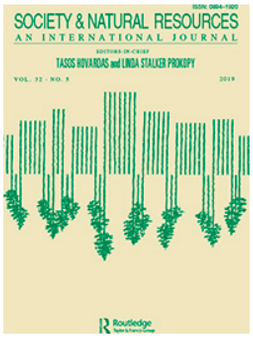

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Community Stories: Explaining Resistance to Street Tree-Planting Programs in Detroit, Michigan, USA

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ABSTRACT

Non-profit organizations are key actors in urban and community forestry (UCF) initiatives, and sometimes city residents resist their efforts. Between 2011-2014, 24 percent of residents offered a street tree in Detroit, Michigan, USA submitted a "no-tree request." Differing views on decision-making emerged as a main reason for resistance to tree planting. This study used interviews with city residents, and those within a non-profit organization, between 2014-2016 to understand reasons for conflict over decision-making between these groups. Heritage narratives, or selective representations of the city's history and character, helped explain conflict over tree planting. Residents who wanted greater decision-making power in tree planting assumed they would be responsible for stewardship, reflecting their historical experiences within the city. The organization's dominant heritage narrative emphasized that residents held misperceptions of trees based on negative past experiences, and required education on benefits of trees. Recommendations for integrating heritage narratives into UCF efforts are provided.

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Introduction

Non-profit organizations occupy key roles in urban and community forestry (Conway and Vander Vecht 2015). In the U.S., this trend proliferated from the 1980's onwards, following significant cuts in federal aid to municipalities in the 1970's (Seamans 2013). Municipal governments in several U.S. cities decreased or eliminated their forestry programs (Moskell and Allred 2013). Non-profit organizations emerged to fill the void in tree planting and stewardship services on public lands and easements (Perkins, Heynen, and Wilson 2004; Svendsen and Campbell 2008). Many U.S. cities now prioritize efforts to improve urban tree canopies, including through "million trees" campaigns, and rely on partnerships with non-profit organizations to design and implement these programs (Battaglia et al. 2014; Donovan and Mills 2014).

Urban trees mitigate air pollution, stormwater run-off, and urban heat island effect (McPherson et al. 2005), and are linked to decreased crime and noise (Kuo and Sullivan 2001). Such benefits are important for low income and minority residents who

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experience disproportionately greater exposure to air pollutants and hazardous land uses, which exacerbate respiratory illnesses (Jennings, Johnson, and Gragg 2012).

Quantitative research has found disproportionate distribution of urban forests based on race and income. In Tampa, Florida a significantly lower proportion of tree cover exists on public right-of-way in neighborhoods with "a higher proportion of African-Americans, low-income residents, and renters" (Landry and Chakraborty 2009, 2651). Similar trends were identified in residential tree canopy cover distribution in Milwaukee, Wisconsin (Heynen, Perkins, and Roy 2007). Urban tree canopy cover also positively correlated with median household income in Baltimore, MD, Los Angeles, CA, Philadelphia, PA, Raleigh, NC, Sacramento, CA, New York, NY, and Washington, D.C. (Schwartz et al. 2015). Meta-analyses verify significant income and race-based inequity in urban forest cover (Gerrish and Watkins 2018; Watkins and Gerrish 2018).

Urban and community forestry (UCF) in the U.S. focuses on restoring and sustaining community forests in cities and towns of all sizes to fulfill a range of values (U.S. Forest Service 2018). UCF is an environmental justice issue due to the social and ecological benefits associated with urban trees, and evidence that lower income and minority residents often reside in areas with disproportionately low tree canopy cover (Danford et al. 2014). As such, Watkins et al. (2016) utilized a quantitative approach to examine the characteristics of neighborhoods where non-profit organizations plant trees, such as existing canopy cover, household income, and racial and ethnic composition, to examine whether their efforts will help to mitigate inequitable distribution of the urban tree canopy.

Environmental justice in UCF involves both the equitable distribution of environmental benefits for all city residents and the equitable involvement in decision-making processes regarding the natural environment (i.e. procedural justice). Jennings, Johnson, and Gragg (2012, 3) state, "Even though promoting participatory landscape development can be a long-term learning process, it is also a key element of promoting environmental justice," since active involvement of citizens determines how green spaces function in a community.

Very little research has examined the procedural justice of urban street tree-planting efforts, or how residents in neighborhoods affected by disproportionately low tree canopies are involved in decision-making processes about city trees. An understanding of the drivers of non-profit organizations' decisions about UCF initiatives is particularly lacking in academic literature (Conway and Vander Vecht 2015). Recent evidence of resident resistance to urban street tree-planting programs raises concerns about the procedural justice of UCF efforts (Battaglia et al. 2014, Carmichael and McDonough 2018).

Residents in Detroit, Michigan, USA who declined a free street tree from a non-profit organization, or were dissatisfied with the tree they received, cited concerns about a lack of decision-making power in species selection and maintenance responsibility (Carmichael and McDonough 2018). The non-profit organization was hesitant to extend decision-making power to residents. The study reported here sought to understand how different stories told about the city's past contributed to these divergent perspectives on power-sharing. This research presents one way to explore procedural injustices in UCF by examining the gap in understanding between residents and non-profit organizations regarding appropriate decision-making processes, and the stories that perpetuate this gap.

Heritage Narratives: A Tool For Understanding Conflicting Frames Around Urban Greening

The environmental justice paradigm contends that garnering involvement in social movements that mitigate environmental injustices, like urban tree planting, relies on collective action frames used by movement participants, such as non-profit organizations (Benford and Snow 2000). Mental "frames" help people put boundaries around an issue, and determine the central ideas to focus on (Maibach et al. 2010). For example, urban forestry practitioners commonly advocate for increased investment in urban tree planting through the frame of quantifiable benefits that trees provide (e.g. stormwater flow management), with little focus on how benefits may vary across different types of residents (e.g. renters vs. home owners) (Campbell 2015). While this frame may reflect the values of municipal government actors, it does not address barriers to participation in street tree-planting programs among minority urban residents (Carmichael and McDonough 2018).

The way people frame an issue depends upon the meaning they attribute to it, which is created through social interactions (Paveglio et al. 2010). Giovannini (1986, 4) states, "… social interaction is defined as a communication process where individuals symbolically convey messages about themselves, the other actors, and the social setting." Repeated social interaction facilitates the development of shared meanings about an issue, which results in collective action frames (Benford and Snow 2000). Since the social interactions people have vary greatly depending on their life circumstances and the cultural groups to which they belong, the collective action frames that appeal to people will vary accordingly.

Urban political ecologists demonstrate that landscapes are created by cultural groups that use different symbols with different meanings for the same physical objects or conditions (Greider and Garkovich 1994). It is important to examine the meaning residents and non-profit organizations attribute to tree planting, which is created through social interactions via the tree-planting program. This can help with identification of conflicting aspects of the frames employed, and whether a proportion of people and their perspectives are excluded from decision-making about tree planting. For instance, given the historical issues surrounding trees in Detroit, including millions lost to the Emerald Ash Borer and Dutch Elm Disease (Greening of Detroit 2018) and decreased investment in UCF by municipal governments, trees may symbolize hardship for residents, and possibly failure of government agencies to properly manage environmental issues.

One way to approach understanding shared meanings is through heritage narratives. Heritage narratives are "broad renditions of a community's history … the character of its people (both past and present), and its trials and triumphs over time" (Bridger 1996, 355). These stories are selective representations of the past, and not politically neutral (Smith 2006). Rather, they are a mechanism through which individuals express shared meanings that have been negotiated through social interactions. Anguelovski (2014, 53) notes: "More attention should be given to activism, engagement, and the underlying meanings of local struggles."

There are often multiple heritage narratives in a community because different groups experience and remember events differently, and utilize varying interpretations of history to advance certain agendas related to contemporary issues (Bridger 1997). Such

narratives can have a profound impact on public discourse and constrain land planning practices when proposed actions are in conflict with a community's dominant heritage narrative (Bridger 1996). For example, Alkon (2004) identified how leaders in a California county facing erosion issues on newly converted vineyards chose to create a cooperative organization rather than a new regulation because it aligned with the dominant heritage narrative of the county as agriculturalist, cooperative and harmonious, and antiregulatory. The study presented here examined whether city residents who resisted tree planting and those within the non-profit organization who promoted tree planting expressed conflicting heritage narratives about the city of Detroit based on different local knowledge and experiences with people and with trees.

Methods

Study Site

Data for this study was collected in Detroit, Michigan, USA. Detroit was known as "The City of Trees" from the late 1800's until the 1950's, boasting more trees per capita than any other industrialized city in the world (Austin and Kaplan 2003). By 1980, more than 500,000 trees in Detroit had died due to Dutch elm disease, urban expansion, and neglect (American Forests 2012).

The city's human population also significantly declined, largely due to race-related conflict (McDonough and Vachta 2005). Detroit's population reached a high of 1.85 million in the 1950's with 16.2% African Americans (Metzger and Booza 2002). By 2016, Detroit's population had declined to 672,795, with 82% African Americans, resulting in large amounts of vacant property across the city (U.S. Census Bureau 2016; Figure 1). The city of Detroit also has the highest percentage of lower income residents in the country (with incomes less than $25,000 per year) (New Detroit, Inc. 2014). Therefore, primarily lower income African Americans must cope with the interrelated stresses of Detroit's economic and environmental decline. This demographic reality makes tree planting in Detroit an issue of environmental justice.

The Greening of Detroit (TGD) was established in 1989 to reforest the city. The "collaborative effort enlisted professional forestry associations and universities to inventory the city's trees and identify tree species to plant, with input from city residents" (Carmichael and McDonough 2018, 222-223). TGD implemented a street tree-planting program on city-owned easements in residential neighborhoods, based on authority granted by the city government. The mission of TGD is: "Inspiring sustainable growth of a healthy urban community through trees, green spaces, healthy living, education, training and job opportunities" (https://www.greeningofdetroit.com).

At the time of this study, TGD had 35 advisors, 30 staff members, and over 5000 volunteers annually—many of whom were not Detroit residents (Carmichael and McDonough 2018). City residents could request a tree planting in their neighborhood from TGD, but TGD's green infrastructure staff decided in which neighborhoods to plant trees, as well as tree species to plant and tree maintenance protocols. TGD's green infrastructure staff members committed to maintaining trees for three years after planting, which residents were informed of through door hangers and at community meetings, if they attended such meetings.

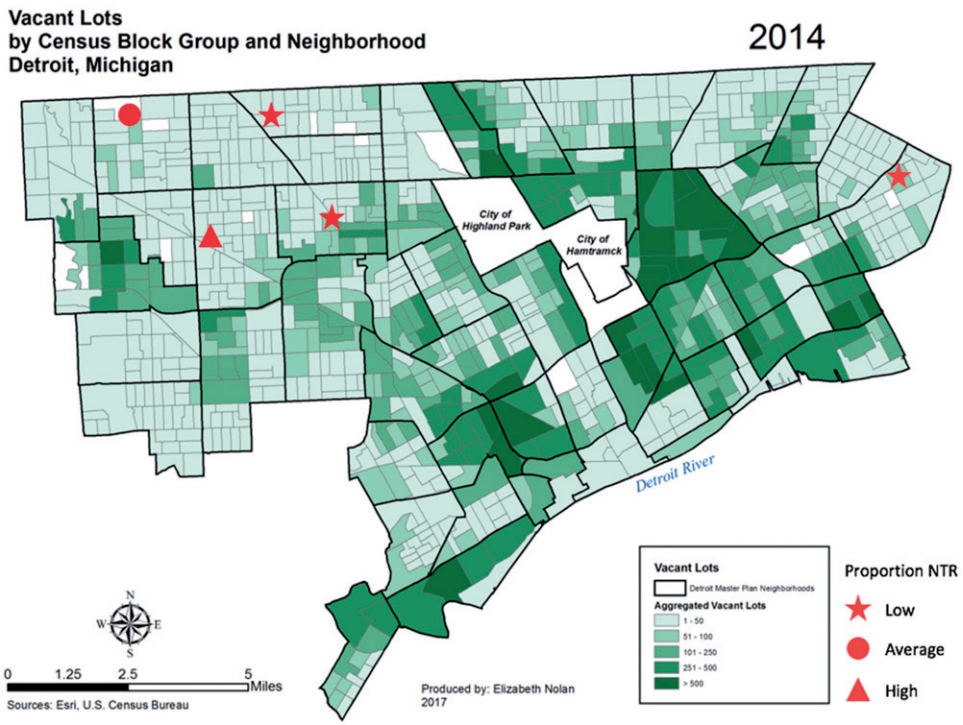

Figure 1. Map indicating amount of vacant lots in the city of Detroit, with darker areas indicating more vacancies (Nolan 2017). The five study neighborhoods selected, based on proportion of "no-tree requests" (NTR) submitted by residents, are indicated with markers.

Sampling Design

Data were collected from city residents eligible for street trees in neighborhoods where TGD conducted plantings and relevant TGD staff, board members, and volunteers involved in street tree planting, who were identified using snowball sampling. With assistance from community groups and key informants, residents who either submitted "no-tree requests" (NTR) or received trees were identified through snowball sampling in five neighborhoods. Neighborhoods were defined as areas selected for individual tree-planting events by TGD, since no other formal definition for neighborhoods exists that is agreed upon by residents and the city government. The five study neighborhoods were involved in TGD tree-planting events between 2011 and 2014. These neighborhoods also demonstrated maximum variation in the proportion of NTR received.

Between 2011 and 2014, TGD received NTR from 24 percent of residents approached (1,834 total NTR). Since the data exhibited a normal distribution, maximum variation was based on neighborhoods in the bottom *and* top 10 percent for proportion of residents who submitted NTR, and neighborhoods within 10 percent of the 2011-2014 percentage of NTR (i.e. low, average, and high proportion of NTR). This approach ensured that the researchers captured the range of neighborhoods and responses to tree planting (Kuzel 1999). Originally, one neighborhood of each type was selected (low, average,

high proportion of NTR). Two additional low NTR neighborhoods were later added due to limited number of respondents willing to conduct interviews in the first neighborhood selected.

Leaders of neighborhood-based organizations informed approaches used to invite residents to participate in interviews. Multiple methods of data collection took place between July 2015 and May 2016, which ensured a more representative sample that included residents that varied in how they could be reached and their preferred method of communication (Buch and Staller 2007).

Data Collection and Analysis

Methods of data collection included audio-recorded interviews, field notes from doorstep interviews, and transcribed dialogue of community meetings. The first author conducted audio-recorded interviews with TGD staff, board members, and volunteers from mid-August 2015 through May 2016. Field notes were also collected during participant observation at tree-planting events, fund raisers, board meetings, and community meetings. Semi-structured interviews with TGD staff, volunteers, and board members lasted approximately one hour, and included the following questions:

1. What are the goals of the street tree-planting program?
2. What are the challenges to achieving these goals?
3. How do you interact with, or receive feedback from, residents in neighborhoods selected for street tree-planting projects?
4. How did interactions with residents inform decisions made about the street tree-planting program?

While these questions did not directly elicit heritage narratives (i.e. the respondents' renditions of the city's history or character), respondents shared narratives throughout the interview to explain their perspectives. For example, regarding challenges to achieving their goals, one interviewee focused on residents' perceptions of tree planting, which he felt were negative because the city's forestry department had been defunded completely for 20 years. Interviewees' provision of heritage narratives without direct prompting demonstrates the importance of these stories in guiding perceptions of tree planting among stakeholders.

Semi-structured interviews with residents lasted between 30 minutes to one hour and included the following questions:

1. What is special about your neighborhood?
2. What are the biggest challenges you face in this neighborhood?
3. What are your thoughts and feelings when you hear the word "tree"?
4. What have been your experiences with trees in this neighborhood?
5. What was your response to the street tree-planting program?
6. How were you involved in the decision to plant this tree on the property between the sidewalk and the street in front of your house?

Table 1. Characteristics of residents interviewed from three types of neighborhoods, based on proportion of residents who submitted NTR (n = 43).

		Type of neighborhood			
Demographic characteristic:		**Low NTR** (n = 9) 2 NTR, 7 R	**Average NTR** (n = 21) 11 NTR, 10 R	**High NTR** (n = 13) 7 NTR, 6 R	Total:
Gender	Female	5	12	10	27
	Male	4	9	3	16
Age group	Retired	8	10	11	29
	Working age	1	6	1	8
	Unknown	0	5	1	6
Home ownership status	Own	5	9	13	27
	Rent	1	3	0	4
	Unknown	3	9	0	12

Question 4 focused on past experiences with trees, which often elicited heritage narratives about city maintenance of trees. Audio-recorded data were transcribed and coded in the qualitative data analysis software NVivo, with typed field notes from observations and informal conversations. Coding was an iterative process in which the researcher and research assistant reviewed and coded each data source for heritage narratives until no new themes emerged (Emerson, Fretz, and Shaw 2011), and then used focused coding to combine the coded data into larger categories that subsumed multiple codes (Bailey 2007). The lead researcher and research assistant coded portions of the same data separately to ensure inter-rater reliability. When coders disagreed, they discussed the rationale for their coding and either agreed on a code already developed, or created a new code.

During data analysis, interview and group discussion results were compared with participant observation to the extent possible. This process of comparison sometimes identified consistency in results obtained from different methods of data collection, and elucidated conflicting accounts of the current and historical circumstances, ultimately bolstering the quality and rigor of the research results (Nightingale 2003).

Results

Characteristics of Interviewees

Nine of 14 study participants from The Greening of Detroit (TGD) were employees of the organization 5 years or less, one had a tenure of 6-10 years, and four were with the organization 16-25 years. Eight of 14 TGD respondents were women, and only four TGD respondents lived in the city of Detroit. Table 1 displays demographic characteristics for the residents interviewed. Forty-three residents completed 41 interviews, since family members were sometimes interviewed together. Twenty had submitted "no-tree requests" (NTR) and 21 received trees (R). Approximately two-thirds of residents interviewed were retired home owners, and 60 percent were women. All residents interviewed were non-white, based on the interviewer's visual assessment of their race. Key informants indicated that asking residents to identify their race could discourage participation in the study.

Table 2. Responses toward tree planting by those who submitted an NTR or received a tree (R) (n = 41)[a].

Residents who were satisfied with the tree-planting decision-making process:		**Number of NTR:**	**Number of R:**
1. Did not accept a tree	Reason(s): • Maintenance concerns (i.e. root damage to underground infrastructure or sidewalks, pruning, raking leaves)	16	0
2. Happy to accept the tree planted	Reason(s): • Believed trees planted would be better than species planted in the past • Lack of trees now • Able to choose preferred tree	0	14
Residents who would have accepted a tree under different conditions:		**Number of NTR:**	**Number of R:**
3. Would have accepted a tree happily with maintenance of tree and/or infrastructure	Assistance desired: • General tree care, pruning, watering, underground infrastructure repair	3	3
4. Would have accepted a tree happily if I could have chosen the type of tree	Characteristics preferred: • Flowering or smaller tree species • Trees with lush green leaves • Tree without berries that fall	0	4
5. Wanted more information about a tree scheduled for planting	Information desired: • Tree growth patterns, care responsibilities, appearance over time, benefits of trees, maintenance assistance available	2	5
6. Once a dead tree is removed, I would accept a new tree	Concerns about dead trees: • Safety or nuisance concern • Not enough space for new tree	1	0

[a]Note: All respondents in Category 5 overlapped with other categories, so they are omitted from the count of "n" respondents for this theme.

Categories of Response to Tree Planting

Analysis of the data revealed six categories of response to tree planting, which reflected residents' satisfaction with the tree planting decision-making process (Table 2). While many residents submitted an NTR (Category 1) or accepted a tree (Category 2) and were satisfied with their level of involvement in the decision-making process, nearly half of the residents interviewed (18 of 41) felt their values were not adequately considered in tree planting and stewardship. These residents would have happily accepted a street tree with greater assistance with tree maintenance (Category 3), choice of the species planted (Category 4), more information about the tree planted (Category 5), and/or removal of a dead tree (Category 6). Category 4 overlapped with others, as some residents who accepted a tree wanted more information about the tree and maintenance needs or responsibilities.

Residents' Heritage Narratives About Their Neighborhoods, The City, and Trees

Residents who did not want a tree (Category 1), or wanted a tree under certain conditions (Categories 3, 4, and 6), noted challenges to maintaining an appearance of care in their neighborhood, including trees. Several of these residents specifically linked these challenges to Detroit's major population decline over the last several decades, which had led to an increase in vacant properties, decreased care of properties, and decreased city services and social cohesion among neighbors. This heritage narrative of Detroit emphasized that residents who stayed in the city through its economic decline bore much of the responsibility for stewarding their neighborhoods, with little help from city government.

This heritage narrative of city neglect of trees was prominent in neighborhoods with average or high proportions of NTR. For example, a man who wanted a tree with greater assistance with tree maintenance said, "We don't want to be living in no slum, but there's a lot of people that are moving out and that's what's messing up our city." He went on to say, "The city doesn't do much for their properties." Another man who submitted an NTR indicated he would not accept a tree because of the upkeep, stating "someone could get hit in the head" with the tree issues they have now and "the city doesn't do nothing for the tree" and "the city doesn't spray for moss anymore." Both of these residents said they liked trees, but they were hesitant to accept a tree due to a lack of city services for tree maintenance, which was linked to population decline. A woman who submitted an NTR also said she liked trees, but there were two dead trees in front of her house that needed to be cut down first. Her neighbor responded, "Back in the 1960's and 70's, the city would cut the tree limbs and spray them. Now you have to get on them to do that work. Even when a tree falls in the street, like what happened two years ago, the city won't come and take care of it." Another woman who submitted an NTR said:

> You know I love trees actually, it makes things beautiful and it makes shade. There's no problem with trees. The problem with trees is they have to be maintained and in our neighborhood, they're not being maintained … I tried to get the city to trim trees almost 15 years and they never came out.

A woman who wanted a choice of tree species planted similarly said, "Even though it's the city property, we're gonna end up having to care for it and raking leaves and God knows whatever else we might have to do." At two neighborhood group meetings in areas with average and high proportions of NTR, the leaders of both groups said that they are doing what they can to maintain the area but "the city needs to do their part." In the high NTR neighborhood, the leader said the biggest problem faced was abandoned homes and "people want trees and other things cut down." Several attendees at one community group said they remembered when Detroit was known as "The City of Trees," with some people specifically upset about the trees that have been lost. Following these comments, a woman then asked, "And when the tree dies, who takes the tree down? Who do you call?"

This feeling of neglect from city government extended to the non-profit organization, which some residents felt re-produced this dynamic by not adequately communicating with residents about tree planting and stewardship. A man who accepted a tree

indicated he called the organization several times about tree care without an adequate response:

> I've left several messages. My tree was planted last August. My wife loved it. It was a Japanese pink or mocha color blossoming tree. I was told that they would come back out and either water it or fertilize it. Haven't seen anyone. So, I've been doing the best that I can, but somebody now … So where do I go from here?

In a neighborhood with a low proportion of NTR, a woman said that the non-profit organization planted a tree in front of her house the previous year, "but they have not been back to water or prune it or maintenance it at all." She said she was upset because she had to do the pruning, which was not easy for her as a senior citizen. In these cases, if the organization was maintaining the tree, the resident was unaware of it, and if they were not maintaining the tree, the resident was unsure why that they had not. A woman who accepted a tree and noticed TGD watering the trees said, "I wish they would take a moment and leave some type of information that they're maintaining the tree and how to keep them prospering and who to contact if you have questions or concerns." A woman who submitted an NTR wanted more communication prior to the tree planting:

> You know what, I really appreciate you today because that shows that someone is listening and someone is trying to find out what's really going on in our thoughts, the way we feel, and I just appreciate you guys. And maybe next time they can do a survey and ask us, if they would like to have us have the trees.

Residents in the neighborhood with a high proportion of NTR described how this experience of neglect happened with many entities not based in the neighborhood. These residents explained that a utility company installed new meters in the neighborhood and "half did the job," by not filling in holes and hiring landscapers that did not repair damage. A resident said, "This is what happens when people come in to the neighborhood to "do good." They "half do it" or don't do the whole job."

Residents who were happy to accept a tree in a neighborhood with a low proportion of NTR said they experienced no such challenges with vacant properties or property upkeep by other residents or the city. A woman in this neighborhood said, "I appreciate the fact that everybody's trying to do the same thing, which is, you know, live well, live nice, live clean." She then described her excitement about receiving a tree, due to a positive previous experience with city tree services:

> And I was very excited about getting mine … I mean, I love the trees. You know when we first moved here we had a tree on the curb but the tree was in bad shape and so the city came and they cut it down, and so I was grateful because now I was blessed you know to get a brand-new tree that's going to probably last for many, many years …

A retired man who accepted a tree said his neighborhood was full of trees and "one more tree wouldn't hurt," explaining that he had not had any sewer or related issues with trees, and he was given a choice of the type of tree planted since he was home during the tree-planting event. In other neighborhoods, residents also described contentment to receive a tree as they had not had negative experiences with city trees. One resident who moved into his house *after* the tree was planted said he was fine with the tree there because "trees take care of themselves." Another resident who was happy to receive a tree said she

had not had any issues with trees in the neighborhood and she approved of planting trees, "especially if it's not costing anybody anything." A younger man accepted a tree because " … we need more trees over here and there's really no trees over there."

Non-profit Organization Narratives About Forestry in The City

Several individuals within The Greening of Detroit (TGD) noted the historical circumstances around forestry in the city that led to some residents' hesitance to accept trees. One board member said:

> The city's inability to do adequate maintenance for the last 40 years probably at this point, those huge dead and dying trees out there are a huge barrier for several reasons. They take up space so we can't plant a tree where there's a big dead tree, but they also cause a huge public relations problem for us, because people feel, and you can't really argue with them, if we can't take care of what we have, why are we putting more in?

Two staff members also reflected on this history:

> I mean back in the 70's and 80's, they had over 400 people in the forestry department, so I remember them coming out and whatever they were doing I forget. But they were doing some kind of work to reduce some of the disease, but now they have 12 people, so they don't have enough people to do anything. Let alone cut down trees.

> So, and a lot of it I can't argue with. Some people are like, 'well even if you plant this tree, you maintain it for three years, what's the city gonna do after three years? What's gonna happen in 15 years?' How can I answer for em? Cuz the city stopped pruning trees, 25 years ago, 30 years ago, I don't even know when they stopped pruning trees.

When asked about tree maintenance after the first three years a street tree is planted, a staff person said, "it's up to the resident, because they are off the books." In other words, the tree is no longer the organization's responsibility. However, it is on city-owned property and legally the responsibility of the city government. This staff member's response acknowledges the historical circumstances around tree maintenance which many residents discussed as well—that it will be left to them.

Organizational Identity: Interactions With Residents

When the non-profit organization started, there was acknowledgement of this history of neglect in the city and the founding members of the organization sought to earn the trust of residents and involve them throughout the tree-planting process, initially by setting up a demonstration planting to show people what the organization wanted to do with residents as partners. The founder discussed the rationale for this approach based on the city's heritage narrative of previous, not-so-successful, 'philanthropic' efforts, and her narratives about serving other communities:

> There had been a lot of, how do you say it nicely, well-intentioned but not well thought through initiatives, so we were determined from the beginning to guarantee every tree that we planted and that we would work to do the highest quality work with the best outcome for everyone, with the community buy-in because I had previously worked in Appalachia and other places and from what I had learned early on is that you have to find out what the local people need and want and then you help them get it. You don't impose it on

> them, they really have to participate, and people have brilliant ideas to share and energy and can do so much more if you work with the community. Sometimes it takes a little longer to get things under way, but once they're involved, the success is ensured if people are really committed to it … What is really critical is that you have to go down to the most local level and first talk with people about an idea and have them respond to it and then listen to what their ideas and input could be and then go back to them.

This narrative speaks to an organizational identity tied to valuing residents' input and intentional engagement in two-way dialogue that guided decision-making about the purpose and governance of forestry endeavors. The approach utilized by TGD during this study had shifted to less of a shared decision-making power structure, and more of an effort to convince residents to accept the trees that the staff felt were the best to plant. Part of this approach was driven by staff, volunteer and board members' perceptions of residents, including narratives about residents' experiences with and knowledge of trees (or lack thereof):

> You're dealing with a generation that has not been used to having trees, the people who remember the elms are getting older and older. Now we've got generations of people that have grown up without trees on their street, they don't even know what they're missing.

> Then I had to understand that I'm running into generations that never saw that [Detroit's former tree canopy]. I'm running into young people that say, 'the only thing I've ever seen of Detroit is devastation.' So then I bring that challenge, 'well let's change that around. What do you think we can do?' And that's what kind of draws them now to community meetings.

Some staff members felt that residents' resistance to tree planting manifested from experiences with city government neglect, rather than issues with trees specifically:

> Sometimes you get people that are, ya know, they're upset about so many other things that this tree in their front yard is just merely a sounding board for it, and we are the first people that they believe are from the city, so like governmental or city organization, that's ever been in the neighborhood in like 10, 15 years and they're gonna use every chance they can to air their grievances about the burnt up houses on the street … how long it takes police to get to the neighborhood … and there's all these greater issues and why are we wasting money planting trees?

> So a lot of the issues I find with the trees were not the trees, it was life in general and here I was bringing something extra into your life. So it's about control. It's about being able to control your environment.

Although these staff members acknowledged that residents want control of their environment due to negative past experiences with the city—which the founder of the organization also recognized—the tree planting decision-making process did not include residents in selecting the species of trees to plant in their neighborhood, unless they sought out staff to submit an NTR and were given options of other types of trees so that they would accept one. This is also despite the fact that some staff members wanted to facilitate more active involvement on the part of residents in the program:

> In my mind, the organization should be building and creating a culture that values urban forestry and trees, and tree planting. And if that truly is the objective/mission, then we should identify ourselves as a community engagement organization that promotes trees. Instead of a tree-planting organization that conducts community engagement, if that makes

> any sense. What I'm getting at is: We want to teach people how to fish, instead of giving them fish.

The organization's dominant heritage narrative centered around the need to educate residents about the benefits of trees to help them move past misperceptions of trees based on negative past experiences. This narrative guided the actions of the organization when engaging with residents:

> I told him [a colleague], we need to embrace the community because they just don't know, ya know, what a good tree is and what a bad tree is … We need to let them know the type of trees we're planting, the benefits of that tree, and we also should give them the history of the tree that was planted there … Ya know, that that tree shouldn't even be in this state.

> I think that we have a really good system that combines, you know, very knowledgeable professionals, a small core group of very knowledgeable professionals, with a large group of really enthusiastic community people who just need a little knowledge in order to do the right thing.

Discussion

The story of declining population, city government disinvestment from forestry, and the resulting shift of responsibility for city trees to a non-government organization, and ultimately individual citizens, represents a frequently expressed heritage narrative in this study. This narrative also instigated conflict between The Greening of Detroit (TGD) and some city residents. Several residents interviewed desired shared decision-making power in selection of species to plant and maintenance protocols because they had borne much of the responsibility for tree care and property management—including vacant and/or city-owned property—over the last several decades. Those within TGD focused on a different interpretation of this heritage narrative—often portraying residents as lacking experience with and knowledge of the benefits of trees, which they felt was the main barrier to more resident buy-in to the program.

The Environmental Protection Agency (1998, 7) defined environmental justice as "the fair treatment and ***meaningful involvement*** of all people regardless of race, color, national origin, or income with respect to … " environmental policies (emphasis added). The tree-planting program TGD implemented did not prioritize meaningful engagement to develop shared meanings and decision-making power, but rather focused only on the meaning that those within TGD attributed to tree planting based on a selective representation of residents and the city's history (i.e. a heritage narrative). TGD's green infrastructure staff retained primary authority to select which species of trees to plant in particular locations, and subsequent maintenance. This approach perpetuated an environmental injustice by excluding the concerns of minority residents in low income neighborhoods from decisions about tree planting and stewardship.

These results elucidate a tension between residents frustrated over ecosystem "disservices" and urban forestry practitioners focused on the benefits of trees. While this tension manifests from a heritage narrative of a particular U.S. city, it is not unique to Detroit. Assessments of ecosystem services often focus primarily on "goods" produced by green spaces, while disservices are given little to no attention (Lyytimäki et al. 2008).

Campbell (2015, 255) also notes, "For the most part, the public is viewed as recipients or *consumers*: of messages, of educational activities, of stewardship programs, of trees, and of ecosystem services." For example, in a study of public responses to a street tree-planting program in New York City, researchers found that common complaints from residents focused on the tree-planting process, including concerns about the placement of a new tree planting and future maintenance responsibilities (Rae, Simon, and Braden 2010). Although the authors indicate that involving residents in planting could be helpful, they contend this would be difficult to manage and recommend "increased public education on tree benefits and notification of planting processes" (Rae et al. 2010, 1).

The study presented here addresses some limitations of other, primarily quantitative, studies in assessing the environmental justice of urban tree-planting programs. For example, Watkins et al. (2016) argue that urban tree planting conducted by non-profit organizations (including The Greening of Detroit) can lead to more just outcomes because they are more likely to plant in lower income neighborhoods than municipal agencies. However, the results presented above suggest that a lack of resident involvement in species selection and decisions on maintenance protocols is counterproductive to increasing urban tree canopy equity. This is partly because lack of decision-making power in species selection led some residents to submit "no-tree requests" (NTR), resulting in fewer trees planted in lower income neighborhoods. Additionally, some residents did not engage in tree stewardship after receiving a tree due to a perceived lack of adequate dialogue and support for tree maintenance. Without adequate long-term stewardship, tree survival and health is likely negatively impacted (Vogt et al. 2015).

The qualitative research approach used in this study allowed for data collection from a range of residents that had been involved in previous tree-planting events. There were limitations to the approach utilized that can inform future research. The lead researcher chose to gain entrée with leaders of community groups in study neighborhoods and solicit interviews with those who attended community meetings. This choice enabled the researcher to develop trust and rapport with residents and increase the likelihood they would participate in more in-depth interviews. However, data collection was limited to those who attended community meetings or those home during the day when doorstep interviews were conducted, which tended to be older homeowners. While some young adults and renters provided feedback, the results may reflect issues more prevalent with retired individuals or homeowners. Future research should identify opportunities to gain insights from more young adults and renters through qualitative and/or quantitative techniques.

Conclusion

Heritage narratives regarding forestry in the city of Detroit reflect broader trends identified in literature on urban and community forestry (UCF) as well as community research. Perkins (2015, 29) states, "U.S. cities … have less money to spend on public works than they did three decades ago." Goodson and Phillimore (2012, 10) notes there has been a recent "shift of responsibilities for services from the state to the private and community and voluntary sectors and ultimately the individual." Across 667 communities in the U.S., municipal governments spent an average of 0.5 percent of their budgets on tree activities (Hauer and Peterson 2016). It is therefore likely that other U.S. cities

are experiencing similar consequences from disinvestment in city services like tree maintenance, including residents who may be hesitant to accept new trees.

Professionals in UCF can use the findings of this study to guide interactions with residents. These interactions should start with dialogue aimed at understanding the character of a place according to its inhabitants. This is particularly important where UCF practitioners do not live in the neighborhoods they serve, as this can lead to differing interpretations of a city's history and character. Heritage narratives may include the special attributes of a place and the challenges faced in a community from different perspectives. Through this process, forestry practitioners can understand how proposed forestry projects may fit within particular community identities. Understanding heritage narratives will also help forestry professionals identify relevant information to provide to residents who serve as partners in long term tree stewardship. For example, in Detroit, neighborhood upkeep is an important task to maintain social cohesion among residents in the context of population decline and increased vacant properties. Residents facing greater challenges to neighborhood upkeep desired more dialogue and information regarding tree maintenance and assistance available after tree planting, in addition to decision-making power in species planted.

Awareness of the diverse heritage narratives people rely upon to navigate challenges in their communities can help to identify inclusive goals and appropriate roles for all involved in restoring and stewarding urban landscapes, and improve environmental justice in UCF. This research contributes to theoretical understanding of the factors that drive behaviors in urban greening and broader community planning processes by accounting for the relevance of historical narratives, and the diverse community identities that people develop from these narratives.

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