Environmental Stewardship

Pathways to Community Cohesion and Cultivating Meaningful Engagement

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Abstract

What pathways do people take on the journey to stewardship and what rewards do they reap? Numerous studies emphasize the underlying values, whether moral, spiritual, or religious, which provide the foundation for engaging in environmental behavior. Yet, many cases of stewardship are founded not on lofty environmental ideals but on pragmatic, localized ambitions. As cities work to rectify historical inequities in access to environmental assets like trees and green spaces in low-income communities of color across the United States, it is important to understand the cultural and socioeconomic dimensions of environmental stewardship and the distinct pathways to stewardship. Understanding these can lead to policy and programmatic changes, helping city foresters and environmental advocacy groups better engage and serve marginalized communities. In this

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review, we use several cases from our work and others' to illustrate the possible barriers to engaging low-income communities and communities of color in environmental stewardship, how notions of identity, power, and agency impact the ways in which underserved communities respond to environmental issues, and finally, what paths stewards take in finding meaning in their work.

Keywords
Stewardship · Environmental values · Environmental justice · Motivation · Community resilience

Large-scale environmental problems, like the depletion and overconsumption of natural resources, continue to impact humanity on a global scale, yet state resources for interventions, from the neighborhood to the national level, continue to shrink. There is a growing recognition that sustainability outcomes, particularly in cities, cannot be achieved by top-down management alone but instead must be integrated with human systems, with people leading local, grass-roots stewardship efforts (Romolini et al. 2012). Social and cultural issues are an essential piece of environmentally sustainable solutions and development, and yet they remain the most nebulous and perhaps least understood dimensions (Chiesura and de Groot 2003). These issues can range from large and abstract (e.g., how are our relationships with nature formed?) to highly granular (e.g., what parks are most frequently used in a neighborhood and by whom?). Fundamentally, researchers have tried to understand the socio-cultural factors that influence attitudes toward sustainability, and ultimately, understand what brings people "to the table" of environmental conservation, i.e. the pathways to stewardship. We hope this chapter can be meaningful for policymakers, volunteer, and stewardship organizations in designing effective and engaging environmental programs by describing a) our current understanding of environmental stewardship, and b) the socio-political structures and processes that mediate broad participation in stewardship activities.

Environmental stewardship, as an area of research, has gained prominence relatively recently, emerging only in the past four decades. It is now recognized as a notable confluence of sociocultural norms and ecological sustainability which is crystallized into practice and conservation strategy (Worrell and Appleby 2000). The practice of stewardship not only creates more environmentally responsible citizens, but also expands the capacity of management organizations by redistributing the responsibility of environmental monitoring and maintenance to the average citizen (Berry 2006; Buell 2009). Citizen-based environmental stewardship programs are increasingly relied upon by government agencies to expand capacity for restoration efforts, greening initiatives, and other improvements to urban ecosystems (Romolini et al. 2012; Baker 2014). The term "stewardship" tends to get applied broadly and can be difficult to pinpoint for analysis.

Stewardship has also been lauded as a way to build community resilience, to increase civic engagement, and to create partnerships between government and community (Baker 2014; Romolini et al. 2012; Fisher et al. 2011). Citizen

stewardship initiatives are increasingly relied upon by governments that do not have the resources to improve social or environmental conditions (Romolini et al. 2012; Baker 2014), and citizen participation in environmental conservation has come to be considered a fundamental part of democracy (Shandas and Messer 2008). Programs are intended to connect individuals to their environment through learning and meaningful action, but some critics argue that current approaches tend to oversimplify complex sociocultural context and overlook some moral and ethical dimensions of stewardship behaviors (Baker 2014). Other studies suggest precisely the opposite – that stewardship is not only shaped by personal motivations but involves both organizational goals and outcomes (i.e., measurable environmental improvements) and also process-related goals such as engaging community members, doing outreach, and collaborating with like-minded others (Romolini et al. 2012).

Social Constructions of Environmental Problems

The existing literature suggests that how we define stewardship varies depending on the context, from meanings derived from modern environmentalist theory to definitions created by agency organizations. Approaches that provide a contextual basis for stewardship are needed, recognizing that engagement in such efforts are tied to social and political histories that enable the capacity to participate. This chapter draws from social constructionist theory where "environmental problems" are seen as social problems in that they are, as Taylor suggests, "socially constructed claims defined through collective processes" (Taylor 2000, p. 509). From this perspective, knowledge and folk theories of environmental issues are created by the interactions of individuals within society, as groups perceive, identify, and define environmental problems collectively through shared meanings and interpretations (Taylor 2000). This means that the framing of environmental issues is particularly relevant to how they are perceived, how people will mobilize around them, and who engages in stewardship efforts (Carmichael 2017).

Therefore, our understanding of environmental stewardship begins with the acknowledgment that individual perceptions, institutional dynamics, and historical injustices recursively create the places we inhabit. Such biophysical and social interactions have complex interpretations at multiple scales (e.g., individual and collective, past, present, future, and across space). Importantly, Clarke and Agyeman (2011) point out that environmental conditions are not equal in all communities. In places where the environment is heavily degraded, or environmental resources are lacking, adjacent communities often receive societal blame for not doing more to conserve their environment. Such claims miss an essential aspect that not everyone has inherited a democratized or shared sense of environmental responsibility in this way. In fact, racial and economic inequalities impact the way that historically marginalized communities experience and frame environmental issues, and whether or not they chose to participate in traditional environmental stewardship activities.

As a result, different approaches to stewardship activities in communities of color, for example, may stem from perceiving a lack of agency, and loss of trust in

government and government processes (Carmichael 2017; Clarke and Agyeman 2011). Examining the multiple spaces of identity, power, and agency in which minority and low-income communities respond to environmental issues can help us to understand and break down the barriers to environmental stewardship. The "environmental sustainability" framework has in the past prioritized environmental conservation over social inclusion or equity, and only more recently embraced the concept of "green justice" or "just sustainability," with an eye toward social justice concerns (Clarke and Agyeman 2011; Agyeman and Evans 2003). Increasingly clear is a need to examine dimensions of fairness, equality, and justice when attempting to get buy-in for efforts in environmental conservation (Agyeman and Evans 2003). Yet, we are still understanding effective approaches to engage communities with these complex topics, especially when engaging with those who distrust and may bear animosity toward government actions and/or formal organizations.

To address these topics, we use a case-based approach to examine real-life examples of environmental stewardship efforts, discuss their impact, and reflect on how policy and governance can be changed toward a more inclusive stewardship model. While a fundamental goal of the present chapter is to illustrate alternative engagement models that address fairness, equality, and justice, we also build on previous theoretical work that helps to frame the practical guidance that underscores our approach. We start with definitions of stewardship, discuss why the concept can be problematic and describe the various pathways and barriers to contemporary stewardship efforts. We close by offering cases where organizations are finding novel successes in expanding and deepening participation in environmental conservation by focusing on community cohesion and helping people find meaning in the work they do.

Defining Environmental Stewardship

As use of the term has proliferated, so have the many definitions of environmental stewardship. In particular, we try to define how the concept of stewardship might be distinct from conservation behaviors or land management more generally. For some, the terminology can be traced back to the Old Testament (Worrell and Appleby 2000). These origins can be viewed as somewhat problematic as they bootstrap onto more traditional, anthropocentric Christian notions of stewardship which might not place an intrinsic value on nature or nonhuman life (Devall and Sessions 1985; Palmer 2006; Routley 1973; Van Dyke 1996). For instance, the seminal work by Lynne White (1967) claims that far from connecting humans to their environment, traditional Christian religious ecologies served to reify the boundaries between humans and the natural world. In recent years, however, this perspective has been challenged by many who have pointed out that a) the religious interpretation of stewardship is not limited to the Christian faith, and can be found in indigenous communities and most major religious traditions around the world and b) the Christian interpretation of stewardship need not be anthropocentric (Worrell and Appleby 2000). For instance, a growing "green" movement within the Evangelical

Christian community suggests that engaging in climate change adaptation, mitigation, and more environmentally sustainable behavior overall (Roberts 2011) can be aligned with a Christian stewardship ethic.

A more secular interpretation of environmental stewardship is also often invoked within the literature. To some, stewardship bears a moral core, providing a path for people to characterize their relationship toward nature as one of right or wrong actions or an ethic of care (Welchman 1999). The idea of values and ethics as motivating behavior has also been empirically validated. In a study with environmental stewards in the Seattle, Washington area, Romolini and colleagues (2012) used a cognitive mapping approach to arrive at a functionalist definition for stewardship. Their analyses revealed that volunteers defined stewardship as rooted in a core set of values and ethics, including **environmental values** such as reducing the human impact on the environment, and a sense of moral obligation. Interestingly, however, stewardship, in the volunteers' minds, was not only defined by personal motivations but involved both organizational goals and outcomes (i.e., measurable environmental improvements) and process-related goals such as engaging community members, doing outreach and collaborating with like-minded others (Fig. 1).

There is also a strong idea of grassroots action within most definitions of stewardship, where a local group of people take initiative to conserve or protect some environmental good. In moving beyond the biblical sense of stewardship, the environmental good need not have instrumental or utilitarian value (e.g., timber is useful for building houses), but rather the management of natural resources can be

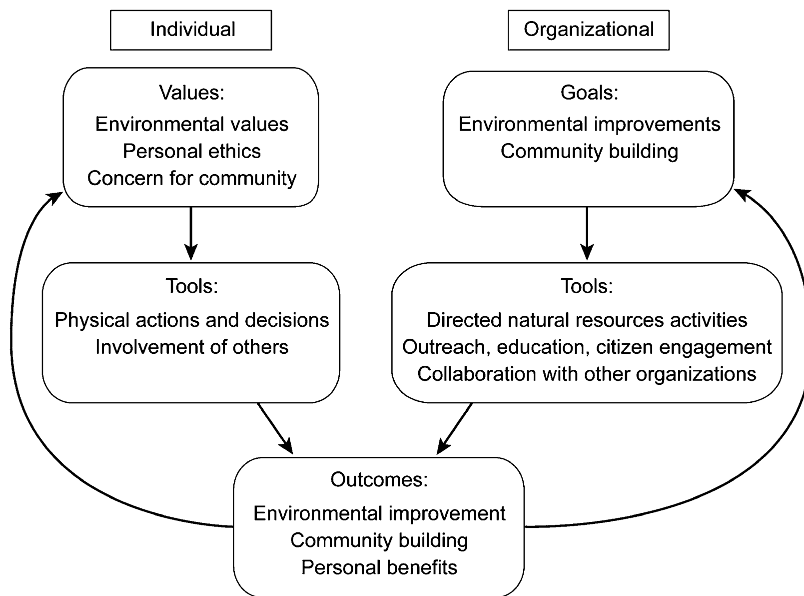

Fig. 1 Romolini et al.'s (2012) framework for environmental stewardship based on cognitive maps of Seattle area environmental stewards

based in spiritual, religious, cultural, or aesthetic value (e.g., the majesty of our forests). Since the early 1990s, grass-roots stewardship organizations have proliferated at all geographic scales (local, regional, national) to promote conservation of wilderness areas, rivers or particular species of plants or animals (Carr 2002). Government stewardship programmes have also followed suit such as the Urban and Community Forestry program managed by the US Forest Service. This program supports local tree planting and care initiatives, among other projects.

As these efforts proliferate, it is becoming more widely acknowledged that stewardship is not solely a human-driven effort, where humans are the only agents of change in the environment. Rather, the significance of coupled human-nature systems in shaping human perception and bounding stewardship efforts is now well-established within the literature (Carr 2002). That is, we note that the structure and shape of the natural environment or landscape has an impact on human behavior and is also an agent of change in impacting local stewardship. Furthermore, while the abundance or scarcity of a particular resource or the local socio-ecological context will necessarily shape human behavior so too will the overall access to or level of engagement with natural landscapes.

And in fact the emphasis on the local environment is another true hallmark of stewardship, which relative to advocacy or other forms of environmental conservation efforts, is less about engaging in lobbying efforts and more likely to have an action- or protection-oriented role within a clearly defined geographic region (Carr 2002; Leopold 1949). Indeed, environmental stewardship appears to contain a strong sense of place, and many stewards draw on their connection to their hometowns and other personally meaningful sites to motivate their work. For instance, tree-planting rituals and trees themselves became symbols of socio-ecological resilience in post-Katrina New Orleans where a desire to restore their neighborhood motivated stewards' tree planting, which in turn helped to sustain their sense of place (Tidball 2014). These efforts in New Orleans, and other like them across the country, make the connection between place attachment and management explicit, indicating a stewardship ethic based on an implicit sense of ownership and agency (Svendsen and Campbell 2008). These implicit feelings of ownership can have many positive stewardship outcomes – for instance, a sense of ownership in a rented plot in a community garden may increase commitment toward managing that plot over time and foster long-term engagement (Kaplan 1985; Stone 2009; Teig et al. 2009).

As these examples illustrate, stewards' sense of place or ownership intermingles with concepts such as belongingness and identity, and is not restricted by geographical constraints nor confined by temporal bounds. That is, long-term residents of a given neighborhood or city may not necessarily become engaged environmental stewards, while recent immigrants to a place with a strong sense of community resilience may. For example, Johnson (1998) discusses the long history of enslavement and oppression faced by African American communities in the South and how that might lead to a decreased attachment to local wildland areas. On the other hand, Krasny and Tidball (2017) note that local immigrant populations are among the most avid community gardeners, bringing their agricultural backgrounds to their new hometowns while concurrently building stronger social community networks.

Historic Socioeconomic Inequities

The influence of place identity and belongingness on stewardship efforts suggests that a discussion of perceptions of environmental stewardship must be situated within larger sociocultural contexts, including the historical context of race. For instance, the American environmental movement before the 1960s was often populated by the middle and upper middle class and emphasized outdoor recreation, an activity that limited its participants to those who had access to transportation, gear, leisure time, and public spaces. This was often alienating to African Americans and other racial or ethnic minorities who could not participate in these activities (Taylor 1998). African American post-slavery were not often welcomed on public lands such as parks and natural areas, and in fact were threatened with violence at times, as in the case of a young African American in Chicago who was stoned to death while swimming in Lake Michigan in 1919 (Taylor 1998). And while time and social progress have perhaps healed some wounds, there can still be a troubled relationship between some African American communities and environmentalism (Finney 2014; Parker and McDonough 1999). Studies suggest that African Americans perceive the environmental movement and perhaps environmental activities in general as "a white thing" (Elmendorf et al. 2005; Taylor 1998).

These culturally-bound and defined frames (i.e., perceiving environmental activities as a "white thing") are therefore a critical factor in understanding pathways and barriers to environmental stewardship (Taylor 1998; Carmichael 2017). Framing is characterized by Taylor as "a scheme of interpretations that guides the way in which ideological meanings and beliefs are packaged by movement advocates and presented to would-be supporters" (Taylor 2000, p. 511). The early American environmental movement, inspired by the Romantics/Transcendentalist ideology of the purity of nature, framed itself as advancing an agenda of land conservation and protection of public lands, issues that did not resonate with many communities of color including African Americans, who were largely denied access to these amenities (Taylor 2000). The civil rights movement's framing was much more relevant, timely, and empowering to African Americans (Taylor 1998). Consequently, the environmental movement had little overlap with the civil rights movement or other social justice movements of the 1960s and 1970s and failed to engage the majority of African Americans (or any cultural minority group for that matter).

Framing continues to be an issue with environmental organizations looking to reach a broader audience (Carmichael 2017). Thus, understanding the frames that motivate certain types of actions is an important and not well understood issue for most environmental organizations looking to inspire and engage stewards. As the next section will highlight, there are many different aspects of stewardship which appeal in different ways to people. Frames have the power to highlight these varied angles and appeal to distinct motivations of environmental stewards. In short, there are many pathways to stewardship and here we highlight the different motivations which might lead people down these paths.

What Motivates Stewards?

It is first worth noting that motivations to engage in environmental stewardship share much in common with motives for civic engagement in other forms. For instance, all of these behaviors have been shown to have a strong values-based component, which could be either intrinsic or extrinsic, and many theories have been proposed about what types of values can motivate prosocial action, and under which contexts. In one descriptive framework, Batson (1994) highlights four distinct motivations: self-interest or egoism, altruism, collectivism, and principled motivation.

Often seen as a special case of prosocial action, environmental stewardship has been found to be motivated by a similar set of values and beliefs (Turaga et al. 2010). Stern's (2000) value-belief-norm theory has been especially influential in understanding environmental activism and behavior. In this model, values (i.e., egoism and altruism), similar in form to Batson's four motivation model, predict environmental beliefs, leading to a set of personal norms which translate into distinct types of action. However, environmental stewardship is also distinct in some notable ways from other forms of prosocial action. For instance, many environmental stewards share a belief that nature and all life are worthy of protection and that human beings should aim to reduce our impacts on them (Romolini et al. 2012). This has led researchers to propose the existence of an ecocentric or biospheric value orientation (Schultz and Zelezny 1998; Schultz 2001; Stern and Dietz 1994) in which the decision to engage in environmental behavior or stewardship is predicated on the perceived consequences to the environment, rather than to the self (egoism) or society (altruism) (de Groot and Steg 2008). Biospheric values are predictive of a variety of pro-environmental behaviors and attitudes, from green consumer choices (Sachdeva et al. 2015) to perceived connectedness between nature and the self (Martin and Czellar 2016), whereas ecocentric values have been shown to be negative predictors of environmental behavior (Kollmuss and Aygeman 2002). In self-reports, helping the environment, a proxy for biospheric concern, is a common response when environmental stewards are asked why they engage in long-term volunteerism (Bramston et al. 2011; Liarakou et al. 2011).

The academic attention given to the link between environmental values and behavior belies other types of motivations that stewardship may entail. That is not to say that values related to the self, community, and earth are not meaningful but rather that there may be alternative pathways to stewardship which have not been studied as extensively. As a point of intervention for volunteer groups or environmental organizations, a focus on motivators separate from ideological values might be beneficial in engaging the broader public. Although values can form the basis of environmental concern, they are often more immutable, subject to broader cultural or macrosocial factors and may even run to counter to sustainability goals (Markowitz and Shariff 2012). Here, we describe two other motivations that may foster stewardship – engaging in conservation efforts for fairly pragmatic reasons such as building life skills and on the opposite end of the spectrum, stewardship that is based on finding spiritual meaning. We also find that a sense of fostering community

ties and building cohesion is a common thread through both of these distinct motivations.

Stewardship for Pragmatism

Engagement in environmental stewardship requires long-term commitment like many other social causes but can also be much more concrete and visceral than other forms of volunteerism. It often requires volunteers to engage in difficult manual labor, learning new skills and techniques at a particular action site. However, despite these challenges, environmental stewardship may be especially rewarding because stewards may see a visible or tangible product of their labors, and therefore more direct evidence of their efforts (Grese et al. 2000). For many of these stewards, the rapidly changing climate or extreme weather disturbances may be strong concerns, yet the abstract, distant quality of concepts such as global warming may make action difficult and worry paramount (Fritze et al. 2008). Localized, community-based environmental stewardship programs can be a way to cope with these anxieties and help people regain a sense of personal agency (Westphal 1999).

The Community Watershed Stewardship Program in Portland is a case in point. Watershed management and planning is not the most prototypical domain of community-based environmental stewardship; rather watershed management is usually viewed as a regulatory matter. However, as Shandas and Messer (2008) point out, community involvement in the management of local watersheds in the Portland area not only yielded important insights for complex urban resource management efforts, but it also increased civic engagement, local knowledge, and feelings of ownership of shared water resources citywide. This program was able to bring together multiple stakeholders, including universities, government agencies, and community groups from the design to implementation phases of the project. Ownership of the project was fostered by involving both community members and technical experts (e.g., hydrologists, ecologists, and botanists) from the onset, and continued participation in the project led to an increased awareness among community members of how their actions affect local water quality and availability.

Along with providing a concrete, localized means to address larger global environmental concerns, participating in environmental stewardship may be beneficial in other ways as well. Several studies have shown that intrinsic desires to learn about the environment and gain knowledge about ecological processes are important motivations in nurturing and maintaining environmental volunteerism (Ryan et al. 2001; Grese et al. 2000; Bramston et al. 2011). Volunteers who feel as though they are gaining expertise, fostering personal growth, and learning skills that could be transferable to other facets of their life experience more satisfaction and are perhaps, consequently, more likely to remain involved in such projects. These educational interests can be fulfilled by integrating programs such as species identification walks (i.e., plants, birds, etc.) during primary stewardship activities. Or, as in the case of the nonprofit organization Keep Indianapolis Beautiful (KIB) in Indianapolis, Indiana, youth education and workforce development can be used to encourage conservation and stewardship behavior in young people.

This model also affords the opportunity to increase diversity in the field of environmental management. KIB employs approximately 70 high school-aged students and 20 adults in a summer program, watering about 5,000 trees a week, as well as mulching, staking, and pruning. The program includes weekly enrichment activities ranging from outdoor recreation to vocational skills for "green-collar" jobs and networking opportunities. Partnerships with research institutions also present opportunities to nurture an early interest in environmental management. KIB and the Bloomington Urban Forestry Research Group (BUFRG) at Indiana University developed such a partnership which resulted in members of the Youth Tree Team being trained in data collection methods by BFURG researchers (Faris 2017). The data contributed to a study of planted-tree survival and growth in urban neighborhoods. Mari Aviles is an alumnus of KIB's Youth Tree Team who now works for the organization as a community arborist. For Mari, the Youth Tree Team was a direct connection to a real job in the environmental field. She says that she believes that changing the perceptions of who environmentalism is for will go a long way toward getting buy-in from marginalized communities (Aviles 2017). Currently, the members and volunteers of environmental organizations are predominantly white (Taylor 2014). Having more minorities working in green-collar jobs especially in positions of power gives people of color recognition and representation where historically they had neither. Note, however, that members of KIB are paid for their work and so motivations for these stewards may be slightly different for those who engage in stewardship on a volunteer basis.

Recruitment for new staff in environmental work often occurs informally through word of mouth, creating an insular network that makes it difficult for communities of color, the working class, or anyone outside of traditional environmental networks to access these jobs (Taylor 2014). Workforce development in environmental conservation and management is one direct way to bring a broader spectrum of people into the environmental field. For The Greening of Detroit (TGD), a not-for-profit organization in Detroit, Michigan, training a workforce in green jobs like forestry, landscaping, and conservation is seen as one step toward a more sustainable economy for the struggling city. Currently, the unemployment rate in many Detroit neighborhoods is still well above the national average (Hay 2017). Detroiters are in desperate need of jobs, and not just in the same industries that have been declining in the city for decades (auto, manufacturing). TGD's apprenticeship program has trained more than 350 people through their adult workforce training cohort since its inception in 2012. This program is designed to train recently-paroled people in landscape maintenance and arboriculture. Participants attend an 8-week training session that takes place in the classroom and in the field, and are paid a small stipend to help them make ends meet during the session. Training can take place in the nursery, city parks (especially in underserved areas where parks have fallen into disrepair), and in tree plantings on public rights-of-way. After they get their certificate, program participants are placed in a job. TGD reports the program as having a 100% placement rate. TGD hires some as crew leaders; others land jobs in local landscaping, or construction and

maintenance companies. Most make $12–13/hour to start, which is considered a living wage in Detroit (Hay 2017).

Stewardship for Meaning

In addition to increasing personal efficacy and ecological knowledge, spiritual fulfillment may also be an important motivator for environmental stewardship. In recent years, psychologists have focused on the feeling of awe, as a special case of a spiritual connection to nature (Vining and Merrick 2012). Awe, defined as an overwhelming feeling of wonder, of something bigger than the horizons of one's everyday life, has been linked to spirituality, certainly, but has also been found to foster prosocial behavior and connection to other people (Rudd et al. 2012). Furthermore, many people report feeling a sense of awe or wonder as they realize the vastness of nature, and their relatively small role within it (Piff et al. 2015). Perhaps it is these sensations which help foster a spiritual bond between humans and nature – whether in the case of indigenous traditions all over the world highlighting the interconnectedness of humans and nature (Berkes 1999, 2017) or the reverence of natural resources within most major religious groups (Gottlieb 2006; Sachdeva 2016).

Humans' spiritual connection to nature can result in positive environmental action as well. Take, for example, Sadhana, a progressive Hindu organization active in the New York area. Through a stewardship project called Project Prithvi, Sadhana organizes monthly cleanups at Jamaica Bay on Long Island. Jamaica Bay is part of the Gateway National Recreation Area administered by the National Park Service and is used by many local residents for a variety of purposes, including recreation. However, it is also used by some members of the local Hindu, Indo-Caribbean community as a sacred site where the sandy shores of the bay are used to conduct religious rituals and, as is customary in many Hindu rituals, the flowing water is used to make offerings. We have found, in our ongoing collaboration with Sadhana, that the bay is often used as a stand-in for the Ganges River in India, a site of utmost religious importance within Hindu practice.

In addressing the concerns of local fishers, ecological groups, and the National Park Service that these practices might introduce contaminants into Jamaica Bay's delicate ecosystem, Sadhana is employing the Hindu concept of ahimsa, or non-violence, in raising ecological awareness among the Indo-Caribbean community. As co-founder Aminta Kilawan puts it, "the goal is not to tell 'the worshippers' to not pray there, but to do so respectfully [of local ecological needs]." Moreover, Sadhana is also committed to bridging understanding between the local worshipping community and the National Park Service and others for whom these practices may seem foreign and unnecessary. By building an open dialogue between all parties, Project Prithvi aims to promote a spiritually based sense of environmental stewardship while ensuring that religious practices continue to be sustained at a site of such profound sociocultural meaning.

It is precisely this sense of meaning, whether place-based or not, that might be important in promoting other environmental stewardship initiatives as well. In the case of volunteer oyster gardeners in New York City, Krasny, Crestol, and colleagues

(2014) find that volunteers' memories and meanings attached to oysters as a keystone species for New York and their socio-ecological associations or memories with local places are strong motivating factors. They go on to explicitly state that this form of meaning attachment is distinct from an altruistic or biospheric value orientation because it is personal and linked to volunteers' self-identity. Finding meaning from working with particular species or in particular regions is not specific to oyster gardening. Sometimes, a connection to megafauna can be emphasized to engage stewards, as in the case of sea turtles as described in Campbell and Smith's (2005, 2006) work. People have also been shown to form these special connections with plants and trees. In the Chicago area, for example, Westphal (1993) notes that oak trees are a particularly iconic species with volunteers reporting vivid childhood memories about particular oak trees in and around their neighborhoods.

The generation of meaningful landscapes can take many forms. In another Portland example, the use of trees in urban neighborhoods is helping to shed light on forgotten histories. Canopy Story, a project that provides a platform to uncover personal histories using neighborhood trees, is integrating complex spatial analytical technologies with the craft of localized, place-based storytelling. Using remote sensing-generated maps to pinpoint the location of every tree in Portland, participants can use an online link to identify and share stories about an individual tree. Although several projects have shown that people do form meaningful attachments to trees in their neighborhood (LaFrance 2015; Westphal 1993), Canopy Story allows us to systematically analyze the types of meaning people attach to trees. Through this project, we can assess whether people are more likely to tell stories about their childhood, spiritual awakening, or falling in love with nature and then link those stories to places and neighborhoods. Although this project is still in its nascent stages, Canopy Story may become a tool for managers and volunteer groups to gain valuable information about the most meaningful trees in a given area. As a management tool, Canopy Story will not only have implications for management outcomes, i.e., keystone trees may need to be cared for differently, but also that these trees can become symbols for stewardship efforts, and help engage people in taking care of trees in their neighborhoods.

The path to becoming an engaged steward is varied and an intricate mix of personal and ideological motivations. One aspect that appears to be a common thread among all of the examples and types of motivations described in this section is the desire to improve social cohesion. The KIB example from Indiana and the Community Watershed Program in Portland demonstrate that people develop ownership and pride in their communities through stewardship efforts. Similarly, one of Sadhana's explicit goals for Project Prithvi is to make communication between the Indo-Caribbean community, the National Park Service, and other local residents, as fluid as possible. As these examples illustrate, people value the idea of connecting with one another and building interpersonal networks as part of their journey to becoming environmental stewards. Much like caring for the environment, social fulfillment and the opportunity to be connected to committed others are powerful, if not specifically environmental, drivers of stewardship. To reiterate our stance from earlier in this section, we do not claim that values or concerns for the environment

are not important precursors to engaging in environmental stewardship. They most certainly are, and many volunteers do get involved in stewardship activities as a means of restoring their connection to nature, or because they believe it is the right thing to do. However, personal, environmental values are not the sole, nor even the most predictive, factors in leading to sustained environmental stewardship. Others, such as community building, social resilience, personal efficacy, spirituality, and a sense of purpose, also play important roles.

Overcoming Barriers to Stewardship

Citizen stewardship initiatives are increasingly relied upon by governments who do not have the resources to improve social or environmental conditions (Romolini et al. 2012; Baker 2014). In recent years we have seen a proliferation of programs and events like the New York's MillionTreesNYC and Portland's Tree Inventory Project promoting environmental stewardship as a means to increase the capacity of government managers (Fischer et al. 2011). Despite the popularity of this model, evidence shows that citizen stewardship efforts have often been unsuccessful at engaging marginalized and underrepresented groups, stemming partly from lack of local resident buy-in to these types of stewardship activities (Clarke and Agyeman 2011).

Case studies further suggest a current trend toward distrust of politicians and public processes, reflecting a growing discontent with political processes and their outcomes in marginalized communities. In a survey conducted in the Puget Sound region of Seattle (Shandas 2007), respondents were asked about organizations from which they trust information. The results revealed that when participating in environmental projects, respondents most trusted friends, family, and neighbors (23%), professional associations (17%) (e.g., Adopt-a-Stream Foundation, Washington Trout, etc.), and university scientists (20%). Least trusted were government agencies, at the county, city, state, and federal levels. Although the focus on friends, family, and neighbors is consistent throughout the world, the lack of trust suggests a major challenge for those agencies in engaging with communities, though exceptions are also likely. Perhaps unsurprisingly, government agencies are increasingly contracting with nonprofit organizations to coordinate stewardship efforts (Shandas and Messer 2008; Chaskin et al. 2001; Romolini et al. 2012).

In Detroit, Michigan, The Greening of Detroit (TGD) experienced community backlash in some areas where they had planted trees, including vandalism and illegal removal of trees. TGD received "no-tree requests" (NTR) from 24% of residents in neighborhoods where they planned to plant between 2011 and 2014 (Carmichael 2017). Outreach by TGD revealed that despite understanding the benefits of trees, many people did not want them planted in their neighborhoods. People voiced concerns about maintenance issues once the trees were planted, and they felt like the community had been left out of the planning process. Situated in the context of the history of urban forestry in Detroit, these concerns are easily understood. Detroit's tree canopy has suffered from sustained tree loss and damage for over

50 years, thanks to pests, lack of funding, and neglect. Longtime residents remember the devastation of Dutch elm disease in the mid-twentieth century and more recently emerald ash borer, both of which wiped out millions of trees, and the latter from which the city has still not recovered. Residents were left with dead trees lining their streets, and a city government that lacked the resources to remove them, let alone maintain the living trees. As a result of these historical issues, trees may symbolize hardship, neglect, and failure of government agencies to properly manage environmental assets to many people (Carmichael 2017).

Not all Outreach Needs to be "Environmental" or Science-Based

In recent decades, perhaps due to increasingly scarce financial resources for environmental initiatives, managers have tended to make decisions about resource management based on quantifiable characteristics (putting a dollar value on environmental assets like trees), sometimes at the expense of important sociocultural values associated with nature like spiritual significance, beauty, and cultural identity and heritage (Chan et al. 2012; Schroeder 2011). This might mean the prioritization of ecosystem services, such as the carbon sequestration or air purification impacts of a tree planting program, with less emphasis on cultural values and long-term social impacts of environmental changes. Cultural environmental services were first defined by the Millennium Ecosystem Assessment as "the nonmaterial benefits people obtain from ecosystems through spiritual enrichment, cognitive development, reflection, recreation, and aesthetic experience including, e.g., knowledge systems, social relations, and aesthetic values" (Millennium Ecosystem Assessment 2005). The value of cultural, environmental services may be difficult to capture in a monetary valuation, but their value regarding stewardship and community investment in conservation efforts should not be underestimated. By better understanding and representing these values and including them in environmental decision-making processes, we will have a more robust representation of the value of environmental assets (Chan et al. 2012). Bringing things like storytelling (Sanderock 2000), placemaking, and environmental heritage and identity into planning may yield higher rates of stewardship and stronger and longer citizen engagement in stewardship.

Incorporating strong, already existing social structures into stewardship efforts may be one way of promoting and sustaining public engagement. For instance, a church is often the center of social life and networks, especially in communities of color (Taylor 1998). Migration and Me is a not-for-profit program in Chicago that describes itself as "focused on conservation and stewardship that engages people of faith in sharing their personal migration stories, connecting their stories to the migration of other species" (Migration and Me 2017). Migration and Me asks people to share their personal stories of migration and relate those experiences to animal migration, in this case, the migration of monarch butterflies. They work with dozens of places of worship, and across faiths. The goal of the organization is not only to help people understand their narratives of identity and place but also to have them

connect their own religious lives with the natural world. The hope, ultimately, is that reinforcing the connection between community members' religious perspectives and nature will help them become stewards in their communities. In essence, Migration and Me builds on existing strong community institutions to weave new environmental understandings into the social network of the community.

Reframing environmental issues with a social justice lens is another way to reach disenfranchised communities.

For example, in Portland, Oregon, the city's Bureau of Environmental Services (BES) is partnering with the social justice organization, Asian Pacific Network of Oregon (APANO), and the environmental justice group OPAL to help the city get information about new tree planting efforts to residents in the Jade District, an area surrounding 82nd and Division in SE Portland which is about 40% communities of color and is a landing zone for many new immigrants to Portland. The Jade District is an area that has been identified as having low tree canopy relative to other parts of the city (City of Portland 2016b), and BES has committed to planting 100 new trees in the neighborhood. This is an area where the traditional outreach and educational efforts to engage the public, based on ecocentric appeals highlighting the environmental benefits of tree planting and stewardship, have not been as effective as city managers expected (Karps 2017). By partnering with APANO, which has strong ties with the Asian community in east Portland, city officials hope they will be better able to reach the community. Brining to light environmental inequities (such as the lack of tree canopy in neighborhoods with high percentages of low income communities of color) has been pointed to as a way to mobilize communities of color toward stewardship (Taylor 1998), yet policy and practice often favors environmental outcomes and "eco-lifestyle" projects rather than environmental justice concerns (Lubitow and Miller 2013). This new approach by the City of Portland to partner with a coalition of social justice organizations to reach environmental goals shows that city governments are beginning to understand the importance of framing when doing environmental work. According to Jennifer Carps, Tree Program Coordinator with the Bureau of Environmental Services, "a big part of my work is to win hearts and minds" (Karps 2017). Reframing is one way of reaching the hearts and minds of those who may not respond to more ecocentric messaging around environmental issues.

When designing environmental interventions or thinking about environmental activities, institutional agents (whether governmental or private) and individuals may often diverge, partly because of from issues of scale. Typically, an individual makes decisions based on household level needs, whereas government agencies or environmental organizations will necessarily think about environmental issues on a much larger-scale, whether that is a neighborhood, city, or forest. Differences in scope and scale of this sort may cause a disconnect between the priorities and goals of individual versus institutional actors.

For the Greening of Detroit (TGD), this disconnect was identified in interviews with both TGD staff and residents who lived in neighborhoods where TGD was doing tree plantings. TGD staff thought of tree plantings primarily regarding city-scale ecosystem services like carbon sequestration and stormwater runoff mitigation,

while residents thought of tree planting in terms of the individual trees planted adjacent to their property which they would have to see and care for as long as they occupied their home. One of the primary complaints of residents was that they were not given a choice about what species of tree to plant. TGD felt that it was not problematic for them to choose the type of tree that was planted because they would select the trees that would maximize diversity and other city/neighborhood-level ecosystem services (Carmichael 2017). However, 22% of residents said that they might not accept a tree if they did not have a choice of the tree type that was planted. So, even though TGD's tree choices might maximize environmental benefits, their success would be minimized if they did not work with residents to find a mutually agreeable solution (Carmichael 2017).

The degree of community power in decision-making processes can also influence an individual's perceptions of environmental issues. Meaningful participation for residents can help to develop and reproduce shared narratives within the community. A community-based approach can improve dialogue between residents and environmental managers, and increase participation in conservation activities because individuals feel that they have agency (Shandas and Messer 2008). This is illustrated by an example from TGD's Neighborhood Nurseries program. The idea behind Neighborhood Nurseries was for The Greening of Detroit to plant sapling trees in empty lots in several neighborhoods around Detroit, then train neighborhood residents to care for trees as they grow, and finally help people to replant the trees in the neighborhood once they were mature. While this program had success in several neighborhoods where the community was onboard with the program, it failed in others where the community was not adequately informed or empowered.

For example, one of the nurseries that was a great success story was in the neighborhood of Grandmont-Rosedale on the northwest side of Detroit. The city of Detroit has made a substantial investment in this community, and its residents earn a higher income than the citywide average. All of the trees in the Grandmont-Rosedale nursery were cared for and eventually planted. However, trees in nurseries in two other neighborhoods were vandalized. A possible explanation is that people in the community did not accept or acknowledge ownership of these trees; rather they believed that the city was simply planting trees without permission. Another issue was the choice of lot for the nursery. People were using the lot as a soccer field and social space, and they understandably viewed the tree plantings as an attempt by the city to take over their space. TGD had done community outreach before undertaking this project, but in this case, their efforts fell short. The engagement and buy-in were not occurring with the right people, and TGD was not on the same page with the residents they were trying to serve. This was a case where their message and mission did not get out to the community effectively, with the result that the planted trees were not properly cared for (Hay 2017). Environmental, ecocentric outreach is not always an effective way to achieve good environmental outcomes, In this case, rather than ecocentric outreach, what was needed was social outreach, to understand the needs and desires of the community using the space where the trees were being planted.

In Chicago's Pilsen neighborhood, a lower west side community that is made up primarily of working class, immigrant communities, the Pilsen Alliance works to build grassroots movements that advance an environmental justice agenda. The nonprofit organization spent more than a decade fighting to shut down coal-based power plants after pollution, and air quality issues became major issues for public health. Pilsen Alliance leader Byron Sigcho says that though Pilsen residents do want environmental improvements, and have an interest in stewardship and volunteerism, the priority of most organizations working in the neighborhood is affordable housing and keeping working-class residents in their homes as the neighborhood improves (and gets more expensive). As in the case of the Jade District in Portland, Oregon, the Pilsen neighborhood is fearful of displacement as gentrification comes to their neighborhood. A major concern is environmental gentrification, where environmental improvements in a neighborhood lead to displacement of working-class residents. Leadership at the Pilsen Alliance believe that special interest groups, planners, and developers want to seize the opportunity to move into the improving neighborhood and take the benefits for themselves, without giving back to the existing community. These beliefs within the community may cause a resistance to engage in city-sponsored environmental improvement events (Sigcho 2017).

The examples cited above suggest that environmental managers may sometimes assume that trees are a universal salve to fix a wide range of problems in a neighborhood, with insufficient attention paid to the means through which tree planting programs are implemented on the ground. Programs that are implemented without the input of residents can lead to wasted time and resources for the city, broken trust with the community, and fears of resident displacement due to gentrification. Another problematic assumption is that people who do not want to participate in environmental stewardship simply have not been educated (Carmichael 2017; Sigcho 2017). Framing the problem in this way leads to a top-down model where environmental managers attempt to convince someone to participate in stewardship by explaining the benefits of trees to them, but not expanding the decision-making power of residents in the planning process (Carmichael 2017).

A top-down approach to urban environmental issues undervalues the perspectives, opinions, and wisdom of the community. Experiential and expert knowledge come from two distinct ways of knowing (Carmichael 2017), which are each valuable in environmental planning processes. If community trust is gained, basic needs of residents are met, and their voices are heard, then stewardship can be a powerful and long-lasting model to increase participation in environmental activities, and increase the capacity of government agencies with a fleet of educated volunteers.

New Paths to Stewardship

The examples presented in our case studies shed light on how we can better engage a diverse audience in stewardship efforts. Perhaps the most important thing to take away from this discussion is the fact that when discussing the environment, we are

not *just* talking about the environment. Using a social constructionist framework, we understand that individual interpretations of environmental issues are mediated through a set of institutional and collective perceptions (normative notions) that form attitudes about stewardship. To understand an individual's pathway to stewardship, we must understand the social dynamics at play that frame their perceptions about environmental issues. Foundational to this process is acknowledging the history of marginalization of certain populations and the effect that racial oppression has on attitudes toward stewardship. Social justice and environmentalism have only recently become aligned, and there will be growing pains. However, reframing environmental issues through a social justice lens can bring new voices to the environmental field, and engage a broader audience in environmental stewardship work. Though the current chapter does not touch upon pathways or barriers to stewardship in developing countries, or the challenges faced by communities outside of the United States, it seems likely that similar concerns about justice are going to be salient within those contexts as well (Adger 2001; Mertz et al. 2009; Thomas and Twyman 2005).

We also see from our case studies that not all environmental outreach needs to be technical or science based. Examples like Migration and Me, Sadhana, and Canopy Stories show us that stewards are often made through storytelling or by making a personal or even religious connection to nature. Conversely, in the case of The Greening of Detroit, we see that presenting people with numbers and facts about the technical benefits of trees was not effective at changing residents' minds about whether or not they wanted to plant them. The personal connection to nature, often tied to a sense of awe or spirituality in nature's presence, is a crucial driver of stewardship.

Inevitably, there are some problems that are so systemic and deep-rooted that stewardship alone may not be able to effectively address them. In these cases, the top-down strategy may become more costly because the trees fail due to lack of care, or as in the case of the case study with The Greening of Detroit discussed in this chapter, because of direct vandalism. Such issues include gentrification and displacement concerns around environmental improvements. In places like Chicago's Pilsen neighborhood, local government may need to rebuild trust with the community and take care of essential issues like housing stability before buy-in for stewardship efforts can be expected from the community into stewardship efforts. While environmental issues are certainly critical, it is important to acknowledge and understand that in some communities basic needs are also not being met. To lift up the people in a community may lay the groundwork for future stewards of the land.

Conclusion

With mounting environmental pressures comes the need to engage local and global communities in conservation efforts. Environmental stewardship efforts are increasingly being recognized as a valuable means of engaging communities across geographic scales in conservation efforts. As this chapter has demonstrated, however,

substantial barriers remain in inspiring people to join these efforts, particularly within historically marginalized communities where people may have different relationships with their local parks, forests, and the environment, more generally. A primary aim of this chapter is to highlight some of these barriers so that managers, policymakers, and volunteer organizations can recognize hurdles and ultimately prevail in building stewardship efforts. Identifying alternative pathways that can engage people in conservation efforts may be key to success. Some of these pathways can be found by reconceptualizing stewardship from a value-based effort to one that builds community resilience, provides people with valuable life and workplace skills, and may help them feel pride and ownership in their neighborhoods. These alternative pathways to stewardship may help create more effective environmental stewardship programs – effective both in terms of promoting sustainable outcomes and fostering long-term engagement on the part of local stewards.

Cross-References

► A Qualitative Case Study
► Empathy Driving Engaged Sustainability in Enterprises
► Planting the Seed of Sustainability in Young Minds Community Engagement in Energy Transition
► Rooting Human Actions in Systems Thinking Education in Human Values

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