MOTIVATIONS & MECHANISMS OF NEIGHBORHOOD TREE PLANTING

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BACKGROUND

WHY URBAN TREES?
Trees in cities provide benefits:
• Environmental benefits
  • Shade, energy conservation
  • Stormwater management
• Air quality improvement
• CO2 sequestration/storage
• Social benefits
  • Higher property values
  • Public health benefits
  • Lower BMI in kids
  • Lower asthma rates
• Community involvement

TREE PLANTING AS COLLECTIVE ACTION
In cities, groups of neighbors may work together to plant trees in their neighborhood, with the aim of making their neighborhood more beautiful, shady, or obtaining other benefits of trees.

“Collective action”
• a group of people responding to a situation or taking action to meet some larger goal

TREE PLANTING AS COLLECTIVE ACTION

RESEARCH QUESTIONS
1. What are the motivations for neighborhood engagement in tree planting?
2. What strategies and mechanisms do neighborhoods use to organize to plant and maintain trees?
3. How do these motivations & mechanisms relate to tree success?

QUALITATIVE DATA ANALYSIS

This research is part of a project to evaluate the outcomes of neighborhood and nonprofit tree planting, led by Jess Vogt with a team of researchers originally based at Indiana University. Complete details about larger project at: www.indiana.edu/~cipec/nucfac.

INTERVIEWS
• 4 U.S. cities (Atlanta, Detroit, Indianapolis, and Philadelphia) with urban greening nonprofits were research partners
• 25 neighborhoods where collective neighborhood tree planting projects occurred were selected randomly in each city
• Names/contact info of neighborhood leaders obtained from nonprofits
• 71 interviews with tree planting leaders and neighborhood leaders in neighborhoods were conducted in Summer 2014 by grad students working with Jess Vogt’s Indiana University-based research team
• Interviews were audio recorded, transcribed, and all personally-identifying information was removed in preparation for analysis

PREPARING TO CODE
• Read through 1 interview per city
• Discussed themes for potential nodes
• Create prelim. list of Parent and Child nodes for NVivo coding (Figure 1).

CODING USING NVIVO SOFTWARE
• First cycle coding
  • Relevant references drag-and-drop to Nodes
  • Refined node descriptions
  • Added/deleted nodes as needed
  • Constant discussion with group
  • Figure 2 summarizes results of first cycle coding

Second cycle coding
• Within one node, sorting references into more detailed groupings (new Child nodes)
• To generate relationships between nodes, determine frequencies, and relevant patterns
  • E.g., Watering (Figure 3)

Next Steps

CONTINUE ANALYZING INTERVIEW CODING
• Generate more concept maps that summarize how neighborhoods engaged in tree planting (e.g., Figure 3).
• Create quantitative variables for each neighborhood using qualitative codes

CONNECTING INTERVIEW DATA TO TREE DATA
• We’ll connect neighborhood tree survival data with data on tree planting organizing strategies, follow-up tree care, and other neighborhood activities.

Good environmental science research:
Social science + Natural science
Qualitative + Quantitative

Figure 1. Coding using the NVivo Software.

Figure 2. Hierarchy chart of coded interviews. The size of boxes represents the total number of references coded to this node.

Figure 3. Node structure for Watering. Numbers in boxes refer to the number of neighborhoods referencing each type of watering method or the party performing the watering.

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