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RESEARCH PROSPECTUS

The influence of trees and greenness on social connection

Social connection is associated with a broad range of positive outcomes, including better public health, safety, economic resilience, and democratic vitality. Unfortunately, social connections are often weaker in disadvantaged areas, and they can be difficult to build.

Are we overlooking a simple, cost-effective way to build social connection? A growing body of evidence suggests that urban trees and greenness can improve human health. But tree-lined streets, parks, and gardens can also foster neighborly interaction, a sense of belonging, civic participation, and place-attachment—qualities that underpin public safety, stability, and community resilience. However, city planners and leaders lack clear evidence connecting trees and greenness to objective measures of social connection, a gap this study aims to address.

Research proposal. We propose a large-scale study, tailored to the specific social and ecological needs of a particular city or county, that examines the association between neighborhood greenness and social connectivity. We will use housing tenure (length of residence) as an objective proxy for social connectivity, as multiple studies have shown that length of residence is positively associated with greater social connectivity and improved health outcomes[1].

Research objectives:

- Quantify the relationship between trees (tree-planting programs or existing tree canopy) and an objective indicator of social connectivity (length of residence).
- Examine equity dimensions — where could we increase tree canopy to have the strongest social benefits?
- Translate findings into actionable guidance for urban forestry, planning and public health strategies.

Policy relevance. Social connection is highly relevant to city governments, urban planners, and community-based organizations, because it influences many things they care about — public health, public safety, equity and inclusion, economic vitality, and civic trust. This research will help:

- **Target investment where it is needed most**. The social connectivity benefits of longer residence are greater in high-poverty areas[1]. Programs such as tree-planting can be prioritized in these areas to maximize positive impact.
- **Leverage multiple benefits to communities.** Many politicians, non-profits, and funding institutions like "triple wins." Tree planting has benefits beyond social connection, including improving public health and increasing equity.
- **Invest in climate justice.** Tree planting connects environmental investment with social equity — increasing shade and carbon benefits while also strengthening neighborhood belonging.
- **Frame trees as social infrastructure.** Tree planting is widely popular and politically unifying. Framing urban greening as a strategy for building cohesive, resilient communities can broaden political appeal, align agencies with overlapping mandates, and attract cross-sector funding.

Approach. We will measure social connectivity using the length of time that homeowners live in their homes. This approach can be used to evaluate the effect of established green infrastructure, such as parks and tree canopy, on social connectivity, as well as the effects of changes to a neighborhood's green infrastructure such as tree planting, tree removal, or the creation of new parks. Because homeowners who plan to stay in their homes for a long time might be more likely to plant a tree, we will use special statistical models to isolate the effect of tree planting on social connectivity.

Our approach is especially well suited to measuring the impact of large-scale tree planting programs such as those funded by the Inflation Reduction Act.

Data. This study could be conducted in any county, city, town, or community, contingent upon access to the following data:

1. House-sales data. These are normally readily available from the county tax assessor's office for a small fee.
2. High-resolution map of tree canopy.
3. Data on the location and date where new trees were planted. Ideally, trees would be geolocated to a specific address, although we can also work with data that are geolocated to a neighborhood or Census tract.

Deliverables

- **Policy and practice briefs** *(City agencies, policymakers, nonprofits, arborists)*. Concise, visually engaging briefs that distill findings into actionable policies.
- **Equity maps** (*City or county leadership, urban forestry programs*). Maps highlighting areas where increasing canopy could yield the strongest social and health benefits.
- **Peer-reviewed journal article(s)** *(Academic researchers, practitioners)*. Publication in a leading journal of public health, environmental science, or urban forestry to ensure scientific credibility and rigor.
- **Comprehensive final report** *(City leaders, funders, health systems, urban forestry professionals)*. A detailed, plain-language summary of methods, findings, and policy recommendations, written to guide decision-making and long-term investment in urban tree planting.
- **Community fact sheets** *(Residents, neighborhood groups, advocacy organizations)*. Accessible summaries highlighting key findings, equity implications, and practical benefits of trees for local communities.
- **Conference presentations** *(Urban forestry, arboriculture, and public policy professionals)*. Presentations at national or international conferences to build cross-sector visibility and information-sharing.
- **Webinars or workshops** *(City staff, nonprofit partners, community leaders)*. Interactive sessions designed to help practitioners and community stakeholders translate findings into on-the-ground strategies.
- **Media outreach** *(General public, journalists, advocacy groups)*. Press release and/or social media call outs to increase public awareness and support for trees as public health infrastructure.

Total project budget: $45,000

References

1. Keene, D., M. Bader, and J. Ailshire, *Length of residence and social integration: the contingent effects of neighborhood poverty.* Health Place, 2013. **21**: p. 171-8.