INSTITUTIONALIZING URBAN POSSIBILITY: URBAN ECOLOGY & VACANT LAND GOVERNANCE IN 3 AMERICAN CITIES

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Introduction

Sustainability has become a feature of inter-urban competition, such that cities signal their status through the creation of sustainability initiatives. A popular example of such an initiative is the attempt by many U.S. cities to expand their tree canopies. However, a USDA Forest Service research team found, based on 2000-2010 data, that the tree canopy of seventeen U.S. cities decreased while their impervious surfaces increased (Nowak and Greenfield, 2012). Notably, the only exception to these divergent trends was Syracuse, NY. The study attributed Syracuse's increased vegetation to the natural regeneration associated with vacant land. Indeed, lots pose a significant but largely untapped resource for improving urban ecological conditions (Schilling and Logan, 2008; Hollander et al., 2009).

Urban greening initiatives—which span community gardens, urban orchards, stormwater parks, and other forms—are closely tied to land resources. Land forms the foundation for the organization of cities, so it constitutes the most fundamental element of urban infrastructure (c.f. Bélanger, 2013). The availability of vacant land is a suitable metric for evaluating linkages between urban economic conditions and urban greening initiatives. Few have considered the urban ecological potential of vacant lots because urban planning has focused very heavily on economic growth. As a result, public administrations have concentrated on the redevelopment potential for their vacant properties, even in the face of severe economic decline. Despite the seemingly ubiquitous interest of urban community residents in greening vacant land across U.S. cities, municipal governments tend to treat their efforts as temporary and small-scale (Drake and Lawson, 2014), reserving permanent protocols for development projects.

It is the political coalitions that create the rules and norms for managing urban land and determining its environmental outcomes. Therefore, I study vacant land governance, with a focus on urban tree initiatives, in order to explore relationships among economic development, political coalitions, and urban sustainability. Specifically, I ask: how do cities govern vacant land for environmental purposes in different economic conditions? Also, how do temporary strategies by civic actors interact with or influence the creation of formal strategies for the permanent, or long-term, management of vacant land?

To answer this question, I examine the institutional arrangements associated with urban tree initiatives and vacant land in Boston, Philadelphia, and Baltimore. The institutional arrangements vary widely among the cases, as does the visibility of vacant land: Boston (90 mi^2) has approximately 7,000 vacant parcels; Philadelphia (141.6 mi^2) has 40,000 vacant parcels; and Baltimore (92 mi^2) has 30,000 vacant properties. I collect ethnographic data through interviews and participant-observation to understand the ways in which public administrators prioritize greening initiatives and vacant land management in response to different economic conditions.

My results suggest that land-based greening initiatives appear to be counter-cyclically related to the strength of the city's real estate market. While macroeconomic conditions create the possibility for enhanced environmental governance, it is the precise articulation of strategic and relational government institutions that determines the social and ecological outcomes on vacant lands. The following sections situate the study in the state theory, urban governance, and urban greening literatures. I then introduce my method, empirical focus, and case selection, and finally I present and discuss the study's ethnographic results.

Strategic-Relational City Governments and Growth Coalitions

The critical geography literature has largely focused on the influence of private firms in development and governance, to the potential detriment of government accountability, but the generation of a stable legal and institutional framework for greening efforts is an essential step that determines the long-term impact of a landscape intervention (Lemos and Agrawal, 2006; Nemeth and Langhorst, 2014). A city's land market creates the possibility for different actors to engage with urban land, but sustainability outcomes crucially depend on the city's legal and institutional arrangements, which are nested within the state and federal system in the United States. Therefore, the question of whether urban sustainability aligns with political resistance and anti-growth efforts, or it becomes incorporated into development visions and strategies, is a political question (Evans, 2002). Integrating market-driven economic development with social well-being and livability hinges on the historically and geographically rooted institutional arrangements governing cities. "Regulatory landscapes are continually made and remade through this intense, politically contested interaction between *inherited* institutional forms and policy frameworks and *emergent* strategies of state spatial regulation" (Brenner and Theodore 2002:356).

Therefore, it is at the level of urban governance that the relationship between capitalist land development and the micro-politics of cultural practices can be understood. Governance refers to "the fundamental question of how organisation, decisions, order and rule are achieved in heterogeneous and highly differentiated societies" (Bridge and Perreault, 2009:476). This organization depends on extensive coordination, participation, and initiative across governments, firms, and civic entities, but it is the public sector that leads land development and governance (Altshuler and Luberoff, 2003). Theorization about governmental actions tends to occur at the nation-state level because that is the scale at which political sovereignty exists. However, lessons from state theory may be productively extrapolated to lend insight into the municipal governance system.

Governments are relational social institutions that strategically produce and reproduce nature across political territories over time (Jessop, 2008). They do not consistently act on behalf of the upper class or the business elite, and their activities vary widely. There is no activity that government bureaucracies always perform, and none that they have never performed (Weber, 1978). City governments develop with institutional, historical, and geographic specificity. They are relational in the sense that they must be understood as vertically nested entities within the state and the federal system, as well as horizontally embedded in society. Their institutional formations develop a cultural template for behavior, and this template is intimately tied to the composition and arrangements in society (Jessop, 2008; also Evans, 1996).

The "growth coalition" is a concept that hypothesizes the ways in which actors and institutions coordinate their behavior across sectors within a locality. It is based on the premise that the logic driving strategic action among property owners, developers, financiers, the media, and other interests is a pro-growth mentality. This common goal overrides whatever other differences they may have, to the degree that "the political and economic essence of virtually any given locality, in the present American context, is growth" (Molotch, 1976:309). However, in select cities, antigrowth coalitions have fought for a focus on quality of life, compared with only economic growth. These are often associated with wealthy cities, such as Beverly Hills and West Palm Beach, as well as university cities, such as Ann Arbor and Santa Barbara. These coalitions tend to be "cosmopolitan in outlook and pecuniary interest, [using] the local community only as a setting for life and work, rather than as an exploitable resource" (1976:328). They rely on the availability of a middle class, presence of intellectual resources, and history of activism. The intellectual merit of growth coalition theory lies in its demonstration that the coordinated behaviors of local actors can change the course of urban development. The fate of cities, in other words, hinges on the decisions of cross sector urban networks. As Mollenkopf writes, "we are not prisoners of history and social structure", but rather, political initiative and coalition building may have "a vast and demonstrable impact on the course of urban development" (1983:299).

Growth Coalitions, Vacant Land, and Temporary Strategies

A glaring gap in growth coalition theory lays in the consideration of external conditions that shape the behavior of growth coalitions in particular places. Macroeconomic cycles "interact with local industries to influence urban growth and decline, conditions to which the coalition adapts" (Schaffer 1989:22). Research about growth coalitions has focused on cities that are experiencing conditions of economic stability and growth. However, as twentieth century processes of deindustrialization and suburbanization have demonstrated most recently (Hollander et al., 2009) cities follow cycles of growth and decay over time. This raises the question: how do growth coalitions operate in conditions of urban shrinkage?

For cities that have experienced significant economic decline, their vacant properties become a spatially extensive management issue, which is plagued with conceptual and bureaucratic problems. Vacant land is "both broad and imprecise, covering various types of nonutilized or underutilized land" (Bowman and Pagano, 2004:4), and municipal administrations define the term in various ways. Therefore my basic definition of vacant land is any land that is unused or abandoned (following Bowman and Pagano, 2004). Despite increasing interest in vacant land as an object of public administration in the last decade, the most recent comprehensive treatment of urban vacant land in the U.S. is a 1999 survey of 99 cities, of which 16 were unable to provide data on vacant land. This study found that many cities did not possess systematic and reliable methods for collecting information about vacant land and abandoned structures. Also, the condition of vacant properties varied by region; administrators in northeastern cities specifically complained of vacant parcels both being too small and vacant for too long. Major cities tended to rely on a complex administrative structure to manage vacant parcels, but in many of these cities, the affected parties had very limited interaction with each other. Many respondents viewed vacant land as basically similar to other land in their cities. As a consequence, most city governments have funneled their efforts toward minimizing damage on a parcel-by-parcel basis, rather than any systematic attempt at their transformation. Typical city policies and programs include "procedures for razing abandoned structures that violate the city code, … special

programs to monitor illegal dumping on vacant lots, to board up unoccupied structures," etc. (Bowman and Pagano, 2000:8).

Cities tend to be poorly equipped to manage vacant properties because planning and policy frameworks assume the urban economic stability or growth. "Traditional regulatory and planning systems… are based on the perceived primacy of stable and certain environments for investment as well as the avoidance of conflicting land-uses" (Nemeth and Langhorst, 2014:146). Systems designed to maximize stability significantly limit the development process by constraining flexibility. Temporary uses, on the other hand are "a manifestation of a more dynamic, flexible and adaptive urbanism, where the city is becoming more responsive to new needs, demands and preferences of its users" (Bishop and Williams, 2012:4). Temporary uses often take place on former commercial or industrial parcels, temporarily transformed into spaces for cultural events or extreme sports, art installations, gardens, and other types of community gathering places (Hollander et al., 2009). They may use the arrangement of vegetation and open space elements to indicate care (Nassauer, 1995) and stabilize neighborhood cultural and property values in the context of depopulation (Hollander et al., 2009).

In general, temporary uses allow local entrepreneurs and interested parties to imagine new uses and then to act them out on site, often on a low-cost and short-term basis. As cultural or social events, temporary uses play out the visions of particular social groups. The fast timeline and incremental, flexible approach of temporary uses provide a visual and performative method for engaging with a range of planning concerns. As such, they have "the capacity to expose the ongoing conflicts and contestations between competing value systems, interests, agendas and stakeholders" (Nemeth and Langhorst, 2014:147). However, the impact of temporary uses depends on their articulation within broader urban development trajectories. The translation of temporary into permanent strategies may reinscribe unequitable development patterns, just as they have potential to disrupt them and lay the ground for more emancipatory or sustainable urban futures.

Urban Greening, Vacant Land, and Environmental Coalitions

For land-based urban greening efforts, community gardens have often sprung up in urban vacant land. These gardens challenge negative perceptions of impoverished urban neighborhoods by creating new functions and values of urban space (Schmelzkopf, 1995). They have largely been initiated, implemented, and managed by place-based civic organizations. City governments have tended to play a supportive role during weak land market conditions, but if the land market improves, these gardens have come into conflict with city-wide plans (Lawson, 2004). Indeed, sustained community gardens often build land value in a way that generates new land demand for the broader neighborhood, often leading to their replacement by build development projects (Smith and Kurtz, 2002).

In general, public administrations in U.S. cities have tended to associate permanent land-uses with the built environment, while they have largely viewed the latter type of greening as a temporary stop-gap measure to stabilize values until a parcel's land market picks up again (Drake and Lawson, 2014). For cities experiencing severe population decline, city governments have occasionally occupied more central leadership positions in managing their vacant properties for environmental ends. These interventions include removing delinquent structures, moving grass, and installing perimeter plantings. For example, Schwarz & Rugare (2009) produced a

Vacant land pattern book for the city of Cleveland, which documents a range of landscape strategies for different types of land parcels.

There is a complex association among growth coalitions, urban sustainability, and economic development. The advocates and coalitions that coalesce around land-based urban greening efforts, such as community gardens, have tended to be civic in nature, with less participation by private firms. Molotch's initial work (1976) identifies the crux of the antigrowth coalition to be rooted in the environmental movement, suggesting that growth coalitions are placed at odds with sustainability advocacy. Molotch and Logan (1987) suggested that the trajectories followed by growth machines may directly incorporate pro-sustainability efforts as well. For example, the interest of Santa Barbara elites in tourism promotion led them to oppose offshore drilling, which would benefit nonlocal actors while incurring costs to the locality (Molotch and Logan, 1987). Therefore it remains an open question as to whether economic development fosters urban sustainability, or anti-growth forces prove stronger in advancing the sustainability agenda. From a governance perspective, one way to pursue this inquiry is to examine the relationships between environmental advocates and coalitions and public administrations in differing land market conditions. I examine this question through an institutional ethnography of urban greening efforts and vacant land governance in Boston, Philadelphia, and Baltimore. The following section introduces my method, study's focus, case selection, and target population.

Methods

Institutional Ethnography

The empirical assessment of linkages among economic development, political coalitions, and urban sustainability requires a particular method. This method must be able to consider factors shaping individual and shared experience, conceptualize local meanings of environmental governance, explore the causal pathways through which institutional influences operate, and incorporate the dynamic interactions between area and individual characteristics. The ethnography is particularly well-suited to develop interpretive knowledge of cultural categories through observation with "thick description." Whereas "thin description" refers to the straight-forward observation of behavior (i.e. blinking eyelids), "thick description" refers to documentation of behavior in a way that conveys interpretive meaning (Geertz, 1973:7). Also, by situating a locality within a world systems context, ethnographies may ask "macrosocial questions about the causes of events or the constitution of major systems and processes, usually represented more formally and abstractly in other conceptual languages" (Marcus, 1986:168). An actor-oriented lens ensures that ethnographic analysis carefully avoids reification of political economic or cultural processes, while it connects the experiences of discrete identity groups with broader historical and social processes.

The purpose of the institutional ethnography is to link differentiated, individual standpoints with overarching ruling relations through organizational behavior (Smith, 2005:13). It makes visible the ways in which individuals are "connected into the extended social relations of ruling and economy and their intersections" (Smith, 2005:29). In this way, its empirical method may approximate the cross case method. A multisite method prompts "more robust conclusions about the factors that appear to influence patterns" in diverse localities (Bebbington and Batterbury, 2001:373). However, the institutional ethnography differs from a cross case method in that it tries "'to uncover the macro foundations of a microsociology'" as well as to "extend not only

from the micro to macro but also 'from local to extralocal, from processes to forces'" (Smith, 2005:32)

To unearth these "macro foundations", this study employs an institutional ethnography of urban tree initiatives. This method investigates the "objective" organization of contemporary bureaucracies, linking their administrative practices and written rules with the informal rules and norms that underpin them (Smith, 2005; drawing from Weber, 1978). Therefore, the lead author spent three months in each city doing participant-observation and interviews with key partners of that city's tree initiative. The Office of Sponsored Programs and Research at Clark University granted Institutional Review Board (IRB) approval to the study.

Urban Tree Initiatives & Vacant Land

I use the institutional ethnography to study the overlapping domains of urban tree initiatives and vacant land management. Urban tree initiatives are one domain of urban ecology that has scaled up to the level of the city. These initiatives are often located within long-term municipal action plans. Accordingly, the agencies, offices, and organizations concerned with urban ecology have tended to coalesce around trees. Understanding the mechanisms and constraints of urban tree initiatives can provide insight into the key resources and limitations involved in mainstreaming urban green infrastructure. Trees are also a key element of urban ecology and green infrastructure (Amati and Taylor, 2010), as they enhance air, water, and soil quality; mitigate water flows and surface temperatures; protect habitats; and provide a host of recreational, psychological, and real estate benefits (Dwyer et al., 2003).

Urban tree initiatives rely on land resource availability, and vacant properties constitute one source of land for potential greening. Vacant land is simultaneously a physical indicator of the economic development trajectory of a municipality, as the presence of vacant land indicates economic shrinkage or stagnancy. This study examines the ways in which cities manage their vacant properties for urban greening in order to better understand the relationship between urban sustainability and economic decline.

Case Selection

I select three cities in the northeastern United States: Boston, MA; Philadelphia, PA; and Baltimore, MD. New York City has received the bulk of research focus on urban tree stewardship, but it is an exemplary case in urban development and governance. Our cases developed their tree initiatives in 2007-2008, when many other cities were deploying similar programs. These three cities exhibit similar socio-economic, demographic, and landscape characteristics (**Table 1**)**.** They are historical cities in the forested northeastern region of the United States. The cities are similarly dense, racially/ethnically diverse, and segregated urban areas. They also possess numerous active civic and neighborhood-based organizations. Their tree initiatives are differently situated in city government, with different relationships with higher-level public administrators, local and extra-local private firms, and local civic actors. Further, the visibility of vacant land varies widely among the cases: Boston (90 mi^2) has approximately 7,000 vacant parcels; Philadelphia (141.6 mi^2) has 40,000 vacant parcels; and Baltimore (92 mi^2) has 30,000 vacant properties.

Table 1: City Profiles, Urban Tree Initiatives, and Tree Cover Change in Case Study Cities[1]

		BOSTON	BALTIMORE	PHILADELPHIA
City Profile	*Founded*	1630	1729	1682
	Geographic Extent	90 mi^2	92 mi^2	141.6 mi^2
	Density	12,907/mi^2	7,671.5/mi^2	11,456/mi^2
	Land/Water	48.4/41.2 mi^2	80.9/11.1 mi^2	134.1/7.5 mi^2
	Population (2012)	636,479	621,342	1,547,607
	Pop. change 1950-1980	-30%	-17.10%	-18.50%
	White / Black / Asian / Hispanic	53.9 / 24.4 / 8.9 / 17.5%	31.4 / 63.6 / 2.5 / 4.4%	41 / 43.4 / 6.3 / 12.3%
	Median Household Income	$51,739	$40,100	$36,957
	Poverty	21.40%	22.40%	25.60%
Initiatives & Social Institutions	*Program Goal*	100,000 trees by 2020	750,000 trees by 2040	300,000 trees by 2015; 40% coverage by 2025
	Start Date	2007	2007	2009
	Multi-level Governance	-----	------	Tri-state, 13-county One Million Trees Initiative
	Lead Partner	Non-profit Org: Boston Natural Areas Network	Municipal Government	Municipal Government
	Data-driven Governance	-----	Ongoing research partnership: Baltimore Ecosystem Study	Project-based coordination
	Institutional Adaptation to Urban Sustainability	Energy, Environment, & Open Space Mayoral Cabinet	Office of Sustainability	Mayor's Office of Sustainability
Landscape	*Tree cover at program onset*	29% (2007)	20% (2007)	19% (2011)
	Tree Cover at most recent assessment	12,000 trees planted (2012)	27.4% (2009)	100,000 trees planted (2013)
	Net Change in Tree Cover	-0.9% (2003-2008)	-1.9% (2001-2005)	------
	Net Change in Imperviousness	+1.7% (2003-2008)	+2.1% (2001-2005)	------

[1]Discover, n.d.; US Department, 2013; US Department, 2013a; City-data Philadelphia, 2013; Grow Boston Greener, n.d.; Baltimore Tree Trust, n.d.; Baltimore Sustainability, n.d.; Tree Philly, n.d.; Plant One Million, n.d.; Mayor's Office, n.d.; UEI 2008; UVM, 2007; UVM, 2011; UVM, 2009; Abel, 2012; Mosell, 2013.

Similar cases are selected in order to increase the likelihood that differences in outcomes stem from differences in institutional form, rather than other reasons. The comparative research design allows stronger conclusions about the institutional drivers shaping landscape patterns in diverse localities.

Target Population

Because the institutional ethnography focuses on forms of bureaucratic organization, this study's target population consisted of the key policy stakeholders associated with each city's tree initiative. All initiatives incorporated the participation of actors and organizations within multiple departments of the municipal government, place-based civic organizations, and private firms of varying sizes. Some of the initiatives featured their city's Mayor's Office more prominently than others, and some interacted more with their state's natural resource department, federal agencies, and academic and private consulting firms. Some cities achieved strategic partnerships with other organizations, such as a public relations firm and fund-raising organizations. The target population in each city therefore reflected the organizational composition and structure of that city's tree initiative. The demographic profile of the target population largely consisted of Caucasian men and women above the age of 30, with higher education and from the northeastern US. Key policy stakeholders in Philadelphia featured notably more women than Boston and Baltimore, as well as a high proportion of individuals born and raised in Philadelphia.

Interview Instrument

An IRB-approved interview instrument guided the topics and flow of each interview. Specific content of the semi-structured interviews depended on the knowledge and experience of an individual working in a particular capacity. The number of interviews with each person also depended on his knowledge and experience, and they averaged one to two interviews per interviewee. With a few exceptions, the interviews were conducted in-person, usually in the office of the interviewee but occasionally outside the office in a cafe. Topics examined:

- range of administrative practices associated with the tree initiative, roles of different parties in carrying out these practices, rules and norms coordinating these practices, and degree to which these rules and norms are commonly held or contested
- range of administrative practices linking the tree initiative with other programs within municipal, state, and federal government, roles of different parties in carrying out these practices, rules and norms coordinating these practices, and the direction of influence among the parties
- range of administrative practices linking the tree initiative with the work practices of civic organizations, private firms, and research entities, roles of different parties in carrying out these practices, rules & norms coordinating these practices, and direction of influence among parties

Participant-Observation

Sites of participant-observation were selected based on the following criteria. On the level of a given city, there were analytical and logistical questions. First, what is the centrality of the organization to the tree initiative, and its relative position to other organizations? Second, what opportunities of access to a target organization are available? On the scale of the study, an additional consideration was the exposure to different partners in the urban tree initiatives in order to understand the work flow from different organizational perspectives. In Boston, participant-observation was based in the Mayor's Office of Boston City Hall; in Philadelphia, it was the USDA Forest Service Philadelphia Field Station; and in Baltimore, it was the Baltimore Recreation and Parks department. Participant-observation was oriented toward these organizations in each city, but it also spanned different activities and sites. Different activities included: tree care trainings; community-based trainings; publicity events; neighborhood-based tree plantings; city-wide community meetings; neighborhood-based community meetings.

Results

Urban Tree Initiative: Boston

In 2007, Former Boston Mayor Thomas Menino announced *Grow Boston Greener*, a commitment by the city to plant 100,000 trees by 2020, with the goal to increase the canopy to 35% by 2030. Menino based his decision on a report created by the Boston Urban Forest Coalition (BUFC). The Mayor's Office subsequently handed off the initiative to BUFC, with oversight by the Mayoral Cabinet of Energy & Environmental Services and the Parks & Recreation Department. In addition to the city partners, the BUFC consisted of a trio of non-profit organizations—the Urban Ecology Institute, Earthworks, the Boston Natural Areas Network—together with the Massachusetts Department of Conservation & Natural Resources. Using initial funds provided by the city, the BUFC established Grow Boston Greener. In 2009, these arrangements fell apart when City of Boston funding ran out. The City felt that it was UEI's responsibility to raise funds, while the non-profits asserted that it was the City's program and City's funding responsibility. From 2009 to 2011, the coalition was effectively defunct despite mayoral stability in city hall. After two years, the city intervened to provide temporary funds for tree planting and restructure the coalition under the Boston Natural Areas Network, thereby relegating UEI to the keeper of the data. The City also agreed to fund a program manager based at the Boston Natural Areas Network (BNAN). In 2013, the Grow Boston Greener program manager at BNAN also quit due to frustration with the limited progress, and a new program manager has since vacated the position as well. As of the fall of 2014, the UVM Spatial Analysis Lab is still waiting for instruction from the city, and Boston has planted less than 12,000 trees of its 100,000 tree goal since 2007 for 2020.

Urban Tree Initiative: Philadelphia

In 2008, Mayor Michael Nutter set into motion Philadelphia's sustainability plan, called the Greenworks Plan. Mayor Nutter prioritized environmental issues in his platform as a result of an extensive public input session orchestrated by the William Penn Foundation in preparation for the 2008 mayoral race. He committed the city to plant 300,000 new trees by 2025, meaning an increase from 16% to 30% tree canopy. Accompanying these were the creation of TreePhilly as a program directed and staffed by the Parks & Recreation Department, as well as the establishment

of the Mayor's Office of Sustainability in City Hall. TreePhilly was placed within the Urban Forestry & Ecosystem Management Division of Parks & Recreation. For much of 2009, TreePhilly Coordinator, researched precedents set by urban tree programs, especially by shadowing managers of tree initiatives in other cities within the Urban Ecology Collaborative. The Director of Urban Forestry, infused a data-driven management style into TreePhilly with targeted internal and contracted spatial analysis from the University of Vermont Spatial Analysis Lab and the USDA Forest Service during 2009. The city has increased the budget allocation to urban trees for TreePhilly, but the majority of TreePhilly funds come from a private partner, Wells Fargo. The formal partners of TreePhilly are the Philadelphia Parks & Recreation Department, Fairmount Park Conservancy, and Wells Fargo, although representatives from MasterMinds, an advertising agency, and the Parks & Recreation Public Relations Office also attend TreePhilly meetings. But it also possesses a very important informal partner, Pennsylvania Horticultural Society (PHS), which is a line item in the Philadelphia budget and a nationally important non-profit organization. The city has planted 100,000 trees of its 300,000 goal since 2008[2] for 2015.

Urban Tree Initiative: Baltimore

In 2006, Former Mayor Martin O'Malley announced Baltimore's tree canopy goal of planting 750,000 trees by 2040, or doubling the tree canopy from 20% to 40%. Despite O'Malley's—and his two successors'—support for tree canopy expansion, Mayor's Offices have been marginally involved throughout the tenure of TreeBaltimore. It was a coalition of federal and state agencies, research institutions, and non-profit organizations that had incrementally built projects, relationships, and momentum over fifteen years. In the early 2000s, individuals within the USDA Forest Service Baltimore Field Station, MD Department of Natural Resources, and Baltimore Recreation and Parks Department began to conceive of an integrated long-term tree planting initiative that would increase tree canopy cover in Baltimore. Once Mayor O'Malley approved the program, the city placed Tree Baltimore in the Urban Forestry Division of Baltimore Recreation & Parks, hired a Tree Baltimore Coordinator to establish the program with a dedicated budget of $50,000. The University of Vermont Spatial Analysis Lab and the USDA Forest Service conducted an urban tree canopy assessment in 2006 and again in 2009. Unlike Philadelphia, the bulk of the funds for TreeBaltimore is public, with a very small infusion of private funds into the initiative. The City Arborist formalized a steering committee for Tree Baltimore to include two non-profit partners, Parks & People Foundation and Blue Water Baltimore, thereby facilitating communication and minimizing competition among the non-profit organizations.

Vacant Land: Boston

Boston has 7,000 vacant properties across its 90 mi^2. The City of Boston's treatment of its vacant lots in recent decades has largely mirrored dominant urban trends among U.S. cities. Their ownership are fractured among, not only numerous private owners, but multiple public agencies at the city and state levels, including the Boston Department of Neighborhood Development, Boston Redevelopment Authority, MassPort, and others. The Department of Neighborhood Development (DND) is the public agency formally charged with maintenance and dispossession

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[2] The program was officially announced and created in 2009, but counting of tree plantings started with the beginning of Mayor Nutter's administration in 2008.

of vacant properties, and, as with most cities, it does not possess adequate resources for its staff to maintain all of its properties. While its staff works hard to utilize the department's resources to its greatest capacity, in practice, given the budget allocated to maintenance, it must focus its efforts on the lots with greater public visibility on larger streets. Despite the disparity between maintenance needs and the capacity for DND to provide maintenance services, the City of Boston retains a number of complex institutional controls over the access to public-owned vacant properties. The only enduring program to allow greater civic access is the Boston Yard Sale Program, which made a mere 140 properties available for purchase for open space use only by abutting homeowners. It is possible for community groups and individuals to access vacant lots outside of any formal program, but the required process is quite lengthy and cumbersome. The Boston Natural Areas Network is the largest landowner of community gardens in the City of Boston, and the majority of these gardens are located on formerly vacant properties; however, the process through which the parcels have been transferred to BNAN have largely not been through a public process, but rather behind closed doors in Boston city hall.

Vacant Land: Philadelphia

Philadelphia has 40,000 vacant lots across its 141.6 mi^2. Philadelphia inherited a similarly byzantine bureaucratic system for its vacant lots, but it differs in two important ways. First, in 2014 the Philadelphia City Council approved the creation of a Land Bank for its municipal-owned properties, which will be the largest land bank in the country. This Land Bank will streamline the acquisition, maintenance, and dispossession of vacant properties following a strategic plan, which it is tweaking at the time of writing. Take Back Vacant Land Philly is a powerful a coalition of labor, faith, and community groups working with the city government to increase community control over vacant land. Second, the Pennsylvania Horticultural Society, as a non-profit organization, has significantly extended the services provided to Philadelphia residents related to vacant land. In the last fifteen years, PHS developed its LandCare program to stabilize vacant property values through landscape beautification. It is through this program that PHS has become a line item in the Philadelphia budget and that LandCare has become a national model for treating vacant land through landscape beautification. The present is a period of uncertainty for Philadelphia vacant land because the city has recently reversed its trend of depopulation, as the city gained numbers in the 2010 Census, and the pro-growth forces have gained strength in this process. The social coalition operates as a notable counter-force to the pro-growth efforts, and environmental advocates have been less involved in vacant lot advocacy, despite the presence of an unusually powerful Water Department and Parks & Recreation Department in the city.

Vacant Land: Baltimore

Baltimore has 30,000 vacant properties across its 92 mi^2. Baltimore institutionally prioritizes vacant land management the most among the three cities. While the city government appears to struggle with capacity issues, vacant land is a central concern unifying the interest and activities across departments and sectors. The Baltimore Housing Authority, for instance, has a Land Resources Division that "strategically acquires, manages and disposes of real property to create housing, social and economic development for Baltimore's neighborhoods" (BHA, 2014). But the Baltimore Office of Sustainability, a relatively new umbrella office within city government, recognizes "Cleanliness", under which vacant properties are filed, as the first category listed on its website, and it collects data related to vacant lot management. The non-profit organization

Parks & People manages the city's Power in Dirt initiative, which facilitates community adoption of vacant properties; P&P hosts an attractive and user-friendly website, helped to streamline paperwork in order to maximize access, and staffs outreach efforts. As a function of a long-term research partnership, the USDA Forest Service understood that city administrators recognized vacant land as a central governance issue, and in 2014, a new cross-departmental federal initiative, the Urban Waters Federal Partnership, began funding a staff person in Baltimore city government fully dedicated to vacant lot advocacy. The new staff person has built upon existing efforts to publish a "City of Baltimore Green Pattern Book: using vacant land to create greener neighborhoods" and organize a design competition for the transformation of the city's vacant properties.

Discussion

Based on the three cities' tree initiatives, Boston does not appear to have an environmental coalition, whereas Philadelphia and Baltimore both possess one. A separate paper (Foo et al., in review) argues that the different articulations of government-society relationships influence the mechanisms and political capacity to implement green infrastructure. Based on the three cases, there appears to be a close relationship between political practices and the roles of incumbent organizations. Specifically, Boston demonstrates that city governments can enforce government-society relationships based on complementarity as a strategy of control. The city government defined the role of environmental non-profit organizations as clearly distinct from that of public administration, while retaining control over the rules of the game. Boston possesses no environmental coalition because the government-society relationships in that city overly constrain the creative influence of the non-profit organizations, while it enforces a distribution of roles that the non-profit organizations do not share. Poor government-society relationships in that city prevent the emergence of an incumbent organization able to take change of the initiative. At the same time, the City of Boston Energy and Environmental Services Cabinet actively encourages the creative control of the large private firms, which are the largest carbon emitters in metropolitan Boston. Arguably, the powerful growth coalition in that city heavily restricts the logic and strategies for environmental outreach and programming. In particular, focus and momentum at the state-level related to renewable energy has shaped the environmental discourse and programs at the city level, at the expense of serious investments in the land and water resources of Boston.

In contrast, the Philadelphia and Baltimore cases show that organizations that successfully blur the crisp distinction between government and society also tend to occupy roles that define conceptions of control. In both cities, the incumbent environmental non-profit organization grew stronger during historical periods in which the city government was very weak. The Pennsylvania Horticultural Society grew and diversified during the 1970s and 1980s, and Parks & People was founded during the 1980s. In both cities, the absence of a strong growth coalition created a vacuum of power in which environmental organizations could gain strength and form coalitions. As the Philadelphia government and the Baltimore Recreation & Parks Department have become stronger in the last several years, tensions between the public administrations and incumbent non-profit organizations have surfaced and occasionally intensified. The environmental coalitions in both cities have evolved strategically in response to shifting networks of available resources. The environmental coalition in Philadelphia consists of a constellation of non-profit organizations with a very clear division of labor and identities, which

consult with academic and research institutions on a project basis. On the other hand, the environmental coalition in Baltimore features much more overlap in the roles of the non-profit organizations, alongside a much more powerful and central role of academic and federal research institutions.

Unlike Boston, both Philadelphia and Baltimore embrace temporary municipal protocols as a way of stabilizing urban land values. Baltimore city government is too weak to treat its vacant properties on a systematic level, and it requires greater resources from federal agencies or other outside institutions in order to do this. Alternately, Philadelphia's leadership in creating a land bank is currently wrestling with the very question of how to translate temporary protocols into long-term land-uses. Will Philadelphia's formalization for rules be associated with a turn toward built development, and away from open space, or will there be enough pressure created from the established civic political coalitions to force a more "permanent" environmental focus? Time will tell the degree to which cross sector advocates are able to balance growth priorities with social and environmental quality of life.

Conclusion

The urban sustainability goals of municipal governments have not been matched by their environmental performance. For example, many U.S. cities strive to increase their tree canopy cover, while their tree cover continues to decline due to increased development. Because it is the political coalitions that create the rules and norms for managing urban land and determining its environmental outcomes, this study investigates the governance of urban tree initiatives and vacant properties. A city's land market creates the possibility for different actors to engage with urban land, but it is the city's legal and institutional arrangements that determine sustainability outcomes. Poor economic conditions create the possibility for increased political participation of environmental actors, due to the weakened hold of the growth coalition on urban politics. While macroeconomic conditions create the possibility for enhanced environmental governance, it is the precise articulation of strategic and relational government institutions that determines the social and ecological outcomes on vacant lands.

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