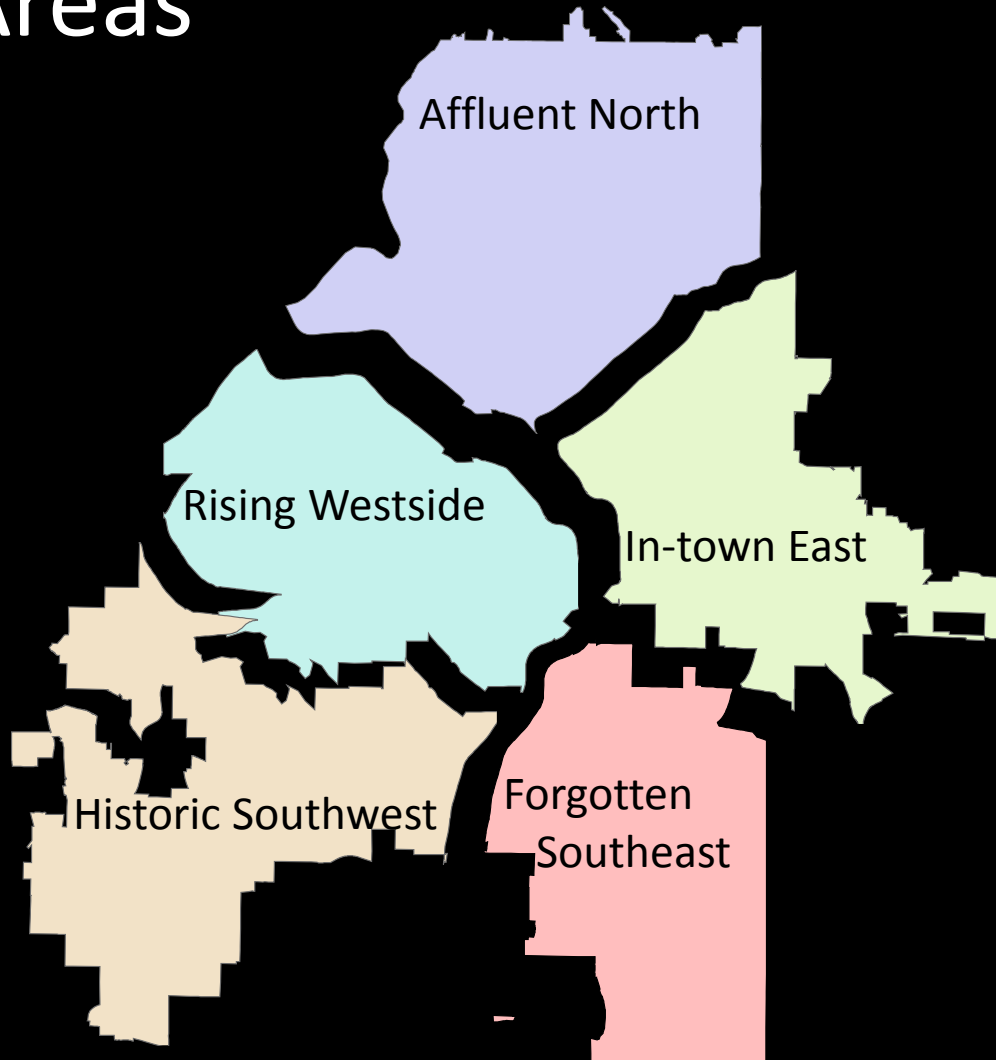
Neighborhood context matters

“...when you look at some of these communities like Peyton Forest and Audubon Forest [Cascade subdivisions], it’s really a natural forest in Southwest Atlanta; and we have tons of public parks in Southwest Atlanta....The unfortunate thing [is that] because the area is predominantly African American, those natural resources aren’t leveraged as high....In other areas...when you focus [on] any neighborhood where it has a park...like Piedmont Park, you know, a home in that area would be four or five hundred thousand [dollars]. But I can take you to Oakland City Park where you have...boarded up houses right in front of it.



“Where the sidewalk ends”: examining the potential for Climate change mitigation in Atlanta’s Cascade community. City and Society, Forthcoming.

5 City Areas

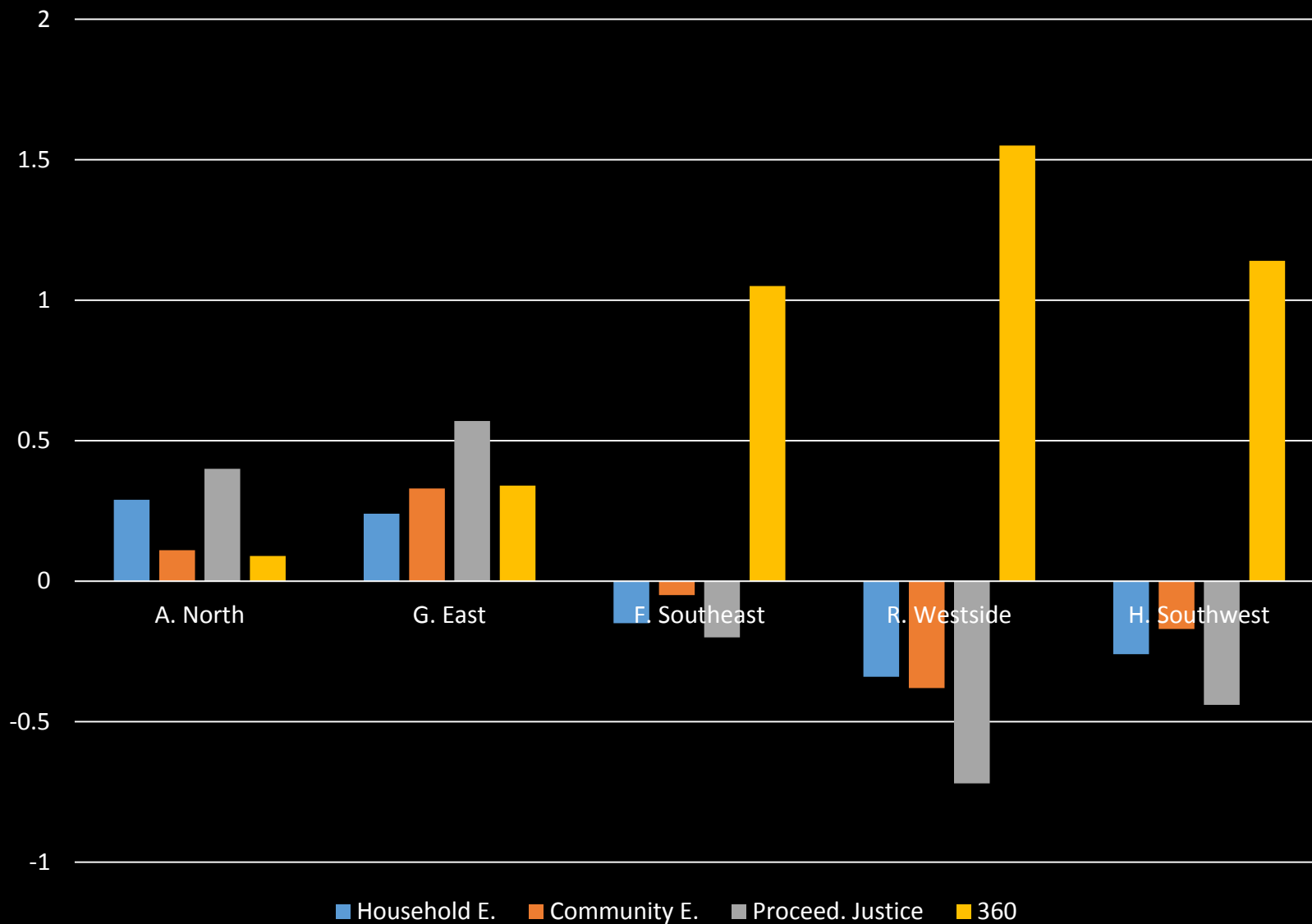


City Area Socio-Demographics

| (census tracts) | Pop. | Mean Pop. Density | Mean % child poverty | Mean % white | Mean % black | Mean % Asian | Mean % Hispanic | Mean % Vacant Houses |
|----------------------------|---------|-------------------|----------------------|--------------|--------------|--------------|-----------------|----------------------|
| Affluent North (N=27) | 122,328 | 4,215 | 9.36 | 71.99 | 10.75 | 5.61 | 9.72 | 15.86 |
| Gentrified East (N=49) | 176,851 | 6,589 | 25.64 | 54.85 | 32.85 | 4.92 | 4.90 | 14.79 |
| Forgotten Southeast (N=27) | 87,910 | 3,381 | 48.35 | 12.39 | 77.57 | 1.19 | 7.2 | 28.10 |
| Rising Westside (N=25) | 67,171 | 3,971 | 51.19 | 6.76 | 87.60 | 1.12 | 4.86 | 30.40 |
| Historic Southwest (N=22) | 105,985 | 3,068 | 50.27 | 2.46 | 91.56 | 0.31 | 4.02 | 19.90 |

U.S. Census Bureau, American Community Survey 2009-2014

Procedural Justice Scale and 360° Analysis (n=226)



Does Trash Correlate with Procedural Justice?

| Spearman Correlation n=226 | |
|----------------------------|------------------------|
| | 360° Dis-amenity |
| Household Efficacy | r= -0.35 p < 0.0001 |
| Community Efficacy | r= -0.29 p < 0.0001 |
| Procedural Justice | r= -0.35 p < 0.0001 |

The greater the incidence of illegally dumped garbage and tires, abandoned homes, etc., the lower people's engagement with the urban forest.

Summary

- Findings are relevant to city's efforts to "transform" sections of west Atlanta.
- **Westside Future Fund**--Business leaders (Chic-Fil-A, Atlanta Falcons) committed to revitalize west side (i.e., "Rising Westside")
- Green space is integral to re-design
- Dis-amenities should be significantly reduced with re-design.
- If dis-amenities reduced, there should be greater engagement by west Atlanta residents with urban forest
- However, there is concern that the transformation, and its accompanying greenspace re-design will displace the poor.



Impetus for Westside Transformation is new Falcon's stadium.
Creative Loafing, May 2016. Photo by Dustin Chambers

Summary

- People's engagement with Atlanta's urban forest varies by area of city as indicated by our measure of:
 - Household efficacy
 - Community efficacy
 - Procedural justice
- Dis-amenities vary by area of city.
- Urban forest engagement correlates negatively with dis-amenities.
 - The greater the incidences of illegally dumped garbage and tires, abandoned homes, etc., the lower people's engagement with the urban forest.
- **Policy implication:** Findings suggest that engagement with Atlanta's urban forest may increase if dis-amenities at household level are lessened.

Future Steps

- Complete data collection (n=700)
- Compute:
 - i-tree canopy at household level
 - i-tree eco at 5 City Area scale
- Model Procedural Justice as a function of:
 - Race
 - Education
 - Area of city
 - Home ownership
 - 360 indicator
 - Canopy cover

Thanks! Questions??



Procedural Justice Scale: Mean Factor Scores (n=226)

| | Household Efficacy | Community Efficacy | Procedural Justice | 360° Analysis |
|----------------------------------|---------------------------------|---------------------------------|--------------------------------|---------------------------------|
| (census tracts) | F=5.52 p < 0.0003 (s. d.) | F=5.48 p < 0.0003 (s. d.) | F=6.63 p < 0.0001 (s.d.) | F=11.91 p < 0.0001 (s.d.) |
| Affluent North (n=56) | 0.29 (0.90) | 0.11 (0.83) | 0.40 (1.56) | 0.09 (0.28) |
| Gentrified East (n=56) | 0.24 (0.81) | 0.33 (0.70) | 0.57 (1.24) | 0.34 (0.69) |
| Forgotten Southeast (N=35) | -0.15 (0.85) | -0.05 (0.81) | -0.20 (1.49) | 1.05 (1.56) |
| Rising Westside (N=44) | -0.34 (0.93) | -0.38 (0.91) | -0.72 (1.73) | 1.55 (1.82) |
| Historic Southwest (N=35) | -0.26 (0.79) | -0.17 (0.84) | -0.44 (1.39) | 1.14 (1.51) |

Procedural Justice Scale (5-point Likert)

Household efficacy

1. Someone in my household spends a lot of time caring for trees.
2. At least one member of my household feels that it's important to personally care for neighborhood trees.
3. Participating in environmental cleanup activities in this neighborhood is important to the people who live in my home.
4. People in my household are very interested in increasing the number of trees we have in this neighborhood.
5. No one in my household is interested in personally caring for neighborhood trees.
6. No one who lives here knows how to get involved with neighborhood improvement groups.
7. Someone who lives here works with other people to care for trees in this community.

Community Efficacy

1. Most of the people in my neighborhood would not be interested in forming a group to plant more trees in this neighborhood.
2. I don't think people in my neighborhood have the political connections to demand that the city plant more trees in this neighborhood.
3. I see a lot of people caring for trees in this neighborhood.
4. Residents in my neighborhood work with tree experts to help decide what kinds of streets trees the city should plant in this neighborhood.
5. Most people in my community focus their organizing efforts on issues that do not relate to tree preservation.
6. The city council representative for this district is interested in preserving neighborhood trees.
7. My community is connected with other communities across the city that are concerned about preserving trees in Atlanta.