URBAN GREEN SPACES AND COMMUNITY PARTICIPATION: GEOGRAPHIES OF HEALTH AND COMMUNITY

By

Stephanie Dawn Boyd
December 7, 2012

A dissertation submitted to the
faculty of the Graduate School of
The University at Buffalo, State University of New York
in partial fulfillment of the requirements for the
degree of

Doctor of Philosophy

Department of Anthropology

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 - 1346

ABSTRACT

This research explored ways in which urban green space is valued among residents of the ethnically diverse neighborhoods of southeast Nashville, with emphasis on examining the ways in which these values influence motivation to engage with community and environmentally focused opportunities for public participation. It also explored barriers that residents identified as preventing either access to green space or participation in community and environmental efforts. Interviews and participant observation were conducted among a study population that was broadly reflective of the demographic structure of southeast Nashville, including participants who were born in Nashville, elsewhere in the United States, Somalia, Mexico, and Iraqi Kurdistan. Across all groups, health-related beliefs were major motivators for valuation of green space, and were frequently tied to participant-expressed motivations for participating in community or environmentally oriented activities as well. Both immigrant and non-immigrant participants expressed strong beliefs relating to the ability of green space access to facilitate physical activity, weight loss, and general physical health, while also indicating that exercise in green space (as opposed to other locations) was beneficial for its effects on mental health. These benefits were tied to strongly held beliefs regarding the meanings of green space in relation to concepts of home and community, and access to green space was viewed as a facilitator of community cohesion. Environmental values, while generally expressed by many research participants, were listed as motivators for valuing *urban* green space much less frequently than were community motivators. While values associated with green space often exhibited strong similarities across groups, barriers to access and participation varied by place of origin. Primary barriers cited by participants born in the United States generally included time constraints and safety concerns, while those born in other countries were more likely to cite uncertainty about existence or appropriate use of parks, lack of knowledge about modes of public participation in the United States, and, in some cases, fears relating to the possibility of deportation.

TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION, BACKGROUND, AND METHODOLOGY

Introduction to the Research Conducted

On one cold March Saturday in 2010, I pulled into a parking lot of a large Catholic Church that primarily serves Nashville's Latino communities, unpacked some signs and tables from my car, and proceeded to join in the task of unloading five foot tall oak tree saplings from the back of a truck. I was there to help at a tree giveaway event being put on by a local non-profit that focused on watershed health (hereafter referred to simply as the Non-Profit). Before we were done unloading the cars, one woman from the community rushed into the parking lot, concerned that the trees might already be gone. Soon after, an event began at the church, and those attending began wandering over to our table, asking, in English and Spanish, about what we were doing, and enthusiastically taking trees. Some commented that they had nowhere to plant them, but that they knew someone who would appreciate them, and asked if it was all right to take a tree as a gift. One young couple who had come from a neighborhood several miles away after seeing an ad on craigslist left in a hurry to make it to a homeowner's association meeting in time to tell those attending that we were giving trees away; later on, at least one person who heard that message came to claim a sapling. All told, that day, over 60 people received trees.

The event was something of a departure for the Non-Profit, in fact, so its success is worth examination. The Non-Profit had long experience in the process of acquiring and distributing trees to residents and community groups based in Middle Tennessee, but had conducted little previous work in the neighborhood we visited on that day. Extremely diverse—culturally, socially, educationally, economically, and linguistically—the neighborhood we were based in that morning was a new target, of interest both because of its diversity and because of its singularity as part of the one watershed in the world in which the federally endangered Nashville crayfish had ever been documented to live. This tree giveaway day was a single event in what was intended to be a much larger initiative to institute a

community-based watershed association in the Mill Creek Watershed, for the protection of the crayfish, the area's streams, and the recreational and health resources of the people who lived there. This larger effort was spearheaded by the Non-Profit, but with strong partnership from the Nashville Zoo and multiple state and city government entities. Collectively, this group formed the Mill Creek Task Force, which, by my arrival in September of 2009, was already working to launch a new community-based, and eventually community-led watershed association in Mill Creek Watershed. At that point, no "regular people" from the community were present, and the discussion was centered on identifying ways in which to engage them; I was invited to incorporate my research with this effort, and the tree-planting event was one of the first outreach activities to be actively planned in association with it.

In the past, a large proportion of the Non-Profit's target audience had been people who were already interested in environmental issues; in many cases, existing community groups approached the Non-Profit for support either in beginning a watershed group or in coordinating activities that could be environmentally beneficial. In Mill Creek Watershed, however, the goal was to engage members of the community who were *not* already highly self-motivated or engaged in these issues, and a prominent challenge was to develop outreach materials that were likely to inspire interest rather than simply tap into it. To this end, Non-Profit staff members had conducted research, brainstormed among themselves, and had spoken with several "community leaders" in an attempt to gauge the interests and likely motivators for the people who lived in the urban portion of the watershed. In the formation of their invitation to the event, they attempted to take these explorations into account. The end result was an invitation that addressed several perceived community concerns with the following text:

"Shumard Oak saplings will be given away for yards, schools, churches, parks, and businesses. The trees are small now, 4ft tall, but they can grow to be big, beautiful shade trees.

Saturday March 6, 9am-11:30am
[Contact Information]

We have 1000 trees to give away. To get a tree, you must live in Davidson County and provide the street address of where the tree will be planted. You also must commit to watering the tree for the first year and during the following summers if needed. First come first served. No more than 1 tree per person, 5 trees per school, church, park, or business.

The [Non-Profit] will provide tree planting instructions in English and Spanish and will offer suggestions on where you can plant trees to help save on energy bills. The [Non-Profit's] goal is to improve water quality in our small neighborhood streams by planting more trees in our city. This project is targeted to aid the Mill Creek Watershed and its residents."

The economic recession, at that time, and during the entire research period, ranked high in the thoughts of all, and the portion of the community being targeted by the outreach effort was a particularly low income area; the message about energy savings was enthusiastically included as an approach targeted to the new community, though the handouts that were distributed with the trees elaborated on all of the points in the outreach campaign. In spite of only minimal advertising, over sixty people came and received trees, some coming because they had seen ads on craigslist or community bulletin boards, others because they had been told about the event by one of several community leaders who had been asked to spread the word, and still others simply because they were driving by and saw signs advertising free trees (and árboles gratis). Over the course of the next few weeks, members of the Kurdish community and walkers at Antioch Park received over 40 more trees in supplemental giveaways, resulting in an effective outreach effort that reached a population that was, Non-Profit staff members said, completely different from the groups they had previously engaged. Something about the outreach effort had worked; the fliers, signs, or word of mouth communications had convinced a relatively high number people to come and be involved on this day, and all of them had left both with a tree and with a flier describing future watershed events in both English and Spanish. Why did this succeed? What, in the few sentences available to residents before the event, had resonated enough to spark this small moment of involvement? In essence, the exploration of this question, in this situation, represents a microcosm of the research as a whole. How do residents, currently unengaged in environmental issues,

situate “the environment” in their neighborhoods, and what might motivate them to participate in efforts to benefit the watershed in which they live? Subsequent chapters will explore these questions in detail, but in this small introduction to the research, some insight is provided by an examination of what types of things residents focused on when they talked about trees. It was striking—especially given initial expectations for the strong pull of the economic information—that in nearly all cases the benefits that watershed residents associated with trees were rooted neither in the environmental nor the economic landscape. Instead, they related to the ways in which trees connected to their “everyday lives” in the city. Their discourse focused on memory, sense of place, and growth of community and family. A woman from Somalia said “I like to go out where there are trees. Sometimes you can sit under one. You can pack a . . . picnic? You know, where you bring food, something to drink, and everyone sits under a tree and eats. That is a good thing to do.” At the tree giveaway event, the majority of people who received a tree, both Latino and not, said that they were happy to get it because it would make their yards and neighborhoods look nice. The non-Latino woman from the Donelson neighborhood (where I also live) who arrived before the event started, afraid that she would miss out if she came too late, was part of a group in her community that worked to create green, attractively planted entrances to the neighborhood. Planting of trees and flowers at these locations was designed to “frame” the community in a positive way. One non-Latino person who expressed enthusiastic appreciation for the beauty of trees did go on to comment that trees could improve property values in a gentrifying area of Nashville, and this is undoubtedly a motivation for the residents of Donelson as well. Notably, however, tree recipients who expressed motivations that had an economic aspect were thinking of benefits that could accrue by means of improving a community. The trees were to “act” in a public space rather than a private one, and it was notable that not a single person engaged us in conversation about the energy saving benefits detailed on the handout that came with the trees, even though many read the handout while standing there and asked questions about other portions of the text. Other discourse also

indicated that the meanings residents attached to the trees tended to be interconnected with the meanings of "everyday life." Both Latino and non-Latino tree recipients often had children with them, and could be heard asking children what they thought of the tree, and discussing plans for watering it and helping it grow together; the tree was an opportunity to teach and to accomplish something as a family. An Ethiopian man at a subsequent giveaway of leftover trees took the time to come over to the area and say that he had no yard to plant a tree in. He then said, very formally, and with a change of tone, posture, and demeanor: "trees are important, very important; thank you for your service. You could be somewhere doing something else today, but you are giving people trees." He commented that he doesn't know all of the names of the trees here, but that he likes to see them; in fact, he often visited Antioch Park, where this secondary giveaway was taking place, in order to enjoy the trees and general open air atmosphere. A woman from a Kurdish community center which was receiving free trees for the first time following targeted outreach, said that having them nearby "helps people not to feel depressed, and to get out in the community more." She added, "If [Kurds] have yards, we always have trees. I have fruit, and a pine tree I don't want to cut down [even though my neighbors want me to]." She invoked the memory of the Kurdish landscape, and said that reconnecting to this is a major reason that trees are so valued in the Kurdish community. One Latino immigrant and one native-born community member who did not receive trees, but were interested in helping to plan future events in their neighborhoods noted that they appreciated that planting them was associated with benefits to the earth. In both cases, this value was strongly expressed, but secondary to other values that mirrored those described above. Previous research indicates that these deep-seated values in relation to trees are prevalent. Particularly illustrative is a study that took place after Hurricane Hugo, in which over 30% of respondents to a telephone survey of Charleston residents identified trees as the most important city feature that had been destroyed, citing the contribution of trees to the beauty and individual characters of different neighborhoods (Hull 1992).

The brief set of research findings described above indicates a range of values related to trees that appeared again and again in the broader course of research. Family, beauty, memory of an earlier home, engagement with children, and sense of neighborhood and community were all invoked, as was, somewhat less often, appreciation for environmental benefits. The findings also show that environmental groups may both overestimate and underestimate the importance of directly practical motivations when attempting to attract low income or immigrant members of the community. On the one hand, it seems true that initial extensive emphasis on prevention of storm water runoff and climate change mitigation is not the most effective way to engage with people who are not already interested in environmental issues. This seems to be true not just for low income and immigrant groups, but for any community members who are not already actively engaged with environmental issues. The Non-Profit had anticipated this and had limited the educational component of its outreach material to a brief reference to the ability of trees to improve water quality in streams. It was expected that the very pragmatic advice on how to reduce energy bills by planting trees in appropriate areas would be more engaging, and yet events showed that this approach is also of questionable use as a means of instigating behavior change or involving new people in conservation movements. One reason for this is simply that many people in the target community did not own homes. However, even among homeowners, there was no engagement with this concept. Appreciation for trees in the community was expressed in terms of beauty, community, and sense of place—more deep-seated and (arguably) less pragmatic values than those espoused in the language of experts. When concrete benefits associated with trees were listed by research participants, they were actually more likely to be tied to environmental improvements than to more self-interested considerations. Even the single participant who made reference to property values was much more focused on the impact trees could have on neighborhood and community development at a social level than she was on direct economic gain. (Although this desire to facilitate community development may certainly contain strong elements of self-interest, it is far more complex and socially

embedded than an immediately quantifiable dollar amount savings). One caveat, though, is that while practical considerations may not be the biggest motivator to *engage* with trees or nature concerns in general, they may certainly be powerful motivators to *not* engage. After a flier for the tree event was passed out, a well-established, professional man from Sudan who was active with a group serving more recent African immigrants read over the instructions about planting and pruning in the cool weather. He laughed, shook his head, and said "they want African people to come outside and volunteer to plant trees in a Nashville winter? That is just not going to happen." As described above, Nashville's African immigrants can feel deep, abiding connections to trees in the landscape—but for this man, practical considerations dissuaded involvement in this particular tree-related event, at least. At the Nashville Task Force on Refugees and Immigrants meeting at which the comment on cold weather was made, another attendee suggested that perhaps this group could help by serving food indoors at a large tree planting event. This idea that was received with interest by the original speaker, who felt that the larger idea of tree-planting would resonate with at least some of the people he worked with. Interestingly, the suggestion of using food to engage more community members in tree-planting work was common throughout the watershed. In a well-off, mostly native-born community, a resident suggested that asking elderly residents who might be unable to participate in manual labor to serve food would help engage them, and representatives from the church that hosted the tree giveaway had also suggested that asking some community members to serve food might bring involvement from members of the Latino community who valued the idea of planting trees but were prevented from active participation by age or circumstance. These suggestions were considered by the Non-Profit, but in the end inclusion of food was not part of the event (though the interest in incorporating it was noted for inclusion in future events). What was interesting, though, was that for members of the community, the meanings attached to the trees were highly embedded in a *social* landscape, at least to an equal extent that they were embedded in a physical one. This has implications for the initiation of a watershed association in the

city, and this dissertation will explore those implications in the context of a consideration of the place of urban nature—or, as it is frequently called in Nashville and elsewhere, urban green space—in the systems of values and beliefs held by Mill Creek Watershed residents.

The remainder of this chapter will serve to introduce the setting and methodology associated with this research, while Chapter 2 will outline the theoretical framework that underlies it. Subsequent chapters will explore the values residents of the watershed place on urban green space (Chapter 3); the motivations they describe as drawing them to participate in outdoor recreation or volunteer work (Chapter 4); and the barriers to participation in such efforts that they experience (Chapter 5). The concluding chapter will examine the way in which a major flood event affected watershed association initiation efforts, and will offer suggestions for ways in which future work in the watershed—whether occurring as part of a city-wide effort or as a targeted watershed outreach—might be conducted in ways most likely to meaningfully engage participants.

The Watershed as Watershed

While this research is centered on the behavior and thoughts of people living in the Mill Creek Watershed, the attributes of the watershed itself were key in the decision both to launch a watershed association there and to study the process of its institution. Mill Creek Watershed occupies a 108-square mile area in one of the most rapidly urbanizing areas of middle Tennessee (US Army Corps of Engineers 2007). It straddles Davidson and Williamson Counties, although the data collected for this research comes almost completely from Davidson County residents who lived in the northern sub-watershed of Mill Creek. As urban water bodies, Mill Creek and its tributaries are particularly and directly subject to the effects of human activities, and the freshwater ecosystem in the area has suffered. As of 2010, 20.8% of land in the watershed was impervious surface (The Conservation Fund 2010), and simulation modeling carried out by the Army Corps of Engineers has indicated that growing development will have the effect of causing more frequent instances of Mill Creek tributaries running dry; the aquatic

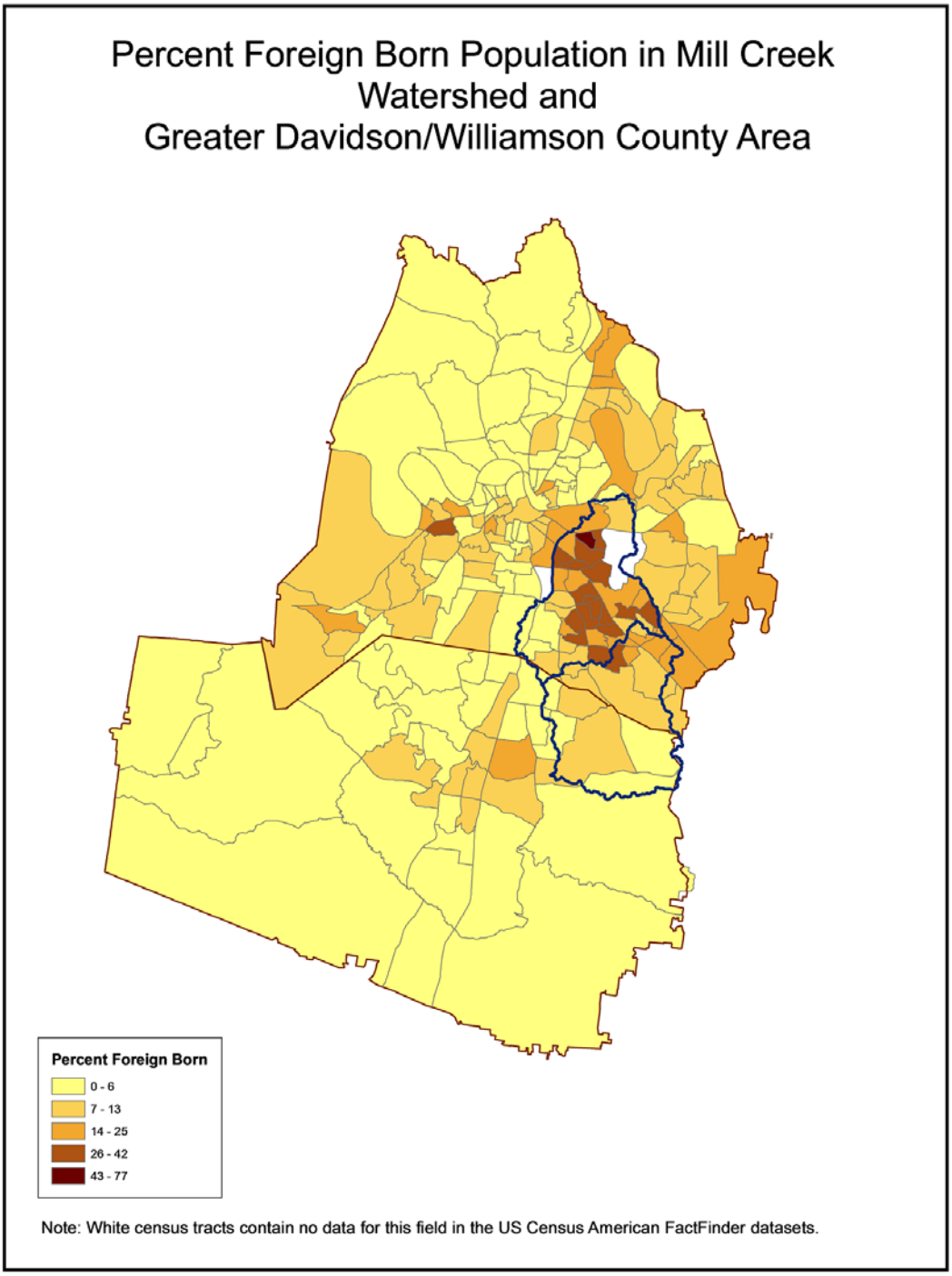
ecosystem is likely to be impacted by lack of water as well as sedimentation and habitat alteration (US Army Corps of Engineers 2007). Pollution, either carried into streams while bound to sediment or in the form of water-soluble runoff, is also a problem in the watershed (The Conservation Fund 2010), and has been documented to adversely affect fish and invertebrate organisms in streams (Nerbonne and Vondracek 2001). Of major concern in this regard, of course, is the potential for harm to the endangered crayfish. Initiatives aimed at reducing sedimentation and runoff have been proposed; the judicious planting of buffer zones of native grasses, scrubs, and trees has been identified as an important mitigation strategy in situations of this type (Hawes and Smith 2005), and has been specifically proposed as a strategy in Mill Creek Watershed (The Conservation Fund 2010). Tree canopy has been cited as having additional value in protecting the Nashville crayfish, as this organism is very photosensitive, and generally only occupies sites with a tree canopy of 60 to 90% ((USFWS) 1988); further, watersheds in which canopy cover is generally more extensive enjoy better overall stream health (Goetz, et al. 2003). Therefore, policy recommendations for improving Mill Creek Watershed's health have included the increase of buffer quality, width, and prevalence, the general expansion of canopy, removal of unnecessary impervious surfaces on public lands, and implementation of responsible development patterns (The Conservation Fund 2010). The attempt to launch a community-based watershed association by the Task Force was intended to take a complementary, behavioral approach to reduction of runoff and sedimentation, both through improvement of negative behaviors in the population as well as engagement of the population with volunteer work (such as creation of buffers and planting of trees as described above) that could help mitigate runoff problems.

The Task Force was concerned both with the ecological problems outlined above and with potential problems that humans could encounter as a result of contact with impaired streams. Direct data relating to these concerns at specific sites is uncommon. The state of Tennessee does conduct regular testing of waters, but not all areas can be tested regularly, and rivers and streams are less likely to have recent

water quality data available for them than are ponds and lakes. In the Tennessee Department of Environment and Conservation's 2010 water quality report, 49% of river and stream miles had no associated data reported, and an additional 17% were assessed only for ability to support wildlife and not for recreational uses. However, when testing was conducted, contaminants were frequently found, and observation of land use patterns allows inferences to be made about streams occupying similar sites to those that were assessed. Notably, fifty-seven percent of assessed stream miles were impaired for recreational use; that is, swimming, wading, and unintentionally finding oneself in the water after the tipping of a kayak must all be considered potentially problematic activities in these areas, generally due to high bacterial loads (Denton, et al. 2010). Contamination from metals (including mercury), and polychlorinated biphenyls (PCBs) is also relevant, particularly with regards to fishing and crayfish collection. There may be substantial risk associated with eating a catch from impaired waters, though the precise level of risk for infectious disease or adverse effects due to bioaccumulated metals is influenced by collection and preparation methods. (Abd-allah and Abdallah 2006; Schilderman, et al. 1999). The potential for crayfish to bioaccumulate mercury, other metals, and PCB has been documented (Abd-allah and Abdallah 2006; Mahaffey 2004; Mahaffey, et al. 2008; Schilderman, et al. 1999; Watanabe, et al. 2003), and the potential for buildup of such compounds in fish and their consequent persistence in humans has been documented extensively (Cole, et al. 2004; Gao and Yan 2007; Gobeille, et al. 2006; Watanabe, et al. 2003; Weintraub and Birnbaum 2008), as have concomitant human health risks including cancer and adverse effects on child neurodevelopment (Gao and Yan 2007; Mahaffey, et al. 2008; Watanabe, et al. 2003). It is for these reasons that one of the initial forces behind both the formation of the Mill Creek Task Force and the conceptualization of this research was a focus on identifying, and when relevant, mitigating certain urban fishing and crayfishing practices. In practice, however, other attributes of human behavior in relation to the watershed gained primacy over the course of the study period.

Immigration Patterns in Nashville

The general increase in development described in the preceding section has been associated with a general expansion of population in Nashville. One important aspect of this growth is that it has come with a major shift in community composition, which is relevant to any outreach efforts planned in the city. In 2010, 11.7% of Nashville's population was foreign-born, and 15% of census respondents reported speaking a language other than English at home (U.S. Census Bureau 2010a). There are strong Somali, Sudanese, and Laotian refugee communities, among others (Cornfield, et al. 2003; Winders 2006a), and Nashville is currently home to the largest community of Kurdish people outside of the Middle East (Ray and Morse 2004). The city also holds a large and growing population of Latino immigrants, coming primarily, but not exclusively from Mexico. The foreign-born population is generally centered in southeast Nashville, with some of the city's most diverse communities being located in the Mill Creek Watershed. Figure 1 shows the percentage of foreign-born residents by census tract for Mill Creek Watershed and for the two counties it straddles.



(U.S. Census Bureau 2010a, mapped using ESRI ArcGIS 10.1)

Nashville's status as a major immigration destination is fairly recent. While Mexican agricultural workers have been part of middle Tennessee communities since the 1930s (Smith 2001), major influxes of

people from other countries did not begin to take place in Nashville until the early 1980s, when the city became a refugee relocation site. By the mid-1990s, Nashville had become a popular destination for Latino immigrants outside of agricultural communities as well. These changes are connected to broader economic and political forces that have influenced the region in a variety ways, and while public discourse (and, inevitably, this dissertation in many instances), often refers to "Nashville's immigrant community," there is a sharp divide between the forces that influenced the growth of the refugee population and those that influenced the growth of the Latino immigrant community. These differences have important implications for the current research, particularly in regard to between-group differences in barriers to engagement and participation in outdoor recreation and environmental initiatives.

Economic and development forces had a large hand in shaping Latino population growth in Nashville. While the city was traditionally built upon an economic base of light manufacturing scattered outside of the urban core, the 1990s saw a shift to a service economy centered in downtown Nashville (Winders 2006b). This shift was accompanied by rapid residential growth, and accompanying urban sprawl; as the economy became geographically centralized, residential patterns became more scattered (DePrince and Vinlove 2001; Eff and Eff 2002), creating a sharp rise in construction jobs that eventually came to be largely filled by Latino workers (Winders 2006a). Between 1990 and 2000, the Latino population in Nashville increased 454% (Winders 2006a), bringing it firmly into the fold of what Mohl has termed "the '*nuevo'* new South" (Mohl 2003). The "Latino community," as it is often referred to in public discourse, is primarily Mexican, though Nashville is also home to established Cuban and Columbian communities, and a rapidly growing segment of the population comes from Central America[1] (Winders 2006a).

[1] In most instances, immigrants from Mexico, Central, and South America will be referred to as "Latino immigrants" in this dissertation. This is not intended to minimize the cultural differences between regions; however, because non-Mexican Latino immigrants are still relatively uncommon, in some cases, identification of country of origin along with other personal attributes would serve to identify otherwise anonymous participants.

This Nashville Latino immigration was part of a larger phenomenon throughout urban and rural regions of the South, including Tennessee, North Carolina, Georgia, Alabama, and Arkansas. Initially, much of this immigration was internal, with people who had been living in Texas and California relocating to southern cities for the better economic opportunities available there (Durand, et al. 2000; Lichter and Johnson 2009; Saenz, et al. 2003; Zuniga and Hernandez-Leon 2001). This internal movement was rapidly followed by international migration, and the previous dynamic of predominantly male migration to the southern United States was expanded by a rapid rise in immigration directly from Mexico, with the South's destination cities quickly becoming home to families including women and children (Winders 2006a). The geography of origin locations changed as much as the geography of United States destination cities during this period, with areas of Mexico that had not traditionally been major sending regions falling out of this historical pattern. Central Mexico emerged as a major source of immigrants to the United States, as did the border regions. Southeast Mexico had been the region of origin for only very small numbers of immigrants to the United States until the 1990s, when alteration of the agrarian economic base there led to large scale displacements of people from the countryside. It has been documented that immigrants from these new, non-traditional sending regions of Mexico are more likely to settle in new, non-traditional United States gateway cities including those of the southeastern states (Massey, et al. 2010).

Refugee resettlement to Nashville took place along a timeline that was parallel, but not identical, to that of the Latino immigration. It began with a little-publicized resettlement of a small number of Cuban children to Nashville through Operation Peter Pan in the 1960s. This was conducted through an organization that would eventually become Catholic Charities, an entity still quite active in Nashville now. Resettlement to Nashville did not begin to become a "trend," however, until the 1980s when somewhat larger resettlements of Southeast Asians took place (Winders 2006a). Following this resettlement, Nashville gradually became part of a system by which refugees were moved from

"impacted" northeastern cities characterized by high jobs competition to "second tier" southern cities with more robust economies and right to work legislation (Hill 1998; Winders 2006a). (According to some Nashville research participants, the weather is a factor in this trend as well; however, the extent to which this might be true appears not to be documented in the literature).

By the 1990s, Nashville was established as a "successful" refugee relocation site, and was subsequently designated by the Office of Refugee Resettlement as one of four "preferred communities" to receive federal monetary support for resettlement of Kurds who became refugees during and after the first Gulf War (Winders 2006a). This trend continued with direct resettlement of refugees from Somalia and Sudan, in parallel with further immigration from Iran (Cornfield, et al. 2003). Building on these earlier successful resettlements, in 2001, the United States Office of Refugee Resettlement chose Nashville to become one of three 'non-traditional' immigrant reception cities that would be funded under the "Building the New American Community" initiative as settings in which "New American" communities of immigrants and refugees could be built (Ray and Morse 2004). This language exhibits a tendency that several researchers have since commented on—that is, the predilection for compressing "refugee" and "Latino" communities into a single "international community" in public discourse. When the "New South" and other "non-traditional" immigration destinations are discussed in the literature, this practice is prevalent (Hardwick and Meacham 2005; Winders 2006a). Even more often, one researcher observes, "Latino" becomes synonymous with "international," so that little is discussed regarding the refugee place in the "New South," the diversity of the integration experience among groups, or the diverse ways in which members of these groups perceive of, contribute to, and envision the future of the city of Nashville. In spite of this tendency in the research, the Latino community is *politically* relatively invisible, while the refugee communities have the opposite status; they are small, but easily "seen" politically, if not prominently studied (Winders 2006a).

Nashville's handling of the relatively rapid expansion of its foreign-born population has been the topic of some interest. Similarly to other major resettlement cities, refugees are generally initially sponsored by voluntary agencies, including Catholic Charities and World Relief (Nawyn 2005). (Catholic Charities also provides some assistance for undocumented immigrants in Nashville (Catholic Charities of Tennessee 2011). However, Nashville initially differed from all other major resettlement sites in the United States due to the fact that until 2005, the Nashville-Davidson County Refugee Services Program handled most other aspects of refugee services; it was the only US refugee program that operated within the structure of local government (Winders 2006a; Winders 2012). Winders observed that this location of resettlement services within the government rather than within civil society had impacts on the ways in which refugee communities, local governments, and advocacy organizations interacted, largely due to the fact that this situation raised the visibility of refugee populations well above "what their economic or demographic impacts could otherwise generate" (Winders 2006a). This impact was particularly notable given its stark contrast with the situation of Latino immigrants, who, by and large, have not been refugees in Nashville. Four thousand, six hundred and fifteen refugees were located to the general Nashville metropolitan statistical area between January 1996 and June 2005, exclusive of asylum seekers and secondary migrants. The official estimation of Nashville's Latino population is 50,000, while community estimates go as high as 200,000 (Winders 2006a). In spite of this disparity in size, Nashville's refugee communities have a much stronger presence in public discourse related to general issues affecting their communities or the region at large than do Latino immigrants (Winders 2006a). The refugee and Latino immigrant communities are consistently grouped together in policy discussions, however. (Cornfield, et al. 2003; Winders 2006a). Consequently, when public discussions examining or addressing issues such as community involvement, integration in the community, and access to services take place in Nashville, they can tend either to consider the position of a monolithic "international" or "immigrant" community or not consider residents of international origin at all. One forum for such

discussions is the Task Force on Refugees and Immigrants (TFRI), which is essentially a non-governmental offshoot of a mayor's advisory committee from the late 1980s (Winders 2006a). The TFRI serves as a community forum in which leaders from the immigrant communities and advocates for them can come together in monthly meetings where positions on relevant topics can be discussed, and consensuses reached (Winders 2006a). Writing in 2006, Winders described the refugee communities as having far greater representation in the TFRI as compared to the Latino community, and by the beginning of my own research in 2010, this was still the case. Meetings regularly included representatives from the Sudanese and Somali communities, along with representatives from health care, lodging, and food assistance groups, Metro government, schools or educational support groups, and immigration attorneys. The Latino community was little-represented, and there are important implications to this dynamic. Though perhaps this role has been attenuated since the early 2000's, the TFRI meetings still serve as an "official" entry point to "the international community in Nashville" (Winders 2006a). Those who wish to announce initiatives, opportunities, or invitations to participate in policy discussions that affect "the international community" can attend these meetings to do so. However, this method of engagement may not always reach the largest segment of the immigrant community in the city.

It should be noted that in the meetings attended during the current research, the TFRI encouraged the involvement of all groups. The leaders as well as the attendees who were there to announce availability of language classes, education, or health care were adamant that immigration status not be examined in relation to health care or educational opportunities. However, it is possible that at least some members of Nashville's Latino community were leery of substantial involvement with a non-governmental group that had been derived from a government initiative. It is also possible that this tendency of low Latino representation could be partially an artifact of tensions that arose after Nashville was chosen as one of the three cities to participate in the Building the New American Community Initiative in 2001. Winders

reports that some leaders of Nashville's portion of this initiative admitted that the coalition had taken on a tendency to focus on refugee situations when releasing publications. This was largely due to the fact that the New Americans Coalition could only fund refugee organizations (Ray and Morse 2004), but this lack of attention to the Latino population reportedly caused the coalition to be at odds with Latino community leaders from time to time (Winders 2006a). Winders also writes that the Nashville New Americans Coalition (NNAC) may have had difficulty "situating" Latinos due to its focus on the category of "New American" and civic participation. The NNAC, she writes, looked upon the "international community" as a "political and social reservoir of future citizens," a status which was not easily available to all Latino residents (Winders 2006a). The "immigrant" and "refugee" communities of Nashville may frequently be lumped together in discourse, but in practice, they face very different issues, and have very different levels of access to the resources that can be offered by the city, state, and nation. However, both the refugee and Latino populations tend to live in the same neighborhoods of southeast Nashville (and the Mill Creek Watershed), where housing is affordable, and where more flexible leases may be available. In these neighborhoods, all world regions are represented, and in many sections, there is no particular domination by residents from any one country, region, or linguistic background (Lotspeich, et al. 2003). It is important to note that this diversity is new to most of these neighborhoods, which, by and large, had been working-class white communities since the 1920s, with strong senses of community, local identity, and local history that existed before the influx of immigrants and refugees (Winders 2012). In many cases, these residents were not displaced, and some of the newly diverse neighborhoods in southeast Nashville still contain many white, working-class senior citizens, along with younger families of people who were born in the United States.

In spite of the rapid growth of Nashville's immigrant and refugee communities, little research has been devoted to either the adjustment of foreign-born residents to the city of Nashville or to the adjustment of the city of Nashville to the relatively new diversity that now typifies it. Winders, already extensively

cited above, has written several papers that describe ways in which immigrants, especially Latino immigrants, may be affected by the local mode of governance in Nashville (this research will be described in a later section of this chapter). Additionally, the Metropolitan Government of Nashville and Davidson County (Metro) commissioned an "immigrant community assessment," which was carried out by researchers from Vanderbilt University, Tennessee State University, and Meharry Medical College. The final report of this assessment was released in 2004, and contained an analysis of data from the 2000 census, survey results from social service agencies who work with immigrant communities, and findings from focus groups conducted with immigrant residents from Arabic, Kurdish, Laotian, Latino, Vietnamese, and Somali communities. The focus groups were centered on ten "social service domains," which included: "community, education, employment, help with stress, housing, the law, security, support for the family, and transportation." Participants were also encouraged to bring up any additional policy areas that they felt were important if they were not introduced as topics by the moderator. Policy recommendations were developed based on the findings of the assessment (Cornfield, et al. 2003). While the social service focus of the assessment differs from the focus of the current research, and while a fair amount of time has passed since the focus groups were conducted, the findings of the assessment do provide insight into general strengths and weaknesses of Nashville as a place to live, as perceived by immigrant communities. These findings will be referred to where relevant throughout this dissertation, and so a brief description of the study and its goals was deemed useful to include here.

Nashville Neighborhood Governance

In addition to the history of immigration in Nashville, some recent history on the form of local governance in the city will also be useful as context for interpretation. (In fact, this history has bearing upon the history of immigrants in the city as well). Upon first moving to Nashville to conduct research, it seemed notable to me that the area had many "named" neighborhoods of varying sizes regarding

population and area, and that local governing bodies seemed to refer to and work with representatives at the neighborhood level quite a bit. What was not evident at that time was that this aspect of Nashville was a fairly recent development, part of a larger national trend to shift towards neighborhood level governance. In Nashville, this shift began picking up momentum in 1999, when Bill Purcell was elected mayor largely on a platform of neighborhood empowerment. After election, Purcell instituted the Mayor's Office of Neighborhoods which had the goal of increasing constituent voices in the government by providing them with technical and informational assistance to organize around issues that neighborhoods saw as important, and to facilitate development of neighborhood associations. Winders asserts that through this office's efforts, "Metro government came to see the city through an institutional map in which residential Nashville—and thus, city residents—was represented by neighborhood associations that covered the entire city." (Winders 2012). This effort was largely successful; between 1999 and 2006, the number of neighborhood associations existing in Nashville rose from approximately 125 to nearly 600 (Winders 2012). A framework of "new urbanism" was grown, with a focus on mixed land use, reformation of urban sprawl patterns, and creation of a strong sense of community (Mendez 2005), which some have described as being based upon the marketing of a past golden age of idealized neighborhoods (Till 1993; Winders 2012). In Nashville specifically, the combination of "new urbanism" focus and neighborhood engagement resulted in a period in which planners fanned out into neighborhoods, envisioning Nashville as a "mosaic of human-scale neighborhoods with streetscapes, limited traffic, and strong visual corridors . . . In the process, neighborhood associations became the official venue through which the city saw its neighborhoods *and* the institutional link through which local government interacted with residents" (Winders 2012). Because the Mayor's Office offered grants, services, and other incentives that were only available to active neighborhood associations, participation in the associations was "recast . . . as a moral duty of active citizenship" (Grundy and Boudreau 2008), in which citizens assumed partial responsibility for the

success or failure of their place-based communities. The Mayor's Office of Neighborhoods mission statement emphasizes this sense of partnership with its call "to improve the quality of life in Nashville's neighborhoods through a more informed, active and involved citizenry and enhanced governmental response to community needs" (Mayor's Office of Neighborhoods).

Overall, this situation strengthened participation in government processes, though in some sections of the city—notably, the southeast section that makes up a large part of the Mill Creek watershed, maintaining the government-to-neighborhood link could be difficult (Winders 2012). A certain level of cohesion in the place defined as a neighborhood is necessary to create and maintain an association, and the growing ethnic diversity in these neighborhoods made this process more difficult (Martin 2003). Even in the absence of overt prejudice (which was not, in fact, absent), the relatively rapid changes to community composition during this time created new barriers that had to be overcome if the goal of bringing residents together to discuss common issues was to be achieved. The fact that many of the communities with large immigrant populations had strong local identities that pre-dated the arrival of foreign-born residents added additional complexity to the situation; immigrant families and elderly white residents were occupying the same residential geography, but not necessarily the same social space. Communities in which everyone had always spoken English were now polyglot, and neighborhoods that had been dominated by owner-occupied homes since their beginnings now contained high numbers of rental units (Winders 2012). It is worth noting that while Winders' study described this rapid change as leading to a situation in which southeast Nashville neighborhood associations were largely being run by and composed of white, older residents, by the time the current research began, the southeast Nashville neighborhood associations in which representatives were interviewed were led by young to middle aged white residents. It is unknown whether this reflects a change over time or simply a difference in communities involved. These new leaders were usually of an inclusive mindset, but they tended to describe the difficulties related to involving both young immigrant

residents *and* elderly white residents as similarly daunting. In any case, a combination of factors including language barriers and cultural mistrust in multiple directions combined with the already steep challenges of urban neighborhood social activism has resulted in a situation in which immigrants are relatively unrepresented (Herbert 2005; Winders 2012).

At least as relevant to the representation disparity is the perception of neighborhood geography as seen by various groups in southeast Nashville. People with a long-term, multigenerational history of living in a neighborhood will have come to define its boundaries in relation to the meaningful places and social opportunities surrounding their residences; the "neighborhood" might be defined by a long-standing elementary school zoning, or a set of streets that bounds an area off of a major road, or by a shared memory of some historical issue that at one time initiated a bond between people living within a certain defined space. These residents will be able to define "neighborhood" stores, restaurants, parks, and churches, and will be likely to define "their" communities as largely synonymous with their neighborhoods. In many cases, if these residents wished, they could conduct a large portion of their shopping, dining, recreational, and worship activities within the area they define as the neighborhood. For foreign-born residents, however, the boundaries of the neighborhood might differ markedly. Latino immigrants, for example, are concentrated in southeastern Nashville, but are generally *not* concentrated heavily in small neighborhood tracts in which they are the predominant residents (Cornfield 2009). Consequently, the Latino "community" stretches across southeast Nashville, with workplaces, dining establishments, preferred stores and churches, not to mention social contacts who share a language and cultural background, being spread across areas much larger than the "neighborhoods" for which longer term residents can easily define local boundaries; the refugee communities of the city, though smaller, exhibit similar patterns, which Zelinsky and Lee have termed "heterolocalist" (Zelinsky and Lee 1998). This division of immigrants from neighborhoods was furthered by the fact that the immigrant community centers that came into being during this time focused on serving and linking immigrants

wherever they lived in the county, a strong difference from the government-associated community centers that were intended as neighborhood level resources and gathering points. Winders (2012) documented an official from the Mayor's Office of Neighborhoods stating that the immigrant populations have their own resources associated with their community centers and with the other government agencies that help them learn their way through the system, "so they don't need us" (Winders 2012). Interestingly, while community centers do exist for the various immigrant populations, including the Latino community, the proportion of the communities actively engaged with these organizations remains unknown. At least two major secular community center/advocacy centers exist targeting the Latino population of Nashville. However, in a 2008 study, more than two thirds of Latino community participants expressed the opinion that there either were no leaders in the Latino community or that they were not aware of any leaders. (Hull, et al. 2010). There have been no published studies of other immigrant or refugee community centers that can speak to whether this perception exists in other Nashville immigrant communities, but it is certainly true that local government does not always interact with the immigrant community centers in ways that parallel their interactions with neighborhood associations.

Green Space as Amenity

One other general piece of literature review seems necessary before ending the background sections of this chapter. The research participants themselves were largely responsible for a shift in study focus from environmental engagement to green space valuation; clearly, many aspects of urban green space are important to many people in Nashville, and a major portion of this dissertation will describe and analyze the ways in which these values are articulated among the residents of Mill Creek Watershed. In most cases, relevant literature reviews will be incorporated with these sections; however, it is worth establishing at the outset the extent to which these subjective values of green space are reflected in measurable benefits associated with its presence in urban environments. A large body of literature

explores the quantifiable benefits of urban green space access, with the largest segment of this research being devoted to documentation of health benefits for residents. Given the current public health focus on the national obesity epidemic, interest in the relationship of green space access to physical activity levels and to prevalences of health concerns linked to physical activity levels has been strong. Several studies have found a significantly higher level of physical activity reported among children (Cohen, et al. 2006; Liu, et al. 2007; Roemmich, et al. 2006) and adults who lived near a green space (Coombes, et al. 2010; Fisher, et al. 2004; Giles-Corti, et al. 2005), though at least one large study in the United Kingdom failed to find such an association (Hillsdon, et al. 2006). It is notable that this particular study used GIS to measure distance to green space and examined the relationship between distance and physical activity data collected as part of a large multi-national public health survey of middle-aged adults. Additional attributes of the green spaces, the respondents, and the spaces between respondent homes and green spaces were not taken into account, thus creating a view of the green spaces as islands unaffected by external forces. In effect, the study measured the relationship of distance to green space and physical activity in the purest possible sense, but may have failed to measure *access* to green space at all.

Studies that do take additional factors into account tend to support this idea. Nielsen and Hansen, for example, found evidence that, apart from the presence of formal parks, the general "green infrastructure" that is more common in park-heavy neighborhoods is more conducive to resident behaviors such as bicycling to work or walking to the store—to an extent regardless of the actual distance between an individual's residence and a designated park (Nielsen and Hansen 2007). Interestingly, while areas of lower socio-economic status might have better than average access to green space when it is measured only in terms of distance to parks, resident understanding of access is more multifaceted, and dependent upon individual understandings of what these green spaces were predominantly to be used for (Kessel, et al. 2009). Coombes et al (2010) found that a positive relationship between meeting minimum recommended physical activity levels and green space

proximity persisted even when neighborhood walkability and area deprivation were taken into account, although the associations were stronger in more walkable and less socio-economically deprived neighborhoods. This study also divided urban green spaces into four types, and found that both higher reported use and greater participation in physical activity were most strongly associated with what they termed "formal parks"—that is, parks with organized layouts and structured path networks that were generally maintained consistently. Others have identified a relationship between higher physical activity levels and the presence of paved walkways in park areas (Kaczynski, et al. 2008).

Similarly, studies have explored green space relationship to health outcomes that may be associated with better physical activity behaviors. Residents of areas with higher levels of green space have been documented as self-reporting higher levels of general health (Maas, et al. 2006). There is some evidence for an association between green space access and reduced obesity rates (Nielsen and Hansen 2007)though some studies have not found such an effect (Potestio, et al. 2009; Potwarka, et al. 2008). Interestingly, the Potwarka et al study, similarly to the GIS study of physical activity and green space cited above, measured weight in relation to distance from parks; when the researchers examined weight in relation to park *facilities* such as playgrounds, they found a strong association between proximity and lower weight (Potwarka, et al. 2008). Adding to this complexity, a study conducted in the United Kingdom found an apparent decrease in cardiovascular disease among men who lived near urban green space, but identified no such effect for women. They speculated that safety and other concerns might be in play, and that a qualitative analysis of the green spaces in question might add to understanding of women's park use (Richardson and Mitchell 2010). Taken together, these studies indicate first, that presence of green space can be associated with better health behaviors and outcomes, and second, that these effects are influenced by a variety of factors. Measuring distance to a park is not the same as measuring access to a park, and measuring both of these factors is not the same as measuring facilitation of healthy behaviors and outcomes.

Notably, green spaces that do not (apparently) facilitate behaviors conducive to better physical health may still play a strong role in improving mental health and general well-being; this effect has been documented in literature that predates the more recent interest in physical activity facilitation (Ulrich and Addoms 1981) (More and Payne 1978). More recently, a study in Australia found that people who perceived that their neighborhoods had high levels of "greenness" were more likely to report better mental health than were those who perceived that their neighborhoods were not green, even after controlling for higher levels of exercise and social interaction that might be supposed both to be associated with green space and to contribute to the association of green space access with good mental health outcomes (Sugiyama, et al. 2008). If there is a mental effect associated with green space that is independent of social or exercise-related attributes, it is interesting to note that some research has been dedicated to studying the synergistic effects that may be associated with exercising in green areas. "Green exercise" may be associated with improvements in self-esteem, depression, anger, confusion, and anxiety (Barton and Pretty 2010; Mitchell 2012; Pretty, et al. 2007)indicating the possibility that physical activity in natural areas may be augmented by "restorative experiences" (Hartig 2008) that amplify its effects. The previously cited studies were derived from general population samples in which no specific mental health risk factors were evident, but there is some evidence that access to green space may serve as a buffer to specific stressors. One study in the Netherlands found that people who experienced stressful life events were less affected by the experience if they lived near an area of green-space, and that this proximity was also associated with perceived good mental health (van den Berg, et al. 2010). In Australia, residents of neighborhoods with high quality public open space were found to have lower levels of stress than those who lived in otherwise comparable areas lacking in this amenity; interestingly, it was the presence rather than the amount of green space that was associated with the lower stress state (Francis, et al. 2012). It has been proposed that such benefits may in part derive from the ability of green spaces to facilitate development of a "sense of place" in one's

neighborhood; inclusion of spaces to which people can form such an attachment in urban areas may have public health value (Frumkin 2005). This is interesting in light of the high immigrant and refugee populations in the watershed; if facilitation of sense of place and mitigation of stress response are benefits of urban green space, it is worthwhile to consider that such places in the city *may* be of some benefit to those adjusting to a new home.

Given the established benefits of urban green space, it is notable that the literature documents a tendency for economically disadvantaged areas of cities to have lower access to it, and for this to be even more prevalent in areas with large minority populations. Several researchers note that while greater emphasis is traditionally placed on documentation and effects of "disamenities" (e.g. proximity to superfund sites, high levels of vehicle emissions, etc.), access to positive environmental amenities is an equally important environmental justice concern (Brulle and Pellow 2006; Cutts, et al. 2009; Dai 2011; Evans, et al. 2012; Heynen, et al. 2006; Pastor, et al. 2005). While higher obesity rates among low income and minority groups are well-documented, little research has been done to explore the ways in which neighborhood environment might contribute to this pattern (Cutts, et al. 2009). However, there is some evidence indicating that the built environment in general, and the geographic distribution of green space in particular, may have a role. Evans (2012) has published research suggesting that the higher prevalence of obesity among low income children may be partially explained by the presence of fewer open green spaces leading to lower activity levels (Evans, et al. 2012). In Phoenix, Arizona, GIS analysis revealed that, contrary to expectations, Latino immigrants and African-American residents were more likely to live in walkable neighborhoods with access to neighborhood parks. However, more detailed analysis of this area showed that populations near *large* parks (used as proxies for high-quality parks based on the assumption that they would have a wider range of recreational and/or habitat options) had lower Latino and African-American populations (Cutts, et al. 2009), thus limiting potential opportunities for physical activity. Studies in other locations have indicated similar effects in which

access to number of parks may not be uneven, but access to large or complex parks is (Mitchell, et al. 2011; Wendel, et al. 2011). Heynen et al (2006) found that urban residential canopy cover (not limited to parks) had a strong positive correlation with median household income. A study conducted in an English city found that accessible green spaces were less common in areas with high populations of Hindus, Sikhs, and Indians (regardless of religion) (Comber, et al. 2008), and a study in Atlanta showed a similar trend, with green space being significantly less common both in areas with high concentrations of African-American residents and in socioeconomically disadvantaged areas (Dai 2011). Most notable in the context of this documented uneven distribution of green space is research indicating that low-income residents of greener areas may experience less health inequality than people with similar incomes living in areas with lower levels of green space. This association held both for assessments for circulatory disease and for all-cause mortality, suggesting that presence of green space may partially mitigate negative health effects of poverty and reduce socioeconomic health inequalities. (Mitchell and Popham 2008). Finally, a single 2006 study carried out in Nashville examined prevalences of unhealthy weight and hypertension across Davidson County Census tracts. While this study did not examine park proximity, accessibility, or use, it is notable that the general southeast Nashville area that is the focus of the watershed study was among the three Nashville areas in which the highest rates of hypertension, highest Body Mass Indexes, and lowest rates of physical activity were identified (Schlundt, et al. 2006).

Research Methodology

The methods employed to conduct this research were participant observation and interviews. Participant observation took place in the form of attendance at staff meetings of the Non-Profit and at meetings of the Mill Creek Task Force and the Nashville Immigrant and Refugee Task Force. It also included participation in volunteer activities, festivals, and events that took place within the watershed, as well as occasional participation in city-level events that took place outside of the watershed, but had been heavily advertised within the study area. Finally, participant observation was conducted in the

form of interaction with visitors in the watershed's parks during non-event days. Much of this work was done in conjunction with the efforts of the Non-Profit; that is, I assisted in recruitment to watershed events and in forming contacts for the eventual launch of the Mill Creek Watershed Association. This connection proved to be both a strength and a weakness in methodological terms. On the one hand, association with the group provided easy access to important activities, and also helped ensure that the activities at which participant observation was conducted were likely venues for recruitment of future watershed group participants; that is, the activities were one-day, low-commitment events of the type that would likely have been planned with greater frequency and expectations of ongoing participant commitment if the watershed group had been launched. On the other hand, in the process of attempting to identify the best way to launch such a watershed group, many advertised events were delayed multiple times, cancelled, or changed substantially from the way in which they had been described to early contacts. In such situations, frustration on the part of contacts may have extended both to the Non-Profit and to the research.

In addition to participant observation, short interviews were conducted in parks and at events, at which people would agree to participate in a brief, focused interview, which would not disrupt their activities extensively. Fourteen long (thirty minute or greater) interviews were also conducted during this research. Longer interviews frequently took place in these outdoor settings as well, although they were more typically conducted by appointment rather than occurring by chance. Participants who were not encountered at special events were typically recruited using email, telephone, or in-person outreach to neighborhood leaders, representatives from schools, churches, community centers, and government representatives with relevant duties. Those who responded to these initial contacts frequently identified additional people who might wish to participate in research, who would then be contacted and interviewed when possible. In some cases, respondents referred me to media that was produced by members of their communities, and that they felt represented something important about a group they

belonged to. Content from interviews, participant observation findings, and community media was analyzed for common and divergent themes among and between groups, with added context provided by findings from the literature. To facilitate interpretation, additional work using ArcGIS and Google Maps was carried out; this work is presented more as visual aid to background and findings rather than as generative of insight in its own right.

Difficulties Encountered in the Research

Overall, the methodology used was effective, although it was not without problems. One of these has already been described. Another, related difficulty encountered was associated with the nature of the target study population: residents or workers in certain neighborhoods who were currently *un*involved with local environmental volunteering efforts, but who might become interested in involvement under the right circumstances. The initial intent was to study the process of recruiting and engaging people who fell into this category, and several strategies were in place to facilitate that process. One central strategy was to target people who fished or gathered crayfish in urban streams; initially, it was assumed that this was a relatively common activity, based on a number of anecdotal stories that had been circulated among environmental professionals and neighborhood groups. In reality, this proved not to be the case, and, at least from the time of the study period on, urban fishing appeared much more likely to occur at lakes and reservoirs outside the watershed, rather than in streams within it. Because of the very local nature of the topic being studied, expanding to study those fishing in reservoirs outside of Mill Creek Watershed was not deemed likely to contribute to the ultimate goal of gathering insight on potential determinants for involvement within the watershed.

A second promising research strategy that was planned early on was to spend time speaking with visitors at the Nashville Zoo, where an exhibit on local aquatic wildlife was planned. The zoo is located within the watershed and reports a relatively high level of diversity among visitors (this is based on observations by zoo staff, not upon published statistics, of which none are available). The Nashville

crayfish's centrality to the exhibit would provide a natural means of opening conversation with visitors, who, although encountered while in the act of visiting an environmental conservation facility, were not necessarily likely to be particularly engaged in environmental policy discussions or activities. It was thought that this population would provide an excellent source of respondents who were neutral to neutral-positive on environmental issues, and whose attitudes, opinions, and potential motivators for increasing their levels of engagement could be explored. My previous experience collecting data at a zoo exhibit while conducting earlier research had also shown that this particular venue for data collection was potentially high yield; zoo visitors were unusually willing to converse with a stranger at an exhibit—much more so than visitors recruited at parks, who, in Nashville at least, are frequently otherwise engaged in cardio workouts or quality family time, and therefore less likely to be amenable to a stranger approaching them for research purposes. Because of the potential benefits to be gained from collecting data at the zoo, the plan to launch the exhibit within a few weeks of the beginning of the research period seemed ideally timed; part of the exhibit was already constructed, and permission to gather data had been obtained. However, economic factors forced delays in initiating the display, and in the end, it was never possible for the zoo to launch the exhibit; thus, it was necessary to abandon this data collection strategy.

Economic and institutional factors influenced data collection in other ways as well, in that they were partially responsible for reduced staffing and high staff turnover at community and social service organizations. In three instances, I had succeeded in developing interest from staff members at such organizations, and then subsequently learned that those staff members had left. In one of these cases (at a community center serving primarily African refugees), full reengagement was eventually possible. In a second (a community center primarily serving Latino residents of Nashville), limited reengagement was possible, but because of the extended time period involved, this reengagement did not extend to the point of allowing major participation from those who use the community center. At this

organization, the director (an immigrant himself) was interviewed multiple times, and was enthusiastic about the research being conducted. However, the fact that reengagement took over a year shortened the time window in which it would have been possible to conduct interviews upon reengagement. This difficulty was exacerbated by the fact that the center had recently experienced a major downturn in participation, at least partially due to a recent move on the part of the facility's headquarters. It never became possible to interview members of this community who were not in positions of relative leadership, although the insights of those who did contribute still provided vital information about the community they served. At a third center (a school-based social service organization serving low-income, primarily Spanish-speaking members of the community), no further engagement was possible.

Overlaid on the longstanding economic difficulties that faced Nashville over the course of this research, an additional, single day event unexpectedly altered both the figurative and literal landscape of the watershed several months into the research period. On May 1, 2010, a Mill Creek cleanup event at Antioch Park was planned. On the morning of the 2011 cleanup, however, it quickly became apparent that the event would need to be rescheduled. The sky was black, and it was raining early; before the event's scheduled start time, flashes of lightning started appearing with regularity. It was disappointing, but seemed likely that the event could be rescheduled in a week or two. This never happened. Thirty-six hours later, 13.57 inches of rain had fallen over Nashville, more than doubling the record previously set in 1979. A rainfall measurement station located within the watershed recorded that within a forty-eight hour period, Nashville experienced its first and third highest rainfall days since records began being kept 139 years ago (National Weather Service 2011). For perspective, it is useful to be aware that at fifteen measurement sites in the general region, more rain was recorded than was associated with the landfall of Hurricane Katrina (National Weather Service Nashville Tennessee Weather Forecast Office 2010). The Cumberland River crested at a record (since institution of flood control measures) 51.86 feet in Nashville (National Weather Service 2011), twelve feet above flood stage (Metropolitan Government of Nashville

& Davidson County Tennessee 2012). Twenty-six people lost their lives in the flood region, eleven of whom lived in Nashville (National Weather Service 2011), and at least 11,000 structures were damaged (National Weather Service 2011), with an estimated two billion dollars in damage being done to private property (Metropolitan Government of Nashville & Davidson County Tennessee 2012). Interstates 24 and 40 were shut down due to flash flooding, and hundreds of vehicles were subsequently towed from these and other roads after the waters receded. One of city's two water treatment plants was flooded and became non-operational, while the other escaped a similar fate by the narrowest of margins (National Weather Service 2011). 2,773 businesses, employing 14,499 workers were impacted, and hundreds of homes were completely destroyed, with many more sustaining major damage. Among some of Nashville's more famous buildings, Opryland Resort and Convention Center sustained $220 million in damages(National Weather Service 2011), and Opry Mills Mall was damaged so badly that it did not reopen until March of 2012, nearly two years after the flood. In all, FEMA received 20,189 Individual Assistance applications, of which 12,903 were approved, and also funded 768 Public Assistance projects (Metropolitan Government of Nashville & Davidson County Tennessee 2012).

These statistics are included to clarify the scope of the event, and the extent to which it affected all aspects of life in Nashville after it occurred. The event also affected research. The parks and greenways that served as data collection areas were closed for much of the summer following the event, and community and social service agencies that had been interested in helping to facilitate this research now clearly did not have the resources to do so; all such agencies were now devoting almost all "spare" time and resources to issues of housing, rebuilding, and assistance for those filling out FEMA assistance applications. These were long-term circumstances that did not resolve quickly. Further, the event influenced the appropriateness of conducting this particular research for at least several months. During the summer of 2010, asking strangers to comment on the values they attached to streams and associated green space was clearly inappropriate in many cases—although the event also certainly

introduced several opportunities for interesting research questions to be addressed after more time had passed. Finally, the flood was the event that ended the Mill Creek Watershed Association development project (following upon other setbacks). This was not immediately evident, however, and so the process of ending the initiative will be discussed in later chapters.

There are, of course, some limitations to this research. Sample size was small both overall and for individual demographic groups. Further, while these findings may be instructive regarding the engagement of currently non-engaged people in environmental initiatives, caution should be used in extrapolating the meanings and associations connected to green space and environment at the larger population level. Due to the nature of recruitment, research participants were likely to be people who already used parks and informal green spaces; those who did not make use of these Nashville amenities were less likely to be interviewed, and so may present a different picture of neighborhood identity entirely. However, it does seem clear that the picture presented based on those who did participate in the research *is* descriptive of a substantial proportion of the population of Nashville, and many who used the green spaces and were interviewed were *not* recruited while doing anything explicitly nature-oriented. Consequently, this study may provide a truly useful analysis of a type of urban resident that is not engaged with environmental efforts but is ready to be engaged—that is, possessing of certain ideas and values that are readily tapped for motivation to expand modes of participation in neighborhood and environmental issues. The next chapter will explore the theoretical underpinnings of some of these ideas, examining how cognition about urban nature and urban neighborhood may underpin the values and beliefs associated with these entities.

CHAPTER 2

THE COGNITIVE LANDSCAPE

This research was intended to have two strong foci; the first was on a narrow determination of the prevalence, values, and meanings attached to the process of collecting aquatic species from urban streams. The second was to examine the factors that influenced environmentally conscious behavior and public participation in the watershed; that is, to examine this topic with the environmental component as central, in an attempt to identify the values and meanings attached to it. Because this research was to chart the formation of a local watershed group in an area where one had never existed, the people being studied were those who were for the most part *not* already actively participating in regular environmental volunteer work or public meetings on the subject. It is consequently not surprising that it quickly became clear that in Mill Creek Watershed, the environmental/species preservation concept was not a central structure to which other values and meanings were widely attached. This is not to say that these concepts were not important to members of the watershed's communities; they existed, sometimes exerting significant force, as concepts attached to other, more central and powerful schemas of meaning. "The environment" and "the watershed," it emerged, were external concepts cognitively, largely removed from everyday life in the city of Nashville. "The neighborhood," however, was immediate, and planting trees, cleaning up streams, and protecting urban wildlife were revealed as activities deeply embedded in a more central ethos of neighborhood and community improvement. As a result, it gradually became clear that the research had morphed into a study of neighborhood and community cohesion along with valuation of and access to urban natural areas. This chapter will articulate the theories of meaning and cognition that came to define the landscape of this research, and will end with a brief exploration of the watershed as place from the perspective of environmental professionals, which will serve as a backdrop to subsequent chapters that will centrally focus on concepts of place for members of the community..

The Wilderness and the City

This is a study of human interaction with nature in the city. It examines interactions with places that urban planners tend to refer to as "green space," or what one prolific pair of researchers has termed "nearby nature" (Kaplan and Kaplan 1989). Such places, these researchers write, may be ". . . common and unusual, managed and unkempt, big, small, and in-between, where plants grow by human design or even despite it" (Kaplan and Kaplan 1989). In the study area, the managed spots under discussion include, primarily, four parks: Antioch Park, Ezell Park, Ellington Agricultural Center/Whitfield Park, and Coleman Park, which is a very small green area with a paved exercise path located outside of a community center. Another park, called Seven Oaks, is generally not covered simply due to difficulty encountering people who engage with it. Greenways are also included as managed areas; this network of paths often runs through park land, but many miles of the greenway system are instead connectors, tying the parks to the built environment. Other areas that are "managed" but not officially holding park status are school yards and church yards. Unmanaged "nearby nature" includes pleasant neighborhood roads, back yards, and vacant public or private land—and these are important, particularly in southeast Nashville, which, compared to many other segments of the city, has fewer formally managed parks available to residents. The Nashville Open Space Plan states a goal of adding 25 miles of greenways over the next five years, 3,000 acres of parkland over the next ten years and another 3,000 acres of parkland by 2035 (Office of the Mayor Metropolitan Government of Nashville and Davidson County and The Land Trust for Tennessee 2011). The plan overtly places a high priority on creating parks in the southeastern section of Davidson County (Metropolitan Government of Nashville and Davidson County 2012; Office of the Mayor Metropolitan Government of Nashville and Davidson County and The Land Trust for Tennessee 2011) and specifically states a goal of prioritizing park and greenway linkages in the Mill Creek Watershed (Office of the Mayor Metropolitan Government of Nashville and Davidson County and The Land Trust for Tennessee 2011). Progress has been made over the course of this research period, but for the present, deficits still remain, and are perhaps more strongly felt due to the changing social

landscapes of some southeast Nashville communities. Access to public areas and urban green space is a topic of interest to both the government and the residents of Mill Creek Watershed; this section aims to explore the cognitive basis for interaction with these places, and to identify a framework for exploring the ways in which urban green space takes on meanings, values, and notions of appropriate activity.

What *is* urban green space then? There are several things that it clearly is not. Cognitively, urban green space is viewed neither as wilderness nor as a pale substitution for wilderness. Those who visit the wilds do so for different reasons than those that are in play when they visit their local parks—even when the same people are involved. By virtue of public ideal and legal definition, the American Wilderness is a place apart from the everyday, a place that, "in contrast with those areas where man and his own works dominate the landscape, is . . . recognized as an area where the earth and community of life are untrammeled by man, where man himself is a visitor who does not remain" (88th Congress 1964). The idea of wilderness is inextricably intertwined with the idea of solitude (Nash 2001; Stankey 1989), again, to the extent that the idea is enshrined in federal law, which decrees that protected wilderness areas have "outstanding opportunities for solitude or a primitive and unconfined type of recreation" (88th Congress 1964). Studies of values associated with American wilderness confirm this ideal (Hammitt 1982; Lucas 1985), though some more recent studies have clarified that the solitude sought may be as much a psychological state as a physical one, with one set of researchers proposing that such solitude is a "*psychological detachment* from society for the purpose of cultivating the inner world of the self . . ." (Hollenhorst and Jones 2001), italics in original). The words used in all of these quotations are telling: "a visitor who does not remain," "outstanding opportunities for solitude," and "detachment from society." If these are the ideals of wilderness, research in Nashville indicates that urban parks are cognitively categorized as different places all together. The distinction may be more artificial than residents wish; in May of 2010, Nashville certainly found that the fearsome power of nature is not always mitigated by living in cities. However, urban nature is *seen* as being managed, and the parks and green spaces of

Nashville are cognitively "mapped" as part of the city environment, not islands of wilderness within it; in Nashville, as in other cities, when the power of uncontrolled weather is made manifest, people tend to blame the government rather than nature (Rotenberg 2005). This has implications for understanding the values attached to urban green spaces. They are *not* lesser imitations of some wilderness ideal, at least for the most part. Certainly, some residents indicate that they go to the parks to see a little nature and tranquility when they can't take a long trip out of town. However, their quest is for a lunch hour respite, a quiet place to sit outside of one's home after dinner, or an opportunity to step outside of work and look at the river while trying to solve a problem. They do not visit these places in a search for the transcendent, the sublime, or the "sacred" (Tuan 1976). Primarily, the urban green spaces serve different roles altogether, and the goals people attach to the experience of the urban park are distinct—even opposite—from the goals they attach to a visit to the wilds. The sublime is not manageable, and indeed, this is part of the draw of the wilderness. Sublimely unmanageable, unpredictable nature is not a draw when it encroaches upon the city, however. These are properties more comfortably assigned to a category of place to which the visitor travels but "does not remain." In the everyday life of the city, nature must take on other qualities to be valued. Even the least managed of urban parks places a frame upon nature and creates a type of place that is permeated with meanings centered around an idea not of solitude but of connection. For those people described above, who valued urban nature for the opportunity it afforded for brief, quiet moments of escape, part of what made their chosen places "good"—in fact, part of what made them places with meaning in residents' lives rather than spaces to pass by—was their proximity and ability to mesh with the experiences of everyday life. There is another thing, then, that the best urban green spaces are *not:* They are not islands. Their value is increased by their embeddedness within the landscape of "everyday life" in part because this increases the chance to get "away" for a few minutes as a means to help manage everyday stress. Relatedly, watershed residents place strong value on the opportunity to exercise and improve their health in a pleasant place,

and to be able to do this in the midst of the work day, or in combination with more mundane and necessary activities such as shopping, travelling to work, or visiting a friend.

'Nearby Nature' and Its Preferred Qualities

The preceding section provided an observational overview of the place of nature (or the nature of place?) in the city. This section will construct a firmer framework with grounding in the literature. The Kaplans have formulated a helpful outline of attributes that tend to make everyday green spaces more preferred by those with the opportunity to encounter them. They describe four elements that may be defined in such places: complexity, cohesion, legibility, and mystery (Kaplan and Kaplan 1982). Because people are inherently engaged with the act of "making sense" of their environments, they propose, two attributes they call "coherence" and "legibility" are important to the formation of preference. Additionally, humans are drawn to opportunities for involvement, and, the Kaplans hypothesize, landscapes that are valued will have sufficient "complexity" and "mystery" to cause people to feel invited to explore. This work provides a framework within which to discuss the ways that people assign value to urban natural areas. However, their framework, at least as presented in their earlier work[2], is incomplete with regards to explaining such preferences in the urban setting. This section will discuss both the framework as described in the literature and a theory of additional "layers" of these attributes that must be applied to understand human interaction with nature in an urban setting.

Complexity and coherence are best considered together. Complexity refers to the richness of an environment—the number of visual (or potentially auditory, olfactory, tactile, or gustatory) elements that are evident in a place. Coherence refers to the extent to which these elements appear ordered, or the extent to which the landscape seems to direct a viewer's attention along certain lines. The Kaplans

[2] Social aspects of urban green space are discussed at length in several of the Kaplans' works, though with different perspectives than those that will be offered here. See, for example, Kaplan and Kaplan 2002, Kaplan and Kaplan 2005, and Kaplan and Kaplan 2008. However, these works do not describe the complexity/coherence/legibility/mystery framework in relation to these social concepts.

note that coherence is not to be confused with redundancy. A complex scene containing many elements may be orderly, so long as nothing seems out of place (Kaplan and Kaplan 1982). The parks that were most often discussed by participants in my own research generally contained a strong measure of coherence, largely due to the paved paths that directed both attention and feet in prescribed directions while serving to bind elements of the landscape together in a visual field. Relatedly, the attribute that has been called "legibility," refers to "the ease with which [a landscape's] parts can be recognized and can be organized into a coherent pattern" (Lynch and Brusi 2005)This is essential to way finding, and the paths through Mill Creek Watershed's parks add legibility even more directly than they do coherence. The presence of landmarks also defines legibility; a pathless forest of trees that are similarly sized would have low legibility, while the parks in Nashville, over all, are highly legible to most users due to paths that follow stream courses, trailheads, occasional interpretive signs, and landmarks such as benches, parking lots, bridges, and small gardens or artworks. Legibility relies upon memorability; it is increased when a landscape contains components that people will easily remember and place in a developing cognitive map.

The fourth element of the Kaplans' categorization system, "mystery" is a factor that provides the promise of information and encourages a person to explore further in the pursuit of obtaining new knowledge (Kaplan and Kaplan 1989). In the Mill Creek watershed parks, the creek is often accessible, and diverging from the wide paved paths are enticing small tracks about a foot wide, which lead down to the shallow water where numerous rocks are scattered in and around the creek. Anything might be under the rocks, and even without them, something new might be visible if one descends through the trees into the area surrounding the riverbed. The paths, and the line of the stream itself, increase legibility even as they invite exploration through the aspect of mystery. It is landscapes like these, the Kaplans contend, which include legibility and mystery in sufficiently balanced quantities to encourage exploration while limiting the sense of feeling lost or overwhelmed, that are most often preferred by

humans. Some level of complexity must be present to make the place interesting, and some level of coherence must be present for people to feel sufficient immediate understanding to have confidence that further exploration will result in comprehensible information—but as these factors increase, they reach a point where their growth no longer corresponds with human preference. Legibility and mystery rely on inference rather than immediately available attributes, and it is for this reason that the Kaplans contend that human preference for a landscape rises with them indefinitely. (Kaplan and Kaplan 1989)

Kaplan and Kaplan acknowledge that interpretation of landscape is always built upon the knowledge, experience, and culture a person has already gained (Kaplan and Kaplan 1989), but, they do not explore these knowledge and experience-based underpinnings to preference in detail, and generally focus on the universals of human cognition rather than on the specifics that might overlay them; they are concerned with what Bloch has termed the "universal predispositions" from which culturally specific knowledge is ultimately generated (Bloch 1998). They do, however, point to the important difficulty of distinguishing cultural effects from simple familiarity, and to the fact that culture is more problematic to untangle. One study of immigrants visiting very unfamiliar parks has indicated that lack of familiarity with a place may act in contradictory directions, either decreasing preference through inspiring confusion or lack of understanding, or increasing preference due to human attraction to novelty (Rishbeth and Finney 2006). But where the basic human cognition overlaid with positive or negative reactions to novelty ends and specific cultural factors begin may be difficult to determine. In my culturally diverse study area, the attributes of legibility and coherence could be perceived as existing at different levels in the same landscape dependent upon who was viewing it, but the extent to which such effects were cultural versus experiential was not always clear.

Variations on the Kaplans' Theme

In urban natural settings, I would argue that the concept of "complexity" may contain, at the risk of redundant terminology, additional layers of complexity. Others have indicated that this attribute may be

examined in built as well as natural environments—arguing, interestingly enough, that vegetation in urban environments may not be as beneficial as some researchers believe (Nasar 1989). What is little-explored in both analyses is a concept of connection between urban-built and urban-natural environments—a striking omission in light of research that has shown parks in mixed-use neighborhoods to be more used than those in neighborhoods that are solely residential or commercial (Frumkin 2005; Jacobs 1961). The concept of complexity is useful here, with the important addition that in an urban setting, the "green space" is an element embedded in a wider landscape rather than a discrete place to which one has traveled as a destination containing completely separate characteristics. Destinations are outside of everyday life, and need not be tightly webbed with connections to the everyday. In Nashville, for example, participants described "spending a day at Radnor," which is the state park located west of the city. To an environmental professional, it is (barely) in the watershed. To residents, however, its relationship to the watershed is irrelevant. It is not in the neighborhood. It is a place to plan for and spend substantial time in rather than a place to go for a quick walk in the context of a normal day. On a trip there, one is as likely to find visitors from within the watershed as to find visitors from all other parts of the city, surrounding suburbs, or even further afield. If such destination parks are outside of the everyday even when geographically bordering on it, however, urban green spaces are embedded within the cognitive map of "everyday life" that residents carry with them. They have a defined place in relation to other "everyday places," and they exist along the routes that residents identify as part of their cognitive maps. Perceptually, they have fuzzy borders, and the desirability of the park within is influenced by the desirability of the area that surrounds it. This type of complexity contains an active component; it is underpinned by what people believe they can do as much as what they believe they can see on a trip to the park. This "complexity of action" depends on answers to questions such as these: Can residents pick their children up at school and cross the street for an unplanned walk in the woods? Can they pick up milk on the way home from a park? Can they do something that improves

health without having to pay a fee or go far out of the way? Can they get there on a lunch hour and take a walk for exercise while wearing professional clothes, knowing that the pavement will keep them from getting too dirty? In the city, when the answer to all questions of this type is "no," the complexity of the landscape surrounding the park is also low, and whatever is within its boundaries becomes inherently less desirable. A small urban park is, perhaps, limited by size in the level of what the Kaplans call "mystery" that it can provide, even though the quality is by no means absent at these parks (and indeed, Chapter 3 will discuss ways in which human elements may form part of the beneficial element of mystery in some cases). Without a higher level of that attribute, though, the parks are not destinations but neighborhood amenities, and as such, their complexity must be measured along with that of their surroundings and the necessary, mundane actions that those surroundings make possible. It is notable that while "complexity" in the Kaplan framework is a static trait, rather than a trait of potentiality (Kaplan and Kaplan 1989), this additional layer of complexity is an attribute built on possibility as much as upon immediacy. Rather than enticing people visually, it entices them to consider possibilities, to imagine ways of fitting time in this place into the day.

Overlaid on the basic landscape complexity and the complexity of action that are superimposed upon the park and its neighborhood is an additional layer of attributes affecting desirability. This may be termed "social complexity," and it encompasses a broad scope of potential attributes that are related to the presence of humans going about their everyday lives, either presently or in a remembered, localized past. Theoretically, this latter attribute would be measurable to some degree in any natural area, but it becomes more cognitively prioritized when the setting is a pocket within an urban community. The number of visitors to the Grand Canyon who have "everyday" memories related to being there or anywhere like it is almost certain to be low. In Nashville, the number of people who have "everyday" memories of both formal and informal green spaces is high. Residents may look upon a creek and remember wading, swimming, or fishing in it—or somewhere similar—as children. They may take their

grandchildren to do the same . . . or they may come to the conclusion that pollution, crime, health, or some other barrier will not allow this to be something they will do. In either case, the memory and the action it inspires become tied to the landscape, and are part of what a resident "sees" when looking upon it. In the present, paths in parks, or the presence or lack of sidewalks on neighborhood streets help determine the extent to which social exercise is viewed as a valid option for the space. Narrow, rugged paths or roads with no sidewalks and little space along the side become places to walk or jog alone—assuming the area seems otherwise safe. Wide paved paths (as are more common in the parks of the watershed) define places to walk or jog in pairs, or to bring children who are learning to ride bicycles. The presence of jungle gyms, ball fields, and picnic shelters may encourage a certain range of human interaction; at the parks in Nashville, groups of parents find themselves together and conversing at the playgrounds and fields, and picnic shelters may be rented out by families or by neighborhood associations to bring certain configurations of people together. The nature of these configurations may shift over time, so that the present demographic profile is overlaid on the memories of older configurations of neighbors that long-time residents recall. And, finally, these spaces may serve as facilitators of memory for other places and communities that are separated not only by time but by distance. Chapter 3 will include description of several instances in which members of Nashville's immigrant communities overlaid local green spaces with meanings that held attachments to both remembered and current social uses of landscape.

As with the Kaplans' original elements of complexity, coherence, legibility, and mystery, these additional levels of complexity interact with one another, and form new configurations in resident perceptions both of what a place is and what it may, in the future, come to offer. If the complexity of action available *around* the park is of importance in influencing the frequency with which people visit it, the complexity of possible actions *within* it can also not be neglected. This is not such a marked difference from the situation in wilderness parks, where a variety of activities are also possible. The difference lies, again, in

the embeddedness of the green space in an urban landscape. What may be done in the park is possible because of proximity, and this may have implications for health and well-being, as already mentioned. Volunteer opportunities within the park may range from conducting cleanups, to planting gardens, to organizing community festivals. Any of these types of work may change a place so that it is more (or less) acceptable and likeable to the people who live nearby. Additionally, though, what is done in the park crosses the border to interact with the neighborhood around it in a mechanism that is not in any way comparable to the experiences people have when they visit wilderness sites, or even conduct work within them. For most people, volunteering in a wilderness area is a trip-based event, dedicated to achieving environmental benefit. Volunteers in urban green spaces may certainly be similarly motivated—but they are also cleaning *their* streams, and increasing the beauty—and property values—of *their* neighborhoods. The Kaplans warn—rightly, no doubt—that examining the social opportunities provided by urban green spaces to the exclusion of their other qualities provides only an incomplete picture of their place in urban life (Kaplan and Kaplan 1989). This research does not dispute this caution, but it centers itself differently. A social component undoubtedly overlays the physical redefinements of urban green spaces that volunteers may bring about. People working in the urban green space modify it, but they also create new social ties among those who participate, a fact which is particularly important when participants are likely to be drawn from the immediate area, where the possibility of forming lasting relationships is present. These are public places around which community members may work towards common goals, thus fostering and continually shifting the character and boundaries of the community that participants belong to. It is perhaps not surprising, then, that other researchers studying valuation of urban nature have at least partially found themselves writing about valuation of neighborhood. Research in Hong Kong found that "neighborhood relationship" influenced perception of parks (Lo and Jim 2010), while a study in Detroit revealed that neighborhoods with strong community identities were motivated to beautify vacant lots; these efforts came to be symbolic of neighborhood

commitment to improvement, social connection, and crime deterrence (Austin and Kaplan 2003). A study in England found that although a local woodland was regularly described as one of residents' favorite places, it was not strongly identified with the village as a place. The woodland was a place away, and it was valued, but the character of the community was seen as being defined by smaller, well-tended yards and streetscapes with natural elements that residents saw as being signs of a caring community (Jorgensen, et al. 2007)—conclusions that were drawn by several Nashville respondents as well. Intriguingly, both in Nashville and in the studies cited above, similar meanings were assigned to green spaces by both residents of deprived neighborhoods and residents of neighborhoods that were economically and socially secure. What was striking in Nashville, though, was that, of those neighborhoods that were targeted by outreach for this research, those in which residents responded with interest all could name *some* neighborhood identity problem—perhaps only a small one— that they hoped could be mitigated by actions involving green space (either public or private). Green space, across communities, was overlaid with meanings involved not only with displaying cohesion, but with strengthening it in the face of some challenge.

If the "complexity" of a space is in part defined by the diversity of the elements that surround it, coherence in an urban park is similarly defined, and likely to be related. Interviews in Nashville show that some green spaces—formal and informal—are seen as "fitting in" to their neighborhoods, while proposed roads and buildings which interrupt a view are seen as threats to coherence. This was largely an experience-based response rooted as much in fear for obscuration of shared history and social structure as it was in fear of losing grass and trees, and this serves as a reminder that experiential and cultural factors in landscape preference must not be ignored. In Nashville, it may be argued that such factors are most influential in regards to perception of legibility. While legibility is an indicator of the extent to which a person feels that he or she will not get lost in a place, the perceived *consequences* of getting lost influence the weight which people assign legibility as an indicator of acceptability.

Commonly, this may involve a perception of danger relating to violent crime; several women in my research had habits of solitary walking and jogging, but, in reflection of previous studies, they also often acknowledged potential dangers of solitary green space use (See Jorgensen, et al. 2007; Krenichyn 2006). Confidence in the landmarks that remind a person that they have not strayed will be weighted more heavily when safety is a concern. Additionally, just as the embeddedness of the park in the urban landscape makes the surrounding area's complexity and coherence relevant to the value of the park, the same is true for the attribute of legibility. If the roads to a park make it somehow difficult to access without getting lost along the way, visitor numbers will suffer. Nashville's largest park, located across the river from southeast Nashville, is a case in point. At several times during the research, this park was specifically named by members of the immigrant community as a place that they did not always feel comfortable visiting. In general, this perception had nothing to do with the park itself, but with the "legibility" of the road system that surrounded it.

Legibility may also have a social layer, which is present regardless of whether a park is urban or rural, though it is likely to be more dominant in urban areas. If parks are social places, it is necessary for visitors to them to "read" the setting and determine and enact appropriate behavior (Richardson 1980). In this case, "legibility" refers to the ease with which a visitor can look around and understand the script for acceptable interaction. For a person who has grown up in Nashville, or in another city with similarly managed urban parks, this layer of a park's attributes may never reach a conscious level in a visitor's thinking. For a person who does not come from such a background, however, difficulty "navigating" the actions allowed in a park may cause real barriers to enjoyment. In walking a park in Nashville and looking at it with fresh eyes, most would infer that the paved paths are intended for walkers. But are bicycles allowed? Motorized scooters? If a narrow dirt path diverges from the paved path, is it permissible to follow it? Can one wade in the creek, or pick the blackberries along the path, or set up a grill, or bring food into the area to eat? Even long-time residents of the city may wonder about the

answers to a few of these questions, but even as they wonder, they will be aware that consequences, should they pick berries and find that this is not allowed, will be only minor. In interviews with some immigrants in the city, participants described the uncertainty that activities like park visits could inspire during the first years in a new country, and noted that in some cases, the consequences of a misunderstanding might be too high to risk.

Prototypes on the Urban Green

The preceding section outlines the useful system the Kaplans have provided for the understanding of preference in regards to landscape. It also begins to expand upon this framework by postulating the importance of recognizing both the embeddedness and the social nature of such places when they exist in urban environments. What is needed now is a framework with which to understand how the Kaplans' universal concepts and some of the particulars associated with urban environments may come together in resident categorizations of what natural places are good to value, and how meanings are assigned to such places. More practically, it is important to consider how residents determine what places and causes are worthy of action, and what barriers to desired actions are relevant. The concept of prototypes (Rosch 1973) became increasingly relevant to the attempt to understand these everyday categorizations in the watershed; indeed, unintentionally, the preceding section has already begun looking like a list of attributes associated with a prototypic urban park. Prototype theory states that knowledge is organized through the medium of "idealized cognitive models," to which other entities perceived as being of a like kind can be compared in the course of a categorization (Lakoff 1987). The entity in question need not share all attributes of the prototype to be determined to be a member of the category, but the existence of the prototype allows the mind to deal with constant new information effectively. Many of the classical examples of prototypes at work involve identification of a thing *as* a thing; the definition of "bachelor," being perhaps the most cited example (Fillmore 1982). In categorization of urban nature, however, the meanings at hand are less concrete, and, arguably, form

the nexus of a greater number of meanings. The following sections will explore prototypes with relation to green space and neighborhood.

Green Space and its Attributes

In the current research, the concept of park is already defined in an official, government-given sense; valued green spaces that were *not* officially parks were usually not referred to as such by participants, though they were potentially valued places that residents assessed with criteria similar to those they applied to ranking of parks. These are places that have been referred to in the literature and in government circles as "green space," a category which includes, but is not limited to park land (and may not include all parks)! This particular term is not one that is used very often by "everyday folk" in American culture, although the prevalence of its use in government communications has brought it into public discourse in Nashville. For the most part, however, it remains an official label that allows professionals to talk about a certain type of space. What became clear in this research, though, was that it was an official label for a type of space that was *already* valued, though unlabeled, by residents. "Green space" refers to a type of place that already tended to take on certain meanings and values for residents, which raises questions regarding what prototype exists for determining any place to be, first of all, green space, and second of all, to be a nearly ideal example of it. This question differs slightly from the questions the Kaplans attempted to answer in their explorations of preferred landscapes. The attributes they identified *are* attributes of preferred green spaces; however, they are also attributes of other types of natural places. As described above, a traditional reading of these attributes did not present a full picture of what these places were to residents. "Green space" appears to be a type of natural place, which, to be a good example of its category, must have sufficient complexity, coherence, legibility, and mystery as described by the Kaplans. However, it apparently must have other attributes as well, if it is to be capable of taking on the particular types of meanings associated with "green space."

Based on the current research, these seem to be the additional attributes defining the prototype, summarized here from the broader discussion of the previous section:

1. **The presence of plants**. At least one botanical reference was included in nearly every conversation about valued outdoor places. One may consider this the source of the "green" part of the term "green space"—however, as will be seen in Chapter 5, this is not an unproblematic label—and, as with other prototypic attributes—it need not always be present.
2. **Space.** The use of this word in the label "green space" is not simply a placeholder. Good green spaces hold a sense of openness. They have views, or at least, sufficient room to allow those who visit them not to feel enclosed.
3. **Urbanness.** In Nashville, the concept of green space does not appear to apply to more rural settings. The meanings assigned to places such as Radnor State Park had little overlap with those assigned to green space. Likewise, the generally rural settings in the Williamson County portion of the watershed were also not placed in this category.
4. **Embeddedness or Connection.** The green space is assumed to be bordered by things that matter to its quality and status.
5. **Sharedness.** More than one person or family may be perceived as having some sort of claim or right to access these places.

In Mill Creek watershed, all parks may be considered as green space, though some are better examples than others, in keeping with the idea that some categories may be understood in terms of ideal cases (Lakoff 1987). Antioch Park is closer to an ideal green space than many entities in the watershed, even if it would fall short in comparison to some of the larger parks in other parts of the city; few would be likely to argue that it lacks any of the attributes listed above, and it has a balance to its space and connectedness that brings it closer to the ideal. That is, the park contains not only the minimum requirement of space, but a sufficient level of this attribute that the cityscape is not always seen from its interior, even though it is directly bordered by important neighborhood entities (schools and a community center). It also contains sufficient levels of the landscape attributes identified by the Kaplans within its borders; there are paved paths, open mowed areas, a creek, trees, and a playground. The nearby Ezell Park, on the other hand, contains all of these attributes except for the playground but falls short in terms of "embeddedness." By both observation and report, this park is certainly less used by residents, and while it matches closely enough to the prototype to be categorized as green space, it is a lesser example of it. Back yards, on the other hand, are not green space at all, though they are valued

natural areas which may well be assessed in terms of complexity, coherence, legibility, and mystery. Front yards, however, are more ambiguous. When enough pleasant green yards containing well-maintained houses are arranged along pleasant streets, most of the attributes above are at least marginally present. The street is public and shared, and the yards become part of a shared view, even if they may not be physically accessed with impunity. Further, even if physical access is bound by various rules, auditory and visual access are not. Interacting from the street with a person in the front yard may be acceptable. Admiring the pleasant aesthetic effect may be too; in fact, it may be encouraged, and becomes a form of sharing an otherwise private space. Thus, while no individual yard has any claim to the categorization of green space, large tracts of green yards arranged in a coherent way along a street may form a peripheral example in terms of the cognitive image of nature in the city.

These attributes, it seems, when gathered together, allow for the categorization of a certain type of place that can gather a certain set of meanings. These will be explored further momentarily, but it is first necessary to consider another prototype effect relevant to this research.

Prototypic Neighborhoods and Senses of Place

The term "neighborhood," while far more established than "green space," is nevertheless problematic to define. In fact, at least one researcher has resorted to an echo of the famous Supreme Court opinion, writing that neighborhood is "a term that is hard to define precisely, but everyone knows it when they see it" (Galster 2001). This assertion is challenged by other researchers who argue that we do *not* know neighborhoods when we see them, but rather construct them as needed, based on common ideals of what neighborhoods should be (Martin 2003). Even if constructed for social, or, as Martin asserts can happen, research reasons, however, residents recognize the presence of something they call a neighborhood, which leaves us again with the need to define what it is they recognize or attempt to build. One definition states that "the criterion for a neighborhood is the acknowledgement by residents, merchants, and regular users of an area that a locality exists. It presumes some agreement on

boundaries and a shared recognition of distinguishing characteristics of the setting (Rivlin 1987): 2). It also presumes a name, and the associated idea that the act of naming is an indicator of resident attachment (Tylor, et al. 1984).

The concept of neighborhood also contains a longitudinal component (Rivlin 1987); neighborhood values, identity, and relationships develop over time, and that change results in conceptualizations both of shared history and shared future. Even if residential composition changes, there is an assumption that the issues seen as salient today build upon a past status, and will inform, in a linear fashion, the way in which the people living on that patch of land define the issues important to them in the future. Just as the neighborhood of today is embedded in a longer frame of time, so it is embedded in some larger community; the neighborhood is a part of the city, and in some regards, it modifies the ways in which residents interact with the larger life of the city. As with the green space, the entities that border the neighborhood help to define it (Hunter 1979). Another researcher, writing more recently, defines neighborhoods as "locations where human activity is centered upon social reproduction . . . [they] derive their meaning or salience from individual and group values and attachments, which develop through daily life habits and interactions" (Martin 2003).

These definitions and commentaries suggest the presence of more complex categorizations than the concept of "neighborhood" may usually be given credit for inspiring. The difficulty with which a fast definition can be assigned suggests that, like "green space," "neighborhood" may be defined prototypically. From the literature and from the current research, there initially seem to be six attributes associated with this prototype, several of which will look familiar from the previous section:

1) **Agreed upon geography.** A shared geography is acknowledged by residents.
2) **Temporality.** This shared geography is something that can be talked about temporally; it has a history and is expected to have a future as a coherent entity.
3) **Namedness.** The geographic location has an agreed-upon name.

4) **Shared identity.** There is a sense that some character qualities, values, or problems are shared among members who are part of the neighborhood.
5) **Embeddedness and connection.** There is a sense that the small geographic area is a subunit of and connection to a larger urban area. In Nashville, this attribute is particularly relevant due to Metro's strategy of interacting with residents via neighborhood associations; however, this attribute remains apparent even without such formal enshrinement.
6) **The presence of informal activity.** There is an assumption that the shared geographic area is a location for "everyday life" and "everyday interactions." This implies a certain degree of informality; many aspects of life in the neighborhood are unscheduled and unplanned, in contrast to, for example, the typical modes of interaction in a downtown business district.

Consistent with general prototype theory, there is some "wiggle room" in these attributes. The borders of the geographic location may be fuzzy, with some segments that not all residents agree are part of the neighborhood. The issues that are seen as being shared may be fuzzy as well; what seems most likely is that a constellation of binding issues will be present in the community, and that various residents will be more or less concerned with each of these due to factors *not* tied to their residency in that geographic location. And, of course, it is possible, if not common, for a geographic location to share all of the above attributes except for that of having a name.

While this proposed prototype is useful, it seems somewhat incomplete in terms of the research in Nashville. I did not set out to study neighborhood in this research, but when I began interviewing residents about their experiences with urban green space, I found that, planned, or not, I was spending a lot of time talking about it. Over the course of the research it became clear to me that a seventh attribute to the prototype of neighborhood exists: The neighborhood is inherently an outdoor entity. Spatially, it is a matrix of spaces between places, and the interiors of the buildings it contains have little presence as neighborhood entities if the spaces between them are not relevant to residents' lives. This seems to be connected to the idea that neighborhood is a place of informal everyday life and interaction. Spaces enclosed by walls are usually more defined, predictable, and formal. For example, if a resident invites a friend to his home, he will have control over who he sees there; this is a private

interaction, not an interaction in the neighborhood. If a resident goes to the neighborhood church, she will be visiting a place in which it is assumed certain people will be seen and certain views will be shared within a given time period and format. Going to a store, restaurant, or library usually allows the visitor to enter these domains intent upon specific goals, with no expectation of engaging in human interactions beyond those that are transactional in nature (of course, there are always corner stores, vibrant cafes, and community-centered libraries where this is not true all of the time; however, they are not the unmarked versions of these entities). It is when this outdoor aspect of neighborhood is accepted as part of the prototype along with the other attributes that connections to the idea of green space become apparent. Certainly informal, unscheduled interaction may happen on street corners and store steps regardless of the presence of greenery; however, it became apparent in the research that residents saw such interactions as more desirable and less risky in the context of places that fit the "green space" prototype. Residents of neighborhoods that had such spaces consistently drew on them for purposes of strengthening or reaffirming neighborhood identity; neighborhoods with less developed senses of identity or with less access to green spaces attempted to increase community access to both of these prototypic entities in conjunction with one another.

These observations invite questions regarding cognition that go deeper than identification of categorizations and definitions, and that begin to explore more complex meanings related to experience. While it may be possible to consider a prototypic "green space experience," more complex schemas appear to mediate both this, and the connection of green space to the concept of neighborhood. The apparently widespread belief that a good green space fosters social cohesion is interesting; after all, this is a non-observable attribute that comes into being only by agreement. There is nothing in nature—nothing that could be represented in a picture of the landscape alone—that can form the basis for the assignment of this attribute. And yet this meaning of green space was readily drawn upon by native-born Americans, who overtly sought to use neighborhood green spaces to

strengthen shared identity in the face of change. What's more, the invitation to use green spaces to foster cross-group social cohesion in this way was readily accepted by immigrants from a variety of cultures, who also described ways of attaching similar meanings relating to social coherence to such spots *within* their communities.

Why was this so commonly the case? I would argue the reasons are tied not so much to what green space is, as to what it is *not.* It is *not* an enclosed, built entity in which meanings are dictated by pictures on the wall, locked and unlocked doors constraining flow, windows constraining view, general enclosure, and strong presence of one culture or group's defining symbols. At least in Mill Creek Watershed, most parks have relatively minimal landscaping beyond that which is functional rather than deeply meaningful; that is, they are not particularly strong representations of the western pastoral landscape. (Fortunately, Centennial Park with its extensive gardens and complete replica of the Parthenon falls well outside the boundaries of the Watershed!) If these attributes of what near-ideal green spaces are *not* are accepted, we can begin to ask what this means, and how this relates to neighborhood tendencies to use or create green space in the face of challenges. There are several things to consider here. Lave has emphasized that, in the analysis of everyday activity, it is important to examine actions in relation to their contexts, and further, to examine the contexts of those contexts. Thus, an examination of meaning of green space involves examination of the actions that occur in green space as well as a larger constellation of expectations associated with that setting—which includes, it must be remembered, the entities that border it (Lave 1988). Understanding of these meanings may best be achieved through the medium of schema theory. At a basic level, schema may be defined as "networks of strongly connected cognitive elements that represent the generic concepts stored in memory" (Strauss and Quinn 1997), or, in the case of more complex schema organized into cultural models, "presupposed, taken-for-granted models of the world that are widely shared (although not necessarily to the exclusion of other, alternative models) by the members of a society and that play an

enormous role in their understanding of the world and their behavior in it" (Holland and Quinn 1987). These schema may generate meanings which are sensitive to context and dependent both on individual life experiences and cultural norms (Strauss and Quinn 1997). In the neighborhood-green space conceptualization, it would appear that some schema is at work that builds upon the connectivity and sharedness inherent in both of these concepts to allow for a range of meanings and acceptable behaviors to become associated with neighborhood green space.

It is interesting to consider how the two concepts come to be connected cognitively. Green space may not be a metaphor for neighborhood, but it does seem to be able to function as a kind of metonym for it when the occasion requires. This does not occur linguistically—that is, no one would make a statement about Coleman Park and imply that this really referred to Flatrock, Mill Creek Watershed, or Nashville. However, metonymic tendencies exist cognitively and behaviorally; there is an idea that the neighborhood—its shared attributes, its relationship to the wider city, its history and problems—can be concentrated in a shared neighborhood space that allows neighborhood to be enacted in ways that, typically, it is not in the supermarket or library. If front yards along a shared public road are well manicured, or if gardens are planted at community entrances, that comes to mean not that the green space is well cared for, but that the *neighborhood* is well cared for and by extension contains people who care for their shared community. There is already a social dimension to this; green space is cared for by humans, and that care implies something about the humans involved as well as their community. However, perhaps more profound is the way in which direct human interactions in the green space may be assumed to represent—or build—bonds that can be transferred to the identity of the neighborhood at large. Schank and Abelson have described the concept of the script as a type of schema that is a "predetermined, stereotyped sequence of actions that defines a well-known situation(Schank and Abelson 1977) which can be reconstructed and drawn upon as it is needed to interpret experience (Schank 1980). In general, the building interiors of neighborhoods come each with their own scripts,

constituted as required depending on the nature of the building and the identities of the people involved. Going to the store, usually, follows a script in which the person arrives at the building, enters, locates and picks up necessary items, proceeds to the cash register, is greeted by the cashier, told how much to pay, pays, takes the merchandise, and leaves. With occasional exceptions, one does not make innocuous conversational forays with others in the aisles. One does not sing, practice skate boarding moves, play traditional instruments as part of cultural rituals, or walk on stilts (all things I observed at one time or another in the watershed's green spaces). Even at community-centric indoor places, fairly constraining scripts are involved; even the most inclusive meeting held at the most inclusive of community centers is still a meeting. Participants will arrange themselves in scripted configurations when they sit, and will speak according to specific rules, and in line with specific topics. The level of welcoming displayed by the host is beside the point in this case; in fact, Chapter 5 will examine the idea that the formal rules of these meeting scripts are particularly difficult to engage with when new to a culture. The green space, however, is a form of shared neighborhood space that is relatively unburdened with scripts of this kind; it is a space that allows for more freedom of activity, and for trying out modes of human to human connection in a situation that is relatively low risk. To native-born Americans, shared belief in this attribute seems to lead to the formulation of overt plans to take advantage of it to strengthen challenged community identity. Whether this particular use of the meanings associated with green space fits a schema employed across cultures is open to exploration—however it seems that at the very least, there is a cross-cultural sense that scripts are loosened in the types of outdoor public area which, here, tend to be given the label of green space. This is far from saying that "anything goes" in these spaces—but the combination of the fact that urban green spaces are less dominated by the symbols of any one group and the fact that they provide space for easy, casual retreat from interaction should it become required creates a perception that a wider range of activity and interaction is acceptable. This is also far from saying that no confusion on acceptable

behavior is ever likely to occur; later chapters of this dissertation will describe instances in which confusion does happen. However, the attributes of green space are such that they allow those who encounter each other within to feel that they share something. They share, at that moment, the space and the neighborhood, and may engage in informal greetings on the basis of sharing these things in common. One researcher studying neighborhood has proposed that "the degree to which people identify with neighbors and become involved in local collective activities . . . may depend on [a] linkage of identification between the individual and collective levels" (Hunter 1987). Given the activities people choose to undertake in relation to green spaces, it is worth considering whether these places have some ability to intensify this linkage under the right circumstances. For the Nashville residents who participated in the research presented here, small natural areas were almost always important places *not* because of the ways they stood apart, but because of the ways they were *connected*—to the places around them, to local businesses, to human action, and to human memory. In some respects, as already described, this attribute of connection actually facilitates the ability of urban green space to serve as a "place away" simply by making it easier to *get* away without a great deal of time or trouble. However, the proximity and connectedness of the better-used of these places has another effect; it makes them "part of the neighborhood." These green spaces, formal and informal, become places in which residents reaffirm their identity as members of a community. They are places to gather, claim, and beautify in affirmation of a shared sense of place.

One important question may arise in a discussion like the one above: Does it matter that the places in question are green, or would any outdoor public space that allowed for large gatherings and informal interaction serve the same purpose? This was impossible to directly study as part of this research simply due to the fact that no outdoor public gathering areas without at least some natural elements were present for comparison in the watershed. This may partly be a result of having a city government that overtly works to acquire open space and repurpose it under the label of "green space," connected

by “green ways” and, increasingly, by “blue way” systems within the urban waterways. The green space label is consistently applied to a variety of settings, some of which are very green, and others of which are comprised of small patches of park or the addition of trees to line an otherwise “brown” street. Certainly gathering and interacting may occur along such a street in the absence of trees or any other vegetation. However, consistently in the course of this research, watershed residents said that the presence of plants made their walks relaxing, made the air feel cleaner to them, gave their children things to learn about, and made them feel that the risk of crime was lower. Several elements may be in play here. One may be that the addition of plants is one of the easiest, least expensive ways to make an urban area look “cared for,” and that this attribute of appearing to be valued would be just as much of a reassurance about community quality and safety if it took some other form. Additionally, the Nashville focus on “greenways” throughout the city may make it easier for people to view greener areas as being particularly connected to a larger idea of home and community in Nashville. Based on my experience here, it seems likely that the relationship of natural elements to open space in terms of human benefit is akin to that found in Pretty et al’s (2007) concept of “green exercise,” in which a synergy between “green space” benefits and exercise benefits is postulated (Pretty, et al. 2007). The values attached to open public space and to natural areas in the city are not necessarily identical, but when they occur together (as they usually do in Nashville), benefits may be drawn from both the public and the green aspects of the spaces. In the coming chapters of this dissertation, some sections will focus prominently on aspects of what I am calling “green space” that do not depend upon the presence of any natural elements, and some accounts of research participant beliefs and actions in regards to such places will not mention natural elements at all. However, it should be remembered that, even if the organization of the dissertation divides a participant’s comments about social cohesion from other comments regarding the benefits of natural elements in cities, virtually all respondents directly observed some benefit to open outdoor areas that *was* tied directly the presence of some component of nature.

"Green" elements increased the value that residents assigned to public spaces, and if Tuan's 1977 definition of "sense of place" as space "endow[ed] with value" (Tuan 1977) is accurate, their presence may augment the very ability to form strong place attachments. For residents, "Mill Creek Watershed" was little known as a place in the city, but the parks that clustered along the banks of Mill Creek were sites of importance, and the green yards and trees that watershed professionals would have seen as protecting the watershed tended to be viewed instead as protecting—or at least proclaiming—neighborhood identity and character.

Professional Seeing and the "Image of the Watershed"

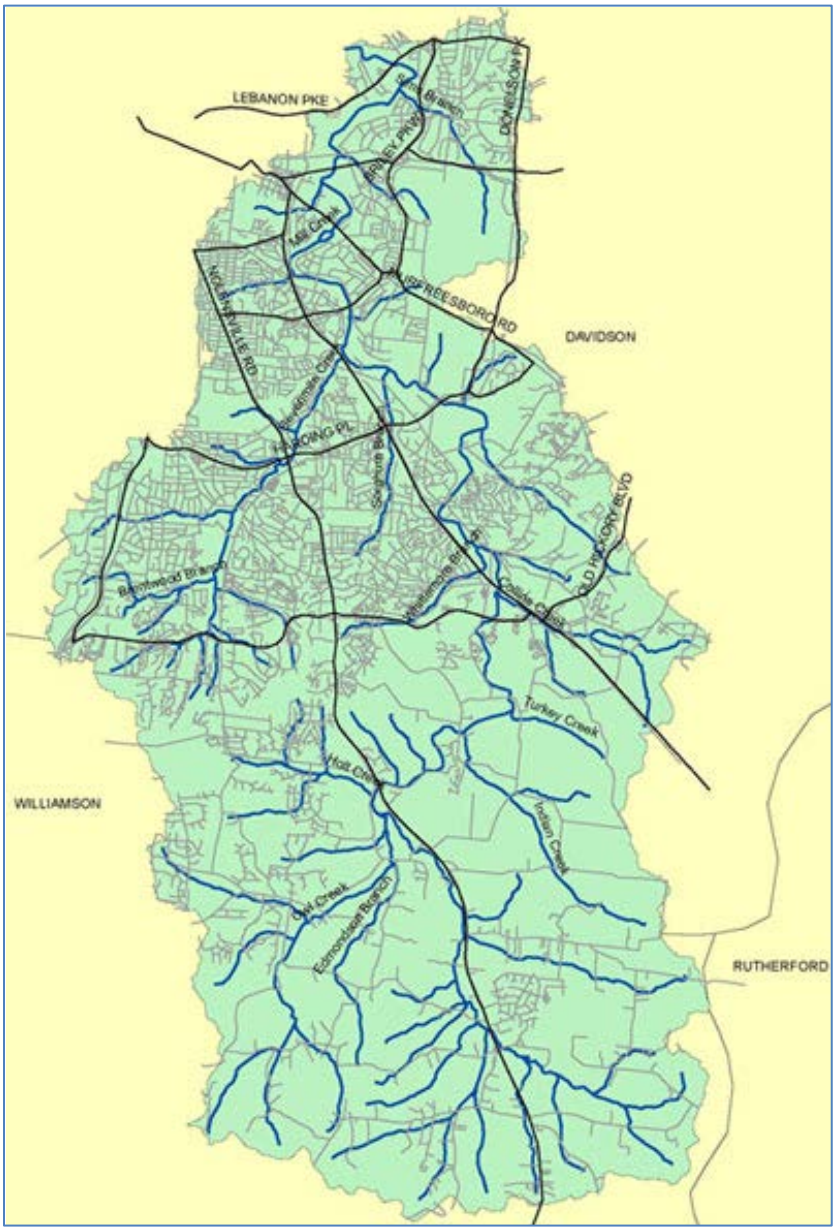
What of the watershed as a place perceived by environmental professionals? Do they see Mill Creek Watershed the same way as those who live in it? The most important part of the answer may be inherent in the question; in this study, the members of the Task Force and associates of the Non-Profit were the only ones who saw the watershed as a discrete "space endowed with value" at all. They were the only ones for whom it was a named entity, and while they were certainly aware of the fact that any concept of the watershed must be embedded within larger ideas of community and sociocultural identity, they were simultaneously able to view the watershed as an entity embedded in something else altogether. They easily saw the watershed as part of a more global environmental worldview, in which the health of the Mill Creek Watershed was linked to that of the Cumberland River, to the ecology of Middle Tennessee, and ultimately to the climate of the planet earth. The goal of the Task Force, then, was to help residents "see" the watershed, first as a place of relevance to life in Nashville, and subsequently as a place that was embedded in a larger ecological landscape. A precursor to meeting either of these goals, of course, was that residents become aware of the Mill Creek Watershed as a named place at all. To this end, the Task Force worked to create a watershed map that would facilitate communication in the community, and an examination of this process is useful to understanding the

"environmentally embedded" worldview that so easily served as the prominent "layer" of the map of place carried by environmental professionals.

The map construction was an ongoing endeavor, and when I attended my first Task Force meeting in September of 2010, its current incarnation was projected on the wall for review and brainstorming on ways to improve it. All agreed that the map was visually attractive, with the outline of the watershed superimposed on a colored satellite image. Various landmarks had been added to "ground" the image, chosen by representatives of the government groups who had created the map using GIS technology. Lakes and streams, not surprisingly, given the map's topic, were represented by blue lines, and were easy to pick out. A few major road arteries were labeled, to make it easier to see the area the map was referencing. Metro greenways were also evident, drawn on with colored lines. Parks were similarly highlighted, and the Nashville Zoo and the Ellington Agricultural Center (to be discussed more later) were clearly labeled. During subsequent brainstorming, a few extra road names were proposed for addition, based on the knowledge of participants who worked in the watershed regarding which roads were frequently used. Someone else suggested that it might be helpful to label the airport, due to the fact that when unlabeled, it created a bit of a mystery space on the map, which could confuse readers. No other landmarks were included or initially suggested. Several weeks later, though, after several interviews had been held with previously uncontacted community members, the idea of adding other landmarks was proposed, with acknowledgement that the maps were for outreach to people who might not already use the greenways and parks, not just people like those attending the meeting who used them, thought about them and tracked additions to them all of the time. However, sometime between this discussion and the launch of the Watershed Association Website on which the map was to appear, not only were additions not made; all "human factors" were removed, until the map consisted of nothing but a border with county names and a web of streams, creeks, and roads, a few of which were

labeled. Labeled parks and greenways were now absent, and even some water features, such as ponds and lakes, were notably missing from the map, which is pictured on the next page.

Figure 2. Mill Creek Watershed Map: Task Force Version



(Mill Creek Task Force 2010)

This was never intended to be a final, heavily distributed outreach map, but was rather a placeholder on an as yet unadvertised website. Had the initiative continued, it would certainly have been augmented in a variety of ways. It is illustrative, though, that for environmental professionals, this map had meaning enough to be viewed as an adequate placeholder on a live but unfinished web page. This is a map in which the presence of waterways within the watershed boundaries is included almost to the exclusion

either of any representation of community embeddedness within the watershed or of any connection of the watershed to a larger ecology. It is a shape floating in space; even the labeled counties have borders that are obscured by the watershed shape, so that seeing the position of the watershed in the world of Nashville becomes difficult. By "clipping" the image at the border of the watershed, the other landmarks—including natural ones—that would help place it in the city are clipped away too. The wide looping band of the Cumberland River which is just north of the watershed is a potential orienting feature that is missing—to say nothing of the near impossibility of inferring place from the few labeled roads on the map. (Streams are labeled much more frequently, although they held less meaning to the residents of the watershed). The map, when compared to the preliminary descriptions of the meanings that residents attached to the places that were present, but not named within it, underlines a fundamental difference between the way that the professionals viewed this place and the way that residents saw it. It is notable that residents often spoke of environmental issues as if they were placeless—or at least, as if they were not localized. Environmental improvement happened to "the earth," and was situated as external to the life of the city. In looking at the above map, it is striking to see how clearly it perpetuates this de-localized view. Importantly, the professionals who served on the Task Force did *not* hold such a disassociated view; they saw environmental issues as being fundamentally local and tied to communities. The difficulty, perhaps, was the ease with which they could see the connection. To those who already think of the city partially in terms of its environmental attributes, the presence of the rest of the city—its neighborhoods, landmarks, and amenities—may simply "go without saying." This map, though undetailed, is full of information to professionals; even the limited inclusion of stream and street distribution provides information on water drainage, and on likely "problem areas" that could become rich topics for discussion and action. To those who have not habituated themselves to thinking in these terms, though, such a view as the one presented on this map

can only perpetuate the idea that environmental action is located elsewhere, external to neighborhoods, lives, and "spaces imbued with value" (Tuan 1977).

Authors writing more recently than Tuan have continued to explore the "sense of place" concept in a variety of contexts, some of which may hint at ways to align environmental and community-centric views of place in actionable ways. One set of researchers describes sense of place as "the collection of meanings, beliefs, symbols, values, and feelings that individuals or groups associate with a particular locality (Williams and Stewart 1998). This sounds rather fuzzy and difficult to concretely grasp—and yet studies in neuroscience have begun to find evidence that response to place is built into the biology of brain (Lengen and Kistemann 2012). The meanings, beliefs, and values assigned to a place are influenced by cultural and experiential mediators, but the basic act of assigning these place meanings is something we seem to do as humans. This raises questions about the types of spaces that take on this dimension of place. Natural areas—both urban and wilderness—have often been the focus of explorations of this concept, and some have proposed that such areas particularly facilitate sense of place development due to their ability to fill human needs for comfortable exploration and information gathering that built places do not easily address (Kaplan and Kaplan 1989). In the course of the current research, it seemed clear that green space facilitated the development of sense of place. What was striking, though, was the fact that for residents, this sense most commonly attached not to the patch of land itself, but to the land as a component of the neighborhood that surrounded it. The things the green space "meant"—whatever those were—were transferable to the greater community in which it was embedded, and these meanings were sometimes overtly cultivated by community members in the conceptualization of green space activities with the intent of increasing community cohesion and place attachment. Given the nature of green space as being cognitively defined by connectedness to the city around it and by sharedness with those others who also inhabit this bordering zone, this is not surprising. These are places in which one does not leave everyday life behind, but rather affirms everyday life, either through

opportunities for social interaction in the shared space or through the mechanism of brief retreat to facilitate the return to the normal day.

This quirk of cognition has real implications for organizations who hope to engage a currently uninvolved community in a new environmental initiative. Williams and Stewart have suggested that if planners move beyond the "sense of place" idea as an ill-defined attitude or belief and acknowledge the social and historical processes which lead to the development, contestation, and negotiation of place meanings, that sense of place begins to look like a concept of ecosystem; place is created from space and endowed with particular meanings due to social processes that are dynamic and historically embedded. Like the neighborhood, the place in general must be considered in light of its past, present, and future. As the authors point out, the data-driven conceptualizations of environmental professionals also form part of a sense of place for this group; in Mill Creek Watershed, it is not valid to say that the non-professional residents held the "real" sense of place, while the professionals—residents of Nashville themselves, if from different communities—held "only" a scientific idea devoid of meaning. The issue was not the identification of the *real* place so much as understanding of the differing senses of place being proposed, and eventually identification of areas of overlap that could provide opportunity for growth. Williams and Stewart propose several ways in which such opportunities might be grasped. Knowing and using local place names is important, they assert, and affirms a level of respect for the ties that people already have with a place. It also simplifies references and makes discussions of management plans feel more familiar and relevant to residents. In Nashville, this is not to say that reference to Mill Creek Watershed cannot be made, but that it is important to acknowledge the watershed as containing the other named places community members feel attachment to. The authors also suggest that maps are "fundamentally social and human" (Williams and Stewart 1998), and that in community planning discussions, employing maps with layers of social and cultural meanings in addition to biophysical ones may be a useful tool for engaging interest. This idea will be revisited in the

concluding chapter of this dissertation. They also assert that the "politics of place" must be acknowledged when working with communities, and further that places that have taken on different meanings for different groups should be given special attention. The last of these might have been supposed to be very relevant in an area like Mill Creek Watershed, which is home to an extremely diverse population. For the most part, however, groups appeared to attach similar meanings to similar places; the issue was one not so much of contested meaning as of layered meaning—with the only really divergent "sense of place" articulated being that of the Task Force—the only entity that defined that particular configuration of land as a place at all. Of course, this is what the preceding recommendations were designed to address, and there is evidence that acknowledgement of residents' senses of place can bear fruit. Past research has shown that Cleveland residents with what was measured as strong "place identity" in relation to Metro parks were much more likely than other residents to express desires to learn about the area's natural history. Another study found that engaging residents in "place-based" activities could lead to greater increase in environmentally responsible behavior than could be achieved by provision of education alone (Vaske and Kobrin 2001). In essence, it may be said that development of sense of place prepares people to receive education—a useful insight for Mill Creek Watershed, especially given that the natural places in question here—the green spaces—take on meanings that extend outside of their borders and into the neighborhoods that surround them. The fuzzy-bordered nature of the resident cognitive map linking green space to neighborhood may be an indication that a combination of place-based experiences with community efforts and education could serve to create an additional "layer" to the internal map, in which green space and neighborhood were part of the watershed, and worthy of being cared for partially in relation to this.

This chapter has focused on proposing ideas about the way people think about green space and neighborhood in Nashville. One additional role that cognitive theory may serve is to provide guidance for understanding the ways in which findings from individuals of diverse cultures sharing one space

might be interpreted. This could be a thorny issue in this research. In some cases, research respondents were kind enough to inform me that their values reflected deep matters of cultural heritage. In other cases, several members of a common group might share opinions that were clearly circumstantial and experiential rather than cultural in origin; there is, for example, no cultural reason why Mexicans should fear fishing, but Chapter 5 will include a description of why such an activity might be a matter of shared concern in this particular community in Nashville for circumstantial reasons. More often, though, the role of culture in relation to value and behavior is more difficult to tease out. Members of the Task Force were at once members of a variety of cultures: environmental professional, native-born US citizen, southerner. Other native-born participants shared American culture with the environmental professionals, but they lacked exposure to the professional subculture. Commonly, though, they lived in neighborhoods that they perceived as being distinct enough to very nearly merit subculture distinctions of their own. Those who were immigrants straddled, with varying degrees of balance, their cultures of origin and cultures of residence—all overlain with the *experience* of being a relatively recent arrival to a culturally and linguistically divergent place. If a Somali man and a Mexican woman shared similar values on a particular point, how to know whether their original cultures shaped them separately, or whether they had adopted these values from American culture, or whether the general experience of being a new person in a new country had shaped the belief—or, of course, whether the matter was tied to something else altogether. Further, the communities that had received this influx of immigration were aware that the culture they had always felt they shared had changed, and were sometimes engaged in active attempts to redefine it—to identify values that were shared among different groups, and from there, to forge, if not a sense of shared culture, at least a shared identity and sense of place. These considerations are difficult to untangle, and this research will not be able to do so in all cases; in addition to the considerations listed above, the number of participants from each definable group was simply not large enough to draw strong conclusions in many instances. However, there is substantial

room for meaningful analysis and interpretation of results. D'Andrade has described the role of cognitive anthropology in the exploration of cultural consensus (or lack thereof) as well as the consideration of how "pieces" of culture are defined and relatable to one another (D'Andrade 1995). Schema are not necessarily fully cultural; as Strauss and Quinn observe, they are "cultural to the extent that [they are] the product of humanly mediated experiences" but also "cultural to the extent that [they are] not predetermined genetically" (Strauss and Quinn 1997). At what precise point a given schema should be considered cultural is, they write, "simply a matter of taste," depending on what level of sharedness is emphasized (Strauss and Quinn 1997). Looking at culture in this way allows for exploration of how cultural values are shared, and perhaps how "pieces" from a variety of cultural systems may influence each other in the development of, in this case, shared identity and a shared sense of values related to the accomplishment of work, regardless of whether the values that motivate participation are also shared. It allows for identification of a domain of overlap in categorizations of the "good" and the "worthwhile" across cultures, without in all cases being able to identify the difference between cultural, experiential, and psychological influence.

Concluding Thoughts

This chapter has explored the cognitive landscape surrounding the ideas presented in this research. It has examined the way people think about the wilderness and urban natural areas, and has considered what cognitively defines the ideas of "green space" and "neighborhood," building on these definitions to propose a schema of meaning in which these two concepts may be closely intertwined. It has explored the idea of "sense of place" and has considered ways in which this place sense for the watershed may differ between environmental professionals and community members. From here, this dissertation will build to explore the ways in which these ideas play out in the community, and the next three chapters will be dedicated to this endeavor. Before moving to this task, though, it is helpful to "step back" and consider the goals of the Task Force in relation to the creation of the watershed—that is, to consider the

nature of the goal to which the coming discussions of values, motivations, and barriers was directed. Heimlich outlines four prominent goals of environmental education programs: 1) Increasing individuals' positive activity directed towards some environmental stressor, 2) reducing individuals' activities that negatively affect the stressor, 3) engaging people to become involved in active efforts, such as conservation work or landscape remediation, and 4) supporting the work of the organizing entity (Heimlich 2010). All of these goals were relevant to the Mill Creek initiative, and all were dependent on first growing a local community of people who were motivated to be involved in organizational efforts; meeting this goal required the identification and recruitment of people to participate in meetings (where education would be received), events, and fundraising efforts. Regarding behavior change, it was hoped that education at meetings would lead community members to undertake simple actions to benefit the watershed, such as planting trees, planting rain gardens, and disposing of the oil from at-home oil changes appropriately. The inclusion of community-based "events" along these lines was discussed as a means to facilitate engagement; these events might have included stream cleanups or organized tree planting and rain garden planting days.

Ideally in such planning efforts, the engagement and behavior change goals are connected, so that as people become engaged with the environmental community, they will naturally make behavior changes when they learn that they can help the environment. Alternatively, it may be hoped that marginally engaged people who start making small behavioral changes when convenient may increasingly become attracted to the ideals of environmental conservation, and become more engaged in the environmental community. These were the goals associated with planning of the watershed association, and the exploration of values, motivations, and barriers in the community was initially directed at understanding how effective means of outreach and engagement might be developed. The next three chapters will explore this research.

CHAPTER 3

SOCIAL VALUES AND HUMAN MEANINGS: INTERPRETING THE PLACE OF URBAN NATURE

In the course of this research, it became clear that an understanding of likely motivators for participation in an as-yet nonexistent community watershed association relied on an understanding of the values attached to two different, but related concepts. The first of these is access to neighborhood green space, both in the form of designated parks and in the form of informal but pleasant places such as shaded, attractive streets, back yards, gardens, and river views. For many, these places are the cognitive "homes" of ideas about the environment and environmental improvement as related to urban Nashville; these are the places where one can see that "nature" is indeed present in the city, and that it has a connection to "everyday life" here. The second concept of importance is that of participation. It is important to understand the values attached to volunteerism, both in the sense of ongoing participation in general organizational efforts (such as PTA meetings and neighborhood associations) and in the sense of discrete active volunteer opportunities (such as neighborhood cleanups, tree-planting days, and soup kitchens). This chapter will explore the values associated with urban green space, while the next will examine the values associated with participation. However, it will become evident that it is not possible to wholly divide the issues in this research. For many, the values attached to green space were reflective of participation in human communities, in keeping with the cognitive schema outlined in Chapter 2. Indeed, it may be said that green spaces are inherently "participatory places" in the eyes of many residents, and so the division of focus between chapters, while necessary for organization, is to some extent artificial.

Values Relating to Health and Well-Being

The background sections in Chapter 1 detailed a number of health benefits that have been objectively associated with access to green space. Consequently, it is perhaps not surprising that the most common

benefit that research participants described as being associated with spending time in urban nature settings was that of improved health, including both physical health and mental well-being. Something relating to health was mentioned in every interview that lasted over ten minutes, and was very frequently the first thing mentioned by research participants who were describing their reasons for using outdoor public green space[3] (though it was not necessarily the value that participants spent the most time articulating). This section focuses on direct, health related benefits for which research participants expressed value. By nature, the description of perceived physical health benefits is less "story-oriented" than some of the other benefits that were frequently mentioned by participants. It also appears to be more individualistic, in the sense that the physical health benefits described were likely to relate to individual goals. In subsequent sections of this chapter, it will become clear that Nashville's green spaces have strong community-oriented meanings for many, and in regards to health, research participants certainly talked about how they valued walking and bicycling with their families. However, while these respondents may have been happy that their children were developing healthy habits, the primary focus of their activities in that regard was really on spending time together, and on the fostering of children's learning, exploration, and growing independence. In contrast, when respondents used "health words" in their speech, they were more focused on people as individuals, whether they were telling of their own habits or describing things that they thought would be important for other people. These "health words" might include terms such as "nutrition," "diabetes," "exercise," "depression," and "stress," along with any words relating to weight. These same respondents often expressed other, more community-oriented values in association with green space, but during the portions of interviews in which "health words" were prominent, mentions of these concepts were more rare, though not

[3] Public, semi-public, and private outdoor green spaces will all be considered in this dissertation, throughout which any reference to "parks" will refer to public parks unless otherwise noted. Many of the distinctions between such places are outside the scope of this research, but it is important to note that *public* space is of particular importance, for reasons that go beyond the attribute of "sharedness" described in Chapter 2. Uneven distribution of public parks results in both unequal access to the benefits of green space and unequal access to the rights that are protected in public places.

necessarily absent; when they appeared, they were nearly always tied to mental health or general well-being benefits, and they served as conversational transitions from the individualized domain of health benefits to the more collective domains of neighborhood, community, and memory. Perhaps the best way to look at the place of health in relation to outdoor spaces in the community is to examine some direct quotations gathered from respondents:

"*Isn't Nashville one of America's fattest cities? It can't help that a lot of neighborhoods don't have anywhere to go and be outside doing things . . . I like to walk at Coleman, and that is one of the reasons I moved [to that neighborhood]. . . but still, it's so small and you can see the traffic going by the whole time you're there. There still aren't places to go that let you feel you're getting away from your normal life in the city."*
-A middle-aged Somali-born man, currently professionally established in Nashville

"*Green space is so important . . . it helps everyone with stress."*—A young, American-born woman

"People here feel strongly that [picking their own fruits and vegetables] is healthier. . . When I did a survey, I was surprised to find that having access to healthy food, and other healthy things like exercise were at the very top of community concerns" —a Latino leader of a social services group with mostly Latino members

"I don't like to drive everywhere. I leave my car somewhere and I ride my bike. Walking is good too, but I like biking more . . . It's good exercise, especially for these . . . my old legs! . . . sometimes you just need to breath outside, the healthy air."
-A Somali-born male senior citizen who has been in the United States for 10 years

"I do go outside often. It is important for exercise, and to breath the good air, the better air than inside. I go outside and walk around. . . If you are inside, and you are confused about something . . . or . . . you are . . . bored . . . it helps to go outside, walk around. You get the air, you get the exercise."
--A middle-aged Somali woman who has been in the United States for about 7 years

"I would like to bike to work, get the exercise benefits" (said while indicating his weight, which was not particularly excessive).
–A man with a leadership role in the Latino immigrant community

"*I think better outside. . . every day, after awhile looking at the [computer] screen I need to come out and take a break out here."* But also "*In Somalia, you could go to most streams and take a hand of water and drink it, and you didn't have to worry about pollution. I know that doing that here would be likely to make a person sick, but it still seems strange to me."*
--A middle-aged man from Somalia who is now professionally established in Nashville

"We got the garden started up with a grant from Vanderbilt because this area is a food desert, where it's hard to get produce . . . we hosted an event on nutrition and produce at the community center . . . and [people] were very very hungry for the information."
–middle aged man born in the United States

"It really calms me down. And I like to eat, so I need to exercise (laugh)"
—middle aged woman born in the United States.

"Having trees around helps people not feel depressed, I think, and to get out in the community more and exercise more."
-A Kurdish woman, secretary at one of Nashville's Kurdish centers

"Well, I need to lose some weight, and I got diagnosed with diabetes, but am trying to exercise and change my diet so I can control it without medicine. I always walked, but now I do more; people are learning it's really good for you. If I can't get anywhere else, I just walk around and around in my cul-de-sac; it's still better than being in[doors] on a treadmill. . . my grandmother lived to be 98, and she continued to do everything for herself, all of her yard work almost all the time, and I know that's why she was so healthy. My parents, too, weren't active before, but now they walk all of the time; my step-mother's had some strokes, and sometimes her mind was better than others, but now she's pretty good; I really believe it's the walking that's helping that."
-An African-American woman, around 60 years of age

The perceived connection of good outdoor space to health was strong in all groups; American-born, Latino, Somali, and Kurdish residents all spontaneously described health benefits as primary reasons to value public green space, and leaders of immigrant community groups reported consistently that health was one of the most important topics for the people they served. Women, especially, I was told, sometimes took longer to get drivers licenses or vehicle access, and having access to good, safe green spaces very near homes was cited as being of particular importance to mental and physical health in such situations. Exercise and mental health or stress reduction benefits were mentioned directly about equally often, and usually if a person mentioned one of these benefit types, they would soon follow up with mention of the other one. There were other participants who, without directly stating that being outside reduced stress or helped them think (that is, without making statements about how the experience affected mental state), still commented on the peace of being outside, with implications that it improved their sense of well-being. One of the few people I ever encountered at Ezell Road Park was there almost every time I visited at lunchtime, sitting on a bench and reading a book. He said it was a better way to spend his lunch hour than anything else he could think of, and that it was always relaxing. Even more striking were a set of interactions I had mere days after the flood, in which residents of badly

affected communities expressed their love of the peace and relaxation opportunities available near the creek behind their neighborhood. That creek had just destroyed their homes, and yet it was still seen as a site of mental replenishment. In the city, the presence of urban green space serves an important role; it allows people a chance—briefly—to get away. Hammitt distinguishes between the concepts of "getting away to" and "getting away from," finding that urban residents in his own study area were more likely to be motivated by the idea of "getting away to" (Hammitt 2000) urban natural areas. The park remains part of the city, but it is a part with a different atmosphere, in which, for a few minutes, a person can relax, refocus thoughts, or think more effectively. For those who expressed values for "getting away" to urban parks in Nashville, the same seemed to be true; respondents here used the green space accessible to them to achieve a certain type of moment within the day, not to leave the day behind. They enjoyed the time to relax mentally, and physically to breathe what several described as better air—a value of urban parks cited in other studies as well (Krenichyn 2006; McCormack, et al. 2010). Following these interludes, they returned to their computers, their offices, and their work sorting through flood debris. Similarly, those who used the parks for exercise valued the embeddedness of the park in the city. They did not *want* it to be a place "away from," nor did they want it to lose all of the markers of its urbanness. Research on Chicago's Lincoln Park found that park users across four ethnicities ranked opportunities to exercise and socialize highly among their reasons for valuing of the park, but that they ranked the fact that the park allowed them to undertake these activities with minimal planning and time commitment even higher (Tinsley, et al. 2002). In Nashville, this idea was common as well. As one participant noted, it is not possible to work out at a gym or walk on a rugged trail for half an hour on a lunch break and then go back to work. On a paved trail, it is possible to remain in professional dress for a short, brisk walk, and even shoes only need be moderately supportive. The lunch hour walk becomes feasible with minimum effort, and without the need to spend time changing; further, the walk can take place in the best of projected worlds—a green relaxing view made more

legible, coherent, and predictable by the addition of pavement and facilities. Some researchers believe that outdoor exercise may be synergistically combined with mental health benefits over and above those associated with exercise in isolation (Hartig 2008; Pretty, et al. 2007), and this belief was apparently held at some level by many in Nashville. A visit to Antioch Park at lunch hour often revealed many people in business-casual dress sitting sideways in their cars while changing shoes.

There is a robust body of work, summarized in Chapter 1, that attempts to quantify the health benefits of proximity to green space, and other studies have shown that these attributes of parks are valued by lay people (Kyle, et al. 2004; Tinsley, et al. 2002). (Importantly, less research has been devoted to health meanings attached to less formal green spaces such as pleasant roads). One study of Metropark use in Cleveland, Ohio found that resident perception of their dependence on the parks was statistically associated with valuation of the parks for health reasons; that is, park users apparently believed that some health-related attributes of the park were unique *to* the parks, and could not be realized by exercising at different locations. This research did not explore these findings further, and they could be a result either of economic constraints or some sense of place that caused residents to more greatly value exercising and relaxing there than in other places—but in either case, the suggestion that green space may offer health opportunities not perceived to be present elsewhere in the environment is interesting (Kyle, et al. 2004). Given this finding, it was particularly intriguing that in one of the few studies examining immigrant valuation of urban semi-natural areas, the authors specifically noted that no participants (all from African or Middle Eastern countries) articulated health or exercise-related reasons for enjoyment of these spaces. Except for a passing reference to acculturated Mexican-Americans valuing exercise benefits at levels equal to native-born citizens (Gramann, et al. 1993), I encountered no other studies that noted either a presence or absence of this motivation among any immigrant

community in the literature[4]. The findings of the single study that did conduct deep exploration of immigrant values of green space were surprising given that health-related values were very commonly expressed by immigrants from African, Middle Eastern, and Central and South American countries in my own research. In a more general sense, "health," either connected or not connected to green space access, was a major theme in conversations with immigrant and refugee residents of southeastern Nashville. At least one study has shown that Latinos who live in "new-growth communities"—that is, communities that have become major destinations for Latinos only recently—face greater barriers in gaining access to health care when compared to Latinos living in major centers with longstanding populations (Cunningham, et al. 2006). While my own research indicates that members of many immigrant and refugee communities may place a high value on opportunities to improve health, the only Nashville-based research reported in the literature focuses on the Latino community. This study found that members of the Latino community in Nashville were "quite concerned" about health, averaging a response of 7.0 on a scale of 1 to 10 in ranking the importance of this issue. Two of the three most commonly named health concerns in the study were concerns that have been cited as having lower prevalences or better outcomes in the presence of accessible urban green space: obesity and diabetes (the third was dental health) (Hull, et al. 2010). These general findings from earlier studies combined with the strong orientation to health concepts exhibited by participants in my own research indicate that health benefits are major motivators for valuation of green space in Nashville—both for immigrant and non-immigrant members of the community.

One other point should be brought up in relation to the prominence of "health" as a theme in discussions of green space across groups in Nashville. In the introductory section of Chapter 1, there was

[44] Some studies did explore race in relation to these motivators, and references to application of translated surveys indicate that immigrants were involved; however, since groups were categorized by race, "Asian" might refer both to immigrants from a variety of cultures and to people whose families have been in the United States for multiple generations (Tinsley, et al. 2002)
.

a discussion of outreach language used as motivation for participating in a tree giveaway. Recall that for the event, there had been an attempt to tap into generally self-interested motivations when emphasizing tax credits and energy savings, but these messages failed to resonate with the community. The current research suggests that if there is a directly self-interest driven, pragmatic motivator attached to valuation of green space in Mill Creek Watershed, it is the potential for health benefits rather than minor economic benefits. Understanding of this value might be of importance in future messaging aimed at recruiting participants to a community-based environmental effort. Indeed, in this regard, the interests of the community and the Non-Profit may align very naturally. It must be emphasized that the economic messaging adopted for this outreach was atypical of the Non-Profit, and was an attempt to mold a message that might resonate more strongly with a previously unengaged group. In general, the outreach efforts of the Non-Profit when intended for the general public are ecology based, though they often include a brief nod to the concept of "healthy communities." Economic incentives and reassurances are common in the group's outreach aimed at businesses, however, and in this case, an assumption that members of lower socio-economic brackets might, like businesses, be motivated by the bottom line resulted in a message with little draw. Instead, the words and, in other contexts, the actions, of residents indicated that the "healthy community" is an important mobilizing idea that cuts across social, cultural, and economic groups in the watershed; there was support for efforts that could make neighborhoods into places that promoted healthy activities for those who lived in them. It might, perhaps, have been difficult to tie the tree-giveaway event in the form it eventually took to the concept of health improvement. However, in the planning phases of this project, many members of the community articulated ways in which a tree giveaway *could* be framed as health-building; there was the idea of planting fruit trees, and of appreciating the labor benefits of an extensive day-long planting effort. There were suggestions for planting the trees to enhance streets that were already prominent sites of resident recreation—and always, there was the related idea of improving the

health of the community itself. This idea of the healthy community, to which residents so consistently and naturally transitioned after speaking of discrete benefits to physical health, will be the primary topic explored for the remainder of this chapter.

Green Space and Community: An Introduction

Human thought and action require constant acts aimed at making sense of one's surroundings and categorizing them into manageable units of meaning. As already described, the Kaplans have dedicated a heavy volume of research to understanding how people's preferential categorizations of natural places are made, and work in cognitive anthropology has examined the process of categorization in a variety of ways as well. In assessment of a place, categorization must involve an assessment of whether the location is clean or dirty, safe or unsafe, pretty or unsightly, convenient, or impossibly inaccessible, interesting or boring, along with conducting a rapid analysis of what activities are appropriate and possible in the location. All humans will carry out this internal process of "placing" the place, although the "prototype" of the category's ideal member will differ based on circumstance, experience, and culture. All of this mental groundwork is necessary to formulate an appropriate and actionable idea of what a place *is*, but it does very little in terms of determining what a place *means* or why it is important enough to be the subject of directed actions. In Nashville, access to urban places containing natural elements is valued across cultural, economic, political, and geographic divides. Environmental groups value such places as buffers that, when placed appropriately around streams, mitigate the pollution that can flow into them. Watershed residents are not without environmental reasoning in regards to open space either, but most often, their values have different foci. Some of these values have strong and immediately practical elements; attainment of health benefits, as discussed in the previous section, is the most common of these. However, documentation of desire for greater health through park access provides little in explanation for the values placed on urban green spaces. Some of these are too small for extensive exercise. During some parts of the year, vigorous exercise in parks is all but impossible; as

this sentence is being written, the temperature in Nashville is 101 degrees Fahrenheit, and still climbing for the day. Gyms are common, and many of the participants in this research could easily afford gym memberships. For those who cannot afford standard fees, a Metro-owned community center in southeast Nashville provides access to excellent workout equipment and an indoor pool to adults for $30 per month or $3 per day, or half that cost for youth and senior citizens (Nashville Metropolitan Department of Parks and Recreation 2012). It is heavily used, by members of both long term resident and international communities. One health-conscious (and economically secure) research participant from the Somali community stated that he had chosen his current home in part because of its proximity to this community center. Tellingly, however, he referred to it not as the "community center", but as "Coleman Park," in reference to the very small, formally maintained green area around the center that includes a circular path for walking or jogging, a playground, and some open space. Why exercise on the path when an inexpensive, climate controlled, insect-free workout environment is immediately adjacent? Why do people who do not typically attend public meetings organized by Metro attend "Walk with the Mayor" events on Nashville's greenways? What seems certain is that the city's greenways and green spaces are invested with an ability to provide something that can't be provided by community centers, gyms, or meeting venues—or for that matter by wilderness settings. Chapter 2 discussed ways in which extra-boundary characteristics influence both the categorization of land as green space and the attachment of meanings to that space; the specific ways in which residents enacted this schema will be explored here, with relation to a common thread that was regularly evident in the way people talked about places they valued: Urban green spaces are cognitively laden with the connection to home. They are cited by residents as neighborhood amenities in a utilitarian, recreational sense, but more than that, they are revealed as places with power to facilitate a conceptualization of home and neighborhood, particularly when that conceptualization is fraught with difficulty. Indeed, it emerged in this research that the very concept of "neighborhood" is intrinsically, cognitively viewed as an outdoor entity. The

"neighborhood" is not the houses, shops, or churches in a location—rather it is the network created by these places; in the Nashville neighborhoods where residents held strong, deeply seated definitions of the neighborhood's identity, the spaces *between* places were spontaneously talked about, valued, and named. In communities with less cohesive concepts of neighborhood identity, a cognitive image of buildings (and perhaps a clearly defined park), surrounded by empty spaces emerged. In the strongly cohesive neighborhoods, the interstitial spaces had become *places,* and far from being empty, the lots around buildings and roadside grass stretches became analogous to a connective tissue binding the neighborhood together. In one neighborhood, school and church yards were named as places of heavy activity for many community members, even when they had no formal affiliation with the work that went on inside those buildings. In another, local artists requested and received permission to paint murals under bridges and on bare walls (so far, these murals have depicted scenes associated with the nearby zoo, another enclave of urban green space, although its status as a pay-for-entry organization limits its attribute of sharedness and distances it from the prototype). In a third neighborhood, residents mobilized to create "gateways" to the area, erecting attractive signs and planting flowers and trees in formerly vacant patches of land marking prominent entrances into the neighborhood. In all cases, the residents have taken the time to delineate outdoor areas that are part of *their* neighborhoods, and consequently extensions of their homes. These home-related meanings attached to urban green space took two separate, though interconnected forms, which will be explored in the sections to come.

Neighborhood Identity and Sense of Place: The Interactions of the Everyday

The first part of this chapter described participants' attachment of health-related values to urban green space access, but also indicated that while this value is common, it is something of an anomaly. Physical health values are most frequently expressed using individualistic language; they are related to the desire for immediate personal benefits and individual goals. However, in spite of the frequency with which these types of statements were made, participants spent more time describing values of urban green

space that had strong social components; often the ideas of health and social value were bridged with a comment on the mental health benefits associated with "getting out in the community more." Without fail, participants who had children quickly listed the value of having a good place to play nearby, or the value of having a place to do things together with their families as being intrinsic aspects of good green places in Nashville; in fact, these attributes were often listed as required components of what made a public outdoor area "good." They were part of a broad array of possible "informal" activities that were associated with prototypic green space, and generally held a factor of sharedness as well. The value of eating outside with family on picnic days was described by watershed residents native to the United States, Somalia, and Mexico. Further, at the Non-Profit's most family-oriented event—a festival in which farmed fish are released into a lake for children to catch—the value of society outdoors was visible all around. Of course the event organizers provided games and educational experiences for children, and vendors sold food and beverages. But many families made a day of it, and all around, a viewer could see picnic baskets and picnic blankets; Spanish-speaking families set up multiple smokers and grills, with families going back and forth and sharing with one another. While looking around at the Spanish-speaking families cooking and sharing food at this event, one older Nashville-born resident commented uncertainly that things had changed—but after a moment, he added that the food smelled good, and that the barbecuers were obviously having a wonderful time. This is an observation that will be explored a bit further later, but for now the image of this scene provides a foundation for the coming section: hundreds of white, black, and Latino children with fishing poles, the adults showing them how to cast, the music, the picnics, and the very evident vibrancy of Nashville's communities.

The image above introduces a notion held by many who participated in the research—that the right kind of outdoor space can influence the extent to which people feel connected to one another. Interviews that took place during the research were laden with isolated instances of people who placed this attribute of such places very high in their ranking of reasons for valuing them. There was a prominent

belief that the care of pleasant outdoor places was important to the maintenance of community, and that the unorganized contacts that take place in these liminal zones are important. Later in this chapter, ways in which community members overtly leverage this attribute of outdoor open spaces for the purposes of instigating community changes will be explored, but as a backdrop to this discussion, it is useful to consider some of the "everyday" interactions that occur so frequently in these places. Their ubiquity, after all, lies at the heart of the very idea that these attributes of the spaces between places in neighborhoods could be mobilized as a means to fulfill social goals. In organized action, such activities were proposed as ways to increase understanding between residents of different generations (in the neighborhood of Crieve Hall, and to a lesser extent, Flatrock), and to reduce barriers between residents from different cultures and nations (in the neighborhoods of Flatrock and Antioch). Consider then, the "everyday encounters" described below, in which unorganized travel, work, and play in the watershed's urban nature areas led people to some insight regarding the interactions of people across these very divides.

During the first months of this research, I met two fly fishermen wading in the creek at Ezell Park; they exemplified a cross-generational cooperation that they said was enhanced by the opportunity to interact outside of environments like offices, schools, or churches, and though I did not know it then, they provided a first glimpse of a use of urban nature that I would see in more organized form later. One of these fishermen was 61, and one was 24, and both of them expressed explicit value in the wisdom the other brought from his generation. The older told me that the young man's father was a fisherman, but that the son had never tried fly fishing, so he had taken it on himself to teach this younger man, who wasn't a relative. "We're both learning a lot from each other," he said, and commented on how interesting it was to think two generations could come together in something like this, to explore, learn, and just appreciate being "in a good place" near the area's streams.

Other research participants from a variety of immigrant communities expressed the opinion that informal interactions in outdoor settings with natural elements helped facilitate their growing connections to a community very different from those they had grown up in. A woman from Somalia, living in Nashville's Flatrock neighborhood now, commented that she enjoyed spending time in a park-like area owned by her apartment complex because it calmed her and created the opportunity to "see something new, or see new people and talk to them." Very similarly, a Kurdish woman also currently of Flatrock said, in the context of explaining that landscape has a strong effect on mood, that having trees around helped people "get out in the community more." Another research participant, a 61-year old Somali man who has lived in the United States (and Flatrock) for ten years, spoke of this ability of the "spaces between places" to reduce barriers between people from different ethnic backgrounds in greater detail. It is his practice, even when he is traveling to a location that requires driving, to put his bike in his car, drive partway to his destination, and then park partway there so that he can bike the rest of the way. Exercise is one reason he does this, but even more importantly, he said "I bicycle around, I see people" in a way that isn't possible in the car. In the course of doing this, he said, he's met many people who speak Spanish, and has learned that Spanish is becoming a second language of the United States. In fact, in the course of the interview, he asked about resources for learning the language, since "the public library has only dictionaries, and all of the Mexicans are trying to learn English [and don't want to give Spanish language classes]." When asked if he would use Spanish very much in his job as a security guard, he replied "no, no, it's not for the job! Just to communicate! I go around here . . . see people while I'm biking, all around, and many people are Mexican! I just want to be able to communicate with them!"

For him, interactions in the spaces around significant places facilitated a way of entering more deeply into the neighborhood community and reducing its "heterolocalist" attributes. He says that he feels at home in Nashville, and that talking to these people he encounters in locations between his "comfort

zone" destinations facilitates this. His attitude, in fact, speaks strongly to the concept of the greenway that is so embraced in Nashville's government circles; namely that facilitating means by which walking and bicycling in pleasant environments within the city can be functional will lead to greater green space use and stronger, healthier, more cohesive communities. This particular respondent lives in an area that is largely devoid of greenways, but he has made his own, identifying safe, pleasant routes that allow him to exercise, enjoy the "better air" and scenery, and meet people all while meeting the everyday goal of reaching essential destinations.

The practice raises an interesting question, which will take on greater significance in light of subsequent sections of this chapter. Does it matter that the man is biking in "green" areas, or would any long engagement with the street do for an initiation of interactions with strangers? Holston has written of the street as a place of "sidewalk sociality," independent of any "green" attributes that may exist along its corridor. He describes ways in which modern planning has led to a "death of the street" in Brazil, with important implications for public life and the cohesion of community (Holston 1999). These writings have relevance to the current study, but in Nashville, the problem may not be so much *death* of the street so much as a form of growth that has unintentionally changed the *purposes* of formerly sleepy streets in ways that limit interactions there. Sidewalks are often lacking along roads that have become too busy to navigate on foot without them, and rapid population change has sometimes resulted in rapid changes in building occupancy in commercial corridors. The residential streets off of these corridors showcase large yards and limited traffic that facilitates walks within the neighborhood—but pedestrians (and possibly bikers) from these communities may now be separated from easy means of walking to the commercial districts that are near them. They can get there in cars, of course, but this effectively eliminates all possibility for informal conversation with others passed on the streets. Even the Somali man quoted here had to go to great lengths to access "the street" as social milieu; he had picked his routes carefully, and those he chose tended to be green. This may be because he preferred it so

(and he did articulate other strong values for visiting such places that were unrelated to social aspects), or it may be because areas with more trees are correlated to areas with less vehicular traffic. In any case, he still had to pack his bike into the back seat of his car in order to have any hope of leaving the car behind in his travels. This general problem of pedestrian and cyclist accessibility will be discussed further in Chapter 5, but it is useful to consider in brief here, as an indication of why "green space" may be emerging as the favored type of "public space" replacing the old fashioned street in southeast Nashville. The problems here are the result of rapid development rather than urban planning, and indeed, now that planners are involved, it is a problem slated for action, especially in the Antioch area. With the exception of a single new southeast Nashville community that was planned from the ground up, though, most of these efforts to increase public space focus on the formation of "greenways" and the repurposing of open land as "green space" open to the public. Perhaps as a result, the spaces between places that facilitate informal interaction with strangers in Nashville are indeed very likely to be "green," but as in the question of the Somali cyclist's choices, the extent to which their qualities are directly attributable to greenery is impossible to untangle from the consequences of rapid unplanned development and the remedies being applied to mitigate it.

If traffic patterns in many areas of southeast Nashville have separated residential areas from the corner stores and intersections of the thoroughfare where they might otherwise gather and converse, the contained streets of southeast Nashville's residential areas themselves often retain the social qualities of the street, and residents describe ways in which these qualities help bind these microcommunities together. One non-immigrant woman from the Crieve Hall neighborhood (Isa) commented that people where she lived were often out in their yards or taking walks, and that this helped to create a safe,

cohesive neighborhood. Another Crieve Hall resident (Annie[5]) elaborated on this general idea, describing how she walks or jogs by herself in her neighborhood several days during the week, and sees many retired couples, dog walkers, and mothers with strollers doing the same. She also walks her daughter to school almost every day, and has found that they talk about "so many things. That time has become so valuable to her, to both of us." In a way, she says, she was unprepared for how meaningful and important this time would become, and said that there's something about it—the time of day, the walking, the view around them, the opportunity to be alone together—that opens up topics for easy conversation that would otherwise be less likely to occur. While they walk, they speak with many non-walkers who are out in their yards or getting in their cars to go to take their children to school, and Isa thought these interactions were important for community cohesion. In essence, the private front yards become semi-public spaces, where a walk along the street can turn into a conversation with a neighbor in his or her yard; this is one of the circumstances in which a complex of street and coherently landscaped yards has come to be categorized as a semi-public green space, even while the yards themselves remain private. The walkability of the streets—the fact that walking in Crieve Hall is pleasant and that some practical destinations can be reached on foot—is responsible for the frequency of these casual encounters between destinations, and goes a long way to facilitating the sense of shared space and connectivity central to the green space-neighborhood schema. This aspect of Crieve Hall stands in stark contrast to some of the other neighborhoods in the watershed, though, and the communities containing many immigrants are less likely to boast this dynamic. Chapter 5 describes barriers that other residents report encountering in their attempts to enjoy more time in the city's green spaces, and when reading that chapter, it is important to remember the social implications of unequal access that this implies.

[5] All names included in this dissertation are pseudonyms. Not all research respondents were assigned a pseudonym, but in the case of some whose contributions spanned many topical areas, it is helpful to have a "handle" to trace when an observation comes from a previously quoted respondent.

This division becomes more meaningful in light of the fact that the social aspect of green space was also articulated as influencing crime rates by several respondents. Annie, who had chosen to move to Crieve Hall in part for its perceived safety, felt that the tendency of people to encounter one another on sidewalks and in yards was directly related to the presence of mature trees and well-kept lawns—and further, she felt that this contributed to "aesthetics of the area . . . that generally don't promote crime." Like Annie, Isa also linked this attribute of the neighborhood to reduction in crime. Interestingly, this elaboration came during a portion of the interview when she was relating a crime that actually had occurred—the theft of items out of her family's shed, three times. Before the third time, her family had installed a security system, and so the person was caught, and it turned out to be a neighbor. "That was hard," Isa said, given the cohesion of the community. "He was sent away. But that isn't what the neighborhood is really like; the real character of the neighborhood is the neighbors across the street who called at midnight when they saw cop cars to ask if everyone was ok." The idea in play here is that in areas with higher levels of green space, people spend time outside, and can't help knowing the people near them. While property crime occurs (not too frequently, but not rarely, in Crieve Hall resident perceptions), violent crime was not perceived by the Crieve Hall women as an issue at all; Isa says that, within the boundaries of the neighborhood, she jogs at night sometimes, and has never felt in danger. Another woman, who helped find housing for immigrant families, spoke of her preference for placing people in a few Flatrock complexes that contained open spaces and trees. She felt, both for herself, and even more for the immigrant communities she worked with, that these places were "important for socializing, making a better community," and that one of the many reasons this is important is that "people don't want to rob or do bad things to people they see as neighbors."

These comments represent "gut feelings"—opinions held by residents without specific evidence (in fact, in one case, even in the face of evidence *of* crime occurring), but nevertheless, strongly perceived to be true. Interestingly, there is a body of research indicating that these instinctive rationales for the value of

green space have merit. Some studies have shown that people living within walking distance of green areas tend to report higher levels of neighborhood satisfaction in a general sense(Fried 1982; Kaplan, et al. 1998). Other studies have explored this idea more deeply and have shown that neighborhood social ties are stronger when neighborhood common spaces are greener, with residents of such areas participating in more social activities, having more visitors, reporting knowing more neighbors, and being more likely to feel that their neighbors were helpful people (Kuo, et al. 1998; Kweon, et al. 1998). Both of these studies were conducted in inner city neighborhoods where the general landscape was not particularly green; the differences they showed are all the more striking in that they are apparently associated with relatively small swaths of trees and grass in public common areas. One study has resulted in evidence that some of the health benefits associated with urban green spaces may actually be results of increased social contacts that are facilitated by access to green space (Maas, et al. 2009). Another study examined the relevant issues very systematically, and with a very large sample size. This research compared two public housing developments that each had pockets of trees and grass as well as barren territory, and then analyzed units in terms of proximity to green space. 40,700 housing units, mostly home to very low income African-American residents were part of this study, which used a combination of structured interviews and analysis of police data on crime to draw conclusions. Consistent with other research, residents of both complexes were likely to report stronger neighborhood ties if they lived near the green areas. When a standardized scale was used to measure domestic violence rates, higher vegetation areas in both complexes were associated with less psychological abuse, less “mild violence,” and less severe aggression. Further, when police crime data from the area were analyzed, higher vegetation areas had lower crime levels than medium vegetation areas, and medium vegetation areas had lower crime rates than low vegetation areas, with 7-8% of variance in number of crimes reported apparently attributable to landscape (Sullivan 2005). Other, smaller studies have shown similar crime-reducing associations with greater presence of green space

(Garvin, et al. 2012; Kuo and Sullivan 2001). Strikingly, the conclusions presented in this research sound very reflective of the interview responses collected from some of Nashville's residents. The authors of the largest study finish their article as follows: "To a middle-class observer, surrounded daily by reasonably pleasant settings, a small number of trees and some grass may seem only marginally better than an otherwise barren inner-city landscape . . . the findings from this body of work, however, suggest that to residents of inner cities, green neighborhood landscapes are profoundly important. The surprising connection between neighborhood green spaces and the strength of neighborhood social ties, lower levels of aggression and violence, and lower levels of reported crimes provides compelling evidence that nearby nature is a necessary component of a healthy human habitat" (Sullivan 2005).

The literature also provides some support for the idea that these general benefits of urban green space are at work, or even augmented, among immigrant populations[6]. As described in Chapter 2, interaction in green space is less "scripted" than other activities, and in combination with the similarly relaxed "script" of behavior associated with recreational activities (Kelly 1993), some have argued that outdoor recreation may have an important role in adaptation to a new country. Gramann, Floyd, and Saenz (1993) studied this effect, hypothesizing that Mexican Americans would differ from each other in some regards with respect to acculturation levels, and that they would also differ from native-born Americans with regard to the importance they placed on at least some of the possible benefits of their recreation activities. During interviews, they found that all groups valued outdoor recreation as an opportunity to spend time with family, but that established Mexican Americans placed the highest values on "doing something with your family" and "doing something your children enjoyed." Native-born Americans and established Mexican Americans valued "having a change from your daily routine" highly, but less

[6] Note that this does not encompass the role of wilderness or extra-urban green space, in which research has frequently documented a pattern of non-use for minority or immigrant populations (Johnson, et al. 2004; Buijs, et al. 2009; Peters, et al. 2010)

acculturated Mexican Americans did not, and likewise, this group did not place as high a value on "getting away from crowded situations" as the other two groups. The least acculturated Mexican Americans also rated "being in a scenic area" as less important than those who were born in the United States, but bicultural and somewhat acculturated Mexican Americans valued this at similar levels as native-born respondents. All groups placed substantial and comparable value on "being with friends" and "getting exercise," but Mexicans of all levels of acculturation judged "meeting new people" to be more important than Anglos (Gramann, et al. 1993). It is difficult to say whether these differences are cultural, and modified by time spent in the culture of the United States, or whether they are associated with the immigrant experience, and modified by increasing stability and resources as individuals become more established. In Nashville, "meeting new people" was an expressed value of green space among immigrants across populations, and, anecdotally, valuing aesthetic components of green space was common among immigrants who had reached a higher level of establishment in the United States—although in the case of the current research, no participants who were currently very marginally established were interviewed for comparison. The social values were prominent among both immigrants and non-immigrants, reflective of what others have identified as an ability of urban green space to promote social cohesion among diverse groups. In the Netherlands, for example, research has shown that urban parks are important as mixing areas, with the opportunities they provide for brief informal interactions with strangers being important contributors to this trait. They were found to be more inclusive than non-urban green spaces, and they served to "provide a vital locality where everyday experiences are shared and negotiated with a variety of people" (Peters, et al. 2010). This study was particularly interesting in that it was conducted in the context of perceived decreasing social cohesion between immigrant groups and Native Dutch people—somewhat reflective of the situation described in Flatrock, and to a lesser extent, the situation in Crieve Hall. In the face of a perceived threat to social cohesion, opportunities for interaction are important. In urban green spaces, these opportunities are

abundant, and they are low risk. They are also, potentially, facilitators of place attachment, so that as these small, everyday interactions accumulate, participants on all sides may experience more appreciation for the geographic space in which those interactions occur.

The Green Space as Festive Locality: Community Cohesion and the Urban Green

The preceding section detailed a variety of "everyday life" experiences that research participants identified as valuable to the building and maintenance of cohesion in the communities they lived in. While ordinary in nature, it is likely that the ubiquity of these interactions—for surely everyone has shared conversation with a stranger in a neutral outdoor space—is the foundation upon which more complex and planned uses of the meanings associated with these places may emerge. During the course of this research, deeply felt aspects of the social meanings of these public green outdoor spaces, did, indeed, become evident. The people quoted above were, for the most part, recounting individual experiences without extrapolating them to consider implications for their larger communities, but their stories, nevertheless, often proved to be microcosmic representations of circumstances that affected their larger communities. As described briefly in the opening to the previous section, there were two general types of situations in which these cohesion-building attributes of green space meaning were relevant in the watershed. Both of these fell under a broader umbrella of "newcomers in interaction with longtime residents" though in one case the main barrier was seen to be (broadly) ethnicity, and in the other case, it was seen to be generation. The "ethnicity barrier" was really a complex of differences between people born in the United States and people who had immigrated to the United States from a variety of other countries. Depending on who was reporting, difficulties could arise that ranged from relatively neutral to interactions tainted by low-level suspicion, to real animosity. "Neutral" difficulties were based on simple misunderstandings or inability to communicate due to language barriers. These were situations in which representatives from both groups were willing to get along, but weren't sure how to find common ground. Less benign difficulties sometimes involved concerns about the

importation of Muslim religion, “illegal” Mexican immigrants taking jobs from citizens, and concerns about what children in previously “all-American” schools were learning from association with their new multicultural classmates. Actual research participants never reported more than mild concerns in relation to the newly multicultural landscape, but true opposition could be found on some local web forums and in the occasional news story; it is part of the backdrop of experience for both the native-born and immigrant residents in some of the watershed’s more diverse neighborhoods.

The barriers associated with age also involved the influx of new residents into established communities, but in these cases, the established residents were people who came from families who had lived in a given neighborhood for multiple generations, or were elderly people who had lived there themselves for several decades. The young adults in these situations are not the children of these established residents, but are people from other areas of Nashville, or more often, other areas of the state or the country, who have been attracted to the idea of an established neighborhood. Usually the attractive forces are described as being the schools, low crime, the “non-cookie cutter” housing plans, and relatively large yards. As was often the case with the interactions between immigrants and non-immigrants, the barriers to interaction in these age-divided areas stem from the perception that a community’s heritage is being changed—or, from the perspective of newer residents, the perception that some things about the community *need* to be updated.

The “ethnicity barrier” subtype of this tension between newcomers and established residents is typified in the Flatrock community. This group of neighborhoods is among the most culturally diverse in Nashville, and the community also exhibits some undercurrents of the age-related tensions as well. Flatrock contains old residents, mostly white, who have lived there for their entire lives. It also contains a strong contingent of young professionals, who have come to the area relatively recently, bringing some different—but not completely alien—ways of thinking with them. And finally, the Flatrock area

contains the largest concentration of Kurdish, Latino, and Sudanese people in the Nashville area, along with a mix of other immigrants whose communities are not so large. One of the younger, native-born professionals agreed to be interviewed early in the course of this research, and said that when he arrived from his home state, he'd noticed what an insular community Flatrock was. He saw the diversity, but also saw that old residents kept to themselves, young American-born residents kept to their own groups, and immigrant groups formed cohesive communities within the larger community but seemed, like the other segments of residents, to keep to their own language-based communities. "Cal" said that he'd done some research and learned that this was typical of communities with Flatrock's recent history of rapid diversification: "people tend to hunker down, stop doing things together, stop feeling a community." (See, for example, (Cattell 2002)for an ethnographic study of a community facing similar changes). This knowledge, strengthened by his own ongoing observations of the process at work in his new community had made him think that "someone should do something about that." On further reflection, he decided that, as a former professional organizer of music festivals, he had skills that could help. He and several other community members started this process by founding the Flatrock Heritage Foundation, a kind of regional neighborhood association that encompassed (but did not replace) the smaller neighborhoods of Woodbine, Glencliff, and Radnor. (A map showing the location of these and other neighborhoods is included in Chapter 6). As one of its first activities, the group applied for and received a $500 Arts Council Grant to have "an art/neighborhood/music/car festival, reflecting the interests of the community, . . . where everyone could take part and feel welcome." He said that the initial attitude of the Arts Council seemed to be "yeah, you're another neighborhood group saying they'll do something but people never do, but here's a little money, so . . . go do something." Cal saw this as a challenge, and decided that the Flatrock Heritage Foundation should host a large outdoor event, where no group would have to be too obviously "hosted" in another group's space, and where everyone could bring what they had to offer and get to know one another. He wanted to create a festival that would

help people appreciate the diversity of the community without making it the main crux of the event; as he put it, “What I didn’t want to do was one of those ‘One Thousand Villages’ things where everyone gets dressed up in their country’s clothes and does dances and things. I just wanted to have a neighborhood party with food and music so people could get out and meet each other.” It was the difference, he felt, between celebrating diversity in an abstract sense, and celebrating a living neighborhood in a way not divorced from everyday life.

His point is interesting, and worth some analysis. Several of the “One Thousand Villages” types of events are held yearly in Nashville, and they tend to be large in scale. Families go there to spend a day, but when the invitation list includes all of Nashville and the surrounding counties, the event becomes a show, a way for people to entertain themselves along with their friends and family, but not necessarily to get to know other people. In the course of this research I did attend several of these events, the first of which took place only a matter of weeks before the initial interview with Cal. He was right; people from every major immigrant community had been at the Nashville festival, but groups did not appear to mix substantially, other than to serve each other food. Further, the event was strikingly “young,” with most of the adult attendees appearing to be between eighteen and forty-five years of age. Cal envisioned his festival as a party for a neighborhood that simply happened to be home to people with a wide variety of cultural backgrounds and interests. Flatrock has a large contingent of residents, especially in the older generation, who collect antique cars. Many members of the younger generation that has moved into the area are artists or strong supporters of art, with strong affinities for both music and visual art forms. The ethnic diversity of the population has spawned, in recent years, an explosion of international restaurants that would have been difficult, if not impossible, to find in Nashville twenty-five years ago, and that are still difficult to find in Nashville outside of the Flatrock area. At a festival planning meeting, Cal summarized as follows: “this is our community. We have all of this great food, we like cars, and we support artists.” The festival was meant to reflect those interests, and if it seemed to

be a strange combination of themes around which to build a festival, it shouldn't bother anyone; it's Flatrock.

Cal had a flippant way of wording his statements, but his professional background was originally the organization of similar events on a larger scale, and he brought a high level of knowledge and professionalism to the task he had set himself. He articulated practical reasons for the eclectic array of themes, and for his indirect approach to the multicultural one. Many of the older residents harbored at least some level of uncertainty regarding the influx of immigrants, he said, and an event focused on that trend would only have alienated the older citizens. Far fewer of them would have come to an "international festival," and the whole purpose of the event would have been defeated. (As noted above, observations strengthen the force of this point; the population attending the large "international festivals" is diverse in race, ethnicity, and gender, but the age group attending, at least based on non-measured observation, is skewed to young adults and young families). On the other hand, Cal said that many of the immigrants were suspicious of his own motives when he first invited them to be involved in the festival planning. Those who hold leadership capacity in these groups had seemingly gotten used to the city of Nashville holding events highlighting their cultures, and agreed to put on demonstrations, cook food, and be a part of those events regularly; they were, after all, intended specifically to celebrate their presence in the city, and the major immigrant communities now all contain established citizens who have experience working with the planners on these events. Within the neighborhood, though, things were different. Cal said that when he first approached immigrant community leaders with his idea, he gathered that their initial thinking on the topic ran along the lines of "well, here's this white guy coming out of nowhere, knocking on [the] door inviting them to a festival, when they've been out in the community and gone to stores and seen people weren't happy to have them here." This was a challenge that took some time to overcome, but eventually, he said, the large Catholic church serving the Spanish-speaking community embraced the idea (the same church, incidentally, that hosted the tree

giveaway), and a couple of prominent members of the Sudanese community said they'd come and eventually started attending planning meetings. Representatives of the Kurdish community always responded to Cal's emails but never agreed to participate in meetings, though they promised to attend and bring food to share. The year of the first festival, Cal said he assumed that group was simply being polite in their offers, and he hadn't really expected them to do more than send token representation. However, on the day of the event, they turned out in force, bringing a great quantity of food to share along with them. He said it's been the same every year; the various Kurdish organizations promise to show up and bring things, never come to any meetings at all, and then appear on the day of the event with everything they had promised, very friendly and apparently glad to be part of the day. He supposes maybe their culture isn't as "meeting-obsessed" as American culture. "I've been getting used to different ways of doing things," he said, acknowledging that that was really the point of the endeavor in the first place.

Around two thousand people attended the Flatrock Festival the first year it was held, representing a broad cross section of the people living in Flatrock. As Cal was recounting this during his initial interview, (which took place in a community garden that the Foundation had also started), two other residents came up and joined in. One of them was a woman in her sixties who had lived in Flatrock most of her life, and the other was a young woman in her twenties who had moved there within the past two years. Each of the three people in the garden felt strongly that after the event, more people looked at each other and smiled on the sidewalks, and more people at least said hello, regardless of whether they thought the person they were speaking to knew the same language. Many people were able to vaguely recognize strangers as faces they had seen at the event, and to respond accordingly. They also felt that the first festival was only a first step, and that more needed to happen before the community had the level of cohesion that it should. The Flatrock Heritage Foundation had consequently gone back to the Arts Council and reported on what they'd done. The next year, the council gave them a little more

money than they had the first time, and they acquired a few larger sponsors and many small sponsorships from locally owned businesses representing the diverse groups of the area; the different immigrant groups and the long-time residents had literally "bought in" to the festival, and that second year, approximately four thousand people attended. By the third year, when I encountered Cal and was invited to attend one of the planning meetings and man a booth along with the Non-Profit, the budget was between $15,000 and $18,000, and the group had begun planning to save surplus money for an annual scholarship that would help a youth from the community to study an arts-related subject at a post-secondary institution. Twenty people attended that meeting, of varying ages. Cal commented that it was a "pretty white group" at that point, but that over time, the people from the Latino immigrant community, the Somali community, and the Sudanese community would all be there and all find themselves active in the planning. One of the middle-aged residents commented, as had the people in the garden, that for weeks after the event, one could see people running into each other on the street and talking with people they didn't normally interact with; the festival gave them something they shared, and became a positive topic that residents could talk about when they met one another, even if they didn't feel certain about sharing much else in common. He thought that the effect had been a little stronger after the second year, and a man in his sixties added that if the Flatrock Heritage Foundation could really get the festival established, it could make a lasting impression.

In an attempt to continue engaging the community outside of the festival, the Foundation had also offered several classes on nutrition and fresh produce at the community center. This was originally intended to be a tie-in to the community garden they had started, and which they soon hoped to get more people involved with. Cal felt strongly that the garden could help increase neighborhood cohesion if it could become established. He noted, in keeping with the health theme that ran through this research, that people are always interested in food and in cooking in ways that keep their families healthy, and that further, the opportunity to work on a common project, outside in the open air, was

conducive to the lowering of barriers and the reduction of misunderstandings among groups. Other respondents also spoke of the power of gardening as a means of breaking down barriers. A woman in Antioch—whose efforts will be discussed presently—had alighted on the formation of a community garden to solve a problem similar to the one faced in Flatrock. In a description of a more informal set of interactions, Somali man who had been in the United States for over twenty years commented that "immigrants from Vietnam are different [from Somalis] . . . They came and right away started planting gardens in their yards, and for many Somali immigrants, seeing their Vietnamese neighbors do this was the first time they had seen a tomato." In this case, the gardens being described were not public, but they still became motivators for reaching across group boundaries, providing people with something worthwhile to discuss, teach, and learn. To try to tap this potential, the Flatrock nutrition event was planned as a means of addressing lack of awareness that the garden existed, and was launched with an invitation for the community to come learn "a healthy recipe based on stuff from the garden." To Cal's surprise, over fifty people attended, mostly low income, low education, and, in his estimation, about half white non-Latino, half Latino. It seemed that the attendees already valued gardening, and the connection to using things they could grow resonated—but "it wasn't like they were just like 'ok, thanks, this was fun.' They . . . really really wanted to learn about [the nutrition information]. You get so used to sort of assuming other people have the same basic education as you do and can forget that a lot of people were never taught very basic things." He was in the process of planning a second seminar focusing on food and children, and hoped to make these regular events. This is another instance of health serving as a strong motivator. The Flatrock group used it as a means of drawing people into their community gardening program, but found themselves surprised by the force of "health concerns" as general motivators to participation in the community.

The garden, the nutritional programs, and the festival all speak to the larger goal of the Flatrock Heritage Association, which, Cal said, is "Helping new members of the community be part of the

community and helping elderly members of the community feel that their community's heritage, history, and identity are valued and intact." He added that people need to see the changing population as an instance of "*growing* the identity of the community rather than changing it." On the organization's website, that statement is more formalized: "The Flatrock Heritage Foundation is a 501(c)(3) organization dedicated to preserving the history of the Flatrock Community of Nashville, Tennessee as well as celebrating the diversity in art and culture that exists today" (Flatrock Heritage Foundation 2011). Interestingly, this wording—and indeed, the organization of the festival—serves to facilitate community reconnection to older meanings once associated with the land. Flatrock as a distinct place with distinct functions has existed since before the Revolutionary War, and its history as a place of diversity is longstanding. Originally, it was a place where the Seminole, Creek, Chocktaw, Chickasaw, and Cherokee tribes inhabiting the surrounding land congregated for business, treaty signings, and shared agricultural and hunting efforts. In the 1920s, the area of Flatrock known as Woodbine began its first community center. When it started, it was the Woodbine Sewing Club, an entity founded by a woman who hoped to use it to promote racial unity. Eventually, the Club became the Community Organization which exists both in its own right and as part of the Flatrock Heritage Association today (Perkins 2005). In invoking "heritage" in the name of the Flatrock group, the organizers created a means by which these earlier efforts to embrace diversity could be remembered and celebrated as longstanding community traits which were now being called upon in a new set of circumstances.

On the face of things, the statements describing the purpose of the Flatrock Heritage Foundation do not reflect any belief in deep meanings associated with the presence and availability of public outdoor green spaces. However, in the course of several interviews, it became clear that much of the work of the Foundation is tied to things that happen outside, in the types of places that fit the prototype of "green space." The garden was planted in the hopes of giving people work they could do together in a neutral,

pleasant place that, Cal felt, was conducive to conversation and understanding. The Foundation was also involved with an effort to have a kayak launch installed in Flatrock, in order to increase access to water recreational opportunities for the people of the neighborhood. Murals were commissioned for walls beneath bridges, and in unsightly areas that all residents had to pass frequently. All of these activities are means of reclaiming the spaces between private locations as places of relevance to the community. Most significantly, the festival was inherently an outdoor event. This was partially a matter of necessity, given its size and scope. However, Cal and the other planners had already noticed that conversations among members of different groups were freer in the open air setting than they appeared to be at smaller, indoor events sometimes held in the community. The festival, in essence, was intended to be a microcosm (or metonym) of the neighborhood, encompassing the informal opportunities of "everyday life" there as well as the potential of the community when it put forth its best efforts. It contained the neighborhood's art, music, and food, and local social service groups and non-profits offering community activities were encouraged to set up booths to help residents become more aware of what the neighborhood had to offer. Important organizations from outside the neighborhood were also welcome to set up booths, in keeping with the role of neighborhood as gateway to the larger urban environment in which it is embedded. Containment of the event within any one group's walls was deemed inappropriate by its planners, even if it had been possible. Most indoor spaces are too easy for one group to lay claim to. The walls mark a limit surrounding an interior that is almost always bent to the needs of a relatively small group of people, and the space inside is built to suit them, specifically. In a community attempting to integrate Nashville natives, Kurdish, Somali, and Sudanese refugees, and Mexican immigrants, a group might come together in one of many public indoor places; churches, community centers, and mosques may fill this role, and community leaders from each of these groups have indeed all come together in these locations for discussion and planning. However, when this happens, one group or another is the host, and the others are guests, with at least the perception of

being a more peripheral part of the community temporarily formed for the event. While immigrant community leaders may be well-established American citizens who feel comfortable in these spaces, not every more recent arrival is likely to feel sure of welcome, or of why they would visit, for example, a church where they did not intend to worship. Not all of Nashville's newer residents grew up in places where a church they were not affiliated with hosted community suppers, Girl Scout troops, and AA meetings. The festival is always held in the open area behind the Community Center, which, based on interviews in the community, seems to be viewed as the most trustworthy, non-biased institution in the area. Many children from all ethnic groups had already played on its playground, and many adults, also from all ethnic groups, had taken a walk around the loop trail that sits on the property. This is a space that has already become a place in the lives of a wide range of residents, and it serves as a logical venue for an event aimed at fostering community ties to the neighborhood and each other. Does it matter that it is a "green" space? It's hard to say. As described previously, this question is difficult to meaningfully examine in an area where all of the commonly used public spaces *do* contain natural elements. Coleman Park's location in relation to its surroundings may well be at least as important as the presence of grass and trees there; situated on the grounds of the community center, near the public library and around the corner from one of the immigrant community centers, Coleman Park is well-embedded in a fabric of public social places and may very nearly function as a large-scale urban square, where members of the community can easily engage in conversation during chance meetings. And yet, there is enough in the statements of area residents to give evidence to the idea that the grass is, at the least, a part of what makes the park a good place for a festival aimed at increasing community cohesion. Leaders from Somali, Sudanese, Mexican, and Kurdish communities all stated that large proportions of the immigrants they serve in Nashville come from *rural* areas rather than urban ones, and that nostalgia for open unbuilt areas is common. Likewise, some older residents of Flatrock spoke nostalgically about a remembered Nashville in which currently built-up areas contained more open spaces, small woodlands,

and fields, and contrasted this past to a present where unused buildings contained derelict lots and contaminated streams. Flatrock and the rest of the watershed neighborhoods were never part of Nashville's urban center; the urban structure instead expanded to include these areas in which, away from the main roads, yards are still often a full acre in size, in spite of their location in the city. There is a history in which the front yard rather than the street corner is the nexus of interaction with neighbors, and it may be that this history, combined with the diversity of residents' backgrounds *and* the government's overt investment in creating and maintaining "green spaces" results in a circumstance in which the social functions of the street are better met in the types of place that the government has begun labeling green space. An observation: when passing others while walking on major streets in the watershed, a greeting from a stranger was a rarity. When passing other walkers while in residential neighborhoods with large yards or when walking on a greenway or the loop trail of the community center's park, greetings were the norm. Definitive? Hardly. But suggestive, certainly, in combination with the greater body of this research.

Whatever the proportion of influence between green view and public open space, the community of Flatrock placed high value on Coleman Park, and it was unequivocally considered to be the best location for the neighborhood festival to be held annually. I attended in 2010, its third year. Over five thousand people were there. It had grown again, and the growth was especially noteworthy because, only four weeks before, the 2010 flood had occurred, and the community had been severely affected. An old, lifetime resident of Flatrock attending the event commented that the flood made events like this all the more necessary, and that it was important for the community to be together. He wasn't the only one who felt that way. In the community, there was a tiny El Salvadorian *pupuseria* located just above the bank of Mill Creek that I had always intended to try when driving around the community. After the flood, knowing where it had stood, I knew it could never have survived, and indeed, once the roads were clear enough to allow a drive into the area, it was evident that it had been almost completely washed

away, with only some rubble remaining to show that a building had stood there at all. Given that, it was a surprise to see a booth at the Flatrock Festival bearing the same name as the restaurant. I ordered a plate of food, talked with the owner, and eventually was able to learn that she was indeed from the same business that had been destroyed by the flood. But, she said, they always did something for the festival, and they were doing it that year too.

Interestingly, Antioch, another section of the watershed which has seen substantial diversification in recent years, exhibits seeds of a similar tendency to imbue urban green space with meanings related to the establishment of community identity. There is no community group in this area that approaches the level of organization and cohesion shown in Flatrock, and this may hamper efforts. Further, while there is a community center attached to the Antioch Park, it isn't central to the community in the same respect that the Coleman Center (or, indeed, the park) is—and it is also more difficult for some residents to access due to its location in relation to bus service (to be discussed further in Chapter 5). Several social service initiatives exist in the area, but they have a hard time serving more than small sub-populations, in spite of strong efforts. A respondent involved with the leadership of a Latino community center there ("Alberto") stated that his group had actually moved from Flatrock to Antioch to try to fill the void of community cohesion in the area. They hosted community events for all area residents and ran classes where native English speakers and native Spanish speakers could jointly practice each other's languages. However, the center had had a difficult time gaining traction in the area, in spite of having been substantially larger at its past site. Anita, a representative from an agency operating out of one of Antioch's elementary schools, revealed that the center she worked for is intended for use by everyone in the community, but that building bridges across different groups had been hard; so far, it had been almost all Latino people who had used the resources she offered. She thought that this was partially because the Latino community is the largest minority community in the area, and partially because she herself is a native Spanish speaker. She also thought the school could do more to address this, but that

in general, its attitude was to say "'oh, we're diverse, yay' all of the time, but never really examine it." Anita felt strongly that getting people out in the community, and outside of "their two or three places they normally go" was important, and one of her most important goals—developed in accordance with community interest—was to develop a community garden at the elementary school. Like Cal, she wanted to use it as a forum where people could discuss foods popular in their cultures, and she was excited about the Non-Profit's idea for a tree festival, which she thought could be used as a springboard to draw people into the garden and other neighborhood enhancement work. One of the reasons that tree planting and gardening were so attractive to her as activities to foster in the community was the fact that these would be things people could plan together, work on together, and (in the case of gardens or fruit trees), harvest from together. A lot can be accomplished in a garden even in the presence of major language barriers, and while the Latino community was the group that had initially expressed the desire for being able to grow and harvest food, she hoped that this would resonate with the larger community as well. "People in the neighborhood don't feel connected to it," Anita said, and this statement seemed to hold truth both for the immigrant and non-immigrant populations, just as Cal had said was the case in nearby Flatrock. In Antioch, the changes associated with a rapidly diversifying population are perhaps made more problematic from a community-building standpoint due to the fact that the total load of people living in the area has changed as much as its composition; the region has outgrown its resources in terms of parks, libraries, social services, and transportation. The area is also more diffuse, and instead of existing as a small named entity to which people have naturally begun assigning shared identity, Antioch is more or less a zip code with a name. Some smaller neighborhoods exist within it, but the area contains large swaths of space in which such self-defined neighborhoods have not formed. At least among participants in this research, comments about the area's "heritage" were seldom made, suggesting that the temporal component of this neighborhood was broken

somewhere along the line; that is, the Antioch of the past appears to be less readily associated with the Antioch of the present than is the case in Flatrock.

Efforts to address service deficits in Antioch are in the planning stages, but in the meantime, community leaders make their own attempts to build a sense of shared place, with the benefit of fewer starting resources than are present in areas like Flatrock (Metropolitan Government of Nashville and Davidson County 2012). Anita felt that having the garden at the school would have benefits over and above those already described. The choice of location, she hoped, could help teach people that the school was a resource in their community, and if organized correctly, it would be something that would not stop at the end of the year, just when residents were getting comfortable dealing with the school. It could go on all summer, even if the building itself wasn't open, and help develop a more longstanding sense of connection. Unfortunately, in spite of the fact that a garden site had been selected and logistical planning was well underway in the early spring of 2010, the idea was literally washed away in the flood that came in May. It is likely that the garden planning would have experienced a renaissance eventually, but Anita took another position before the time was ripe for that to happen, and as of this writing, the garden doesn't seem to be a current priority for the school or the social services group. What is striking, though, is that faced with a neighborhood that people didn't feel connected to, part of the answer was deemed to involve the formation of a new public green space. The comparatively neutral outdoor area was seen as a natural canvas on which people could grow food they had long valued and employ cultivation and gathering skills they missed the opportunity to use. They could teach each other about the different foods, and it was hoped that in the course of this, some seed of community cohesion might begin to grow. Further, the location of the garden at the school provided a "next level" for the formation of neighborhood identity, establishing the school as a community hub year round and introducing all residents to the ways in which the school could become a central resource, along the lines that can be seen in some of the more established neighborhoods of the city (to be discussed next). The idea was

that providing an open, attractive, *good* place with natural elements and work to accomplish outside would one day help bring people inside, and that from there, more complex intra-community ties might have a chance to form. Far from conceptualizing green space as a way to facilitate time away from the urban bustle, the intent in this instance was to create the space as a means of spawning a connection between private and public life in the community. Notably, in this low-income neighborhood that many residents might hope to move on from one day, many of the perceived benefits of these planting projects were transferrable: development of skills, engagement with the public institution, and confidence interacting across cultural and linguistic barriers all help to strengthen individual engagement with the community of Nashville and the United States over and above the strengthening of present neighborhood-level connections. And, of course, garden meanings associated with improvement of health exist outside of these social and community-oriented meanings as well.

Crossing Generations: Another Perceived Use of Urban Green Space

While Antioch and Flatrock were concerned with building social cohesion in a context of rapid cultural diversification, with a more minor subtext of generational integration, other communities in the watershed were engaged in a complementary endeavor. Crieve Hall is the community that most typifies this situation. Like Flatrock, it is a long established community that contains many lifelong residents, but here the major concern related to social cohesion was the integration of generations, with a subtext of intercultural communication that is only beginning to build. This is a community that, perhaps more than any other in the research area, places strong value on its identity. It perceives itself as unique, and residents are sometimes concerned about losing what they view as a long-established character of the community. The neighborhood association's website emphasizes this attribute of uniqueness, beginning with the text "Crieve Hall is a place as unique as its name. No other place on Earth shares its name. The Crieve Hall community lies nestled in the rolling hills of Middle Tennessee, about 9 miles south of downtown Nashville . . . This suburban neighborhood, as we know it, was created in the mid-1950's,

subdivided from large farms and grand estates. With lovely views of the Overton Hills to the West, it is a scenic place, rich in history"(Crieve Hall Neighborhood Association 2009b). In actuality, this strong valuation of a unique community character is likely to derive from its newness rather than a long history; the neighborhood still contains a sizable contingent of residents who were present from near the time of the community's inception. The first resident of the area who participated in this research was active in the Crieve Hall Neighborhood Association, dedicating most of her volunteer time to a committee called "Crieve Hall Cares." She and her husband had moved to the neighborhood several years before and had completely remodeled their home. Her family is one of many that has done this; most Crieve Hall homes are 1950s ranch houses inhabited (at least as recently as the early 2000's) largely by their original owners. Annie said that many of those residents are widows and widowers, and that as that portion of the population has inevitably declined, young families have begun moving in from other parts of the city and the country. However, the homes aren't very fashionable or convenient by current standards, so major renovations have become common. This has been a concern for more established residents, many of whom, she said, were at one time "actually pretty against all of the young people moving in, and *very* against the idea of them gutting and renovating houses[7]." Annie, after some time in the community, had helped to organize a "Tour of Homes" that would let people showcase their renovations, and this was initially not well-received by the neighborhood association. The idea was approved, though, and around two hundred people attended the event in its first year, even with very little advertising. Annie attributed this success to a shift that had taken place in the planning once the discomfort of some original residents was expressed. Knowing of the more longstanding residents' concerns about the renovations, Annie had tried to develop a focus that would bring people together rather than split them further, and like Cal, she had realized that this would mean dividing the focus of

[7] In Crieve Hall, it must be noted that all research respondents belonged to the younger generation, and so a very important view of these considerations is missing. This was not the case in Flatrock, where I was able to speak with a greater diversity of residents.

the event. For the younger people, the emphasis of discourse surrounding the Tour of Homes was on the opportunity to see how other people were carrying out renovations and to get ideas for their own future plans. Instead of emphasizing this exclusively, though, the Tour of Homes committee worked to create a parallel focus that emphasized the ways in which the renovations preserved the character of the houses and of the neighborhood, only updating the living space inside them; the message is that the community's history is being respected and built upon rather than replaced. The idea that this type of focus could reduce concerns is interesting, and speaks to the nature of neighborhood as an inherently outdoor concept. The living spaces within houses are private domains, and may, it seems, be altered substantially without generating real concern. The outsides, however, both belong to the neighborhood and define it; the concerns expressed by residents were concerns relating to the undermining of "cohesion" both in the landscape sense and the social sense. Emphasizing the ways in which these outdoor places were preserved was a way of reassuring residents that the character of the neighborhood was both valued and protected by newcomers. To this end, some homeowners showing their homes left signs on their doors detailing what they loved about Crieve Hall. One of these, posted as part of a promotional video on YouTube, lists "Friendly neighbors, Everyone knows (and somehow loves) our dog as much as we do, Big yards with mature trees, Convenient to both Nashville and Franklin, Original homeowners (with lots of stories!), Ranch homes are an open canvas to create a masterpiece!" (Crieve Hall Tour of Homes Committee 2011). The listings carefully articulate the balance striven for in the event, and also articulate the outdoor view of neighborhood; only one of the items refers to the indoor, private domain, following others that emphasize the outdoor spaces and interactions that bind the home to the community.

The listing of big yards with mature trees in the homeowner's sign emphasizes one strongly agreed upon value; the green views of the community are seen as part of what makes it special to both long-time residents and younger newcomers. In light of this, the Tour of Homes organizers soon found themselves

focusing on the yards and gardens associated with the homes, showcasing their beauty and the incorporation of old flowerbeds, shrubs, and trees that had been planted in the yards two generations ago. Some more established residents had expressed fear that renovators would tear out old trees and flowering bushes, and so the Tour of Homes organizers had tried to show that this was not happening, and that those longstanding attributes of the neighborhood were as valued by the new residents as they were by the old. Annie believes that this approach has allowed many people to find common ground, saying that the "younger people like me are [motivated] by aesthetics a lot, but maybe without so much focus on the history. We want the neighborhood to look nice and well cared for. Many of us also really are big on the environment, preserving forest areas and reducing the pollution, and so that can be a direct motivator for this group in a way that it probably isn't for older residents." However, the original residents reportedly appreciated the ethic of caring for the home and perpetuating the long-held community value of keeping the neighborhood well-cared for and aesthetically pleasing, just as they continued to value the sense of heritage they felt in the neighborhood's long-present architectural and botanical elements. (Whether or not Annie's assessment of the older generation's environmentally oriented ideas is accurate cannot be known). Like the organizers of the Flatrock Festival, the people behind Crieve Hall's Tour of Homes have never found it necessary to pretend that everyone in their community is motivated in identical ways. Annie's goal has been to show that, in spite of differing motivations, many of the goals of the younger and older generation mesh well, and that the older generation's sense of history is respected, if not always shared. The committee has tried to bolster this by giving a portion of the proceeds to causes that are important to all residents; proceeds have gone to the two neighborhood elementary schools and to the Crieve Hall Cares Committee, which, the website emphasizes, "exists to connect the residents of Crieve Hall; to build bridges between all ages with the common theme of benevolence; and to give back to the community in ways that truly make our residents feel honored and loved" (Crieve Hall Neighborhood Association 2009a). The wording strikes a

careful balance, and is very similar in tone to the Flat Rock Heritage Foundation's official description. (See previous section).

The result of these efforts, Annie believes, is a shift in the perception of the newcomers' renovation activities, at least among the active members of the Neighborhood Association. This was a major transition, in some respects. In keeping with Martin's (2003) assertion that neighborhood may be constructed or strengthened in response to a perceived problem, Crieve Hall Neighborhood Association had originally been founded to oppose the extension of one of the community roads to connect with a main artery. After that issue was resolved, the habit of using the association as a venue for opposition became engrained. The Tour of Homes was one of the first Neighborhood Association activities that was not focused in this direction, and the Cares Committee has tried to build on this success. Annie said that "the Neighborhood Association so far has had a kind of negative slant, so what we're trying to do is add some positive work, so the group is active in things other than just opposing something. We really want to find more things that will bring the younger and older residents together." She had more recently been planning to build upon the early successes by organizing a "tour of gardens." The flowering bushes and other "heritage plants" had already become a focus of the tour, with their position evolving naturally to lead to the idea of an event in which they were central.

The committee's more long-range plan for focusing on gardens and yards in the community speaks even more deeply to the levels of meaning that may become enmeshed with urban outdoor spaces. Annie and other members of the Neighborhood Association are in the early stages of planning a system for having the younger neighbors, especially older children, help the older members of the population with their yard maintenance. The Association already coordinates help with major yard work needs, food after funerals, grocery shopping for residents who can't get out, and other activities. However, the idea growing now is that the yard work focus might be something that could be more systematized, holding

the potential to bring people together in more longstanding relationships. It would be good for the children to learn the history of the neighborhood from the older residents, she thought, and good for the original residents to be helping young people do positive things. She hoped to involve the school in these efforts as well. Her own children weren't attending the elementary school yet, but from conversations with friends whose children were school-age, she thought there was potential to organize an oral history project, where the elementary school would assign fourth or fifth graders to interview older residents about what the neighborhood was like when they were young. At the time of the interview, the Non-Profit was in the process of planning the tree giveaway described in the introductory portion of Chapter 1. This idea excited Annie, who believed that the tree event could mesh with many of the goals she had described earlier in the interview, and perhaps even help to launch some of the plans she had discussed. She didn't think that it was likely that many of the older residents would want to get out and plant trees (though she knew some who probably would), but she thought they would love to receive trees, and would be happy if they were asked to prepare and serve food for the event. This would be a contribution they could make, and one which, in her experience, they would enjoy making, while the younger members of the population could make the contribution of digging holes and planting trees, later to celebrate by enjoying the culinary talents of the community's older members. (The representative from the Catholic church that eventually hosted the event had proposed something similar as a way of involving members of the church's community who could not plant or have trees). Since the Non-Profit was also planning a web site in which watershed residents could share stories, art, or music related to valued places within the watershed, Annie perceived an opportunity to incorporate the tree festival both with the planned yard work initiative, and with an activity in which children helping to plant the trees could also help gather stories and knowledge from older residents who wished to share them. Her acknowledgement that different segments of the neighborhood might experience different motivations for participating in the same event was reflective of some studies on the subject of

volunteerism and participation, which have shown that motivations change over the life course. Older volunteers have been found to be more likely to cite "generative concerns" as motivators for participation. That is, they are likely to list a desire to leave the world a better place for their children, or to pass on knowledge to the next generation (Warburton and Gooch 2010; Wilson 2012). One study of community-organized tree plantings across Detroit found that different neighborhoods developed different models of action. In one case, the resident "lot keeper" was an elderly African-American woman who mentored young people in maintenance efforts over the years. She provided the knowledge, and the youth provided the labor; generational ties and ties to place were affirmed and strengthened (Austin and Kaplan 2003). In Crieve Hall, Annie had likewise found that the love many of the original residents bore for their community translated into a desire to pass these values on to the next generation, and she and others had begun looking for ways of incorporating this motivation into the efforts of the Neighborhood Association. The idea of working together to enhance a value that was shared—that of the informal green space created by the consistently attractive yards—seemed natural.

Another Crieve Hall resident, Isa, spoke on these topics from a slightly different perspective. Unlike Annie, Isa does have school aged children, and while she had put her house on the most recent Tour of Homes, she is more active in community efforts centered around the school. She said (about one year after the initial interview with Annie), that the Neighborhood Association had really done an excellent job of integrating the generations in the neighborhood, and that a difference in the level of connection between the two groups in the community had become marked over the decade she had lived there. In addition to the Tour of Homes, she said, the Association conducts educational programs on crime prevention, radon in homes, and a great diversity of other topics to the extent that "lots of people have found something interesting, and the Association has grown to the point where it's a nice mix of new residents and retired people, all sort of connected by the idea of being dedicated to keeping Crieve Hall a 'little gem.'" Children, as well as their parents and older citizens have found motivations for being

dedicated to this idea, and after construction of new school buildings recently (not a flood-related construction), it was a fourth grader who had noticed all of the trash blowing around and decided that the community should come together and do something about it. The school and the wider community had indeed come together on the issue, and organized what Isa described as an extremely well-attended event. Based on the success, and the revitalization of the school's central role in the community that had come with the new building, residents began taking it upon themselves to identify more ways to improve the school grounds. The school and community now have plans for "sprucing up" an area of the elementary school property, with one of the active parents who is a landscaper already volunteering to bring trees, labor, and expertise. "People are proud," Isa said. "They want to do things like that . . . the community doesn't always have a lot of money, but they are good about donating goods and labor." More than any other local entity, Isa believes that the school in Crieve Hall is valued by the entire neighborhood, which is one of the reasons she feels it is so central to efforts to reclaim the cohesive nature of the community. Most of the younger families moved to Crieve Hall at least in part because of the elementary school, and most of the older residents attended it, or had their children attend. Many of the children in the school now are at least second generation students, and with these strong ties to both generations of the community, it is not surprising that the community uses the school property quite often; families bring their children to play on the playground, and older kids go there to play basketball and baseball. There's also a large green stretch of Metro-owned land attached to the school yard, which people are free to use, and Isa believes this helps people to see the school yard as a park-like place that can be used by the community outside of school hours. The school is also central to the community in a more concrete sense; it is located at the intersection of two streets that everyone in the neighborhood uses, and it's easy to drive by, see many active people there, and decide to bring one's own family there to do the same. At least one other study has found that playgrounds located along regularly traveled routes are used more often than others (Ferre, et al. 2006). In contrast to the

situation described by Anita in Antioch, the open space around this school is cared for and associated with strong community meanings that extend well outside of the academic education of children. Geographically and socially, it is embedded in the community to the extent that Isa went so far as to say that Crieve Hall defines itself largely in terms of the school; the fact that so many residents were educated or had their children educated there, combined with the central location and the common use of surrounding green space created an ethic of viewing Crieve Hall as a tight-knit community that is a small "gem" in Nashville, geographically delineated by the area's street layout, cohesive landscape, and the zoning associated with the elementary school.

Public Participation: Green Space as a Facilitating Environment?

The findings presented above indicate that residents of the watershed may frequently use outdoor public spaces to affirm the connections between places and people in their neighborhoods. They draw upon the embedded and connected nature of these spaces, and, in the neutral territory they provide, use them to negotiate informal actions and perpetuate values they see as important to their communities. Just as these urban natural areas are embedded in their neighborhoods, though, so are they embedded within the larger city of Nashville. It is this nested embeddedness which gives rise to one other type of instance in which Nashville urban green space apparently serves as a promoter of social interaction—in this case of a type that may facilitate not only exercise and conversations with new people, but also potentially participation in public process. Winders (2012) documented that, at nearly every Metro-sponsored neighborhood planning meeting that took place in southeast Nashville during the period of her study, all attendees were white, in spite of the racial diversity and highly prominent immigrant populations living in those neighborhoods. This was my experience as well. My research did not focus so heavily on Metro planning activities, and so my observations in this regard are not conclusive; however, when combined with Winders' observations, they are suggestive, and taken together, the single exception to this trend that I observed takes on important meaning. One of the

Mayor's community connection initiatives is entitled "Walk 100 Miles with the Mayor." This program, launched in March of 2011, was designed to encourage people to "walk 100 miles" over three months, and provided a web site on which people could register and track their miles on a citywide pedometer that would show the collective miles walked by Nashvillians over the period of the challenge (Walk 100 Miles with the Mayor 2011). Winders described neighborhood participation in Nashville as being framed as the duty of a good neighbor and Nashville resident, and this idea was also evident in advertising for the 100 miles challenge; Mayor Dean told residents that "getting more active and being healthier will benefit [individuals] and our entire city." (Metropolitan Government of Nashville & Davidson County Tennessee 2011). The Office of the Mayor web site dedicated to the initiative made it clear that this was also an opportunity for people to "see" the city in new ways, and to grow their appreciation for walkable areas, parks, and the greenways that the city is working to expand; residents are encouraged to see these as amenities to living in Nashville. The web site states that "as part of the event, Dean announced a brand for Nashville that celebrates the spirit in our city that creates healthy, active and green places. The brand will highlight the many opportunities – such as a (sic) greenways, community gardens or bike lanes – available for Nashville residents to enjoy and encourage them to live healthy lives. The campaign will also inspire Nashvillians to join their neighbors and the city in further creating a vibrant Nashville that helps make the healthy choice the easy choice where they live, work, play and worship."(Metropolitan Government of Nashville & Davidson County Tennessee 2011). The project is billed as healthy, social, and beneficial to Nashville; to highlight the social aspects and encourage people to walk in new places, especially along greenways and on publicly owned land, participants could opt to walk all or some of their 100 miles literally in the company of the mayor. Organized walks of increasing length were scheduled throughout the year, and were hosted by Mayor Dean, who participated in the walks himself; participants were often provided with free water, opportunities to learn about greenways and bike paths around the city, and other information to help them take advantage of walking

opportunities in Nashville. During 2011, three out of twenty-nine walks were hosted in the Mill Creek Watershed; unfortunately, these all took place early in the initiative, and I was unaware of the project until slightly after the third Mill Creek walk. However, in 2012, a "Walk 100 Miles with the Mayor Reunion" was launched; this year did not include 100 miles of scheduled walks, but it did schedule walks to occur every Saturday during the month of June. One of these was in Mill Creek Watershed, starting from the Antioch Community Center Mill Creek Greenway trailhead. A second walk began at a trailhead that was outside of the watershed by only about 4000 feet, in Donelson, which is a neighborhood partially within the watershed borders. Even though I was otherwise done with data collection at this time, I attended both of these walks as a final research activity. Over one hundred people attended the Mill Creek walk, and the group attending was much closer to being representative of the community than had otherwise been typical of Metro-sponsored community events bringing citizens together with government figures. Around one third of attendees were African-American, several were Asian, and people of all ages were present, ranging from families with young children to elderly walkers. There were also several dogs and a pet bird carried in a screened backpack. Two young women from Africa were present (specific countries of origin were not shared), and so was a woman from India (although this woman did not represent the typical Antioch immigrant community in that she was in the country only temporarily as a professional contractor). This is the first time I had seen any substantial numbers of non-white participants at a Metro-organized event, and the first time I had observed *any* involvement from people who were not born in the United States. The second walk, just outside the watershed, contained a similar number of participants, again including a substantial number of African-American walkers, though not as many as had attended the Mill Creek Walk. No participants in this case appeared to be non-native English speakers, although this cannot be stated definitively. The neighborhood of this second park does not include the high percentage of immigrant families that the Antioch Park area contains, and so the apparent lack of immigrants in the group was not as striking as it would have been

had it occurred at the first walk. However, it is worth noting that this second walk took place at one—two, actually—of Nashville's largest city parks. Antioch Park is truly a neighborhood park, which one would expect to serve mainly those who live or work within a certain limited distance of it. Two Rivers and Shelby Bottoms also have this quality of being valued as neighborhood amenities by nearby residents, but they are simultaneously destination parks, that residents of all sectors of Nashville may visit. A pedestrian and bicycle bridge crosses the river connecting the two parks (or "connecting neighborhoods," as the plaque on the bridge states). Two Rivers Park is the park on the same side of the river as the Mill Creek Watershed, and in addition to trails, it contains an extremely large playground as well as a water park and skate park. Shelby Bottoms is across the river and cannot be considered to be contiguous with the Mill Creek Watershed, although the pedestrian bridge now makes it possible to experience the parks as two halves of a whole—an example of the way in which the geography of the area as experienced by residents matches poorly to the idea of geography associated with the watershed. If Antioch Park belongs to Antioch as a neighborhood, Shelby Bottoms belongs to Nashville as a city. This park contains a nature center, a large, fishable lake, and a network of primitive trails in addition to the paved ones. Unlike most of the city parks, an entire day could easily be spent here. Consequently it is not surprising that in most conversations I had on the Mill Creek Greenway walk, walkers stated that they lived very close to the park, while on the Two Rivers/Shelby walk, walkers were more likely to report having come from other parts of Nashville (sometimes, in fact, from the south and southeastern sectors of Nashville that are part of the Mill Creek Watershed). The Mill Creek walk was unsurprisingly more diverse, but given the baseline of near zero non-white presence in other Metro neighborhood and community events, both events presented a strikingly different picture. However, while the groups were closer to being representative of the area surrounding the greenway than many such events are, even the Mill Creek walk stopped far short of drawing a true cross-section of the population. No Kurdish people were present as walk participants, although this community is populous

in the area and uses the greenway frequently. Even more striking was what appeared to be a complete lack of Latino participants among the walkers—again, in spite of the fact that a very large Latino community exists in the immediate vicinity of the greenway, and that on any normal given day, both Latino and Kurdish walkers will be present on that particular trail. (Indeed, representatives from both groups were present that day, as independent walkers rather than Walk 100 Miles participants). In spite of these representational gaps, however, the group of walkers "looked" more like a group of people one would see anywhere else in that neighborhood than similar Metro-sponsored events in the area have tended to do, and there is something to build on here. There is also resonance with another, earlier observation; the one partially Metro-supported (but not Metro-run) event that has also drawn a diverse crowd to date has been the children's fishing event, at which many Latino families were in evidence. Additionally, as described previously in this chapter, established, native-born white residents who have expressed hope for bringing people together in their communities have asserted that their activities are more successful when they take place in the relatively neutral landscape of urban green space. Outdoor events have a freer feel; people may come and go as they please, and even on the organized mayor's walk, other walkers were present who were there to enjoy the greenway on their own. Dropping off of the walk or ending early would not have been remarkable. And, in spite of the fact that the trail is paved, the park is not heavily "manicured." Grass is mowed in areas immediately adjacent to the path if it is growing thickly there, but for the most part, the area off the path consists of forest sloping down to the creek, along with a few small gardens planted by school students, which do not resemble heavily managed plantings in more formal parks. The park appears as a semi-natural urban area made easily accessible, rather than manicured to be beautiful, and the "nature" remains easily open to the interpretation of those who view it. The Walk 100 Miles with the Mayor concept also overtly builds upon the topic of health improvement, which was the reason for valuing green space that was most frequently mentioned by immigrants in my research. Nashville residents from all cultural backgrounds

believed that park access provided opportunities for exercise and "fresh, healthier air" as well as opportunities to meet new people and socialize, and the initiative takes advantage of the momentum on these topics that is already present in the community. Outreach was built on a message that emphasized the connectedness of the greenways to the locations and values of "everyday life" accompanied by framing around the more immediately pragmatic health benefits that were already desired by the people of the city. In terms of the more diverse than usual population that these events attracted, it is relevant that Nashville's current mayor has *generally* been viewed as supportive of the city's immigrant communities and has sometimes been vocal in the community about this support; in April of 2012, he laid the symbolic first brick at a large new community center that is intended to offer services for all Nashville immigrant communities. At the event, the mayor stated that "opening doors, not closing doors is necessary for improving our city," (Zanolini 2012) and it's likely that the current mayor's willingness to become both engaged and vocal at this type of event can increase the likelihood that foreign-born Nashville residents would feel that "walking with the mayor" was a desirable activity. (Although, as previously noted, immigrant participation was low; it was viewable as a success in this regard only because the rate of participation in other government-to-community initiatives had been observed to be zero. The racial diversity evident on the walk, however, was a major departure from the demographic composition previously seen at such initiatives by any measure).

In the beginning of this chapter, a question was posed: Why would over 100 people turn out to get their exercise walking with the mayor on a blisteringly hot day, when indoor opportunities were abundantly available at no or little charge? The answer must lie in the fact that these events were more than opportunities to exercise. They were, of course, opportunities to meet the mayor; this is of real importance, given the typical demographics of those who engage in public participation processes put on by Metro. For some, perhaps, these outdoor, low-risk events might become a first step to further engagement. The events were also opportunities to meet new people and see new places, regardless of

whether a participant had any interaction with the mayor or any other representative of Metro government while attending. Participants chatted about where they lived, and why they'd chosen to come. They petted each other's dogs, asked how old each other's children were, and did each other the favor of pointing out interesting things as we passed them by. This was a setting rich with opportunity for brief, informal conversations among people who otherwise would not have been likely to converse at all; its high level of "complexity" gave participants topics with which to start conversations, and as the walks progressed, conversations on other topics followed. Participants talked with one another about how they enjoyed the exercise, or about how lucky Nashvillians are to have the greenway system. The shared walk invoked shared pride in the city, and pride in supporting this attribute of it by participating in the walk. Additionally, the experience of being outside in a pleasant environment was important to participants. Kaplan and Kaplan emphasize the quality of "mystery" that makes the experience of "good" landscapes particularly enjoyable. Recall that this trait encompasses an idea of possibility—a perception, upon viewing or entering an environment, that something interesting, novel, or fulfilling *might* appear upon further exploration. The Kaplans emphasize that the benefits of "mystery" in a landscape increase when "legibility" increases—that is, when the landscape is comprehensible, and not likely to result in danger or being lost (Kaplan and Kaplan 1989). In walking conversations, the mystery of what one might see on the walks was articulated with regularity. Side paths that the walk route did not take were always noted by walkers, especially when they appeared to lead into a landscape that differed from the one we were already in. A middle aged woman from southern Nashville told me that she had participated in as many of the walks as she could in the initial run of the initiative, and that one of the best things about the program was just "getting to see all of the different parks." In this case, the "mystery" was evident; one never knew what the parks could contain, and the act of discovering what was there was enjoyable. This same woman's comments also illustrated the fact that, in *urban* parks, the potential actions of other humans may form part of the "mystery" element. Humans are present there,

and are expected to be present. While the opportunities for social interaction and associated improvements to social cohesion that go along with the presence of other people are paramount, in some cases in the city, the humans are also part of the scenery to be discovered. This woman never commented on the natural elements we passed while walking, but certainly appreciated an encounter with a man walking across the pedestrian bridge on stilts. She said that her own son rode a unicycle and sometimes did so at this park, enjoying his ability to provide a fun and unusual sight for visitors to encounter. An older couple was seen picking blackberries into a container, apparently hoping to gather enough to use in a recipe. These interesting and unusual human activities were not confined to the large central Shelby Bottoms; on the Mill Creek Greenway, at various times during my research, I observed teenagers performing impressive skating tricks, a Kurdish group making instrumental and vocal music, and a man with a metal detector who was enthusiastic to describe the art of metal detecting. On the Mill Creek Greenway walk with the mayor, similarly, participants remarked upon the decorations contributed by the schoolchildren at least as much as on the naturally growing elements—although these were appreciated, and on the Two Rivers Walk, one person explicitly expressed pleasure at "seeing all of the different plants" along the side of the trail. She was very motivated by the idea of potential health benefits, as were many others on the walks. However, it was common for participants to take a moment to point a natural element out to a fellow walker, demonstrating that even when a person's *primary* motivation for visiting an urban green space is not tied to appreciation for nature or environmental activism, participants may still experience strong benefits that are tied to natural attributes, and that may serve as secondary motivators for valuing the experience. In fact, this woman who appreciated seeing the plants was in the company of another person who said she did not generally see herself as a "nature person." The companion was there anyway, however, suggesting that some aspect of the event had motivated her to exercise there instead of in an indoor environment that morning.

From the perspective of an environmental non-profit, it is useful to consider that these secondary motivations may be built upon and may eventually come to occupy higher cognitive positions. While it may seem intuitive to classify the walking for exercise as an "active" use of the park and the incidental observation as "passive," and therefore less important, this is not a meaningful distinction. Simple observation, the Kaplans note, is a "use" of nature (Kaplan and Kaplan 1989), and the act of seeing may still carry a wide range of benefits. The element of "mystery" affects this enjoyment, and as with the other factors that may define landscape preference, the integration of the park with the community creates a "subtype" of mystery that is unlikely to be dominant in wilderness parks. Mystery inherent in the landscape remains present, but mystery inherent in human nature becomes important too. In an urban park, one looks upon a bend in the path and wonders whether it might lead into the woods, whether it might take one to the water, whether there might be crayfish to catch under the rocks there . . . and whether a man on a unicycle might be able to pass from the opposite direction. The mystery is not diminished by being non-traditional, and the possibility of seeing "people doing interesting things" is part of any landscape that is embedded in a populated human community. It is notable that these "interesting things" might potentially take the form of "interesting work." During a small volunteer planting effort that took place at Shelby Bottoms (outside of the watershed, so not central to the research effort), park visitors occasionally walked over and asked questions about what was happening; this capacity to infuse Kaplan and Kaplan's "mystery" element with human action presents an opportunity for outreach to visitors who might potentially become interested in engaging in environmental work themselves. Those who may not be engaged by a flier on the bulletin board may become interested in work when they unexpectedly come upon it being done—an argument for incorporating river cleanups and similar events into nascent initiatives. The presence of experts conducting the work provides a measure of "legibility" that the Kaplans assert is necessary in balance

with mystery in natural landscapes, and provides a means by which people observing this work that affects the landscape might come to see it as relevant.

The presence of expert leaders in terms of legibility enhancement was also an important attribute of the Mayor's Office walking programs. People who were unfamiliar with the greenways could come with a certainty that they would be guided, and perhaps the implication that the walk must be worthwhile if it was selected for the program. In relation both to the enjoyment of the green spaces and participation in environmental work, the ability of an organizational framework to add legibility to a situation that might otherwise be a bit too overburdened in mystery is important. In effect, the same is true in the efforts of Flatrock and Crieve Hall residents. In the case of the greenways walks, the official program helped to impose legibility both on the park and on the face of local government. In the case of Flatrock and Crieve Hall, the official programs used the venues of public well-valued green spaces to help facilitate the imposition of legibility on a social milieu that was lacking in cohesion. All of the interactions facilitated exploration in a managed area of green space that encouraged participants to see their neighborhood—or their city—in a light that emphasized connections rather than divisions.

Landscape and Memory

This chapter has so far described meanings of home and neighborhood (and sometimes city) that residents attach to urban green spaces rooted in the present. A second, though connected, type of this home-related meaning emerged as being important to the way people think about Nashville's green spaces as well. This second type of meaning is rooted in memory, though with an important added attribute; in many instances, the relationship to green space apparently serves as a bridge between a remembered and a present home. In the city, it seems, grass, trees, gardens, and streams are powerful evokers of connection. Some aspect of being outside, even in a relatively small green area, inspires a mental diminishment of barriers, and over the course of this research, several people described how such places helped them remember the past, even when their pasts occurred in places that little

resembled any landscape to be encountered in Nashville. Early in the research, I spoke with Anita (already quoted previously regarding initiation of a community garden), a leader in the Latino community who worked with families through a base established at one of the schools in a poorer, sidewalk and park-lacking area of Nashville. Many of the Mexicans in her community are from rural areas, she said, where they would "go out and find food in the land or plant gardens and fruit trees themselves somewhere." It wasn't always necessary to own the land, she said, and in some areas, people knew they could just find an unused space and begin using it. People had told her that they missed doing that here, and "[felt] that it was an activity with intrinsic value." A few weeks later, on the other side of the watershed, a woman from the other side of the world told a similar story. Tiroj was a counterpart to Anita, in some ways—a woman whose native language was something other than English who had now lived in Nashville long enough to be comfortable with the language and culture, and to take on a role helping other members of her community. Tiroj was associated with a Kurdish community center, and she had enthusiastically expressed interest in receiving free trees from the Non-Profit. They were to be planted by adults and youth group members on new land that had just been purchased for the creation of an Islamic cemetery[8]. Over the course of her years in Nashville, she had found that most people in the United States pictured Kurdish people as originating in the desert regions of Northern Iraq. In reality, though, many Kurds are from mountainous areas, and share a strong cultural identity derived in part from the idea of a fertile shared landscape. She stated that "even those who lived in desert areas recently trace back to those [fertile] regions. These places have fertile soil, and people living there would have lots of fruit trees, like figs and oranges and other fruits." More recently, she said, many of the trees in the Kurdish homeland have been cut down for fuel and energy. In most cases, people believe

[8] A note for readers: Since 2010, the national media has run frequent stories about conflict relating to the building of a mosque and Islamic community center in Murfreesboro, another middle Tennessee community. As a clarification, the cemetery and associated mosque/community center mentioned here is not the one that has been the subject of such debate. There was no large scale organized opposition to either this plan for a Muslim cemetery or past mosque constructions in Nashville.

that it was necessary for survival and don't view the actions of those who cut the trees down as particularly evil—but now, many people who live there are trying to reforest the areas, and support for those efforts is one of the links that refugee Kurds share with those who still live in Kurdistan (a region that encompasses parts of Iraq, Iran, Turkey, and Syria. The majority of Nashville Kurds were born in Iraq). The landscape was an important part of their cultural heritage, and now that they can see means of doing so, Tiroj states that it has become something that members of the Kurdish culture agree on wanting to repair. Tiroj went on to say "Kurds like things to be green. And here, Kurds are the same; we like to have trees. If we have yards we always have trees. Kurds love fruit. . . . We looove fruit trees, to pick fruit to eat, that is something we were always able to do before and like to do here." There was a pause in the conversation while Tiroj seemed to consider before she finished by saying "I think peaches grow very well in this climate . . ."

In this case, the past is orange and fig trees, which don't grow well in Nashville. Most Nashville Kurds came to the United States at least a decade ago, and many, including Tiroj, have reached a level of comfort in regarding Nashville as both their present and future home. They've invested in the community, constructed expensive, permanent structures, and can now sometimes afford to devote energy to recreating the aspects of their former home that were important to them. A cemetery that matches the Kurdish idea of a cemetery—and provides something resembling beloved aspects of remembered Kurdish landscapes is one of these things. The non-fruit bearing trees the group received from the Non-Profit will grow there for now, and later, at the cemetery and on other land they acquire, it may be that peaches will replace the oranges and figs of the past. The *idea* that makes the trees important is large enough to encompass all fruit species, and to help bridge the heritage of Tennessee and Kurdistan.

Interestingly, an academic essay by a conservation professional has explored the ecological and cultural considerations involved with the planting of non-native species to make "here like there." The author of that work suggests that one manner of appropriate balance might be struck by using plants native (or at least long-established and near-native, such as the peach) to the new home to replicate the colors, patterns, and possibilities for activity associated with the home culture (Brooks 2003). Independently, this is the proposal of the Kurdish research participant. What is important is a lush landscape, an ability to pick fruit with one's own hands and to enjoy its taste and the nourishment that comes with it; the manner of fruit can be altered without debriding the garden of meaning. The planters of trees—at least for the initial, non-fruit-baring varieties received during the interview— were expected to be members of the youth group, many of whom were born here. Thus, the trees and the act of planting them were named as ways of connecting a new generation both to the Nashville landscape being developed by the Kurdish community and to the ancestral Kurdish landscape that exists as an ideal.

Months after the conversation with Tiroj, another member of the Kurdish community expanded on these themes. She was interested in contributing to the research, but preferred not to be formally interviewed, and so instead directed me to a video that she felt accurately portrayed something important about Kurdish culture. The video was part of Nashville's Public Television's "Next Door Neighbors: Storytellers" series, in which members of immigrant groups are trained and equipped to tell the stories of their own communities, with focus on aspects of their cultures that their Nashville-born neighbors may not be aware of. The video referenced by the Kurdish woman was called "Fruits of Our Labor: A Look Inside a Kurdish Home Garden in Nashville." It showed men, women, and children tending gardens in the small yards of their Nashville homes and contained voiceover that described the importance of gardens to the Kurdish community here. "Gardening is a big tradition in Kurdish culture," viewers are told. "You will find that almost every Kurdish family in Nashville, Tennessee has a vegetable and fruit garden; not only because it's symbolic and reminds them of Kurdistan, but they enjoy the

delicious fruits and vegetables produced by their own hands . . . many . . . Kurdish elders, find great joy and happiness in the garden. It reminds them of the life that they left behind in Kurdistan. . . .Gardening provides more than edible things for Kurdish people. It tells their stories, strengthens family bonds, and unites communities" (Nashville Public Television 2011). This summary taps similar levels of meaning to those discussed in the preceding sections of this chapter, though in this case, the green space attributes of "connection" and "sharedness" serve not only to strengthen social cohesion in a community presently associated with the land, but also to connect members of that community to a shared heritage associated with a different landscape altogether. Of course, these short NPR videos provide only narrow windows into the cultures they portray, and the immigrant community members who make them certainly have an interest in portraying aspects of their cultures that native-born Nashville residents will see as admirable and non-threatening. However, neither Kurdish research participant was involved with the making of the video, and the first spoke with me before the video existed. This is one case in which the culture of a Nashville immigrant community may well provide a strong, specific connection point for future work in environmental efforts. Indeed, Tiroj thought that in the future, the Kurdish community might find affinity with the efforts of the Non-Profit, and spontaneously expressed interest in exploring funding options together with a view to combining the Kurdish interest in fruit trees with the Non-Profit's interest in tree planting for purposes of environmental improvement. There was indication, too, that at least some in the Kurdish community could see environmentally focused tree-planting efforts as an extension of their own heritage, linking them to the environmental restoration efforts underway in their home countries.

The stories of those whose experience of green areas in Nashville helps them feel connected to lost landscapes of their pasts are especially powerful—but a landscape need not be very distant or truly lost for a person's sense of place in Nashville to be strengthened by the experience of the past. Recall the neighborhood of Crieve Hall, where efforts were made to frame the changes in home interiors as being

contained within an outdoor neighborhood fabric that remained largely unchanged. Younger and older residents valued things like the old azalea bushes that had been blossoming for decades, and Annie indicated that "work that acknowledges the beauty of this neighborhood's yards as a major part of its history and identity really motivates [the original residents]." Isa, also of Crieve Hall, outlined the many benefits of being outdoors that she considered important to her life, one of which has notable connotations for the value of memory in association with urban nature. Partway through my interview with her, she paused, and then continued in a softer tone, saying "I really remember walking with my mom. We always took the time to look around, look at milkweed pods, see what was going on in the pond. I learned so much about those things." Her parents, she said, had both grown up on farms, though by the time she and her brothers were born, they'd moved to the suburbs. Isa said she'd understood that the long nature walks and the careful teachings about wildflowers and animals were their way of connecting their children to that past, to the world that they had grown up in and continued to value. Her parents are still alive and well; the value of memories inspired by landscape isn't dependent upon loss. She went on to say that this process has continued with her own children. They spend a month in Minnesota every year, and their grandparents *and* parents teach them in this way, as their parents continue to do in Nashville. The general experience of having nature near the home is transcendent of place, in some respects; actions taken in Nashville strengthen connection to the farming heritage of the family in spite of differences in climate and landscape. Isa recalled one day in particular, when her daughter was about three and they'd gone on a walk at the park near their Nashville home. That day they found many—maybe dozens—of butterflies crawling on the ground, and "tons of millipedes." She remembers that her daughter was fascinated to watch them and learn about them—and her mother, with the background received from her own parents—was able to teach. She said that her daughter, now eleven, still remembers that day clearly, as young as she was. And while she sat there sipping hot chocolate and reading while I spoke with her mother, she looked up, grinned, and nodded her head

vigorously. Isa smiled and said “I just think it’s a necessary part of growing up . . . learning about these things, learning to see them, learning to be able to entertain yourself.”

Likewise, in an area of the watershed that still has many streams, but also has far fewer green areas than it did a generation or two ago, an elderly man who had grown up in the Flatrock community spent time describing his childhood experiences in creeks, where he had spent many warm summer days “entertaining himself.” He emphasized more than once that in those days, “there was a crawdad under every rock,” and that he and his friends had spent hours flipping the rocks over to find those and other interesting things. This man said he wasn’t sure how much kids in the neighborhood did this now, or whether they even should do those things, with all of the pollution in water. There was no question, however, that he considered those hours playing with friends in the creeks an essential, defining aspect of his own childhood, and that the continued presence of the streams in the city was important to him. An older woman from the Antioch neighborhood expressed similar feelings, touched with some regret, when she described visiting the greenway with her grandchildren some years past and finding a turtle. The children’s reaction was “get it away from me!,” she said, and it made her wish her grandchildren had been exposed to places like the greenway more often when they were younger, before they became such confirmed “city kids.” “I grew up in the country,” the woman said, and she saw her grandchildren’s lack of experience with turtles and other “country things” from her own past as regrettable—a chance for connection between the generations that had missed its window. She was glad, though, about the expansion of the greenway system in Nashville, seeing it as a way to connect other “city kids” to things she believed were valuable for them to know.

One of the things that is striking about all of these accounts is the presence of humans in the memories that the landscapes evoke. Throughout this research, it was only rarely that any story of the past was free of strong, central references to human interactions. In the one instance in which such a story

occurred, the reference was short, and was meant to illustrate a difference (pollution) rather than a bridge between the two landscapes involved. Perhaps not surprisingly, the green settings of Nashville don't easily evoke nostalgia for simple mind pictures of long-missed unpopulated landscapes. Not once during the research did anyone describing their relationship with Nashville's natural places share a simple story of what the river they knew as a child looked like, or how the trees on Mill Creek greenway reminded them of a scene they had known in childhood. Memory was always connected to something human, often a memory of learning or exploring with someone else—but even when such an action did not necessarily involve the presence of others, the community was always implied. Going out and picking fruit in the yard or the countryside was not described (or shown) as an action of an individual, but as something "Kurds always do," or that "people from rural parts of Mexico really value." The actions were important not solely for the intrinsic value attached to them by individuals, but for their ability to confirm the continuation of strong, deeply held cultural values. Further, the places that inspired memory of the past are local to current lives. They share the neighborhood with everyday activities, and with the everyday human interactions described in the earlier sections of this chapter; the same research participants described the power of green outdoor places both to help them remember and to help them connect to new people and new landscapes in Nashville. It would appear that the model connecting green space to neighborhood also contains an element by which green space can be connected to both past and future; this schema seems to be enacted largely through the medium of an idea of community as both localized and transcendent of place and time. The green space is local and connects those who use it *to* the local; additionally, though, the relatively unscripted nature of green space that facilitates this also facilitates more symbolic connections, by which the land may acquire meanings that connect it to distant places or remembered pasts.

Some previous research has explored the role that urban green space can play for immigrants to a new country, but this literature is not particularly robust. While several studies have examined the relative

paucity of access to public outdoor space in immigrant neighborhoods in some urban environments, this literature has tended to focus on documentation of this lack, and of potential associations with health and social well-being indicators. Little research has explored the meaning that members of these groups may assign to such places, and few of these studies examined immigrant communities at all. In a study of the United Kingdom, Stewart has noted that research regarding immigrants who are refugees and asylum seekers tends to focus on the immigration process and on basic rights and legal situations; general quality of life issues, including access to green space, recreation opportunities, and environments that promote general healthy living receive less attention (Stewart 2004). Among the limited studies available, a few are illustrative, however. Churchman and Mitrani (1997) found that Russian immigrants in Israel reported that the number and types of neighborhood parks were among the most strongly missed aspects of Russia; it was notable that the authors found that this was reported less commonly when immigrants had moved to Israel for a positive reason, such as for a sought-after job (Churchman and Mitrani 1997). This finding is reflective of a study cited earlier, in which it was found that many residents of Charleston described trees as the most missed aspect of the city that had been destroyed in a hurricane (Hull 1992); loss of a greener past is regretted by immigrant and native-born alike, seemingly. In the case of immigrants, it may also be that the loss of green space is also a loss of one means of coping with upheaval—an idea that is interesting in light of the fact that immigrants who arrived in Israel under more desirable circumstances were less likely to describe the loss of parks as important (Churchman and Mitrani 1997). Another study, conducted with Asian and African refugees in England, details perspectives from several refugees who were taken on trips to visit a variety of park areas, including some in cities and some in less managed rural locations. More naturalistic areas were described as evoking higher levels of nostalgia, although in all cases it was unlikely that the English countryside of the study was objectively similar to the African and Afghani landscapes that research participants felt they evoked. The geology, the vegetation, the temperature, the culture, and a

multitude of other aspects would be bound to differ, often markedly, and yet participants consistently reported that the spaces reminded them of home. Rishbeth and Finney theorize that this is possible because “these places, especially naturalistic environments, are ‘open to interpretation’” and are, in a sense, naturally “multicultural” (Rishbeth and Finney 2006). Natural elements may provide a framework for memory while simultaneously providing a good way to frame conversations about diverse pasts—an idea that both Anita and Cal had hoped to tap with their community gardens.

Boym (2001) has made a distinction between “reflective nostalgia,” which focuses on the act of looking back at a past time and “restorative nostalgia,” through which people may find ways of integrating the past with a new future (Boym 2001). This latter type of nostalgia is certainly open to any person experiencing a place, but may be especially meaningful—and important—when considered in relation to people who have recently come to a new place, and are trying to begin feeling at home there. Research on urban gardens used by Latinos in New York found that participants may express appreciation at being able to eat or sell fresh food, but that the “logic” behind the gardens is mainly nostalgic and therapeutic; it is a means of bridging two places with an activity (and creation of a small landscape) that existed in both (Lynch and Brusi 2005). At domestic abuse shelters research has shown that such gardens helped people bring past memories (such as of grandparents gardening) and integrate them with the present in which, previously, they had been unable to find space to carry on this tradition. It was also noted that having access to these places gave people something other than domestic violence to talk about (Stuart 2005). Similarly, Rishbeth and Finney’s research participants were pleased and surprised to find plants from their home countries when visiting a botanical garden and were happy to find themselves experts on conversational topics that their English guides knew little of. They also expressed happiness in finding places in their new country that allowed them to, temporarily, feel like they were in their countries of origin while simultaneously being appreciative of the attributes of England that allowed for the open access. Rishbeth and Finney suggested that urban green spaces can evoke restorative nostalgia in

addition to reflective nostalgia, potentially helping people to integrate past and present places and memories through the vector of a landscape that is "open to interpretation" (Rishbeth and Finney 2006). This is an interesting idea, and one worth exploring through practical action if watershed initiatives are regenerated in Mill Creek Watershed in the future. In the course of this research, contacts were made at several major immigrant community centers, and most expressed potential interest in working with the Non-Profit—not necessarily on a watershed association, but certainly on targeted efforts such as clean-ups and tree planting events.

Independence and Exploration: Parental Values for their Children

In this chapter, children have already been mentioned in relation to several deeply held values relating to urban green space. These values have related to family health, to safety, and to the facilitation of connection between generations. Parents described their pleasure in teaching their children things that were important to them, and in talking with their children in settings that seemed to them to foster greater sharing and understanding. However, intertwined with these values related to children was frequently an additional value; that of the fostering of independence, imagination, and exploration. Isa from Crieve Hall articulated this value most extensively. To inspire the growth of these traits in her children, she and her husband have kept a small brushy area in part of their three-quarter acre yard, of which she says "It's just a ton of brush, no one would keep it who wanted to make their yard look nice." Rather than cleaning it up, though, it could be said that Isa's family has cultivated it. They've kept this small area—about the size of a small room—and have cut a path back through it so that "now it's like their outdoor playroom." Her children call it "the forest," and it has apparently become a sought after spot for neighborhood children as well. Isa said that it's great for "imaginative play, and a little independence. The kids don't feel like they are right under my eyes—they're off on their own—but I can see a little flash of purple from her jacket now and then from out the window and know where they are and that they're safe." Annie, of the same community said "schools are built with the same plan as

prisons, and due to growth, right now, half of the elementary school classrooms are in trailers[9]. We are finally going to be expanding the real school and getting rid of those, and now that that's happening, anything we can do to make the school less prison-like is something I want to work on. That's why people here will be so interested in trees and gardening projects." Researchers have documented the same effects that these mothers have observed, with studies showing that children engage in more types of play activities, and more creative play when trees and grass are present than they do in settings lacking them (Faber, et al. 1996).

The young, native-born citizen parents of Crieve Hall—and the older citizens reminiscing about their childhoods—were the research respondents most likely to specifically cite this promotion of exploration, independence, and imagination as highly valued aspects of the green areas near their homes, but observation indicated that this aspect of such places does hold value for a more diverse group of residents as well. At Antioch Park, on every visit that occurred in good weather outside of school hours, the green grassy area was full of children of white, African-American, African, and Latino descent, while parents stood in clusters at a bit of a distance (though within sight). When walking on the trails there, it is common to encounter a child—of potentially any race—striding along seemingly alone before his or her parents appear behind, within call all the time, and within view most of the time, depending upon the curvature of the path. These parents could commonly be seen giving their children permission to go off the path to look at something in the underbrush, or admiring the objects their children had found exploring. It is interesting to note that within the parks in Mill Creek Watershed, this kind of activity was almost exclusively observed at Antioch Park. Few children were ever present at Ezell Road Park, and in the course of the study period, there was never any occasion on which a child was observed more than a few feet away from his or her family there. Seven Mile Park also seemed not to inspire these practices, although, due to the very low volume of people encountered in there, this was not a major data

[9]This interview took place before completion of the new school building.

collection site. At Coleman Community Center, the playground area received good use, and teenagers seemed to enjoy hanging out inside, where there were community rooms and gym and fitness areas, but the space outside was perhaps a bit too mapped and manicured to inspire the exploratory type of play; there is only a small loop walking trail, where the whole length is visible from any point, and the heavily-traveled street is visible from all points. Ellington Agricultural Center was generally less populated when I attempted to collect data there. One resident (Annie) who lived nearby stated that she thought many people in the community didn't use it due to the fact that their own yards were sufficient for play, and their streets were pleasant for walking. However, a second area resident (Isa) said that the presence of the park had been one of the motivating factors in her family's decision to move to Crieve Hall, and she specifically described the element of freedom it provided for her children—who already enjoyed a small brushy wilderness in their own yard. Ellington, she said, was special because there was always something to see; visitors could go near the barns and see animals, and there was quite a bit of wildlife as well. There was also a place where a single path diverged into a loop, and as her children had gotten older, they had received permission to take a different path from their parents. This would take them far away, not quite out of sight, but close to it, and gave them a measure of the independence that Isa thought was essential for healthy development. She noted that both the park and the neighborhood that contained it provided what was to her an essential quality of containing rich potential for discovery in combination with a high enough level of safety to allow that discovery to be directed in ways that fostered growth of independence. In terms of the Kaplans' framework, the park was complex, coherent, legible, and high in mystery, and these attributes were increased in value by the fact that the area surrounding the park was rich in those attributes as well; it was easy to view this park as a fixture of the neighborhood because it resembled the neighborhood, and was surrounded by opportunities for other interesting actions. Even though Annie had not reported much use of the park, she had noted similar reasons for deciding to move to the neighborhood. Specifically, she emphasized the safety aspect of the

neighborhood, saying “East Nashville has all of those beautiful homes, and some of them have good-sized yards, too . . . but you know the joke about [East Nashville]: ‘We’ll steal your heart, and your lawn mower.’” Annie’s children were still too young to be unattended, but when she and her husband had thought ahead, they hadn’t been able to envision letting children bike around the neighborhood in East Nashville. Crieve Hall was the safer choice, and the one that would be more likely to provide her children with the type of childhood she wanted them to have.

It is interesting that research participants articulated these values of exploration, imagination, and independence-fostering abilities of green spaces as being categorically different from the values of “wanting to do things with the family,” “helping children be more active,” or even “giving children a place to play” or “teaching children about their heritage.” This distinct set of values deals specifically with a perceived need of children to have access to natural areas, and with specific benefits to child development and socialization that are viewed as being connected to this access. Kellert describes the experience of childhood contact with the great categorical complexity of nature as being important for emotional, intellectual, and “evaluative” development (Kellert 2002), while Pyle outlines the experience of “Eden in a vacant lot” (Pyle 2002), and laments its decline, emphasizing that many types of parks and nature reserves do not fulfill the same needs, being too manicured, and too bound by rules of behavior that make climbing, straying from the trail, and splashing in the water non-feasible. Beyond the richness of these environments for simply learning how to process information in the world, these places, it is argued, are emotionally engaging. Regarding the childhood experience of natural elements in the environment, Cob writes that “the child’s sense of wonder . . . is aroused as a response to the mystery of stimulus that promises ‘more to come’ or, better still, ‘more to do’—the power of perceptual participation in the known and the unknown” (Cobb 1977). Kaplan and Kaplan have asserted that similar motivations are at play among adults, who, when shown pictures of places, have a tendency to prefer those that are higher in the element of “mystery,” and if urban parks are frequently insufficient to tap a

strong “sense of wonder” in adults, with their greater range of preexisting experience, my own research indicates that these same adults believe that urban nature *does* provide that opportunity to their offspring. Further, adults valued the chance to briefly re-experience this joy of discovery with their children. Kellert notes that in addition to these positive emotions, nature is also very capable of producing anxiety, pain, uncertainty and fear in children; the degree of freedom that accompanies “direct” contact with nature, implies a degree of risk. Bee stings, broken arms, and getting lost are all possible—and all, he argues, potentially beneficial to maturation and development if they are not truly overwhelming or traumatic (Kellert 2002). In the case of Nashville’s green spaces, just as many of their particular benefits are human in nature, and associated with their “embedded” nature, so too are their accompanying dangers. The research participants who valued the ability of nature to foster independence in their children had acknowledged that all areas of the city would not allow this; they had in fact chosen to live in their neighborhoods because they provided settings in which such activities were possible. Violent crime and child abduction are potential concerns, and as Pyle notes, in a context of increasing expansion of population and concomitant crowding, “whether or not violent incidents represent a genuine danger or one largely projected through sensational news coverage, parents *think* that the woods are unsafe” (Pyle 2002). Again, there is a parallel with the Kaplans’ matrix of preferences applied to adults; while mystery is appreciated, and while adults may be less likely to get lost (or subject to lesser consequences if they do), they still prefer landscapes with some degree of “legibility.” Being able to feel confident, not necessarily in one’s knowledge of a place, but in one’s ability to learn to navigate it as one goes increases preference for a place. Some parents, perhaps more aware of this than their children, described their neighborhoods and favorite parks partially in terms of a kind of instructive legibility. The good parks and neighborhoods were seen as helping children to develop abilities to form both cognitive spatial maps and cognitive maps of experience. They provided opportunities to explore in

settings with frequent landmarks, and with progressively movable ways of navigating further—even out of sight—of their parents while still being "in range."

These observations on the place of nature in child development, while not central to this research, remain points of practical value. Parents in the watershed lamented the loss of opportunities for children to spend time outdoors, and described considerable measures that they had taken to provide their children with the experiences they felt had been so valuable in their own childhoods. In Davidson County, 25% of households contain children (U.S. Census Bureau 2010c); the issue of green space access for the sake of children has strong potential as a motivator for participation in environmentally focused efforts, and indeed, the most successful volunteer day to take place during the study was school based, with adults and middle school students working side by side. Awareness of community values related to opportunities for children is of practical use to planners, even when, like the Non-Profit, their central mission is not one of child environmental education. Indeed, some framework for mobilizing these values had already been put in place before the termination of the watershed association initiative with the formation of the Mill Creek Watershed Association Web Site. In the community, it was clear that being outdoors was valued in part because of an association with discovery, and as the web site was planned, its proposed pages became increasingly reflective of this. A "Places to Enjoy Mill Creek" section was planned to give guidance on where to access trails, boat launches, parks, and other places near the creek. A "Things to Look For" section was also proposed as a way to engage people with the fun of finding and learning to identify new animals and historical sites; the goal was to provide a tool that would help residents appreciate both the environmental and the social and historical richness of the urban environment. After speaking with parents both during scheduled interviews and at impromptu interviews along the greenways, it also seems likely that this kind of page would have been an opportunity to engage families in the process of forming the watershed association itself, by tapping into motivations relating to children's learning, growth, discovery, and exploratory opportunities. In

keeping with this theme, the title of the web page was “Mill Creek Watershed Association . . . Discovering an Urban Watershed”(Mill Creek Watershed Association 2010). Intentionally or unintentionally, the theme that the watershed was full of unexpected things that could be learned about and found was subtly highlighted immediately for website visitors. In the web site, the watershed was portrayed as full of mystery, but framed in a way intended to make it highly legible as a place connected to everyday life. In the future, building upon these themes by translating them into place-specific actions might help to spawn interest in water-related issues in the community.

Concluding Thoughts on Valuation of Green Space

This chapter has examined the ways in which urban green space is valued in Mill Creek Watershed. Unquestionably, health benefits were identified as important to the valuation of green space here, and they formed the main immediately pragmatic value associated with these places. These were mentioned by nearly all research participants, though elaboration on this topic was generally minimal, and did little to explain why these participants did not simply work out at home or in a gym. Participants waxed eloquent, though, when they turned to explorations of deeper meanings associated with urban green space, and these meanings, with great consistency, were intertwined with concepts of neighborhood and home, past, and future. In the ability of such spaces to remind them of home, both Kurdish and Mexican immigrants found means of developing goals for the land here, in the present. Across cultures, residents considered ways of connecting their children to these heritages, and parents valued the role such places could have in allowing their children to grow up in a way that seemed most beneficial and meaningful to their future needs as adult human beings. Finally, and perhaps most importantly, these places were associated with social cohesion and neighborhood identity. In Flatrock, the community center’s land was present, on bus lines, and available; its existence made the Flatrock festival and garden possible. In Crieve Hall, churches and schools regularly made their land available for public gatherings, and pleasant green streets created an atmosphere in which more people were outdoors and

able to meet each other. In both neighborhoods, the locus of neighborhood was outside. If the "imagined community" of nation exists in spite of the fact that most members of a nation will never meet one another in person (Anderson 1983), the neighborhood that sees itself as a community relies on the idea that many of its members *will* meet in the spaces between places in the geographically defined area. Festivals, parks, playgrounds, and pleasant, walkable streets facilitate these meetings. Invitations to "walk with the mayor" do the same, and bind the neighborhood to the larger city. In all cases, the presence of pleasant outdoor places that are perceived as being shared among members of the neighborhood is essential to this type of community development. One may argue that a store, café, or other indoor entity important to the community may serve this role. However, such places are laid out in ways that discourage contact among those who do not enter them together, and this attribute of even the most welcoming indoor space has been cited as a contrast to the "festivity and social contact" found at outdoor venues such as farmers' markets (Somer 1989). The Flatrock event, the Crieve Hall Latin Festival, and the mayor walks were all festive occasions which provided people with a reason to come together in a spot that facilitated interaction. Informally made connections strengthen place in community and *sense* of place for individuals, and, taken together, formulate a sense of shared identity that defines a sense of neighborhood. In many respects, nature in the city is not a place where people get away *from* their lives in the city, but a place where they reinforce valued attributes of their everyday lives there. The next chapter will build upon this knowledge to consider ways in which people may be motivated not only to value, but to *act* in relation to environment and green space in the watershed.

CHAPTER 4

MOTIVATIONS FOR PARTICIPATION

Chapter 3 explored the values that residents of Mill Creek Watershed attach to outdoor public places, and demonstrated the ways in which these places are embedded in geographic and cognitive landscapes that are mediated by meanings of home and community. It examined the meanings that community residents have already assigned to these spaces, and began to examine the actions that have seemed appropriate to them given the contexts of their communities, beliefs, and available environments. Neighborhood festivals, tours of homes, school cleanup days, and community gardens were explored as uses of public or, in the case of the tour of homes, private green space, and while these were not overtly environmental initiatives, examination of the motivations held by those who organized them revealed insights that may be of use in considering how community members may be motivated to participate in the work of the watershed association. All of these efforts mobilized the shared and embedded nature of urban green space to enact neighborhood in the image of a desired goal—generally that of fostering or maintaining community cohesion and identity. The neighborhood, it was revealed, is primarily an outdoor entity, and actions undertaken to strengthen it most often occur in the outdoor spaces surrounding and connecting places that are also the targets of action for environmental initiatives.

These "naturally occurring" community efforts that predated any contact with the Non-Profit or the research provide a backdrop for examination of potential motivations for expansion of *participation* in environmentally focused initiatives over and above motivations for simple assignment of value. They also provide a backdrop for examination of ways in which outreach by environmental professionals may tap motivations already existing in the community. The Non-Profit has a long history of organizing successful tree-planting days, rain barrel workshops, rain garden construction work days, and stream cleanups as means to engage people in environmental work. So far, few such efforts have taken place in

the Mill Creek Watershed, and the institution of such work days was one of the methods by which expansion of efforts there was planned to proceed as part of the effort to institute a Mill Creek Watershed Association. This chapter will examine the ways in which community members responded to invitations to participate in festival and volunteer events as well as their reactions and ideas in relation to plans for instituting a community watershed group. It will examine the expressed motivations of participants, the theorized motivations identified by community leaders considering the best ways to engage their constituents, and the ways in which community and environmental professional motivations may find common ground in execution of efforts.

Summary of Watershed-Based Participation Opportunities

It is helpful, here, to step back and consider the process and framework being employed for the creation of the Mill Creek Watershed Association. The Mill Creek Task Force was convened to guide this process, and was originally comprised of representatives from relevant government and nongovernment groups who worked to understand both the environmental and social factors necessary to the formation of a sustainable watershed association. This process would allow time for planning, identification of issues (both environmental and community-focused), and identification of potentially interested members of the community. Initially, Task Force participants came from the Non-Profit, the Land Trust of Tennessee, Metro Water, the Nashville Zoo, the Tennessee Department of Environmental Conservation, the Tennessee Stream Mitigation Program, Tennessee Scenic Rivers Association (not a government entity), Tennessee Wildlife Resources Agency, the U.S. Army Corp of Engineers, and the U.S. Fish and Wildlife Service. Eventually, Metro Parks representatives also joined. During ongoing planning sessions, the group identified other potential individuals, businesses, and organizations to contact, with invitations to be extended to representatives from Nashville along with the independent communities of Nolensville and Brentwood.

Early in the planning phases, the group solidified the reasons that a watershed group was particularly needed in Mill Creek. The major concern, and the one that led to the idea of forming the watershed association in the first place, was the presence of the Nashville Crayfish. Given the small area of its habitat and the rapid development occurring there, the need to engage the community in stream habitat preservation was deemed important. However, additional reasons to focus in the area were also identified. One reason was simply that no one had yet focused on this area for environmental efforts, and it would be worthwhile to engage new groups of people. Additionally, the Mill Creek watershed has seen very rapid development, but the stream and park-related recreational access in the area has not kept pace with construction in many parts of the watershed. In the context of Nashville's green space-heavy conceptualization of urban planning, this is a particularly notable deficit, but also, perhaps, one that is particularly addressable given sufficient community involvement. The hope of the Task Force was that the public could be engaged in both the environmental and the social issues at hand, and would become inspired to take action to help coordinate projects and adopt behaviors that lessened negative impacts on neighborhood streams. The central need, of course, was to identify the factors that might lead residents to participate in new efforts instigated from outside of the community. The work presented in the previous chapter goes some way towards this end, identifying the ways in which non-engaged residents "see" urban nature and attach specific values to it. The present chapter builds upon these observations to explore the self-reported actions of those who take the step to begin a volunteer effort, even if it is, as in the case of many of those described below, only a day-long commitment.

During the research period, several such volunteering or festival events were scheduled to occur within the watershed, but for various reasons, few actually took place. Two of these took the form of simple presence of the Non-Profit with booths at two festivals (the Flatrock Festival and the Music and Molasses Arts and Crafts Festival at Ellington Agricultural Center). A third "festival"—a large community fishing event already mentioned in the previous chapter—was aimed at the wider Nashville audience

and took place in an area outside of the watershed. However, more marketing than usual was directed to residents of the watershed communities, so it is worth mentioning in a list of watershed activities. Another activity coordinated by the Non-Profit was a large, diffuse, ongoing effort in which many trees were given away to community groups who asked for them. No volunteering events were coordinated through the Non-Profit in regards to this, and in general, communities were represented by small numbers of individuals who planned to plant the trees themselves, without making a community effort of it. Historically, few of these trees which were advertised through the Non-Profit's normal channels had been distributed in the urban Mill Creek Watershed area, and the Non-Profit was aware of this disparity, noting that in such efforts, there is a long history in which "wealthy communities are the first to get [free things for the good of their community.] Less affluent neighborhoods with strong homeowner associations or neighborhood groups are behind them, and the poorer communities without community-led organization are last." To help address this, the much broader scale tree-planting event described in the introduction was planned. This event was geographically focused in southeast Nashville and was held in a location with a large number of Latino families. It was initially hoped that this could take the form of a full festival, with food, trees, and scheduled groups going out to plant trees together throughout the day. This plan was later scaled back to a tree giveaway held in a place trusted by the Latino community, though plans for larger festivals were begun for a later time. As described in the opening to this dissertation, this event did successfully draw in a new audience with whom the Non-Profit had not previously engaged. It also provided an opportunity for advertisement of other upcoming events, with information about them included in the planting information that tree recipients received. These events included a Mill Creek cleanup day, the planned spring launch of the Mill Creek Watershed Association, and a public tree and rain garden planting event planned at a middle school within the watershed. However, since the Mill Creek cleanup day was scheduled on the day of the flood, and the planned launch of the Watershed Association was scheduled only 4 days later, these

two events could not take place. The tree and garden planting event, however, was scheduled slightly earlier, and it did occur.

The above introduction was offered as an orientation to the "landscape" of environmental volunteering as planned by the Non-Profit during the research period and as a summary of what activities did and did not occur. This chapter will explore resident motivations for participating in the efforts outlined above, as expressed by people who participated in events that occurred and by people from the watershed's neighborhoods who helped plan additional events, or shared their thoughts on what types of activities and advertising would be most likely to engage their neighbors.

"Just Get People the Education"—Professional Conceptualization of Community Motivation

The goal of the Task Force and Non-Profit in relation to volunteering was to engage people in activities that improved the environment while simultaneously inspiring those volunteers to become interested in finding more ways of effecting positive changes within the physical geographies of their watershed. In this case, the term "physical geography" is used as a reflection of the meanings assigned to geographic entities by the professionals engaged in planning the Mill Creek Watershed Association launch. During planning meetings, local places were viewed through a professional lens that defined them most strongly by the actions that could be taken upon them and the physical improvements that could result. A stream was a place to clean up, with the potential effect of having cleaner water for support of wildlife and for recreation. A yard was a place to examine with the aim of seeing how the water ran off of it during a heavy rain, and how that water could be redirected to reduce pollution in streams. Trees distributed for planting could help reduce heat island effects and, again, reduce pollution running off into waterways. Planting the right type of garden could do the same. While there was awareness and excitement about the need to mesh the professional view of the landscape with the lived landscape of the cultural, historical, and storied places within the watershed's borders, the primary goal of the project was to influence watershed health. Given the desired outcomes of the project, the role of

community education was considered key, and Task Force planning meetings revealed a strong belief in a model of behavior change that is common among environmental outreach groups—namely that education is sufficient to produce success in initiatives like the one that was planned (Heimlich 2010; Kollmus and Julian 2002). A list of information to be conveyed to the public was drawn up early on in the development process. It included basic information such as the size and geography of the watershed, emphasizing the presence of the federally endangered Nashville Crayfish which lives only in that location. Education on "Watershed 101" topics was to be included too, with presentations on the need for buffer zones around streams, the problem of habitat fragmentation, the current state of water quality in the streams and ways in which the quality of storm water runoff impacts stream health. A final set of topics was included to emphasize the "human" aspects of the urban ecosystem. The Task Force wished to convey the benefits of neighborhood streams to the communities they run through by casting them as "amenities." Education on these topics would focus on describing recreational potential, the potential of healthy streams for improving property values, the increased sense of community associated with access to a healthy watershed, and the human health benefits to living in a healthy watershed (along with the potential health detriments associated with eating fish and crayfish caught from contaminated streams). The idea was that in its earliest manifestation, the Mill Creek Watershed Association would primarily be a meeting forum for educating the community about these topics; action would follow. There is some professional debate regarding the effectiveness of this technique (both within the Task Force and Non-Profit, and in the literature), and there was occasionally evidence that the sole use of that strategy might not be the most effective way of engaging the public in Mill Creek Watershed. At one point during the research period, a meeting took place between the Non-Profit, which is an environmentally oriented group that touches on social issues, and another non-profit, which is a socially oriented group whose work occasionally touches on environmental concerns. This second group exists as a resource for all neighborhoods in Nashville and has a successful record of helping

members of the community learn how to engage their neighbors, organize and advertise meetings, and make contacts with representatives from places that can provide meeting space, expertise, or financial assistance. Since the Non-Profit was, in essence, trying to spawn the development of a community-led watershed group in urban Nashville, advice from the neighborhood-oriented group was logical to seek. The Mill Creek Watershed encompasses many areas that define themselves as neighborhoods already, and the intent was to bring them together as members of an additional, more regional group. This was something the neighborhood-based group thought it could provide insight into, and in the course of the conversation they suggested a model by which a community watershed board was created to bring *limited* representatives from various communities to regular planning meetings. Those representatives would be responsible for planning activities and events, rather than trying to get everyone in the communities involved with regular watershed planning discussions. “People probably don’t want another meeting,” their executive director commented. “People would usually rather be involved with activities and events, which a much smaller group of people planned. That is how they get interested in issues like this.” In essence, he advocated for getting people involved, and then educating them while they were there enjoying themselves. Their community representatives, along with the Non-Profit, would then be well-placed to provide further education to a group of people involved in planned events. At this point, one representative of the Non-Profit said that in his mind, the opposite was true: “If you can just get people the education, they’ll get interested and involved.”

Similar philosophical differences on the subject of effective outreach were apparent in other planning meetings between Task Force members and various community leaders. A representative of a social services agency associated with a large Latino Catholic church became interested in the idea of the community watershed association and was enthusiastically in support of active events. (He was the contact that facilitated the hosting of the tree giveaway event at this church). “Tim” thought planting trees on the substantial land owned by the church was a wonderful idea which would engage many

people, and he further believed that after any initial festival, families with children attending their daycare might get involved with helping plant an area for their children. Beyond the offer to involve the church, Tim also offered thoughts on how best to engage the wider Latino community. In contrast to the neighborhood-oriented non-profit representative who had suggested having stream clean-ups, but "not a million of them," Tim suggested that cleanups should occur monthly during good weather. He thought it was important that when people came to one event, they would be able to learn then and there when the next one would be rather than having to go to extra effort to find out more later on. The population he served didn't always have Internet access or skills, and he believed that simply seeing an announcement on a bulletin board would be insufficient to convince people to come, especially in the early stages of a watershed group's formation. Receiving information about the next event while participating in a current one was, in his experience, an effective way of reducing these barriers. Additionally, he thought it should be emphasized that the cleanups were "not one time things, because cleaning up a river isn't a one time thing." In his own work, he had found that people become better engaged—and more open to education—with a schedule. He had a list of "key people" who might be open to engagement (one of whom was Anita, several of whose insights were included in the previous chapter), and suggested that the best way to engage these *initial* leaders would be to invite them to attend a meeting about "protecting the river." The meeting could include presentations focusing on upcoming tree planting opportunities, with the actions themselves being emphasized more strongly than the reasons for doing them. In essence, two models for engaging the community emerged. One relied on education as a means to inspiring action, while the other relied on the instigation of activity as a means of preparing people to be educated. As yet, there has been little opportunity to test either model in the watershed, though it is hoped that the subsequent sections of this chapter will shed light on what might be the most appropriate balance between these methods for this community.

Value to Participation—The Tree Giveaway Revisited

Chapter 1 began with a vignette of a one-day tree giveaway event used as a springboard to discuss the ways in which watershed residents talked about the place of trees in their communities, and, by inference, as an introduction to the thinking that might inform resident considerations of environmental topics. This giveaway was the first major event that was both held in the watershed and targeted to the watershed, and as a means of increasing its likelihood of success, several community leaders were consulted before it occurred, including Anita, mentioned above. Anita ran a "resource center" serving the low income population of Antioch, and was based in the neighborhood's elementary school. I had the task both of contacting Anita on behalf of the Non-Profit and of interviewing her for my research, and found her very enthusiastic about discussing issues related to the formation of a watershed group that included the Antioch community.

Anita was relatively new to her position, as the center at the school had just opened three months previously, but as a native Spanish speaker herself, she was well-engaged with the Latino community. When she had first come to her job, she had offered people seeking services the opportunity to take a survey, the results of which had helped her to understand the perceived needs of community members. She was surprised to find that access to healthy food, exercise options, and other things that generally improve family health were at the very top of the population's list of interests, and that even the desire for community cohesion discussed in the previous chapter was framed as a health or well-being issue in the community. "Healthy Lifestyle" could be said to be the organizing theme—a striking resonance with the comments of the broader watershed population regarding their reasons for valuing and using urban green space. That is, the health interest was not primarily related to logistical issues such as access to care, health insurance, translators for medical encounters, or help with payments; the focus was on access to opportunities to live a healthy lifestyle, which included both physical opportunities and social support. These concerns with both health and community resonated perfectly with the perception of

top community concerns reported by Alberto, another leader in the area's Latino community. According to both, community members' reported needs for opportunities to be healthy consistently came in above financial planning, employment opportunities, and affordable housing help on the list of programs that interested respondents—all areas that Anita, at least, had supposed would be higher on the list of residents' priorities. She had been trying to adjust her activities accordingly, as she saw work that could be framed in a "healthy lifestyle" context as being the "key" to engaging more people to participate in the efforts put forth by the resource center. She saw a collaboration with the Non-Profit as having excellent potential to help her community, and thought that such a partnership could tap the self-expressed motivations of the people she served, while also being true to the goals of the Non-Profit.

The Non-Profit's primary goal was to improve water quality, with a secondary goal of benefiting communities in a more direct way than simply "improving the health of neighborhood streams." Anita actually did believe that the "earth benefits" would be a direct motivation for many of the people in her community, and felt strong personal motivation from a sense of environmental responsibility. However, if the goal was to maximize community involvement, she felt that it would be best to reverse the references to potential motivators when recruiting participants initially. Eighty percent of the people who used the center's services, she said, were not just low income, but "very low income" and simply couldn't afford to put substantial resources into attending meetings and events they perceived as benefiting primarily the earth rather than their families. This group was likely to feel satisfaction at having done good things for the water after the fact, and potentially to become motivated by these goals in the future, but the factors more likely to motivate them to become involved in the first place would be more likely to resonate if they addressed lacks in the community that were already perceived. Anita had already begun plans for a community garden as a means of addressing both the health and the community cohesion concerns that had been shared by community members, and she wondered if this work might not be a starting point for combining efforts with the Non-Profit. This garden has

already been described in Chapter 3, but several different aspects of the idea are relevant to a discussion centered on motivations for participating in activities rather than simply appreciating the availability of green space. Anita thought that there was a strong resonance between tree planting and garden planting, especially if there could be a future plan to include fruit trees. Unlike gardens, trees are best planted in the winter, and so she saw a "tree festival" as a way to engage the community in a larger set of activities early on, and to start building a year-long schedule of events. While the school was not unfriendly, she felt strongly that something more needed to happen before it could become a true hub of the community—a valued place that people saw as essential to their neighborhoods in a way similar to that described by residents of the Crieve Hall community. An essential piece of this community building, she thought, was that something be going on at the school year round. When everything shuts down for the summer, it becomes difficult for people to embrace the school as a living part of their community, especially if it took them a large part of the school year even to get used to interacting with the school. The garden was viewed as a potential bridge; planting would occur in the spring, tending and some harvest in the summer, and more harvest into the fall, when the school year began; adding a tree-planting component could extend the work into the winter. Its formation wouldn't require the building itself to open during the year, though it would require some measure of security to keep the produce safe. Anita hated to admit it, but she knew that thefts would occur if access was unrestricted. However, she had identified a large courtyard area already surrounded on three sides by the school. Some fencing already existed, and if a gate could be constructed, then a system for opening the garden during certain times could be developed. Having the hours of operation at least partially restricted could also make it more likely that a variety of people would come together in the garden—not just Latino community members, but also American-born citizens and members of some of the other immigrant communities in the neighborhood. Most people Anita had spoken with wanted this kind of integration, but were unsure how to achieve it. The combination of a relatively friendly institution (the school) with an ongoing,

outdoor activity that people could enjoy even with language barriers present was optimal, and the addition of another friendly outside group to offer additional locally centered activities would help her by serving as “a springboard” to start drawing people into gradually greater levels of involvement.

In relation to tree-planting initiatives, Anita thought that if the Non-Profit wished to motivate people in her community to participate, they should focus on links between trees and family health. Trees could be described as providing shade for certain healthy things that would be planted in the garden, or, even more ideally, could provide fruit themselves, as part of a garden. It might also be beneficial to highlight the ways that trees can improve a neighborhood, and make it more pleasant to walk in—though for this, Anita thought that continuing to incorporate the community focus would be helpful. A message that might motivate this group would emphasize that pleasant, tree-filled areas are good places for outings with the family, and can help the whole family get the exercise they need to keep them healthy. Working in the garden and digging holes to plant trees, along with carrying water to tend them are also good exercise, with an eventual second health payoff in the form of healthy food.

In Chapter 1, the attempt of the Non-Profit to adapt messaging to this low income community through references to tax credits and energy savings was described, as was Anita’s response to the idea. That description was provided as an early orientation to some of the issues to be described in this dissertation, but it is useful to provide a bit more detail here, in the context of a more general discussion on motivations to participate in environmental events. The suggestion from the Non-Profit was that, since this was a low-income population, some of the personal economic benefits that could be reaped from having trees on one’s property might be especially strong motivators. It was an attempt to engage potential participants with a potential economic benefit over and above any benefit to the environment. Energy savings can result from planting deciduous trees in strategic locations, since their shade reduces the burden placed on air conditioning to an extent. At the time of this conversation, there was also a tax

credit available for people who planted trees near their homes, meant as an additional reward for "green" energy use reduction efforts by homeowners. Quite a bit of discussion at the Non-Profit had gone into the decision to cite this as a potential motivator specifically relevant in low income neighborhoods, though it was noted that in the poor economy, such motivations might have a wider appeal. The problem, though, was that the Non-Profit had built up decades of experience in working with well-off professionals, or "low income" young people from middle class backgrounds who were still in the process of establishing themselves. Their urban initiatives had targeted these groups successfully for years, and in pockets of neighborhoods that drew young or upwardly mobile professionals, they had garnered substantial support. What they hadn't initially taken into account was the difference between low income young people with strong educations and entry level jobs, and the "very low income" communities they were now trying to target. Home ownership is rare in this group, and the tax credit is completely irrelevant in those cases. Anita did note that about 30% of the people she worked with either owned a home or rented in a location where the landlord might allow them to plant a tree, theoretically opening them up to the energy savings, if not the tax credit. Even given this, though, it is important to understand what a deferred benefit this would be. The trees the Non-Profit was distributing were more than saplings, generally around four or five feet tall. Even so, it would be years before any substantial energy savings could be realized, and the people who came to the school-based resource center came because their immediate needs were so pressing. They weren't likely to be motivated by a potential benefit that would occur in a decade *if* the tree they planted survived, and *if* they still lived in the same place by that time—particularly when their circumstances were such that they were actively working towards the goal of living somewhere better. Long term *localized* benefits as expressed in communities like Flatrock and Crieve Hall are much more easily seen as motivators for people who feel intrinsically connected to and invested in a place, and that lack of connection was precisely the problem that these Antioch residents had cited as being focal in their lives. However,

people take their health with them wherever they go. Exercise and healthy diet in a tiny apartment located in an unloved neighborhood provide benefits that are transferable, and if the means to achieving these ends beautify the neighborhood and creates opportunities for shared work, there may be an added benefit of making current circumstances more livable as well. The *act* of planting the trees may have more benefits than the trees themselves in the eyes of these residents, and may be a means by which the properties of green spaces discussed in Chapter 2 become applicable even in places with poor community organization. Green space provides both a view and a space for action, and while most of the efforts discussed in the previous chapter dealt with use or enhancement of existing green space, Anita's plan was really about creating it from scratch. This "act of creation" facilitates a moment of potential power, in which meaningless space is transformed to a new place laden with possibility for growth, change, shared work, and community. It provides a way for people to make the places they inhabit different, and just as many community members cited an ability of green space to facilitate community changes they were attempting to make, community leaders, in some cases, hoped to combine these urban nature qualities with the benefits of shared work and creative energy. In this case, the action under discussion was the garden, but Tim had expressed enthusiasm for stream cleanups—and in Nashville, where creeks and streams are part of the residential view in almost every neighborhood, the appearance of the stream is a neighborhood characteristic. Improving the view is, if not precisely an act of creation, an act with measurable immediate rewards to all in the vicinity.

Given the observations above, it is notable that past studies have indeed indicated that community tree planting efforts can increase connections between neighbors (Sommer, et al. 1994), and also help people unaccustomed to participation and leadership roles find an entry point into adopting these general behaviors (Austin and Kaplan 2003)—another transferrable benefit that could be of particular interest in Antioch. Interestingly, in the attempt to be practical and deal with "economic realities," the emphasis initially chosen by the Non-Profit actually diverged further from community interests than a

straight environmental message might have. Health was the "practical" benefit seen as being of potential interest in the community, not energy savings. No one who attended the event mentioned or asked about the instructions for planting trees to reduce energy bills (the reference to the tax credit was eliminated following the meeting with Anita, but the energy bill reduction text was kept, with acknowledgement that it could not apply to all residents). People did comment on the fact that the trees were free, and we were told in both English and Spanish that the large bilingual signs advertising free trees in the yard of the church were an enticing draw. Passerby clearly wanted the trees, and some commented that being able to have them for free was what made it possible for them to stop and pick them up; they would not have bought them at the store, and the Non-Profit's offering of them at no cost removed a very real barrier to planting. Participants commented on the reasons they valued the trees, most of which had to do with aesthetics and general improvement of living conditions; they cared about trees for their beauty, history, and the opportunities they provided for children to play and to learn about how things grow. Parents could be heard—in English and Spanish—speaking with their children as they carried away their trees, discussing where to plant them, and how they would care for them. Several people took trees to plant in locations other than their homes, pleased at the idea of being able to give this gift, even if they had nowhere to plant a tree themselves. There was also some interest expressed in learning about how trees protect the rivers and streams in the area. This was not a strongly engaged topic, but at least two people asked questions about this flier information, or commented on their support for this idea. However, not a single person ever engaged with the topic of energy savings, either at the event or in the later secondary events that followed. It seems that *removing* an economic barrier to tree-planting (the cost of obtaining a tree) was valuable here, but that attempting to advertise potential for a deferred economic *benefit* added no value to the message. "Free Trees/ Árboles gratis"—four words—were enough for roadside signs, and most likely would have been enough for advance notices on bulletin boards and craigslist too, as long as the location and time of

pickup were added. The location was undoubtedly helpful. The event was held at a site that was a solid, trusted place for many members of the Latino community. As such, it spoke to the sense of community that Anita had asserted residents desired, although it was more reflective of the geographically dispersed "Latino Community" than of the neighborhood community desired by residents. This sense was strengthened by the fact that an associate of the church had made it known that some trees would be planted on the church land for the enjoyment of congregants and children in the day care; there was a structure put in place that would allow those without yards the chance to participate, and to engage in the act of creating something worthwhile in service of a valued community. The church was also in a central, pleasant location that people outside the Latino community were happy to visit, and this status of being desirable to the Latino community while accessible to the wider community likely worked to increase participation. This, with the removal of an economic barrier, was enough. The assumption that economic problems should inspire environmental professionals to propose economic incentives for participation proved not to be useful in this portion of Mill Creek Watershed. There was no need to encourage people to value trees in the neighborhood; those values already existed, and were tied to meanings both more deep and mundane than those associated with savings. It was possible—and easy—for people to view the trees through the lens of life as they lived it, and to integrate the meanings of trees with what it means to travel the neighborhood, raise a child, work for the improvement of a community, and interact with others. These ideas, embedded as they were in the trappings of everyday life, were the forces that motivated people to participate in the giveaway. Of course this particular event required no real time commitment. However, the participation achieved with such minimal advertising was striking. Bulletin board announcements, a friendly site, a craigslist ad, and a few emails to leaders in other Latino community centers pulled in a wide range of people willing to come and later dedicate time to planting a tree. It seems possible that using this strategy to engage people in more time-consuming

events that could be seen as relevant to the values of the community might prove to be a successful way to develop a core of dedicated participants for ongoing work.

If a generalization can be made among immigrant groups, it might be that health benefits (including general wellbeing associated with development of more livable, cohesive communities) are the best candidates to be *motivators* for participation in new efforts, while other factors may be more likely to be secondary motivators or "added value" byproducts that would be realized after participation was underway. Among non-immigrant groups, the opposite might be said to be true. These research participants, as described previously, often mentioned health as a valued benefit of access to urban green space. However, their self-described motivators for participating in present or future activities were different, and generally reflective of an attitude of permanence. These people already had community ties, and thought of their neighborhoods as namable entities that they were a part of, with favorite places, favorite people, and some sense of belonging to a neighborhood-based community that shared common goals. They spoke of their neighborhoods by name—something which only one of the most established, professionally successful of the immigrants I spoke with ever did. For people living in established communities, the primary motivation for involvement in what the Non-Profit would term watershed improvement initiatives was most often improvement to the neighborhood. As discussed in Chapter 3, in communities where different sub-groups may gravitate to different attitudes, histories, and locations, access to pleasant outdoor public space is equivalent to access to pleasant, relatively *neutral* space. It presents an opportunity to come together, and just as such spaces are valued for this attribute, activities that make use of this attribute may draw strong participation. In Crieve Hall, Annie hoped to start an "adopt a grandparent" program, in which older children from the neighborhood would help elderly residents with yard work, and potentially with other chores, as the program progressed. To her, yard work was the obvious safe starting point; it takes place in yards rather than houses, and so remains in a relatively neutral space that is shared at some level by the neighborhood at large. It also

taps into the sense of pride residents take in the neighborhood's beauty—a strongly held value shared by older and younger members of Crieve Hall. And, finally, it presents an opportunity for shared work. Many of the elderly residents in Crieve Hall are healthy enough to do their own yard work, even if the large yard has gotten to be a bit too much. The opportunity for two or three generations to work together on a common goal is one that, Annie hoped, would foster stronger community cohesion while also enhancing neighborhood beauty. There is support for such an idea in the literature; one study in England found that the installation of communal garden sites in neighborhoods allowed older people with physical challenges to continue participating in gardening while ties were increased between older and younger members of the community that came together to share the work (Milligan, et al. 2004). Annie also expressed a belief that the community could be well-mobilized to plant trees along certain streets for beautification purposes—although, similarly to Anita, she noted that environmental benefits could be a direct motivator for at least some of the population. The schema she proposed was that younger residents were motivated by beautification, increase of community cohesion, and environmental benefits, while older residents were motivated by beautification, what they saw as *preservation* of a strong, cohesive community with a longstanding identity, and preservation of the neighborhood's history. Potential motivators for the groups overlapped, and a single Non-Profit initiative could likely find a way to tap the interest of both groups. Trees could be an opportunity for beautifying the area, and also for preserving the landscape of Crieve Hall, which had always been a tree-filled place. A rain garden project, Annie thought, could be billed as a way to beautify a yard and improve the environment simultaneously. She thought that the concept could be "marketed" similarly to the way in which the Tour of Homes had been advertised—as an opportunity to both "preserve and expand the character of the neighborhood" by using the well-established neighborhood value of gardens in a new way. Emphasizing the use of "native species" might engage the older "preservationists," who she thought might be interested if some of the long-valued old neighborhood

plants turned out to have added abilities when planted in rain gardens. This is in keeping with studies that have found the concept of "restoration" to be meaningful to some volunteers; Miles et al (2000) reported that "stewards" derived pleasure from the process involved with restoring a habitat, ranging from gathering information from historical maps and photos, to doing the labor necessary to restore a portion of the landscape to something approaching that past state (Miles, et al. 2000). The past may yield other motivations for participation as well. One man who volunteered as a contributor to a local "historical newspaper" became very engaged with the idea of the watershed association as a means to explore the concept of water-related history in the area. He was prepared to be highly involved, but, initially at least, expressed little engagement with the directly environmental aspects of the project; instead, he wanted to solve a new historical challenge, and to help others in the community appreciate the watershed through that lens.

In Crieve Hall, Annie also noted that, environmental improvement motivations aside, virtually all community members have some awareness of problems caused by runoff. There were eight properties along a road in the neighborhood that had recurrent flooding to such an extent that they were no longer usable in their current states[10]. It had become necessary for the city government to buy them (and, Annie hoped, to institute an open access park with canoe launch). Rain gardens and trees can't control flooding of that magnitude, and the Non-Profit would not have tried to engage residents with claims that it could. However, Annie reported that many residents had experienced more low-level annoyance from minor runoff issues, and would be potentially interested to learn that strategically planted gardens could help reduce these problems. The "being a good neighbor" aspect of this project was also appealing; planting a rain garden may help one's own property, but given the nature of water, it is also an action meant to protect neighbors from one's own runoff. This is a local situation that everyone is aware of, combined with an opportunity to mitigate similar situations while also enhancing the internal

[10] This refers to events before the May 2010 flood.

reputation of Crieve Hall as “a little gem” in Nashville—a set of circumstances, in short, that an environmental association might readily build upon to increase interest.

Environmental components to the motivation to participate were involved in some of the scenarios above, but more direct environmental benefits were mentioned as potential primary motivators by several other members of the community—in all cases, though, social motivations were entwined with the environmental conceptualizations. For example, the older member of the fly fishing duo mentioned previously expressed interest in being notified about any projects—including volunteer opportunities—that would help vegetate river banks to prevent erosion and reduce the level of pollutants reaching the streams via runoff. He used the language of environmental groups almost verbatim, but his true motivations were more complex, merging genuine environmental interest with social motivations reflective of those expressed by other research participants. While this man did express some global interest in environmental concerns, his strong feelings on the topic were motivated by his love of fishing. He spent quite a bit of his time in the city’s streams, performing a kind of labor which he said was special because he always learned from his practice of it. The experience of that had made the streams important places in his life, which he valued for their peace and for the opportunities they provided for him to spend quality time in a good setting with likeminded friends. For him, these deeper values associated with his recreational activity had led to self-education about environmental values associated with preserving the streams, and those values had in turn become motivators of their own. Similarly, young residents of Flatrock expressed enthusiasm for a volunteering at a “tree festival,” and said they thought it was important to do things for the earth. One young couple from the area volunteered that they had installed a rain barrel at their house, to help reduce runoff into streams, and they were interested in helping to spread the word if future rain barrel workshops were scheduled in the neighborhood. One very passionate older woman was recommended to me by the younger residents as the “resident tree expert” who cared most deeply about environmental issues and was the

most knowledgeable about them. Interestingly though, when interviewed, she had little desire to speak about environmental benefits at all, even when asked directly about them. In every instance, this woman brought the topic of conversation back to land access issues. She talked about barriers to enjoyment of one of the few existing parks in the area (See Chapter 5), and spoke strongly against a proposal to sell the old fairground to private interests; her concerns were social and political, being inherently opposed to any privatization of long-public land. (The fairgrounds are an ongoing topic of debate in Nashville. The land is outside of the Mill Creek Watershed, but unlike many other parks in the area, it is very well-connected to public transportation lines that run out of the watershed). Like the residents of Crieve Hall, she was well aware of the flooding issues that would result in the government needing to buy some private property, and she, like others in her community, emphasized the need for a kayak and canoe launch to help expand enjoyment of the river to as many people as possible. This conversation was particularly interesting, because other residents who knew her had described her as "the tree lady" and "mama tree," and once (by an environmental professional, interestingly), as "an old time community activist." It is true that she held deep appreciation for trees and green landscapes; she expressed her enjoyment in spending time in such places—but even "mama tree" proved to be more motivated by social factors than environmental ones when speaking of green space *in her own neighborhood*. She was knowledgeable on environmental issues and was identified as an environmentalist both by herself and by others. When at home, though, she viewed benefits to support urban nature not primarily as benefits to the environment but as benefits to the community in which the patch of nature was embedded. The issue of whether green space was important was well-settled beyond the point of being an issue for her; the issue, instead, was one of access and involvement. One of her laments was that "this is not an area where people are big on volunteering," and she believed that this tendency was one which members of the Non-Profit would have to address if they were to be successful.

Dirt, Place, and Quality People: Volunteer Motivations on the Ground

In spite of the above respondent's lament, some environmental volunteer efforts did succeed in drawing participants within the study area, and speaking with participants at those events provided additional information on motivators for environmental volunteerism in Mill Creek Watershed. The sections above focused on projected motivators for possible future volunteering projects, as reported by prominent members of the communities being studied. However, current volunteers' reports on what motivated them were confirmatory, matching these projected motivators quite well. The most substantial volunteer effort that took place in Mill Creek Watershed during the research period was a tree and rain garden planting event at a local middle school. This event was sponsored by the school, by the Non-Profit, and by the zoo, and was associated with a zoo program through which people could earn free tickets to Disney World by volunteering on various projects. Around seventy volunteers came to the event, all but one of whom were apparently white and non-Latino. (One African-American teacher from the middle school was present). Volunteers ranged in age from middle school students to people in their mid- to late fifties, and most were either teachers or family groups accompanying a child who attended the school. Of the three who participated in interviews, not a single one mentioned the Disney World tickets as a motivator for their participation, nor was any general conversation about this motivator evident from other participants throughout the day. However, none of them mentioned helping the environment as a major motivator for their participation either. At the most, participants (one of them) noted that it was nice to be "helping the environment too," though no participants mentioned water quality improvement specifically, in spite of having received a briefing from the Non-Profit on how their actions would help improve the health of the watershed by redirecting runoff. Confirming the predictions of community leaders from currently unengaged groups, social and community-related factors, along with general aesthetics, were the stronger motivators among those who had taken the step of becoming volunteers at this one-time event. One man, there with his wife and middle-school aged child, worded his motivations most concretely, saying "we're new to the area, and we want to do

as many of these community volunteer projects as we can, to get into the community and meet people. It's the best way to become part of a place, the best way to meet *good* people" (emphasis mine). This view was echoed by a second volunteer, in this case a long-time resident of the community, who commented that the volunteer day was "better than most activities" and that at events like this they met "better quality people." This woman also emphasized that it was important to do things like this with her thirteen year old daughter. They had gotten started, in fact, because the daughter's school had had a community service requirement, so they looked for a project to do and finished it quickly. After that initial experience, she said, "it was something we realized we wanted to do a lot more of, so we find different events on the weekend. Some are with social service groups, some are environmental like this. It's a good thing to be doing . . . and we really enjoy it." She said that her daughter especially loved "this kind of thing"—meaning the outdoor type of volunteering event. It turned out, though, that the environmental component wasn't the primary motivator for either mother or daughter, although it was certainly a motivator. The mother pointed her daughter out during the interview and said "She loves being dirty, look at her. I'm glad she's this way. Awhile ago, on vacation—she's not allowed to wear makeup yet—but I said 'hey, it's vacation and we're away from home. How about I put some makeup on you, and you can see what it's like?'" The mother said that her daughter's reply was "Mom, is this something *you* need to do?" It wasn't, really, and the mother was actually relieved to find that her daughter would rather be outside working hard with her friends, accomplishing something and getting dirty than practicing makeup application techniques. For her, volunteer opportunities were tools that helped her daughter grow in desirable directions and underscored values of hard work and altruism, along with *deemphasizing* some of the more superficial values related to appearance that she felt girls her daughter's age had a tendency to develop. Earlier researchers have observed that adolescent environmental engagement does either wane in favor of social considerations (Kaplan and Kaplan 2002)or emphasize social considerations as an added layer to the basic appreciation of nature found in

younger children (Kellert 2005), and this mother's assessment of the importance of the volunteer day in her daughter's world is reflective of this latter postulation. Of note, the mother's commitment to the day's project and to "making the world a better place" through volunteer work in general was quite strong, but her motivations for participating in the environmental effort were apparently little different than they would have been for participating in something like a Habitat for Humanity building day; the value was in the dirt, the manual labor, and the accompanying requirement to forget about physical appearance while completing the tasks at hand. Other planting volunteers who described their motivations at less length said that they liked knowing they were "helping the school" (a phrase much more common than "helping the environment," and that they were doing something to beautify the area. Like the young girl whose mother said she loved being dirty, participants valued the feel of good manual labor, with one participant commenting that in many professional jobs, you work and you accomplish things, but it's hard to see what you've done by the end of the day. Manual labor "feels good" and creates an opportunity to see the fruits of one's labors in a concrete form. It has also been postulated that this kind of activity helps people feel a connection to a place—not in the sense of being connected to the community, as many research respondents discussed, but of being connected to a specific physical location into which they've poured time and effort (Kaplan and Kaplan 2005). This tendency was apparent on the tree and rain garden volunteer day, during which I spent a large part of the time with a group of volunteers who had been assigned a "boring" job. Instead of planting the rain garden or trees and shrubs, this group was set to do some preliminary land remediation to prepare it for plantings. They were working in a large swampy drainage area, and prior to planting trees and water-tolerant plants in one half of the space, it was necessary to build a dirt berm that bisected it, and that would improve runoff flow. This was very hard, slow work, and after three hours of it, this group had not yet been able to do any planting. True complaining was rare, but many had commented that their work would be easier if they had more wheelbarrows, and on how all of the other groups had received much

easier tasks to complete (this was occasionally said with pride, and occasionally accompanied by a comment that it might be good to rotate work). Eventually, a staff member from the Non-Profit came over and, realizing that they had been dedicated to this task all morning, announced that the group had done enough of this work, and could leave it for someone else to finish later; it was time they moved on to "the fun stuff." Not a single person accepted the offer, in spite of the fact that many had previously wished someone would make it. One person cheerfully yelled out "we have *ownership* of this now," while a few other people shouted "yes!" and went back to their shovels. Not until the full length of the berm was constructed and all that remained to be done was building height and tamping dirt down, did any number of people move on to planting. By that time, they'd come to value the activity they'd originally been given, and actually worked to expand upon it. Seeing the pile of unused dirt, and now grasping the basic engineering principles involved in the land remediation, some people took it upon themselves to haul extra soil into swampy areas within the depression to "help protect 'our' trees." They had, in fact, learned about actions that could mitigate water flow and improve an environmental outcome, but they wished to apply that knowledge not primarily to help "the environment," but to help "their trees" to thrive. For this group, it was apparent that the "action to achieve education" model advocated for by the neighborhood-oriented non-profit was more compelling than the "education to achieve action" model often favored by environmental groups. (And, to clarify, the action-first model *was* the model the Non-Profit intentionally employed in this case). The hard work combined with the act of working together towards the common goal had also created a strong sense of community; in fact, the earlier quoted references to valuation of volunteering for community-related attributes were all collected at the *end* of the day rather than in the midst of it. Recall that Anita, of the school-based social service center, had also noted the value of the hard work of gardening and harvesting to help build connections between people and place. Similarly, the planners for the Flatrock festival who had been involved during multiple years expressed that they were invested because they *had* accomplished

something, and because they had seen the accomplishment grow a bit more the second year. Tim, of the church that allowed the Non-Profit to host the tree giveaway, believed that having some kind of stream cleanup or other event monthly during good weather would help people to see the activity as something that belonged to them, and that they could build upon as new members of the community. The single day tree and garden planting event added evidence to the notion that this strategy has potential in the watershed. For the organizers, the efforts were largely about helping the environment, though motivation to support the school was strong; for the participants, though, the efforts were *primarily* about helping the school, meeting "good" people, working hard, and seeing their labors bear fruit. Reflective of the shared and connection-building attributes of green space, *work* in such green spaces was a means of enhancing both social cohesion and sense of place. The more or less vacant area behind the school had, in the course of the day, become a place that was cared for and laden with ideas of what it meant to be part of a good community. And, situated as it was on the school's property, this newly created place held potential for continuation of the work; consider the case of Crieve Hall, in which a school clean-up day had led to an expansion to other beautification efforts, involving more and more members of the community who felt pride in the improvement of that particular place.

It was noted above that one of the research participant's motivations for doing environmental volunteer work would likely have been almost identical if the volunteer effort had been a Habitat for Humanity project. It was possible to make some comparisons between motivations for this type of volunteering and environmental volunteering while participating in post-flood cleanup efforts. Most of the flood cleanup work consisted of tearing out plaster, insulation, and drywall in homes up to a foot above the water line in the hopes that, if the incipient mold growth were stopped, some of the houses might be saved rather than demolished. Carpet was removed, floors were stripped to the furthest extent possible, and contents in the house were moved out to large trash piles for later pickup. Most of the volunteers encountered immediately after the flood, before many people had flown in from out of state,

were middle class professionals; many employers in the city had offered to let people have a day off work if they would use it to volunteer. Local church groups were also involved, with most of the actual coordination of volunteers being conducted by a local Methodist church, which, in spite of being in the thick of the flood zone, sat very high on a hill. In this case, it is clear that the human factors would outweigh environmental benefits in the balance of things that motivated volunteers to participate. However, many of the deepest motivators were the same as those described for the school planting effort, if more strongly felt in this work. Volunteers reported that, in spite of the circumstances, they enjoyed the opportunity to do good, manual work, and to learn about house construction techniques (or more realistically, house demolition techniques that allowed for the possibility of repair later on). The concept of teaching youth to do the right thing was also strong; teenagers came along with their parents on weekends and during the days after school, and parents said they thought it was important that their children be a part of this, and that they see how many other people were a part of it. Just as some at the school planting day had felt that volunteer events facilitated the meeting of "better" people of the type they wanted their families to know, volunteering at a large scale event allowed parents to show their children that these "better" people were more common than everyday events might lead them to believe. Interestingly, while green space and volunteer efforts centered there seemed to be seen as venues for improvement of moderate community problems relating to social cohesion in everyday life, the large flood event was seen as an affirmation that the community was stronger, better, and more cohesive than anyone had thought it was—though certainly on a larger scale than that of the neighborhood. Volunteers commented that they hoped the efforts helped everyone affected to at least feel they were not on their own. "We're all one big city," one of them commented. "And Tennessee is the 'Volunteer State.'" As in the cases of the Saturday tree planting event and the planned gardens in Antioch, this was a group of volunteers motivated by a sense of community identity. However, none

seemed to feel that it was a time to be supportive of "Antioch" or "Flatrock." The flood had broadened the scale to one that was Nashville-wide.

These conversations, both with current and potential volunteers, exhibited a striking unity of focus. At all levels, when members of the community explained why they volunteered, or what would motivate them to become involved in volunteer efforts, their language indicated that the "action to achieve education" model resonated more strongly with their motivations. Not surprisingly, their motivations for involvement mirror their values for urban nature; they are much more social, and more specific, than the calls for action that environmental groups often use. This does not necessarily mean that the typical outreach strategies are ineffective, but it does indicate some useful directions for expansion of messaging. "Think globally, act locally" has long been a rallying cry of the environmental movement. The problem of applying it, though, is that people *think* locally too. Many research respondents were strongly supportive of environmental efforts, but they saw them as having bearing on the *world* or on the wilderness in the Smoky Mountains, the Grand Canyon, the oceans, or the rain forests—places away from their everyday lives, where their experiences of nature might be transcendent or sublime. Other research has suggested that knowledge about global environmental issues is not always linked to cognition about local environment (Linneweber, et al. 2003), and this was reflected in Nashville. Work that professionals would have described as environmental in focus was not typically articulated as affecting the local urban *environment* at all by residents, even among those who saw themselves as strongly oriented to environmental issues. Rather, in interview after interview, it became clear that, on the subject of these issues that professionals labeled environmental, residents' thoughts first turn to ways in which these actions improve the areas they like to walk, provide places for their children to play, or create landscapes that provide their neighborhood with something it had been perceived to lack. For some, there is awareness that these actions also have benefits for the environment, but that is secondary; in the watershed these issues were almost always about livability first. Identification with

what professionals might term environmental issues is partially socially mediated (Linneweber, et al. 2003), and for many, environmentally relevant behaviors will not be viewed as such; they will be seen as ways of strengthening community identity rather than improving the portion of the global ecological environment available to them. It is also relevant that actions taken to improve the community may yield results that are not only satisfying but simply observable. The actions a single person might take for environmental improvement do not, in and of themselves, turn water in the river observably clearer or improve air quality (Zavestoski 2003). It is easier to view the planting of a few trees as a community improvement than as an action that reduces runoff and cleans the air, and this was reflected in the previously mentioned volunteers' assertions that helping the school was the motivator for planting trees there. For people who have not yet formed a connection or sense of community in the place they live, even these motivators become less central. Wishing to dedicate already limited time and effort to the improvement of a place requires *having* some existing "sense of place," some sense that one belongs there, is part of it, and can work with other people who are also part of it to improve it. For people whose world, at present, includes an apartment, an ESL class, a job, and perhaps a school and church, along with the very specific paths that connect them, even the motivator of neighborhood improvement may be weak. People in these situations do *desire* these neighborhood connections though, and they also feel strong trans-neighborhood connections to ethnic communities ranged across the city; however, most of the community centers positioned to serve as central places for these communities are storefront properties with no grassy land at all. The exceptions, which have been tapped by the Non-Profit with some beginning degree of success, are often places of worship. The large Catholic church serving the Latino community was enthusiastic about planting trees, as was the representative from the Kurdish Center (a place of worship as much as a community center, with the trees being intended for a Muslim Cemetery). Potential secondary locations that may have some value as "places" worthy of action to immigrant families are schools, but this is quite variable, and would depend upon the structures and

programs in place at the school for success. While this research connected with some school-based programs and individuals who have done work to include immigrant communities, these results are almost certainly biased. Representatives from many schools were contacted about this research (though outreach focused on general use of school grounds as green space rather than on inclusion of immigrant communities). Many did not respond, and it is likely that those that did were already interested in the topic and consequently already more inclusive of the community surrounding the school, immigrant or otherwise. (However, inclusion in this research is certainly not a perfect indicator of a school's level of community engagement; some schools that did not respond are known to have strong community outreach programs in place). Further, in the immigrant assessment commissioned by Metro government, participants did identify several problems with school systems. Some of these were logistical, such as difficulties transferring their children's credits from their home countries. Others, however, were relevant to the ability of schools to serve as valuable "places" to immigrant communities. Some participants in focus groups reported that they found home-school connections to be weak, and that information about the schools was not easy for parents to obtain. Some felt that school officials had not dealt with racially or ethnically motivated harassment effectively. This was particularly mentioned by Arabic and Somali residents, who felt that incidents had increased since September 11, 2001 (the assessment was conducted shortly after the terrorist attacks). Somali, Arabic, and Kurdish participants particularly mentioned that transportation to school was an issue; public transportation in most of southeast Nashville is infrequent, and some participants noted that with only one car in the family (or no car), it was hard to get to the school if there was a problem with a child, or if there was a meeting to attend (Cornfield, et al. 2003).

Because of these factors, not all immigrants, even with children, may view schools as central parts of their communities. The involvement of some schools would likely require extensive coordination on the part of an organization like the Non-Profit, and it's uncertain that they are yet ready for organization of

volunteer efforts in a way that would meet with strong success; introduction of environmental or green space initiatives may need to follow expansion of academically focused work first, although potential for integration of environmental efforts with science learning exists. However, in spite of these potential difficulties, schools are locations that many immigrant families have some contact with, and many schools, such as the one Anita was based at and the one in Crieve Hall, already have some structures for working with diverse communities in place. Schools like this, along with community and worship centers, may be ideally situated for partnership with groups like the Non-Profit, especially if projects could be planned to meet social or other needs in addition to environmental needs.

Motivations for Participation in the Literature

The seeds of this research involved exploration of motivations for becoming involved in an incipient movement aimed first at improving the environment and second at improving communities. As an environmentally oriented organization, this was in keeping with the Non-Profit's general mission, and while improvement of human wellbeing was to be an overt goal of the initiative, improvement of the environment for the Nashville Crayfish was the reason for the initiative's existence in that place, at that time. It was consequently necessary for the Non-Profit and the Task Force to strive for a balance in meeting the motivational needs of the watershed's residents, and there was a tension in play between the "education to achieve action" and "action to achieve education" schools of thought relating to recruitment. (Both models, notably, have been used with success by the Non-Profit in past initiatives not centered on Mill Creek Watershed).The ways in which this tension was apparent in the context of some watershed-based volunteer efforts were discussed above, and as noted, evidence gathered during the course of research in Nashville supports the latter view as having the capacity to engage more people quickly. The majority of the literature on this subject supports this view as well, particularly in relation to behavior regarding natural areas available in cities, where people may be less likely to "see" the natural environment as a component of the built and social landscape. In Wisconsin, members of a watershed-

based conservation advocacy group attached to an arboretum certainly cited appreciation of biodiversity and escape to a peaceful setting as motivating values—but they also felt compelled to contribute to the organization due to the arboretum's offerings in relation to recreation, exercise, and as a meeting place for the community (Spartz and Shaw 2011). Ryan and Grese conducted a study in which motivations for volunteers in restoration efforts were tested, and found that the two most important motivations for both the initial decision to volunteer as well as for continuing to participate were "helping the environment" (an apparent divergence from motivations reported by Nashville volunteers) and "feeling useful" (a factor commonly cited among Nashville participants). What is notable in the study, though, is that the act of volunteering, even when "helping the environment" was a motivator, was found to change the opinions and behaviors of participants, in accordance with the idea that once people get involved, they become receptive to the effects of education. Among a group of long-term volunteers in a prairie restoration project, 75% reported a "much stronger interest" in protecting local natural areas than they had held previously, and 46% said that they now visited natural areas more often. Sixty-two percent felt that their attachment to local natural areas in general (not just the prairie) had increased, and 83% said they would "strongly protest" any negative changes to the areas they had actually worked on. Regarding their behaviors in "everyday life," besides visiting more natural areas, 70% of volunteers said that since beginning to volunteer at the prairie, they had become more likely to take care to conduct home landscaping using native plants or to create backyard wildlife habitats, and 55% said they were more likely to discourage others from planting invasive exotic species (Ryan and Grese 2005). For these volunteers, the act of volunteering increased their attachment both to the specific place and to local areas they perceived as being similar to that place; in fact, it inspired them to create more local areas with similarities to the one they dedicated volunteer efforts to, and to adopt practices that were more generally beneficial to the environment. In essence, it appeared that the development of a strong "sense of place" associated with the hard work of restoration had a kind of

transferability, as well as having attributes of a template. Given the high place that "helping the environment" achieved on the list of motivators, one may ask whether the findings of these researchers are relevant to the incipient project in Nashville. However, two attributes of the cited research's study population are essential to note when drawing comparisons. First, motivators for initiation of participation were reported retrospectively; that is, well-established volunteers were asked to remember their reasons for beginning involvement, and may well have colored their memories with their current motivations for continuing. The fact that substantial majorities of volunteers reported changes in the ways in which they valued natural areas and acted to protect them is indicative that this may be the case. Relatedly, the very fact that these were volunteers with long-standing engagements is relevant; these are individuals who initiated volunteer work with the understanding that they would continue it over a period of time. In Nashville, to date, it has only been possible to gather data from people choosing to volunteer in one-day efforts, or from people who have been long-term volunteers in completely unrelated domains. While the goal of the Nashville research was to understand some of these volunteers' motivations in an attempt to identify foundations on which to build, they represent a level of current engagement that is a level down from the participants in Ryan and Grese's study. Already in the course of one day, though, the volunteers at the school planting had grasped the reasons for some of the work being employed and had begun employing them in ways other than those in which they had been directed; education given in the course of action *can* take hold and be applied by those who receive it, and in the context of Ryan and Grese's study, the actions of the berm builders begin to look like the beginning stage of a process by which they might begin applying their new knowledge to other places important in their lives. Would this have been as likely had residents simply been invited to attend an evening lecture on ways in which gardens could be planted to reduce runoff? It is impossible to know, but in the context of the general schema surrounding the place of land-based action and volunteerism in the life of participants, it seems unlikely that such focused education would have tapped

into the complex of community improvement, social network strengthening, and sense of place articulated by people as they employed shovels and wheelbarrows together at the school.

Kaplan and Kaplan (2005) also note that people are frequently passionate about small bits of nature they find in their nearby urban landscapes; their work identifying the attributes of landscapes that tend to be valued has already been described in detail. In later research, however, the Kaplans have explored not only landscape preference, but also the actions people may take in relation to their valued landscapes. They propose factors that may motivate people to expend effort tending these locations or otherwise acting for their benefit, and find that most motivations to this end may be grouped under the general concept of "meaningful action," a term which the Kaplans coined to describe a benefit of urban nature that has been described by other researchers as well (Kaplan and Kaplan 2005). Gardening (including the planting of rain gardens so strongly encouraged in the Mill Creek Watershed) is an opportunity to gain and use competence in a new skill; it allows participants to experience the satisfaction of using the knowledge they already have while simultaneously providing opportunities to learn as one goes. It also allows participants to feel a sense of accomplishment immediately; at the end of a few hours' work, it will be possible to step back and see what has been completed (Miles, et al. 2000). The same could be said for any form of land stewardship, ranging from river cleanups to invasive species eradication to crayfish protection, and indeed the same *was* directly said by participants in the school planting event just described. Some research has shown that the enhancement of "mastery experiences" is an effect of and motivator for volunteering in general, whether in environmental or other efforts (Mojza, et al. 2010). Further, the use of these competencies becomes a way to gain the respect of others, and to feel a sense of contributing to a larger goal (Kaplan and Kaplan 2005). "Special places," the Kaplans write, "places for which we have a strong attachment, are likely to be ones where we are invested in meaningful action. They are places where we can feel needed, where our participation can contribute to their long-term viability" (Kaplan and Kaplan 2005). However, the mere

fact of caring about a place isn't the motivator; it is only that caring about a place is more likely to invest other factors with meaning. People have an innate desire to be helpful and useful, the Kaplans assert, and they emphasize that even people who may not be naturally drawn to exploration of available nature places may still be enthusiastic about opportunities to "help," and "may have time on their hands that they wish to use meaningfully" (Kaplan and Kaplan 2005).

In later work, the Kaplans further elaborate the concept that opportunities for "meaningful action" form part of the value of urban natural places. They propose what they term "the Reasonable Person Model" (RPM), which posits that people are more reasonable, helpful, cooperative, and constructive when the environment satisfies human "informational needs," which they group into three core categories. These include exploration and understanding (acquiring and understanding new information in accordance with the framework of complexity, coherence, legibility and mystery set out in their earlier work), meaningful action (acting on information in an effective manner), and restoration (maintaining a capacity to focus on, choose, and appropriately respond to information in one's living environment) (Kaplan and Kaplan 2008). Small natural landscapes within cities, they propose, provide residents with an environment that meets these human needs, and that brings out a better side of human nature. In addition to allowing people to feel useful, they note that participating in stewardship of local land is something that speaks to an innate desire to be heard, and that participation can be an important corrective to feelings of helplessness. Participation, in these terms, "involves being part of the action, providing input or helping to do something that needs to be done. In the urban context especially, participation can link the individual to both the physical and the social environment, ensuring that the person remains a functioning member of the local community. At the same time, activities that enhance a person's effectiveness can be health promoting in themselves and increase the likelihood of living in an environment that is compatible with the person's needs." Importantly, the Kaplans note that this type of participation can be meaningful to people even if it involves activities that a person might not

normally find appealing, and that groups which focus on environmental issues may do well to incorporate volunteers. Besides reducing cost, the work provides health benefits and opportunities for participants to act meaningfully, and also draws from and increases feelings of community pride (Kaplan and Kaplan 2008). Studies by other researchers provide evidence for the importance of this group of motivators. In a survey of volunteers involved with urban prairie restoration, a wide variety of motivators for participation were identified, including physical fitness and accomplishment, personal growth, fascination with nature, and having a chance to get away. However, the highest ranked type of motivation was "meaningful action." Participants who undertook more responsibilities and who volunteered more often reported both higher satisfaction with the work and higher satisfaction with life in general (Miles, et al. 1998). In keeping with the embedded nature of urban green space, the meanings associated with the acts taken on the land may commonly come to have meaning in larger life as well, with the entire complex of benefits for social connection, reduction of barriers, and pride of place potentially being reached through the work.

Other research has shown that volunteers often want to feel that they belong to a social group, and that ensuring that times during volunteer workdays are allotted for conversation and interaction among participants may help in the formation of this group identity. Nashville's volunteers attending the school-based planting day cited strong socially oriented motivators for participation, and when the broader tree-planting festival was proposed, representatives from several communities were at least as enthusiastic about potential social tie-ins as they were about the trees. The sense of shared work dedicated to the achievement of a mutually desired, locally situated end is a binding experience, and it goes further than the simple shared enjoyment of green space. Past research has compared community ties in neighborhoods where developers planted trees to those in which residents had done so as part of an organized project; community ties, "neighbor assistance," and identification with the neighborhood were higher in the resident planting group (Sommer, et al. 1994; Sommer 2003). The shared goal and

shared work go far towards this end, but others note that it is important for organizers to directly foster opportunities to talk and tell stories as well (Ryan and Grese 2005). Annie of Crieve Hall had already found this to be true and was actively planning to incorporate story telling into efforts to share work dedicated to beautifying and strengthening the community. In this case, and perhaps in the case of any neighborhood with an established identity, the fact that a place is cared for makes it a topic that people want to talk about—and that very act of talking is seen as strengthening the aspects of the community that are already valued.

The findings of these researchers resonate with the reports of many of Nashville's residents, most strikingly so with the two Latino community leaders who described the problems of, as Anita worded it, "not feeling connected [to the neighborhood]" that were evident in some of the watershed communities. In these cases, the problem was different from the tension observed in Flatrock, where a longstanding cohesive community already existed and was being revitalized rather than created. The neighborhoods these leaders described had lacked this cohesion before the influx of immigrants, and so lacked a structure with which to integrate easily. One of the Latino community centers had purposefully relocated from Flatrock to a neighborhood more underserved in terms of facilitators of community connection; this group strongly believed in getting community members together to talk about and solve problems relevant to a diverse group of people, although no efforts were intrinsically based in outdoor work. Anita, however, coming with a perspective of helping to create cohesion between Latino immigrants, non-Latino immigrants, and native-born residents of Nashville specifically stated that the community needed something that they could *work* together doing over time over and above a need simply to *be* together in an engaging place like the Flatrock festival. In the Kaplans' terms, the local environment was currently *not* well suited to the needs of those who lived there. Anita, like the Kaplans, was aware that health and general participation skills were transferable benefits that would be relevant no matter where those who became involved might go. Additionally, though, she hoped that the work

itself would be meaningful to people, and that both the act of doing it and the effects created by it would improve the *local* environment that was currently unsuitable—a benefit to be reaped either by the original participants if they opted to stay long term, or by the next wave of people to fill the homes the original participants might eventually leave. The opportunity for engaging in "meaningful action" in a space that had the potential to be seen as shared was important in her view, and this importance was highlighted by others who immigrated to Nashville from much less geographically and culturally distant places. The assertion by the volunteer who had just moved to Nashville from out of state that work like planting the trees was "the best way to become part of a place" could not have affirmed the Kaplans' point more clearly.

Community pride (as distinct from community cohesion) was another, related, general motivator for participating in environmentally focused projects discussed in the previous section. To the extent to which participants view a place or an environment as part of their communities, working with others to improve it may strengthen the existing sense of being part of a community with shared values and goals (Miles, et al. 1998). A study conducted in Austin, Texas found that for those engaged in volunteer work with local environmental efforts, "it was about preserving the environment, but it always went deeper than that. The environmental movement emerged as the banner for a deeper movement for place because the environment is so much of what creates the sense of place. [It] was part of the deeper movement to preserve an idea of a place, an idea of an "Austin . . ." (Swearingen 2010). In Nashville, the creative acts of some residents in Donelson seem particularly relevant to this idea. This group installs signs bearing the neighborhood's name surrounded by carefully designed and cared for garden areas at entrances to the neighborhood, and while environmental motivations are not unknown here, there is, as in the case of Swearingen's research, a "deeper movement to preserve an idea of a place." This is largely about community pride and cohesion, but it is not without some practical motivations as well. Donelson is a community in which there is strong activism to "revitalize" and become attractive to new

businesses. The large park that sits at the edge of the community is valued by residents for the access it provides to recreational opportunities, and the large yards are touted as amenities. However, many of the main business districts in the community include closed stores, buildings that have been "let go," and stretches that may include multiple cash-for-gold and predatory lending businesses in a single plaza. From some directions, these will be the first impressions of the community for those who enter it; those who work to create landscaped entrances are engaged with creating a first impression which reveals the aspects of the community they feel typify it. The "gateways" hint at the well-manicured yards and miles of heavily used greenway that those entering the community would see if they diverged from the main roads, and, it may be hoped, provide a signal to potential investors that the community could be a good place to do business.

Ryan and Grese indicate that consideration of the potential force of such values may help planners develop initiatives that are more likely to be supported, and eventually embraced, by residents. For projects like prairie restoration, and even, in some cases, tree planting, opposition may take the form of local residents who prefer highly manicured parks, and consider more natural areas "messy, dangerous, or aesthetically unappealing" (Ryan and Grese 2005). In Nashville, at least occasionally, an irate member of the community would express concern about trees creating dangerous environments to the Non-Profit in the midst of tree planting initiatives. However, such protests rested on the assumption that the goal was to create dense urban forests. More frequently, trees were seen as an aesthetic enhancement, a property value raiser, and an improvement to communities. This is in keeping with observations that while overly wild urban parks may be viewed with trepidation, neighborhood urban tree planting projects that visibly improve neighborhoods can receive strong support from residents (Ryan and Grese 2005). Such efforts may also meet support in the face of a perceived threat, as shown by a study of residents in an area where street trees were being killed by a parasite. Participants who had lost a tree or lived near areas where trees had been lost expressed strong interest in participating in volunteer

replanting efforts, and even those who had not lost trees were strongly supportive *if* they had also expressed high levels of community pride. It is notable here that the motivation for support, and potentially for involvement, is social rather than ecological, and the motivations people expressed for considering involvement were more related to a threat to the neighborhood character than a threat to nature (Hunter 2011). If the spaces inside houses and buildings belong to individuals or discrete groups, the places between these structures belong to the neighborhood; they form the shared medium upon which neighborhood identity is constructed, reevaluated, and, when necessary, repaired or reclaimed. This mirrors the case in Nashville, where "threats" to the neighborhood in the form of changes to long-established social dynamics were mobilizing to residents, calling them to gather and conduct work in the outdoor shared spaces of the community. In contrast, the threat to the Nashville Crayfish was never a motivator for participation, and even more general threats to the environment were only secondary motivators. Some indirect, but telling, evidence for the motivating potential of community pride can also be found in a study that examined characteristics of participants in "place-based groups" in Portland, Oregon, where the metropolitan government provides a measure of support both to neighborhood groups and to community watershed councils, with the result that some study may be made of the characteristics associated with the two different memberships (Larson and Lach 2008). It was clear that involvement in neighborhood associations was much more common, as was actual meaningful involvement (as opposed to simply signing up for the organizations' mailing lists). In this study's sample, it was found that 25% of respondents to a community survey reported participating in activities associated with their neighborhood associations, while only 12% participated in watershed council activities. Seventy percent of respondents reported "never" having attended a watershed council meeting, while less than half of respondents reported the same for attending neighborhood association meetings. However, a high number of survey respondents who participated in *either* watershed or in neighborhood association groups took the time to offer extensive, written comments stressing the value

of local volunteer efforts such as tree plantings and removal of invasive species. It was notable that these comments tended to be activity-oriented rather than planning-oriented (except in the case of group leaders). One thing this research showed, if indirectly, is that the segment of the population that is interested in activities that are beneficial to watersheds reaches beyond the segment of the population who actually frame their beliefs as having anything to do with this geophysical concept. Environmentally beneficial actions on the part of residents may be motivated more by desire to improve neighborhood livability than desire to improve the environment (Larson and Lach 2008). While this may create a situation in which simple environmental education leads to little change, it does *not* create a situation in which engagement with environmental issues is impossible. The issue is not what potential participants are willing to *do* but how they tend to *think* about what they do. This is not to say that environmental groups should give up on the idea of transferring knowledge to residents, but the insight does have real implications for how such groups should choose outreach language and initial event venues. In the case of the cited study, it would be interesting to know whether it was common for residents who became engaged with activities through their neighborhood associations to subsequently become interested in environmental issues and thereby find themselves attending watershed meetings. This was not explored in that research, but it is undeniable that in Nashville, neighborhood groups provide ready access to many community members, and may serve as useful entry points for induction of work. Indeed, the Non-Profit already makes good use of them—although, as indicated in Chapter 2, any group that conducts all outreach through the medium of these associations will miss large swaths of the community.

Ryan and Grese further this theme of neighborhood engagement in a way that is particularly applicable to the Mill Creek Watershed when they point out that there are "neighborhoods that may not have the social capital to mobilize volunteer groups to focus on urban forest issues when there are other pressing social issues to address." They emphasize that in such circumstances, "linking the restoration of urban

natural areas to larger recreational and social needs of urban residents is imperative for ecological restoration to benefit the larger society." (Ryan and Grese 2005) For initiatives to succeed in these communities, the larger public must be involved in the planning process, and the best starting point for this is to determine the characteristics of places that are already appreciated by local residents. One piece of advice the researchers offer is that environmental groups should involve local artists when possible, thus creating a social component to the natural landscape and tapping a resource that, when present, is something residents tend to feel pride in (Jacobson, et al. 2006; Ryan and Grese 2005). The Flatrock Heritage Foundation has already begun to use this strategy, emphasizing the variety of local artists in the community at the festival, on the sign for the garden, and on the murals they commission to help revitalize unsightly outdoor areas in the community. Given the interest that the planners of the festival had in the possibility of future tree-planting efforts, a collaboration with the network of artists that they have built over the years might prove beneficial.

Characteristics of Volunteers in the Literature

Related to, but not synonymous with, the motivations for participation in environmental initiatives, are studies of the characteristics of those who participate. While "motivations" are factors reported and explained by participants, "characteristics," in this case, refers to qualities that participants tend to have in common from the standpoint of the researcher. Little research appears to exist documenting basic characteristics of environmentally-oriented volunteers, though a strong body of research examines apparent predictors of general volunteerism. A long history of study documents higher participation in any type of volunteer effort at higher income levels, or more generally, at "higher social capital levels," as measured by income, education, and personal assets (Larson and Lach 2008; Smith 1994; Sundeen, et al. 2007)with individuals having greater social capital being both more able to devote time to volunteering and more likely to be desired and recruited as volunteers by groups seeking assistance (Wilson 2000). In some situations, however, this appears not to be the case. Research in the United

States and Israel found no association between volunteering in neighborhood-based organizations and race, ethnic, or educational attributes, but did find that volunteers across all of these groups cited social and psychological well-being reasons for participating. (Wandersman, et al. 1987), an effect echoed in a variety of other studies described above. Even studies that have found an income or education effect have found that social characteristics carry more weight, with volunteers tending to fit a profile of having high levels of informal volunteering, social activity, and civic participation (Reed and Selbee 2000); indeed, volunteering and civic participation are apparently strongly linked concepts—a status that will be discussed further in relation to immigrant populations in the next section. Other research studying the dynamics within a single initiative identified a higher level of involvement in the low-income group members, for whom they found high levels of contribution in the form of labor (Martinez and McMullin 2004). Isa described a similar tendency in Crieve Hall, where she noted that those who could not afford major financial contributions to community efforts commonly dedicated themselves to hours of labor. She felt that these volunteers were motivated by a strong sense of place regarding the neighborhood, and a desire to contribute what they could to improve it. In Nashville, it was notable that, regardless of socioeconomic status, improvement to communities was the most commonly cited motivator for participation in volunteer efforts—both in existing work and in efforts proposed by the Non-Profit. In the literature, several studies have found that people who feel a strong bond with their neighborhoods—who perceive themselves as part of a community attached to a good place—have higher rates of volunteerism (Mellor, et al. 2009; Rotolo, et al. 2010; Wilson 2012), thus completing the picture provided by the literature from the previous section, in which active volunteers reported themselves motivated by such attachments.

As an illustration of the complexity that can arise when trying to predict volunteerism based on demographics, it is useful to consider several of the studies that have attempted to explore the relationship between ethnicity and volunteerism. One study found higher levels of income and

education to be associated with volunteerism among Chinese Americans only in a subsample that reported being of the Catholic faith (Ecklund 2005), and other research has indicated a complex relationship between income and volunteerism among African-Americans; Musick et al (2000) found that socioeconomic status in this population was not strongly predictive of volunteering (Musick, et al. 2000), but another study found that black men with college or professional degrees were more likely to report involvement in volunteer activities than were African-American men with less education (Mattis, et al. 2000).

Family structure has also been studied in relation to associations with volunteerism. In general, studies have found that presence of a spouse and/or children in the home is associated with a higher likelihood of volunteering (Bryant, et al. 2003; Sundeen 1988), though at least one study has found that presence of children in the home was not significantly associated with volunteerism among immigrants (Scottt, et al. 2006). Research has also shown higher rates of volunteerism among women compared to men (Mesch, et al. 2006; Scottt, et al. 2006; Sundeen, et al. 2007), and among middle-aged persons than people who fall into younger or older age categories (Sundeen, et al. 2007). It is theorized that middle-aged people may be more likely to volunteer because they tend to have greater stakes in the communities in which they reside (Wilson 2000), and that women may volunteer more often than men due to a division of labor that assumes volunteer work in association with schools, church, social services, and health services (Mesch, et al. 2006). Based on the limited amount of observation conducted in Nashville, non-environmental volunteer efforts tended to be led by people who were middle-aged or young, and who felt strong investment in their communities. The idea of family was important to many volunteers here, and most active volunteers had children. However, there were certainly volunteers from other demographic groups in evidence; in Flatrock particularly, young couples without children and retired members of the community were strongly active in festival planning efforts.

What is most important in this brief summary of volunteer characteristics is that they are *difficult* to summarize, and that demographic factors are clearly modified by social, cultural, and individual factors in ways that are difficult to predict. For every study that indicates that a given group is not likely to volunteer, another study indicates that this group *is* likely to volunteer under certain circumstances, or that the demographic effect is not as important as other factors. In the Task Force and Non-Profit, there was no indication that members felt that low income or ethnically diverse populations were unlikely to engage in volunteer work, though outside of these entities, residents who heard of the outreach efforts occasionally expressed the idea that the members of the communities in question would be difficult to engage. The literature, by and large, argues against the idea that demographics are the strongest predictors of volunteer participation, and implies that outreach to all groups in a diverse community has the potential to result in increased involvement.

Immigrants and Volunteerism in the Literature

In Mill Creek Watershed, a large portion of the diversity in the target communities is associated with birth in a country other than the United States, and one of the explicit goals of the Non-Profit in forming the Mill Creek Watershed Association was to involve the immigrant communities of Nashville from the beginning of the process. With a few exceptions in the form of brief notations regarding deviations from established volunteerism predictors, the literature seems to contain virtually no study of motivations for immigrant volunteerism in the environmental sector (although there is a small body of literature that documents immigrant *valuation* of urban green space, as discussed previously). There is, however, a limited literature examining volunteerism among immigrants in general, and an exploration of this literature is appropriate, as it may help to identify potential avenues for recruiting immigrants to environmental projects in the future.

Regarding characteristics of immigrant volunteers, some research has shown that demographic characteristics of volunteers are similar to the characteristics of volunteers studied as part of research

on general populations (Handy and Greenspan 2009), although other researchers have found substantial complexity when attempting to understand the characteristics of immigrant volunteers. One study found that Latino and White immigrants who come to the United States before the age of ten are more likely to volunteer than those who arrive later; however, the same study identified no such relationship between age of arrival and volunteerism among Black or Asian immigrants[11]. (Sundeen, et al. 2009). This study also found that Black and Asian volunteer rates were unaffected by having parents born in the United States, while White and Latino respondents did report higher rates of volunteerism when they had at least one parent born in the United States. Other hypotheses tested in this study showed similarly mixed results. Education was positively associated with volunteerism in all immigrant groups, as was having part time employment; these associations match those consistently identified among non-immigrant populations. However, income, another standard indicator, was found to not predict volunteering at all among immigrant Blacks, and the hypothesis that home ownership would be associated with a higher likelihood of volunteering among immigrants was true only for White immigrant respondents. Among respondents born in the United States, however, higher education, higher income and homeownership were positively associated with volunteering among all four racial groups (Sundeen, et al. 2009). Family structure relationships were also different for immigrant groups than for native-born citizens. Black immigrants who were single with no children had higher rates of volunteering than those who were married with no children, while Latino immigrants who were married with children had higher rates of volunteerism than those who were single with no children. Presence of spouse and children in the home had no association with volunteerism for white and Asian immigrants. The authors speculated that this may be attributable to the fact that immigrant families with children may be likely to dedicate their time to economic survival, rather than volunteerism; they noted that the

[11] This study divided immigrants by race and/or ethnicity rather than country of origin, so in this data set, a Black immigrant is most likely to be from Africa, but could be from any country; this procedure allowed the authors to compare findings among immigrant populations to ethnic differences among natural-born citizens.

Latino respondents in their sample were younger than those in the other three groups, and more likely to have young children (as opposed to any children) in the home. It was thought that this might draw adults into activities associated with their children's' schools. Living in a smaller region and being female were both associated with higher rates of volunteerism for White, Black, and Latino immigrants, but not for Asian immigrants, though a second study of volunteerism in immigrant-centered churches did not find the gender effect; in fact, this study found that women and men were equally likely to volunteer, though men reported more hours per week. Subsequent findings showed that women were less likely to perceive activities such as cooking or serving food at the church as volunteer efforts, thus potentially explaining the difference. The authors of this study also speculated that the Black, White, and Latino immigrants may have greater linkages to their communities, which could lead to a higher rate of volunteerism in a similar way that previously cited research identified for individuals who expressed high levels of community pride (Sundeen, et al. 2009). It is also possible to speculate that the lack of association between volunteering and homeownership among some immigrant groups may be related to the building of communities that are ethnically or linguistically, rather than geographically based, though this was not noted in the literature reviewed here.

While this information on the demographic characteristics of immigrant volunteers is available, little to no research has been done on how immigrant volunteers describe their own motivations; it is hard to find direct correlations to the general volunteerism studies that have identified feeling useful, working hard, and making a difference as motivators to volunteer in environmentally oriented projects. This is unfortunate, given that demographic data of the type listed above does little to provide insight into the factors that motivate volunteers—and indeed, the complexity of the demographic data is such that it can provide little in the way of guidance to a group interested in involving a new community in volunteer efforts. One study in which immigrant volunteerism in churches was studied may be enlightening, however. In this study, the researchers found that 84.8% of 754 research participants

volunteered within their congregations, which represented Buddhist, Christian, Hindu, Jewish, Muslim, and Sikh faiths. While "satisfying religious beliefs" was the most commonly reported motivation for both established and recent immigrants (not surprising given the nature of the sample), there were several other strong motivators present in both groups. Some immigrants reported finding value in "giving back to the community," which again, is an often-expressed reason for becoming involved with volunteer work encountered in general population studies. For both established and recent immigrants, making social connections in the congregation and in the community were the two most commonly reported motivators, after the religious motivation—not dissimilar to the reports in studies of the general population showing that volunteers value the chance to interact with other volunteers. Further, this valuation of social aspects, when detailed further in focus groups, showed that the "community pride" motivator is as present among immigrant volunteers as it is in others. In the case of immigrants, however, ties to a geographically defined neighborhood community may be slow to form, as the first years in a new country are likely to be spent learning English, finding a job, and renting in a location which—in many cases it may be hoped—will be improved upon once the other goals are met. Further, when language barriers are high, the informal and formal periodic interactions with neighbors which gradually create the sense of shared place that comes to define a neighborhood occur less frequently. However, such interactions do occur in other locations, including churches and community centers, and volunteerism may be high in situations in which immigrants have the opportunity to help members of their own communities (Ecklund 2005). In fact, Handy and Greenspan note that they chose to study churches particularly because they often function as much as community centers as places of worship among immigrant populations (Handy and Greenspan 2009)—a circumstance that is at least partially mirrored in Nashville. Immigrant volunteers reported that their outreach efforts (often initially in the form of cultural performances, contribution of food and planning for community festivals), helped them create relationships in the wider community where none had existed before. The benefits to be reaped

from these efforts fell upon both the individuals who volunteered, and on the congregations they represented—which in turn returned some increase in standing to individuals associated with the congregation (Handy and Greenspan 2009).

One major theme was emphasized in this single study on immigrant volunteerism that was not prominent in the literature on volunteerism in general; this was the usefulness of volunteering to obtain job training or potential job skills. (One study of non-immigrants did find that volunteer work may be viewed as a facilitator to returning to employment after losing one's job (Nichols and Ralston 2011), but this finding was not typical of the general literature). This motivator was more commonly reported among recent immigrants, and in the focus groups that the researchers conducted following the survey, immigrants reported that, arriving in a new country with no work experience in that country, they actively sought out volunteer opportunities to build their resumes. These experiences allowed for the building of skills, for the practice of English in low-risk situations, and for the acquisition of potential references who could verify their skills and work ethic. Several clergy reported that they provided certificates of recognition for volunteer work as a means of helping to legitimize the professional applicability of the work volunteers had done (Handy and Greenspan 2009). This harkens back to the "meaningful action" framework described by Kaplan and Kaplan as motivating the volunteer efforts of many who volunteer and value the chance to earn social capital by performing useful services and honing new skills. In the case of recent immigrants, these motivations still apply, and evidently continue to apply after a job is obtained; however, Handy and Greenspan's findings show that, for immigrants lacking work experience in the country (and perhaps for other populations similarly lacking in experience), necessity leads the motivational emphasis to be not so much on simply building skills and social capital, but on mobilizing that new capital in a specific way. This information is of potential importance in Nashville. At meetings of the Nashville Task Force on Refugees and Immigrants, representatives from immigrant community centers expressed a need for identifying ways in which

immigrant job skills could be transferred to the market. At one meeting, for example, a representative described the skills possessed by one recently arrived refugee who could carve fruits and vegetables into elaborate arrangements of the type that sell very expensively as novelty nontraditional bouquets. He hoped to identify some means of setting up systems in which immigrants' skills could be made known, validated with appropriate licensing, and mobilized to allow them to build businesses. This is undoubtedly a difficult process, but the combination of the need and the existing organized efforts of immigrant centers opens possibilities for organizations like the Non-Profit. Opportunities associated with their proposed activities included the following: landscaping-related manual labor; landscaping-related planning and decision-making; problem identification; community outreach; data collection in the form of stream bank analysis or macroinvertebrate sampling; and discussion of community problems with professionals and representatives from local government. These skills have potential applicability in the marketplace, and work with community centers might help define some way in which this work could be formally validated, perhaps with a certificate and acknowledgement that representatives from the Non-Profit could serve as references for jobs involving related work. There was interest in exploring systems of this sort; however, it is important to note that the success of such strategies would not be equally spread among communities. Alberto, of one of the Latino community centers, had lamented difficulties relating to such processes when working with undocumented immigrants. In the past, he had encountered several who were natural community organizers who expanded their skills as volunteers and were deserving of being paid for their efforts. However, he couldn't hire them. In the case of a formal program such as the one proposed above, certification of work conducted could certainly be provided to all, but the potential for benefit among undocumented immigrants might not be realized.

Most of the items described above appear to serve both as motivators and as realized benefits for immigrant volunteers. An additional benefit of volunteering that may not play as important a role in a person's decision to initiate volunteer work is the fact that volunteering, in addition to providing job

skills and community connections, can serve as an important way to learn "how things work" in a person's new culture. Handy and Greenspan's study briefly noted that in some cases, volunteer duties led immigrants into situations that helped them learn some of the more complex, initially inaccessible skills for achieving a high level of involvement in general decisions that could affect them. For example, in the course of volunteering, one man in the study had had to obtain a building permit, which required him to attend township meetings, eventually make a presentation at a meeting, and meet with locally elected political representatives (Handy and Greenspan 2009). In my own research, leaders from every immigrant community encountered (in all cases immigrants themselves) described the acquisition of these types of knowledge as being particularly difficult, and described the lack of knowledge in these domains as a major reason immigrants often did not get involved with initiatives such as environmental efforts. (This will be discussed in more depth in Chapter 5). Yet, in spite of the strength of this opinion "on the ground," in Nashville, it is little-documented in the literature. While they provide few details, Handy and Greenspan do note that the nature of formal volunteering in a new country, and the mechanism for becoming involved may not be familiar to newcomers. In this regard, they note the importance of "organizational characteristics" in influencing people to volunteer. These organizational characteristics may be important in all volunteer populations; people naturally associated with a church, or a school, or a neighborhood are easily recruited by the leadership of these organizations, and already may feel invested in these organizations. For immigrants, the process is not so much different as simply more important—and potentially more problematic for those who have not yet developed associations with the organizations that might serve as gateways to participation in broader volunteer efforts. When linguistic, social, and cultural barriers would make participation difficult, Handy and Greenspan found that "organizational characteristics of shared values, ethnic homogeneity, financial stability, and congregations as community centers lower entry barriers and provide immigrants with improved access to volunteer opportunities" (Handy and Greenspan 2009). Further, while most volunteers in this study

initially volunteered within the center of worship, eventually, over a third of study participants expanded to volunteer elsewhere. The study did not elucidate whether the type of volunteer work undertaken expanded, or whether location of the work was the only change; however, the finding is suggestive of the benefits of recruiting immigrant volunteers at an organizational level initially, rather than relying on bulletin board flyers or even hand-distributed invitations to be sufficient. The Non-Profit has a history of reaching out to neighborhood and homeowner associations which is analogous to these additional proposed sites of outreach. Viewing immigrant community centers as similarly situated conduits for reaching target audiences may help involve a more diverse population than could be reached simply by assuming that contacting representatives from the neighborhoods that immigrant residents live in would be sufficient to involve them.

Concluding thoughts on Motivations for Participation

This research has found that in Mill Creek Watershed, there is a preexisting framework of meaning in which the concepts of urban green space and urban neighborhood are linked by a strong complex of meanings relating to the ideas of connection, embeddedness, and shared access. Chapter 3 sought to explore the ways in which resident values of urban green space were situated within this schema; the current chapter has built upon this work to explore the ways in which these values may be mobilized into action. It has revisited the tree giveaway that was described in the introduction to this research, this time exploring the advice community leaders offered regarding engagement of those they served. It has also explored the motivations of people who spent a day volunteering at an environmentally focused event and has considered ways in which both invitations to participate in efforts and educational information might best be delivered to this community.

Just as the meanings of green space in the watershed were more tied to concepts of neighborhood and home than they were to the idea of wilderness, actions taken in relation to these places were similarly rooted in an urban conceptualization of participation and place. These places are embedded in the

landscape of the city, valued for their proximity to home, school, church, business, and the other sites of "everyday life," and it is perhaps not surprising that an act undertaken in improvement of green space is typically viewed primarily not as an act to improve the environment but as an act to improve the neighborhood. Work there may allow for acts of creation that lead to development of new spaces for the building of social cohesion. Cleanup days improve water quality, certainly, but at least as importantly to residents, they clean up the neighborhood view, just as an environmentally focused planting at a school may be seen first as an opportunity to help the school and meet other "good people" from the neighborhood, and second as an opportunity to help the environment. Notably, while an environmental group may plan an environmentally focused volunteer event, residents will insist on seeing the work through the lens of the neighborhood. "The environment," it seems, is not a local entity. It exists somewhere "out there," and is articulated by those currently unengaged in environmental efforts as helping "the earth," as if actions to this end are severed from all of the meanings that are so strongly felt in relation to urban nature in Nashville.

There is an argument to be made that this lack of "seeing" the environment is a strong justification for groups like the Non-Profit to conduct education there. In fact, it is nearly an incontrovertible argument , and only the way in which people are invited to be educated is in question. In considering the school planting day, it was notable that, while many showed up for reasons other than the environment, several left with new appreciation and new knowledge of environmental work—witness the spontaneous application of learned skills to enhance the protection afforded to the new seedlings. In fact, the Non-Profit very frequently and successfully does use this action-to-educate model when working in the city; it has conducted many planting days and rain barrel workshops in various communities, and educated many people at those events on ways to protect their local streams. The difference in the current work was that a new attempt to create a group centered around a particular watershed, rather than on "the streams of Nashville" was being attempted, and due to the crayfish, the

need for specific education was more in the forefront—thus leading to a plan that potentially focused on delivering education first, as a means to inspire people to act.

This set of circumstances may have led to an appearance of a "professional" view that differed from the resident view of watershed matters, but the reality of the situation was more nuanced. In closing this chapter, it is useful to consider that the professional and resident views of these matters may not be so different from one another as they appear. It may be easier for everyone, whether environmental professional or layperson, to see one's own community primarily as a social space, in which natural elements are defined by their connections to a social landscape rather than by their connections to the larger landscapes of Tennessee's rivers, forests, and open lands. It is worth noting that in the Task Force, there was a participant who was both professional and resident, hailing from the southern semi-rural portion of the watershed that, for the most part, has not been described in this study. His comments at meetings struck a balance between concern about water quality issues and about the preservation of beauty. This may have to do with his role as a representative from a non-profit largely dedicated to such aesthetic issues, but it was undeniable that this man had saved much of his passion for rivers for Mill Creek—for *his* creek. This idea—that the streams and trees of the watershed are naturally seen as worthy of work for a complex of reasons related to their embeddedness in a social fabric is worth remembering. The challenge is helping people to understand that, just as these cared for places are embedded in and connected to the neighborhood, so are they connected to a larger ecology that can be meaningfully acted upon. This research indicates that bridging this gap is possible, and that the act of engagement may prepare people to become educated and further engaged in environmental topics.

CHAPTER 5

BARRIERS TO ACCESS AND PARTICIPATION

While access to green outdoor public spaces in the city is valued by both established residents and by members of many immigrant communities, all groups—in fact, virtually all individuals—interviewed reported experiencing some sort of barrier that prevented them from attaining maximum enjoyment of such places. Others reported barriers to participating in environmental or other volunteer initiatives. Some of these reported barriers are present for all communities in the watershed, but others disproportionally affect some subpopulations or geographic areas more than others. This chapter will explore the self-reported barriers to engagement that were identified by participants in the research. It will focus most heavily on barriers to visiting urban green spaces rather than on direct barriers to participating in environmental or other volunteering efforts, but the information contained here has important implications for identification of ways to engage a more diverse group of people in watershed efforts. It is significant that, in nearly all cases, barriers to engagement were easily articulated by research participants. That is, they were either shared spontaneously or in response to a single interview question, without the need for rumination prior to identifying a barrier. Consequently, these community-identified barriers frequently have two important attributes. First, they are either directly or indirectly related to environmental topics. Second, they are already perceived as problems by at least some members of the community. As such, they may serve as effective "gateway" topics to open up opportunities for broader environmental discussions, and should not be ignored in any community assessment that has the eventual goal of increasing community involvement in an environmental issue. Further, in some cases, the barriers identified for accessing urban natural areas are also potential barriers to participation in planned watershed initiatives. In Nashville, barriers of this type were most commonly shared by members of immigrant communities; understanding these particular concerns may

be an important first step to establishing a watershed group with a membership that reflects the demographic structure of the region it is intended to represent.

Time constraints

While most of the long-established Nashville residents who participated in this research were already fairly well-engaged with outdoor recreational areas in the immediate area, nearly all of them still mentioned some minor factors that made it difficult to enjoy being outside as much as they would like. In this group, time constraints were most frequently mentioned. This is not a barrier directly modifiable by any intervention from government or non-profit groups, though it is worthy of discussion for three reasons, which will be described in greater detail below. First, the time barrier is actually a driver of residents' *valuation* of urban green space. Second, time constraints influence the potential time that residents can allot for participation in a new initiative such as the Mill Creek Watershed Association. Third, time constraints operate in negative synergy with other access barriers such as access to transportation, so while all groups may experience time constraints, some may be more severely affected by them.

While time pressures did certainly constrain the amount of time residents spent in outdoor areas, this apparent barrier was simultaneously a driver for *valuing* high quality urban green space. Residents frequently stated that they didn't have time to drive to the Smoky Mountains every weekend—a finding in keeping with previous studies that have documented that as distance from green space increases, use of it is likely to decrease (Cohen, et al. 2007; Coombes, et al. 2010; Giles-Corti, et al. 2005; McCormack, et al. 2010; Payne, et al. 2005). However, while distance makes frequent trips to national, or even relatively nearby state parks difficult, Nashville residents saw the presence of small outdoor options within the city limits as a factor that made the city a better place to live. A fly fisherman at Ezell Park stated that he was at the park when I encountered him because he was "exploring," looking for somewhere in the city that would be a good weekend fishing spot. He knew it wasn't ideal; it was still

possible to hear cars there (though not see them), and he thought the water couldn't possibly be as clean as it was in rural locations—a concern for wading fly fishing techniques and also for consuming the fish. But, he said, "it's pretty clear, and so far it *smells* clean. This is an urban area after all, so everything isn't always perfect, but this smells good. And sometimes you just don't have the *time* to get outside the city." His response was actually one of very few in which an urban park was being substituted for a wilderness setting. More typical were the "everyday" uses of the park that have already been reported: reading on a bench during lunch hour, slipping on tennis shoes for a brisk walk on a break during the work day, stepping outside to watch the river while mulling over a work-related problem. The fact that the green spaces are embedded in the wider urban context makes them valuable to those who do have limited time, both in the case of formal parks and informal green spaces. In Crieve Hall, two residents stated that one of the reasons the large yards and good walking areas immediately surrounding their homes there were such an attraction was the fact that it wasn't always easy to find time for a special trip to be outside, and similar comments were made by an additional two residents from Donelson. Time constraints, in part, were responsible for their inclination to look for a home with "built in" green space; with that added feature, it mattered less if they couldn't get to a large park as often as they would like. One of the major benefits of *urban* green space located in busy areas of Nashville is that it provides people with the option to be outdoors in a relatively green environment when the structure of their lives would otherwise not accommodate that luxury. Proximity to workplaces or homes and paved areas that keep people from getting dirty when they have to go back to work help address the time barrier that may prevent people from accessing open air spaces otherwise; the embedded nature of these spaces adds to their value when time is a consideration.

Time constraints have further implications for the process of instituting a new watershed group. While the previous "barrier" to enjoyment might actually be a facilitator to participation if the values associated with nearby nature can be tapped, time constraints simultaneously undercut that potential

by posing problems for logistical organization. When time constraints are frequently cited by members of a community, as they were both among established citizens and immigrant communities, careful attention to the timing of meetings and other events is necessary to maximize involvement. In Mill Creek, the formation of the Watershed Association did not get far enough to test any particular schedule, although interviews in the community had led to the preliminary decision to hold meetings in the evening, late enough for residents to come after work. Community leaders in Flatrock, Crieve Hall, and the Latino community had all indicated that such timing would allow participation by the greatest number of people.

The final barrier associated with time constraints—that of its exacerbation by other barriers—is both complex and insidious. It also disproportionately affects members of the community who are otherwise disadvantaged, particularly when they have no or limited access to a personal vehicle. Public transportation in Nashville is inadequate in many sectors, and while a bus may be a valid route for reaching a local park, for many, the schedules in place dictate that once the park is reached, riders will need to stay there for a long period of time. The option of an hour-long trip to the park is effectively eliminated, and so those whose recreational opportunities are influenced both by limited time and by access to a car experience a greater burden. This barrier is further exacerbated when parks are not located in mixed-use areas around which other errands could be accomplished in combination with a visit. The complexity of both the interior of the park and the surrounding landscape become more important in such a situation, as does the legibility of the surrounding area; when only one bus can take a visitor back home at the end of a visit, knowing that it will be possible to navigate both the terrain around the park where errands may have been carried out and the potentially myriad connections needed to travel from park to home become essential precursors to what would otherwise be a simple hour of recreation.

Safety, Connection, and Cared for Places

At a neighborhood development conference I attended at the very beginning of the research period, I sat in a local school's classroom with about twenty Nashville residents who were discussing ways to improve their neighborhoods. A representative from the neighborhood-oriented non-profit mentioned in the previous chapter had just given a presentation, demonstrating the power of GIS technology to help clarify and address community problems. He talked about food deserts, clustering of predatory lenders, and crime, drawing interested comments from an audience that was subsequently invited to consider other issues with dispersed geographic foci in Nashville. One of the first audience responses drew the group's attention to sidewalk lacks in some neighborhoods. The comment was met with a chorus of near-unanimous acclamation.

At that time, I had not yet conducted a single interview, but the response of the audience was confirmed time and again in the course of the research. This is not an environmental issue, certainly—in fact, when the issue arose at the conference, one of the Non-Profit representatives co-leading that workshop noted that in some cases, sidewalks should be placed strategically. Extensive sidewalk networks do increase the amount of impervious surface in an area, and consequently may increase runoff into urban waterways (Arnold and Gibbons 1996; Stone Jr 2004). However, even very environmentally conscious citizens want them. They address an issue of access—access to outdoor exercise around the home, to community amenities that have nothing to do with parks or green space, and to parks and other dedicated outdoor recreational facilities. Brief, unelaborated references to the need for more sidewalks were offered by residents of Antioch, Crieve Hall, and Donelson during the course of the research, and a few participants went into considerable detail to explain the precise nature of the barriers they experienced due to sidewalk lacks. On the "Walk 100 Miles with the Mayor" event on the Mill Creek greenway, two participants brought this up in separate interactions. One, an older African-American woman, said that she lived about a mile to a mile and a half away, which she considered to be a

walkable distance. However, she always drove to the park if she wanted to take a walk there, simply because the space between home and park lacked sidewalks and was otherwise not a very good walk. A younger African-American woman, who was a very active volunteer for the greenways system, said of the same location that "if I were really ambitious, I could walk from my house to here. But I never do; it's going straight up Antioch Pike, and it's just a lot safer to drive." Previous studies have shown that perceived low safety in relation to traffic or violence may be a barrier to park use for many (Wilbur, et al. 2002), and it was striking that in multiple observations conducted at both this greenway and the one at Ezell Park during the research period, there was never any observation of an instance in which someone had walked onto the property. For the two women quoted above, this aspect of the area presented no real barrier; the parks were still local to them, and were highly valued as places they could visit on a moment's notice, without much planning. However, it is notable that given the structure of the city around the parks, geographic proximity does not equate to accessibility for residents who do not own cars. In some cases, access to public transportation may mitigate the safety concerns associated with walking and facilitate park use (Day 2008), while conversely, *limited* access to public transportation may be associated with less frequent park use (Scott and Munsun 1994). In the case of the park being discussed by the two women at the Mayor's Walk, the latter set of circumstances applies; the bus route that would be most relevant for many residents drops riders off a mile and a half from the park entrance, and the road from bus stop to park lacks sidewalks or wide margins to allow easy walking.

This park is in an area with strong immigrant communities, and on any given day, representatives from most major immigrant communities will be present as walkers or joggers on the paved park trails. However, over the course of the research, well-established members of immigrant communities regularly mentioned the difficulty of getting around the city during the first few years in the country. Without a driver's license or a car, and with only limited public transportation options, it is easy to feel isolated during this time, and to find it difficult to explore new places beyond those necessary for

becoming established in the United States; according to community leaders, women in particular often experienced this, and sometimes found few opportunities to spend time in public places where they would be able to meet new people and form connections to their new home. In these interviews, it was clarified that these women were generally not culturally expected to avoid contact with strangers; they were more likely to stay home with children, however, and if only one car was available to a family, it would be used to transport the husband to work. While much easier to plan than to execute, it is possible that some careful, targeted addition of sidewalks along arteries that lead to Antioch Park could increase accessibility for many people. Alternatively, expansion of Nashville's efforts to create well-connected bikeable roads might be even more helpful in mitigating this potential barrier, given that most of the park's near residential neighbors do not live within a half mile radius. This type of access is also lacking in this quadrant of Nashville. At the Mill Creek Mayor's Walk, a volunteer distributed maps of Nashville's bikeable routes, but noted that unfortunately "it doesn't go down this far." Southeast Nashville has not yet benefited from the road-widening and bike lane creation projects that have been happening in piecemeal fashion across the city, which explains why it is not included on the map. However, Metro acknowledges that this sector should be prioritized in green space and greenway expansion efforts, and as these plans are formulated, it is worth noting that centering such plans on the existing and already valued park might be the best way to ensure that infrastructure expansions actually succeed in increasing functional access to green space. Careful neighborhood studies to determine stretches of road that act as "barriers" to accessing the greenway could be fruitful; judging from the limited interviews conducted in the current research, efforts to increase walkability and bikeability along Antioch Pike might go a long way to increasing access for many. Encouragingly, the newest Greenway commission map includes a subset of tentatively planned greenways marked in purple. These are not currently being developed, and are not in late planning stages, but they represent places in which either small waterways that could "host" greenways exist, or in which community advocates have suggested

that greenway access would be beneficial. The most concentrated web of purple lines on the map converges on the existing Mill Creek Greenway at Antioch Community Center; a smaller web of purple lines converges on the new southern section of Mill Creek Greenway that is scheduled to open in the summer of 2012. More actively planned segments are drawn in directly connecting the new southern section with the Antioch Community Center Section, and in turn with the Ezell Park segment and the northernmost Mill Creek Greenway segment that is still under development (Greenways Nashville 2012). While southeast Nashville remains one of the areas with low levels of walkable access to a greenway, the area's geography allows for greenway expansion here, and there is evidence that attention has been paid to community desires on this front.

In addition to potentially limiting park access, lack of sidewalks can create other barriers perceived as important by members of the community. Young residents in all segments of southeast Nashville, especially those with small children, tended to cite the fact that it is both easier and safer to push a stroller on a sidewalk. In many areas of Nashville, it might be feasible for an adult to walk along the side of the road, but many found it problematic to do the same with a baby or toddler. One resident actually proposed that in some neighborhoods, such as Crieve Hall, the sidewalk access barrier could be greatly mitigated by some very small modifications. In Isa's neighborhood, there were no sidewalks at all. However, she felt that the road and traffic patterns made walking safe and pleasant, even with children. (She had raised two there). There was one exception to this though. She cited a very small stretch of road on which there was a curve that limited visibility combined with a bit more traffic than was typical of the neighborhood. She felt that even adults had to be very careful in that area, though it was possible for them to walk there. However, she did not feel she could allow even her middle school aged son very far ahead there due to safety concerns. This was interesting given that it came from a respondent who was very adamant in statements that children should be encouraged to be independent and should not have parents hovering near them all of the time. In fact, one of her major reasons for valuing urban

green space was that it provided opportunities for her children to explore and expand their independence as they got older. For her, the sidewalk barrier was in part a barrier to her enjoyment, since it necessitated extra caution on her part—but it was primarily a barrier to the growing level of independence she would like for her children to attain. The proposal to install a very small stretch of sidewalk was a potentially interesting compromise between environmental and safety concerns. To this participant, the benefit gained would be rather large, since just beyond the dangerous stretch, she reported that there was a great deal of space that was well-suited for family walks, bike rides, and other outdoor activities. She stated that she has "often thought that [the addition of a short stretch of sidewalk] would open up a lot of other areas to walking." This idea raises the question of whether similar areas exist elsewhere in the watershed; it would be interesting to assess the area for other places in which very targeted additions of sidewalk or bike lane could have disproportional effects in eliminating barriers to both green space and general city amenities.

In addition to safety concerns related to sidewalk prevalence and traffic patterns, safety concerns related to the actions of other people were also commonly mentioned, either as active barriers, or as potential barriers. Chapter 3 outlined the perception of Crieve Hall residents that the green, open landscape of their neighborhood helped make the place safer through a combination of social and physical means. However, it is interesting to note that while the Non-Profit's tree giveaway efforts were generally perceived as very positive in Nashville, one city resident contacted them repeatedly about the dangers trees posed; she feared that planting too many trees would actually promote crime. This was clearly a minority view in regards to planting new trees in the city, but "unofficial parks" that were unkempt and had growth without much clear space were associated with potential crimes, and this was a barrier to enjoyment of places that might otherwise serve as resources to people who did not live in neighborhoods that had Crieve Hall's level of ambient green space. One woman (Linda) who is very active in both community and environmental causes in Flatrock and in greater Nashville described an

unofficial park area not far from her home. She said that there is only one area like this in her neighborhood, so the question of its accessibility is really a question of whether some neighborhood residents have access to a local green space at all. This place is not an official park that the city maintains (although it is public land), nor is it part of any formally established greenway, but it has informal recognition as a park area, and people use it enough that paths are well-defined; getting lost there would be difficult. However, "there's too much overgrowth later in the year. It really can't be used by singles much, because a lot of homeless people live along it." She lamented their lack of access to shelter along with other residents' lack of access to what could be a pleasant green area near their homes, and while she thought that most of the homeless people wouldn't hurt anyone, she said she had to acknowledge that some of them had problems that might lead them to become dangerous. This research participant is an avid hiker and has frequently walked and hiked alone in various areas of the country with no real concern, but doesn't feel that this practice is always a good idea in her neighborhood's unofficial green area (though apparently she occasionally goes for a walk there anyway). The other "unofficial neighborhood park" mentioned during the research was located in Crieve Hall, still in Nashville, but outside of the downtown area. There is not a homeless population living in this open space, perhaps because of its distance from downtown, its proximity to a school, and the strong cohesion of the community in that area. Linda said of where she lived that "this is not an area where people are big on volunteering," and felt that this trait made it less common for people to come together on an issue like cleaning up or officially advocating for access to a green space like the one she was discussing. The lack of people "out there doing things" made potentially public space into derelict space—the kind of urban wilderness that isn't viewed as safe. Just as the "complexity" and "cohesiveness" of an urban nature landscape is defined in part by the level at which those attributes exist outside the park's boundaries, in an urban park, what is perceived as the dangers of the city are always part of any assessment as to whether a location can be utilized. The embedded nature of the

urban green space matters here, because the dangers of these patches of nature are the dangers of the city, not the wilderness. In the wilderness, to a large extent, the perceived dangers relate to being far from other humans should help be needed. In the city, though, getting truly lost, angering a bear, or spraining an ankle far from help are unlikely. The danger perceived here is not that people are far away. It is that thousands and thousands of them are always close by. Just as embeddedness increases access for walkers, bikers, and families, so, the fear goes, does it increase access for muggers, rapists, and child abductors.

While these dangers may be perceived as coming from outside of a park, attributes within park boundaries influence the extent to which they are perceived to be problems. Linda, in Flatrock, spoke of the presence of undergrowth as a danger indicator, and in the formally designated Antioch Park, residents noted other attributes they used to assess its safety. Antioch Park contains a well-used, well-valued greenway, and has done for the entire period of the research (outside of the time in which it was closed due to flooding). Late in the research period, while participating in the Mill Creek Mayor's Walk, I received some insight into the ways in which apparent lack of management may lead people to categorize a potential green space as undesirable. One of the participants in this walk shared that in the past, she had visited that park to walk its main loop with a friend frequently. They had both eventually stopped though, due to a sense that the park had fallen into disrepair. "It just wasn't very nice; it wasn't clean. Things were blowing around, and it didn't seem like it was being maintained." The litter reduced the "coherence" element of the park for this participant; it clearly did not belong there, and the fact that it was present had implications for how much she could value the park. To her, the unkempt appearance implied that the park was less safe than it could be just as surely as the well-manicured yards in Crieve Hall led residents there to view their local landscape as a protection against undesirable human action.

Cleanliness and general good maintenance affect perceptions of parks in ways that extend outside of safety concerns as well. The walk participant mentioned above also had a sense that the pavement hadn't been as wide in the past, and that this made it harder to walk with a friend and brought her closer to snakes, which she had seen on the path several times and preferred not to encounter (although she was originally from a rural area and valued the chance to see other wildlife on the trail). She had not been to the park for several years on the morning I met her, due to aesthetic and safety concerns. However, in this case, the "Walk 100 Miles with the Mayor" program succeeded in doing precisely what it is intended to do. The research participant said of the event: "well, I heard about this, and since it's so close and I like to walk, I thought I would come and see how the park is now. I called my friend, but she had to work, so I just came by myself. And this is really nice! I'm going to start coming back here. . . I'll have to tell my girlfriend." It was interesting that in a separate conversation, another woman attending the event—a greenways commission volunteer in this case, who happened to live near this particular greenway—commented independently that she thought the park could use some extra attention. The reference was to a couple of small pieces of paper in the parking lot, and her concern was that people would not be attracted to the park if their first impression of it was not one of cleanliness. It has not escaped the greenways commission that clean trails that look as though they are cared for rather than abandoned are key to attracting neighborhood residents to use them. If the walk participant is typical, the commission's deployment of "trailwatch" volunteers to pick up litter and assess and report both security and maintenance needs may be having an effect (The Greenways Commission of Metro Parks Nashville). Places that look as though someone cares about them inspire more people to believe they are worth caring for, and consequently inspire more people to see them as vital pieces of their neighborhoods. Several studies have indicated that opinions of this sort are typical. Researchers who have examined ways in which basic characteristics of park spaces can influence certain potential users not to visit have consistently found maintenance related issues to be important. Dirty

bathrooms, damaged playground equipment, unkempt vegetation, litter, graffiti, and dog droppings have all been identified as factors that, when present, influence people not to care for or use urban parks. (Burgess, et al. 1988; Gearin and Kahle 2006; McCormack, et al. 2010).

In Antioch Park, signs of "community caring" actually increased over the course of the research. The walk participant had noted a general increase in cleanliness compared to a time before my research began, but over the course of 2012, several new changes appeared. On the morning of the Mayor's Walk, a large, artistic butterfly model was attached high in one of the trees. A little further on, an old tire was full of purple flowers. Further still was a larger flower bed, with some creative wood edging. The community's middle and high schools are located adjacent to this trail, and while they had not undertaken such projects in the beginning of the research period, school classes are now caring for these small areas. These schools are not located in a wealthy area, and have been in need of major funding for improvements for a long time (a fact noted by the mayor before beginning the walk). In my research previous to this time, those particular schools had never been mentioned by community members as among those that served particularly important roles in the community beyond the role of educating children. However, walkers in June of 2012 appreciated the flowers and the art, and further appreciated that the youth who are the greenway's neighbors in the community had been responsible for the additions. Parks in "mixed use" areas like this one tend to do well, and in Nashville, there was strong appreciation for events like the Flatrock Festival, which combine outdoor recreation, art, and community bonding; in contrast to wilderness areas, "mixed use" activity *within* urban open spaces may be strongly valued as a means of showcasing a community's strengths and talents. While people may visit wilderness destinations to "get away from" the city, many may visit urban park destinations in part as a means of *experiencing* their communities. The art along the path was viewed not as an intrusion but as an indication that the park was cared for; given the urban context, it added complexity to the landscape without reducing coherence, and to the research participant who had been absent from the

park for several years, its presence was a reassurance that helped to overcome the barrier of her memory of an unkempt, uncared for space there.

Barriers related to bicycling have already been discussed in relation to access to Antioch Park, but the scope of barriers associated with this activity is broader than evidenced in that description. Several research participants specifically mentioned biking as being more difficult to carry out in Nashville than other common outdoor activities. Factors related to geography, traffic, and general city structure were cited, though the extent of problems depended on both location and on the specific goals of the people involved. Bicycling was described as a fun activity, and was also described as a good opportunity for a workout, possibly with the added benefit of getting something done while out and about. The idea of being able to get exercise while traveling to work or going to the store to pick up a few items was attractive to many—however, this was also precisely the type of bicycling that residents described as difficult to manage. A particularly active resident of Crieve Hall did describe a day on which she and her family had biked to Target—but she also said that this was a major event, which required a fair amount of planning to accomplish safely. Residents who don't have the time or the local knowledge to map out a route in advance would be unlikely to try it for themselves.

Alberto summarized the general situation well: "I would like to bike to work, get the exercise benefits, but I can't, that's not safe [on the roads between his home and work]. They're trying to do this 'Prevention Nashville' thing, so they made a greenway around the middle school, but I'm not going to drive my bike in my car just to ride it. Who is going to do that?" Some people *do* do that; one Somali man who was quoted on this topic already often put his bicycle in the back of his car and drove until he reached a place where he could safely park and ride. This is unlikely to be a widely adopted method of dealing with the problem though, and it is certainly not feasible for a family. Isa, of Crieve Hall said that her family puts all four bikes on a bike rack when they want to have a bicycling outing—and that this is

something they would like to do often due to the fact that the geography of their neighborhood is not conducive to family rides. It's very hilly she said, and for some, that is an asset. She is neutral to it herself, and doesn't mind the hills, while her husband actively enjoys them. Their children, though, aren't yet strong enough to handle them. They bought the bike rack to deal with this, but Isa admitted that it made the bike rides much bigger events, requiring a level of planning they don't always have time for. The added hassle also makes it necessary to make sure the payoff is worthwhile. This family usually goes outside of the neighborhood (and outside the watershed) and crosses the river to Shelby Park to bike—a location with adequate payoff for the time spent to get there: "It's really pretty and big, so it's worth it to put the bikes on a rack and go there. There *is* a tiny greenway at Ellington, but we've never used it for biking. It's too short, and even though [we parents] can walk there, we'd have to drive to get to the greenway with the kids. If we're going to have to drive anyway, we want to go somewhere where there is a lot of parking, and a good ten miles of bike path." Isa's assertions are in keeping with several studies which have identified larger park size as a factor contributing to greater community use of a park (Cohen, et al. 2010; Giles-Corti, et al. 2005). Her account also introduces a larger problem with walking and bike path connectivity in Nashville, which the city has been attempting to mitigate in a variety of ways. The Metro bus system includes a "Bike and Ride" program, through which a passenger may put his or her bike on a rack attached to the bus and then retrieve it when getting off. (Some buses in the fleet do not have these racks, but passengers may place their bikes in onboard luggage areas instead) The program advertises itself as an opportunity to achieve both health and environmental benefits(Nashville Metropolitan Transportation Authority 2011). This seems like a potential solution—but it has several important pitfalls. The bike racks can only carry two bikes; if the program ever becomes successful beyond its use in a small percentage of the population, there won't be enough room—and even now, a family of three or four can't use the system as a way of enjoying a bicycling outing together. Also, while some areas of Nashville are well-served by the public transportation system, others are not, and many

parts of the Mill Creek Watershed fall into these underserved areas. (This will be discussed in more detail presently). There is also no question that the bus-bike combination is not the most convenient way to go about a daily commute. I never encountered anyone who had actually taken advantage of the bike rack option, though one person mentioned having considered it. When it came down to doing it though, he hadn't thought it seemed worth the considerable trouble; in spite of his interest in the health benefits associated with more frequent biking, the logistics involved with doing it were too great a burden—especially given that his place of employment was in an area of southeast Nashville particularly lacking in greenways and bike routes.

While Metro is aware of both the greenway and bike path connectivity issue and the uneven geographical access to existing green spaces, the problems involved cannot be addressed overnight. Nashville's greenways program has formally existed for nineteen years; the current coordinator began as a volunteer, and eventually found employment in building a system from a handful of trails established in existing parks. Currently, Nashville itself has 51 miles of trails (Greenways for Nashville 2012), and there are well over 100 miles of trails in Davidson County. The goal of the program is "to get a greenway trail within 2 miles of every Nashvillian for recreation and transportation as well as to conserve green space, particularly floodplains and viewsheds, along county waterways." (Commission 2011). Commission literature states that they are approximately 63% of the way to accomplishing that goal; however, the goal has been easier to meet in the central part of the city, following the Cumberland River (Commission 2011). Further, some of the trail segments are very small, stretching as little as half a mile in some locations. Volunteers and employees with the Greenways commission state that they are of necessity an "opportunistic" program. They buy land when they can, with the goal that tiny greenway segments will eventually be able to connect to larger ones, but they have found that availability of land is often an even bigger barrier than the always-relevant issue of funding. For the long-planned connecting trail between the Antioch Community Center and Ezell Park portions of the Mill Creek

Greenways, the commission has acquired land from several landowners, but two unbought parcels still remain before the trails can be linked. “It’s been awhile though,” a greenways commission employee commented. “We’ve been thinking it’s time to go back and try again.” In these situations, most landowners aren’t against the idea of a greenway, or even against the idea of selling, she said. Often, they consider it a good use of land. However, in many cases they may prefer to delay selling to maximize potential profit and benefit from the sale. This has been particularly true in the current economy and real estate market, though the greenways employee described the process of negotiating with landowners as worthwhile, and eventually, in many cases, fruitful.

Successes occur regularly, and I had the opportunity to talk with a program director for one of Mill Creek’s new, soon-to-be-opened greenway segments. For her, success was defined in part as simply acquiring the land and constructing the greenway—but beyond that, there was adamancy that this would be a “good” greenway. It contains two miles of paved trail and additional primitive trails around it, and it fits the urban green space ideal of connection to its surroundings; the paved portion will connect a neighborhood to business districts, and will be adjacent to over 70 acres of Metro Park land which eventually will include playgrounds and picnic areas (the timetable for the open land development is undetermined, as it depends on funding opportunities, but the space is open for general use now). In the Greenway Commission’s publication, another touchstone for drawing interest in a broader segment of the community is described, as readers are informed that the land was originally part of a Revolutionary War land grant, and after one sale, was farmed by four generations of the same family (Metro Greenways Commission and Greenways for Nashville 2012). The current generation has served on the Greenways Commission in the past, and eventually sold the land to expand the system. It has been noted already that a certain percentage of Mill Creek Watershed residents have been eager to tie history to outdoor public (and private) areas, and to view these new projects as being outgrowths of ongoing community cohesion. For the Lennox Village segment, this may be all the more important;

Lennox Village is a "new" community developed under a "smart growth Traditional Neighborhood Development" model, and did not exist as a named place until 2000. The area already makes use of mixed-use development, small "pocket parks" and wide sidewalks within the community. The neighborhood had not previously had direct access to a larger greenway, though, so the new development provides a new opportunity, and, perhaps, a touch of local history for a neighborhood with few years behind it. The story also highlights several of the barriers to enjoyment of green space that exist, but are not likely to be articulated by most residents: namely funding and the need to acquire land in appropriate places.

This general social emphasis on the part of greenway literature and representatives of the program is very reflective of the interests of the diverse set of residents I interviewed in the course of my research. A published list detailing the "Purpose of Greenways" begins with a sentence emphasizing their connective nature, "linking activity centers such as neighborhoods, schools, parks, and commercial areas" (Greenways Nashville 2012). If the system reaches its desired potential, it will become not a group of island parks, but a network offering a new way to get around the city, and a new way to see it. The benefits associated with greenways are listed as falling into six categories: health, recreation, environment, social, transportation, and economic development (Greenways Nashville 2012). This list closely parallels the statements that residents made detailing reasons for already valuing access to green space near their homes and places of work. Health was almost always the first-mentioned benefit to having access to public outdoor spaces. Either recreation or social opportunities were typically second, after which the environment was mentioned with some frequency. Transportation and economic development were mentioned least often, but still frequently enough to be seen as motivators for certain segments of the population. And, as is described in several segments of this chapter, transportation *was* frequently mentioned by residents as a barrier to utilizing green space, even if it was seldom mentioned as one of its uses; a green space network that helps to serve transportation

needs may increase its own accessibility and usability. Such an improvement touches on several aspects of the schema surrounding use of green space in Nashville. In the context of the neighborhood, such spaces can stand in metonymic relation to the small communities that surround them, an attribute related to the essentially outdoor conceptualization of neighborhood. When such patches of green space become nodes of a greenway system, however, the hope is that the local spaces become gateways to the community of the city, just as the neighborhood itself is seen as serving that role. New ways of "seeing" the connection between micro-local and urban-level community are created, and the functions of the green space are more tightly bound to the functions of everyday life. This is the goal of the greenway program, and based on the remarks of research participants, the work being attempted addresses several needs that are recognized in the community.

In concluding this segment, one additional piece of commentary from the literature is worthy of consideration in relation to factors other than distance that are seen as barriers to park access. In a discussion of possible explanations for the contradictory findings of various studies that explored green space relationship to health indicators, one set of authors states that "research findings have often been based solely on the perceived accessibility of green spaces, whilst perceptions have recently been shown not to correlate well with objective measures," (Coombes, et al. 2010), citing a study carried out in Scotland (Macintyre, et al. 2008). At least one study conducted in the United States has documented this disagreement between real and actual distance from home to park as well (Lackey and Kaczynski 2009). However, the use of these findings to explain contradictory results in relationship to health may indicate the presence of a problematic assumption in some of the literature exploring these issues. In this case, it is assumed that the quantity rather than the quality of the distance between home and park is of greatest importance, and that the characteristics of the space between home and park are devoid of meaning and impact; they imply that if people knew how close the parks were, they would use them. The discussion above, however, indicates a greater concern with the characteristics of the space *around*

parks, in accordance with their nature of being embedded in the broader context of the city. Further indications of this concern will be evident throughout the remainder of this chapter as well. Likewise, the statement in the Coombes article also divorces the attribute of distance from the perceived quality of the park itself. Some parks, however close, are not deemed worthy of visitation by residents. Nashville walkers as well as participants in research described in the literature have already been cited as evidence that the cleanliness and perceived maintenance status of parks influences the likelihood that residents will visit them. (Burgess, et al. 1988), and the Kaplans' studies regarding factors that influence preference for certain attributes of natural landscapes were cited extensively in earlier chapters. Other studies have identified additional park attributes that influence use. If a park is perceived as unsafe (an attribute not unlinked to maintenance status), use goes down, particularly among people who hold a belief that parks are spaces where sexual attacks, racial harassment, and violent acts are common (Koskela 1999; Krenichyn 2006; Madge 1997; Whitzman 2002). While no Nashville research respondents specifically reported these types of fears in relation to public parks, physical safety was frequently mentioned, and was a barrier to use for some unofficial green spaces that residents saw as being otherwise desirable.

Language . . . in the Uncomplicated Sense

The two sections above have considered barriers that may physically prohibit access to and use of green space for watershed residents. They showed that the spaces around parks influenced perception of accessibility as much as the area of the green space itself, and that both convenience and safety concerns had impacts on use of both formal and informal parks. To varying degrees, the barriers discussed thus far have applied to native-born and immigrant residents of the watershed alike, as well as to residents of varying socioeconomic statuses. However, it is clear that members of immigrant communities may experience barriers that are completely irrelevant to almost anyone born in the United States. This section of the chapter will introduce the most obvious—and most often "officially"

considered—barrier to green space utilization and participation in community environmental efforts—namely that of the language barrier. It will be followed by three more sections that detail immigrant-specific concerns before the chapter returns to a consideration of "physical" barriers to access once more, this time with a bit of additional emphasis on the ways in which physical geographies may influence access in ways that disproportionally affect immigrant and low income members of the community.

When this research first began as part of the initiative to launch a community watershed group, language was originally assumed to be one of the largest barriers to participation that was likely to be encountered in the process of engaging the community in a new effort. This assumption actually led to some concerns over the possibility of unintentionally causing trouble for immigrants by focusing on issues related to fishing and crayfishing. Early in the course of the study, an employee from a government department was initially reluctant to speak on the topic at all, saying "the last thing we want to do is get people [who are fishing without a license] in trouble for what we know is essentially just a language barrier issue." At the first Mill Creek Task Force meeting that took place within the research period, other government and non-profit representatives also brought up this concern, but the meeting's primary focus was on considering how best to reach and engage the communities in the neighborhoods immediately surrounding the zoo. Zoo representatives commented that they felt they had engaged the Latino community fairly well by that point; they knew there was room to grow this audience, but had some existing momentum to build on among that group. They have offered some publications in Spanish, and occasionally advertise special days for the Latino community, during which translators are available at zoo exhibits and educational programs are offered in Spanish. The zoo representatives knew that many other languages were spoken in the neighborhoods immediately surrounding the zoo, but they weren't sure precisely which languages were relevant, and the Task Force wished to begin outreach to other immigrant communities with the initiation of appropriate language

materials. One of the first planned activities for the Mill Creek Task Force was a stenciling project. This was a Task Force initiative that was spearheaded by the zoo, and it was to involve stenciling a picture of a Nashville Crayfish near storm drains in the neighborhood as a reminder to protect the endangered crayfish by not dumping inappropriate liquids into the waterways. Before the actual stenciling would begin, door hanger fliers were to be placed on the doors of as many neighborhood homes as possible, telling people about the stenciling project, giving them information on how to keep runoff to a minimum, and inviting them to call for more information or even participate in the project. As a first step to engaging immigrant communities, the Task Force wanted the door hangers to include basic information about what was happening in a variety of languages, so that most neighborhood residents would be able to read them. It wouldn't be possible to put every language spoken in the zip code on the small document, but they thought basic information could be provided in three to five languages, one of which would be Spanish. They were aware of the potential for some problems that could arise; for example, there are two major Kurdish dialects common in Nashville. For this small document, both could not be included, but there was some question as to whether using one or the other might be construed as a slight to some in the community. This type of information was not something that could be determined from examination of census data (which was outdated by late 2009 in any case), so I was asked to reach out to local experts working with the immigrant communities and see what could be found. A representative from the Tennessee Immigrant and Refugee Rights coalition confirmed that Spanish was important—both because it was common in that area and because that wave of immigration is more recent than the others that are well-represented in Nashville. Compared to other local immigrant groups, more members of that community have not yet been in the United States long enough to develop strong English skills. The other communities with strong representation contain higher percentages of people who can speak English well. However, she did recommend four more languages: Somali, Arabic, Laotian, and the Bahdini dialect of Kurdish. Regarding this last language, we

were reassured that the other Kurdish dialect (Sorani) was more often spoken by people with higher education levels, who are often already fluent or highly proficient in English. Bahdini is also the majority dialect, and for this reason, she said, a decision to use it over Sorani was unlikely to be considered a slight by speakers of Sorani.

I took this information to the next Task Force meeting, where it was met with interest. Participants had been aware of the large Kurdish and Somali populations, but less aware of the fact that a large Laotian community lived nearby, or that including Arabic would cover a fairly large proportion of neighborhood residents. The group decided to try to include a sentence or two in each of these languages on the door hangers. At that point, enthusiasm was fairly high, and while no one thought recruitment was as simple as a few lines of text in everyone's native language, subsequent research showed that it may have been viewed as a bigger piece of the puzzle than it should have been. In any case, the stenciling project did not move forward, so it is impossible to predict how this small step towards a more linguistically expanded outreach might have been received in the community. It is worth remembering, however, that the tree giveaway at the large Latino Catholic church enjoyed high success among community members who spoke little English; in this case, basic signs, translated planting instructions, and the support of a trusted bilingual member of the church's community were sufficient to spark involvement.

"I Don't Even Know Where People Find this out!"—Specific Knowledge as Participation Barrier

Throughout the course of this research, those involved in the Task Force and in non-affiliated non-profit and government groups agreed that getting immigrant populations involved in urban ecology activities would be beneficial for everyone, and most everyone agreed that there would be substantial barriers to accomplishing this. There was a very clear division of perception though, when it came to conceptualizing what these barriers were most likely to be. Environmental professionals and representatives from government divisions that had little regular contact with immigrant communities consistently named "the language barrier" as the major barrier to be overcome if they named any

barriers at all—and clearly, this barrier cannot be ignored. However, a different perception emerged from participants who worked more closely with immigrants, or who were well-established immigrants themselves. These participants were likely to say that the language barrier frequently receives an excessive level of focus by groups hoping to include immigrants in their efforts, to the exclusion of addressing "knowledge barriers" that are equally important.

In some ways, the division is reflective of the general trend regarding education that has already been discussed as prominent in ecological non-profit outreach strategies—the idea that if people receive environmental education, they will be inspired to change their behavior. While use of the word "education" seems to suggest that this is a knowledge issue, in some respects, this concept is really based more strongly on the idea of language. Reading the message, or hearing it—having access to the words—is seen as the key that leads to change. In this theoretical model, people who receive some basic information through a brochure or podcast or pamphlet should then be inspired to come and volunteer at an event or make some changes in their day-to-day behaviors. In Task Force meetings, there was certainly acknowledgement that people who are new to the country might be better reached if the Task Force learned about their home cultures, and tried, to some extent, to "speak to that." However, at these early meetings, no discussion considered a need to address substantial gaps in the non-environmental knowledge of others.

I was first advised to pay attention to this potential for knowledge-related barriers to participation in a very early interview, from a person who is perhaps ideally suited to see various sides of this and many other issues. "Guleed" is a native of Somalia who is now employed by a government office. Unlike most of Nashville's Somali community, though, he came to the United States to go to college, not as part of a broad refugee resettlement program (though he did leave Somalia in the midst of the conflict). He arrived with a strong command of English and some knowledge of what it would be like here, since he

had known others who pursued their educations abroad. He acclimated to the country's culture and norms while in college too, and he stayed here rather than returning home after graduation. Consequently, he had the benefits of a gradual preparation and integration that few other members of the community have had access to. Because of his perspective, he feels it is important to do what he can to ease the transition for other immigrants coming to Nashville, and was quick to point out the particular problem that he has frequently seen overlooked in even the most well-meaning and well-planned efforts to increase immigrant involvement in community efforts. In essence, he said, "everyone wants to focus on language, and that isn't always the biggest problem." The biggest problem, he said, was a qualitative difference in knowledge—a failure to recognize that information a native-born citizen has grown up absorbing may not be available to people who grew up in places with very different systems of government and modes of public interaction. As we walked along a green way near his Nashville office, he introduced this idea with an anecdote from his own life, which had taken place only a few weeks previously (but over a decade since he'd arrived in the United States). A friend of his had happened to mention getting his fishing license for the year. Guleed had found himself replying: "a what? If I want to go and just catch a fish one day, I am supposed to have a license from the government?!" He went on to say "I have been here for a long time. I speak and read English very well. I work for the government myself, but I never even heard of this before. I don't even know where people find this out!" He didn't mind the idea of getting a license, and said that if he wished to go fishing, he would be happy to get one now that he is aware of the requirement, but the concept was completely alien to him. He had never experienced such a thing in his own country, and it would never have occurred to him to inquire as to whether a fishing license was necessary here. This was particularly interesting given the concerns expressed by Task Force participants who feared the idea of people getting in trouble over what is "essentially a language issue." Guleed emphasized that in regards to topics such as this, knowledge, rather than language is the bigger barrier. He went on to ask me which

government group was involved with water-related issues. I replied by listing the Environmental Protection Agency, the Tennessee Department of Environmental Conservation, the Fish and Wildlife Department, the Army Corps of Engineers, the Health Department (federal, state, and local), and the Metro Water Department. He smiled, point made, and then went on to elaborate on the ways in which differences in patterns of knowledge might be relevant to the process of launching a watershed group in an area with large immigrant communities.

One consequence of the "knowledge gap" between immigrants and environmental professionals who have previously dealt primarily with native-born citizens, he said, has to do with the language of invitation. While groups may translate materials to invite immigrants to visit or volunteer in a park, some members of their target audience may require further information on what a park is. They "are not a concept that everyone [is] familiar with," Guleed emphasized. Others may have a general concept of what a park is, but not know where they are located, or what it is permissible to do there. In fact, other research has found that this type of knowledge gap—lack of information about park location, possible activities, rules about who can visit, and access to amenities such as food or toilets—may be detrimental to park use even among people who have grown up in the country that the park is located in (Byrne 2012); for immigrants, however, concerns related to visiting a place without the fortification of specific knowledge may run deeper. Guleed added that people new to the country are often afraid of doing the wrong thing, regardless of immigration status, saying "In my experience, many people do not know about even local places like Centennial Park, where they could take their kids to feed the ducks, and they have no knowledge at *all* of state and federal parks that are nearby." (Again, while this type of knowledge gap may disproportionately affect people who are new to the country or to Nashville, past studies have shown that ignorance of such opportunities is common in the general population as well (Hayward 1989; Spotts and Stynes 1984; Spotts and Stynes 1985). For immigrants, however, the lack of knowledge is more likely to be complicated by other factors. Focus group research has identified several

other potential race and ethnicity related factors that could influence minority park use choices. For example, in one study, several Latino focus group participants noted that differences in non-Latino and Latino "recreational style" may result in Latinos feeling less welcome at urban parks. One of the participants summarized by stating "American people go there to rest, to get out of the city, and I go to make noise, to have fun and that is not good for them." Another participant in the same research expressed nervousness related to not being sure what type of recreation or activity was appropriate. Her experience also focused on fear of making too much noise, and a concern that if she talked too loud, she might be thrown out (Byrne 2012) (In this case, the respondent was concerned only about being thrown out of the park, but a later section of this chapter will describe more substantial concerns of this nature).

Guleed mentioned that there are certainly additional economic and transportation barriers to park use for immigrants, and also noted the existence of what he called "feeling welcome issues," which have also been described in past studies on racial differences in park use. (West 1993). However, while he acknowledged the potential for these factors to pose problems, Guleed reiterated several times that one of the biggest and least addressed barriers is "complete lack of knowledge that these places even exist." He said that while people often miss rural landscapes if they came from rural regions, many are "not familiar with the concept of transplanting [something like a rural environment] in cities." He went on to point out another interesting issue—this time a language issue, though in a different sense from the language barrier issues other respondents had described. In this case, the problem is a failure of what we might call "relevant metaphors." The Nashville government has strongly embraced the concept of "green space." The term certainly didn't originate in Nashville, but the Mayor's Office has placed major emphasis on the concept of "green infrastructure" and the push to expand the network of urban "greenways" and "green spaces" around the city has already been described. In fact, the terms are now in common use throughout the city, and "regular people" may now frequently be heard using

them to describe parks, pleasant streets, and park-like areas around schools and churches. It is likely that nearly anyone who grew up in a temperate climate and who speaks intermediate level English will have some concept of what these terms refer to, even when hearing them for the first time. Guleed, though, pointed out something that seemed very obvious in retrospect. "What is 'green space,'" he asked "to people who come from a desert, where nothing is green? Everything is brown. There might be some small trees and things in the area, but even outside of cities, nothing is green, and definitely we don't have 'green spaces' in our cities, because it really isn't possible to have it. Other people are from rural areas, but there, the village is still the village [and natural areas are separate entities, not part of the village]." The very embeddedness that defines the nature urban parks for native-born residents, it seems, is one of the factors that makes these spaces less comprehensible to some new immigrants. Guleed noted that when he first came—even in his relatively relaxed immigration experience—he was very surprised to learn that people were expected not only to plant grass but to maintain it on their properties. Vietnamese immigrants, in his experience, grasped the concept easily, being from a climate with a lot of rain, and people native to the fertile regions of Kurdistan also seemed ready to accept the idea of green space when I approached them in later interviews. But for the Somalis, where rural landscapes are brown, adding "green" to a word does not cause the same logical chain of ideas that it does for Americans. They do not have the basic cultural metaphor that identifies "green" with "nature," and if those terms are to be used to draw in members of the Somali community—even members with excellent English skills—descriptive language along with invitations to enjoy "green space" will be helpful. It is interesting that this bias is apparent in the literature, which focuses most heavily on studies carried out in Europe and the United States. The Kaplans, in the introduction to the inclusively titled book "Nature and Human Nature" attempted a definition of nature in which one element was that these places contained plants and "would often be described as green, but they are also natural when the green is replaced by white or brown or red or yellow (Kaplan and Kaplan 1989); the assumption was that

these valued natural spots must be vegetative for at least part of the year. And of course, in Chapter 2 of this dissertation, I listed the presence of vegetation as part of the prototype for "green space" myself. In Nashville, this probably remains an accurate green space attribute; land left to its own devices here does inevitably become green, and the difference from the desert landscape does not put off Somali immigrants; indeed, as a group, they expressed some of the strongest values for the intrinsic restorative power of these places that I encountered in the study. It is worth realizing, though, that for those from other landscapes, the idea that these places are green is noteworthy rather than taken for granted.

One study that conducted both a quantitative and ethnographic analysis of green space access was interesting in light of Guleed's comments. This study did not focus on barriers specific to immigrant communities, but it did find that use of nearby "green space" was determined largely by resident understanding of what the spaces should be used for. Some in their studies perceived their neighborhood green spaces as exercise spots, while others perceived them as social meeting places (Kessel, et al. 2009). Use was determined by what the perceived role of the space was—and, as Guleed pointed out, for those who do not come to Nashville with an idea of what a park should be for, the commonly used term "green space" provides no guidance.

One study of immigrant perceptions of parks is interesting in light of Guleed's insights (though the reference to the metaphoric power of the "green" is not studied in that research. Rishbeth and Finney conducted research with refugees in England and found that those who were from urban African areas had fond memories of urban parks in their home countries, but that others (in their study, this referred mostly to participants from Afghanistan), did not bring cultural expectations for the concept of a park with them. This study examined parks as sources of both novelty and nostalgia for relative newcomers to the United Kingdom, and because it is one of very few studies that has directly examined immigrant park perceptions, some description of its findings is helpful for context to the current research. In the

study, the instances of novelty encountered were most often seen as positive by research participants (Rishbeth and Finney 2006). However, it was notable that in this article, the positive reactions of participants had a tendency to be contingent upon explanations by the researchers who had accompanied them. For example, participants all knew what playground equipment was for, and were delighted that it existed in parks—but for some, this delight was only expressed once the researchers had reassured them that playing on it was allowed for any member of the public. The authors did not elaborate on these findings, but they do indicate a difference that must exist for a park visitor unfamiliar with the concept of parks who comes alone, and one who comes with someone who can explain that playground equipment is open to all, that the small houses visible near trees were constructed for birds, and other "strange" occurrences that may arise. "Novelty" may be enjoyable with a guide, but unsettling alone, in keeping with the Kaplans' emphasis on the importance of "legibility" to the human ability to feel comfortable with a landscape (Kaplan and Kaplan 1989). Rishbeth and Finney's study indicates that low legibility may indeed influence preference, but it also shows that the presence of someone who can provide cultural interpretation may convert an initially low legibility landscape into one that is replete with the quality the Kaplans termed "mystery." With a guide, the illegible attributes of the park become avenues for discovery, thus influencing the way in which the park may be perceived. In Nashville, interviews with immigrants only took place with fairly established residents; however, at least one of these described his habit of taking newer arrivals to one of the city's parks and showing them that they could allow their children to play and feed ducks there.

In Rishbeth and Finney's study, it is also notable that one of the immigrants' more preferred parks was near the city center and "highly managed," in a way that created an atmosphere in which "participants were less worried that they might inadvertently do something wrong." Paths were clearly marked, and there were a number of benches and areas in which visitors were obviously encouraged to sit. (Rishbeth and Finney 2006). These fears relating to the possibility of inadvertently acting inappropriately in the

park were more strongly expressed among participants who did not have family or social contacts they felt they could visit a park with; the idea of visiting alone increased concerns about safety and enjoyment value (concerns not unique to immigrant communities) but also increased concern about transgressing boundaries of which they were not aware (a concern more specific to non-citizens, whether in the country legally or not) (Rishbeth and Finney 2006). Social factors, in fact, were deeply important in Rishbeth and Finney's research, a finding that resonates with general population usage patterns for urban parks. If visiting rural areas or very large fringe parks is a way to escape from one's community temporarily, visiting parks within the city may be better seen as a way to experience one's community in a new way, or to expand it. In fact, in the circumstances of relative isolation that are common to new immigrants who arrive through the circumstances common in Nashville, it is conceivable that this social component would be even stronger. It is perhaps not surprising that Rishbeth and Finney found that "the lack of a social context for visiting parks hinders greater use of parks and green space." They noted that while parks elicited a high degree of nostalgia in many research participants, the memories shared about enjoyment of similar landscapes in their home countries were "always" (authors' word) social memories that centered around family and friends. Their expectation of enjoying such environments was connected to these opportunities for socializing. In Nashville, several immigrant community leaders described situations in which multiple-adult families had only one car, effectively resulting in long hours of isolation for many immigrants, particularly when newly arrived. Other immigrants indicated that they were the only members of their families in the city, and that, initially at least, making connections with other people was difficult. These are general barriers to participation in the community life of Nashville, but it is worth noting that for some, they may be specific barriers to enjoyment of urban green space as well.

Both Guleed's insights and the findings of the apparently lone study that has examined the issue indicate that lack of knowledge about park existence and park "protocol" contribute to lower patterns of

park use among immigrants, and that this may be exacerbated by the lack of social ties in the community. These knowledge barriers may also have a marked influence on determining *which* parks are widely visited, particularly, though not exclusively, among immigrant communities. The tiny park at Coleman was seldom empty during the research period, and the people using it were ethnically and culturally diverse. It is notable that the director of the community center occupying the same land spent a great deal of time in community outreach; it was common to encounter him at a variety of social-service oriented meetings and events in the area. These meetings may not have included immigrant participants in all cases, but they did include people whose jobs brought them into contact with the area's immigrant communities. By the time my research began, one of the immigrant community centers was holding monthly dinners at the Coleman community center, and the planners of the Flatrock festival had chosen it both for their own meetings and for the event's venue. The park had made itself known not through outreach emphasizing its existence as a park, but through outreach emphasizing the ways in which the community center could be a resource related to the aspects of life that immigrants to Nashville must necessarily become immediately engaged with. Antioch Park's proximity to a large culturally and linguistically diverse school and a community center may have had a similar effect, and in later stages of the research, it was evident that the school was actively engaging with the park. Ezell Park and Seven Mile Creek Park, however, were not associated with entities that engaged in outreach to the community (either immigrant or otherwise), and Ellington Park may have perpetuated an additional, incidental "knowledge barrier" simply due to its name. Residents who lived near Ellington and those who visited it regularly generally referred to it as "Ellington Park" in interviews. However, its formal name—the one that appears on signs pointing to its location—is Ellington Agricultural Center, and it is a state, rather than Metro-owned institution. As one resident who frequents the park noted, the name does not immediately "tell" residents that this is a park that is open to the public. She thought this was particularly true for the area's growing Latino population. Further,

while the park is loved by those in the community who use it, she didn't feel that it had actively engaged the community. She had described the informational programs that the area's neighborhood association conducted as being essential to "bringing new people" into the association, and felt that if the park did something similar, focusing on topics like walking, exercise, gardening, or nature appreciation, that this might go a long way to showing members of the community that the park was present and relevant to their lives. She particularly noted that Ellington was very accessible to the section of the school district that had recently received a heavy influx of Latino families, and noted that in her conversations with parents from the Latino community, family and health-related opportunities were highly sought, but knowledge of the park as a resource was low. While a search revealed no articles in the literature describing the ways in which such programs could specifically influence the park-related knowledge and participation of immigrant populations, at least one study has found that the holding of "events" at parks is one of the strongest correlates to park use by community members across ethnicity (Cohen, et al. 2010).

In addition to increasing simple knowledge of park existence and of what can be done in such spaces, the park outreach efforts described above also relate to the other half of the "knowledge barrier" that Guleed felt that groups like the Task Force would benefit from considering. This barrier had to do with the general context of how things are done in a western democracy. "Civic engagement," he said, is used as a marker of integration by divisions of Nashville's Metro government that try to assess how immigrants are doing. Depending on where people are from, they may find the idea of engaging with NGO and government projects strange—and the idea of attending the type of public meeting that is so common to this process in the United States may seem even stranger. This may simply be due to concern that one will not know how to employ the cultural "script" associated with this type of meeting in this culture; the rules for this type of engagement, he noted, may differ substantially depending on country of origin. For example there are rules that native-born citizens are unlikely to remember they

know, but which allow them to recognize who is in charge, what level of respect that person should be afforded, when it is appropriate to speak, and how to indicate that one would like to do so. All of those rules are specific to the given context, and far from instinctual to infer for anyone who did not grow up with some exposure to the protocol. Additionally, Guleed indicated that in many of the countries that Nashville's immigrant populations come from, problems knowing how to engage in this type of interaction have deeper roots than simple lack of exposure. In many refugee home countries, he emphasized, "the government and groups with money came and told you what to do. They did not come and ask you what you wanted or encourage you to participate in policy discussions." Some people, he said, are mistrustful of the whole process, having reason to fear power. Others have lower level hesitancy, suspecting that questions about their practices or preferences are really tests of knowledge. This set of circumstances indicates a need for a balanced approach; on the one hand, immigrants from some locations may not be aware of the freely accessible parks in the city or of forums to discuss issues of general interest to the public. On the other hand, as some researchers have indicated, if parks professionals act as if they assume that some cultural groups are uninformed about park usage or lacking in knowledge about them, this very attitude may create new barriers (Dahl 1993). Acknowledging and addressing *differences* in knowledge without appearing to assume *lower* knowledge on the part of immigrants is the balance that must be struck, and of course achieving this is likely to be easier planned than achieved.

Guleed's comments were echoed by other leaders within the various immigrant communities. Another Somali man who is a leader within the community ("Omar") said that one relevant factor is that local government is the level of government most relevant to parks and general community engagement—and that this is the level of government least understood by the people he works with. Many immigrants and refugees, he has found, gain a good grasp of how the federal government works, and even of the role of the governor and state legislature, fairly quickly. The "micro-local" level is much murkier in this

regard though, and during elections, when ads for councilmen start appearing, he always has many people coming to him and asking about what the councilmen do. Further, Metro government's neighborhood engagement strategies add a layer in which non-governmental entities in the form of neighborhood associations serve as connection points to local government in a pattern of ways that vary depending on the community in question. This may add murkiness to an already complex system. Southern Nashville, Omar said, "is heavy in people who don't yet know much about the process, don't know, for example, how to bring issues to the attention of councilmen." Further, few are sure what might be considered "an issue," and if there is a problem, they're not sure what organizations might be able to help address it, or what means of organizing to examine the problem as a community are considered valid, acceptable pathways to eventual resolution. Anita, from her position as a leader in the Latino community, noted that in the United States, public schools are an important community gathering and organizational space, and that even public meetings that have nothing to do with education may sometimes be held in school buildings. Certainly any issue that pertains to children and families in any way is an issue that can be brought to a school, and many of those in Nashville have active PTA groups which can facilitate organization around such issues. However, she said, not all of the people she works with are aware of the extent to which schools hold this role in the United States. Although some had arrived from communities where schools did serve in similar capacities, many did not know that schools in the community partner with non-profits and local businesses to expand their community reach, or that it is acceptable for members of the community to use the outdoor areas at a school—the playgrounds, basketball courts, and any walking trail or open areas—when children are not present. (One other research participant did note that some schools try to discourage this, even though "legally, they are supposed to allow it." That respondent did clarify that quite a few schools in the area are very welcoming of the people who live near them, and that in those cases, it was often the case that immigrant families were not conversant with all intricacies of a public school's role in the community).

These various types of "knowledge barriers" are relevant to any group attempting to expand outreach to include diverse communities, but they may be particularly important when that outreach is related to environmental initiatives. When immigrants arrive in Nashville, there are systems that help them get in touch with government or NGO organizations that can facilitate access to health care, ESL classes, job skills training and job placement agencies, housing, and schools for their children. Environmental issues, however—including both ecology-related concerns and concerns tied to the human living environment—are far from immediate needs for newly arrived residents. All interviewed leaders in the immigrant community believed that access to outdoor places was important, most often citing the health and social benefits for people who are in a situation that is inherently isolating. However, it is also clear that such issues are more engaging to immigrants who measure their time here in years rather than months, and this was also frequently noted. Omar summarized that for the first few years in a new country, people are "just trying to get jobs, find a place to live. But later, people begin to care more about living in good places." It is this latter subset of immigrant communities that may be most ready to engage with activities such as those that the Non-Profit would like to plan. This is the same population that Omar described as having a good grasp of how some aspects of the United States' system of government work, even if its members aren't conversant with the intricacies of local government. However, it is unlikely that this population has ever encountered any branch of government that deals with the issues being discussed here, and as Guleed's story about the fishing license showed, even extremely well-engaged immigrants who have long been American citizens may simply not have had reason to learn what aspects of environmental and neighborhood health the government regulates, mitigates, or monitors. Guleed had smiled at the length of the list of relevant government entities, noting that the broad array of groups is particularly difficult to keep track of. Interestingly, this is a problem that the Non-Profit may be particularly equipped to address. While most people born in the United States have some knowledge of the government entities that deal with environmental concerns,

few know precisely which groups are responsible for which issues. The Non-Profit has a strong history of providing education on this topic, and has provided guidance to help residents understand what professionals to consult in the face of an array of possible issues (for example drainage problems and flooding). It is conceivable that, if a watershed group were to be formed in the area of Mill Creek, this past experience could be mobilized in a way that educated longstanding residents on the complexities of government connections to environmental issues, while also providing the valuable service of initiating immigrant residents to the ways in which some Metro branches can serve the people of Nashville.

Of interest here is some local research conducted by Winders on the ways in which Nashville Metro government interacts with the immigrant and refugee populations of the city. This is a general barrier associated with new trends in governance, not limited to participation in outdoor recreation, but rather connected to participation in general opportunities offered by the city. It is notable, though, that representatives of Metro government were heavily involved in watershed association planning efforts. Without exception, they and other members of the Task Force were strongly committed to engaging immigrant communities in the process. However, if well-established Metro outreach methods were to be employed without sufficient expansion, it is likely that the general barriers to participation described here would have automatically become barriers to the recruitment of a representative population for the environmental initiative as well. In the opening sections of this dissertation, Nashville's model of neighborhood-based governance was described. To recap, in the 2000s, Nashville (and other American cities) increased reliance on neighborhood-based governance, while simultaneously, the local government of Nashville became more streamlined. This had two effects, both generally influencing the lives of immigrants in Nashville. On the one hand, neighborhood-based government resulted in decreased opportunities for immigrants to represent themselves *as* residents of the city. On the other hand, the changes to government structure eliminated the institutional places—such as the Nashville-Davidson County Metro Refugee Services Program described in the introduction—that had previously

been available, displacing immigrant services into a diffuse spread of other social service departments. The result, Winders observes, is that it became "hard for Nashville to see, and, thus, respond to *immigrants as urban residents,* even as *immigration as a political issue* became increasingly visible across the city" (italics in the original) (Winders 2012).

Because my own research focused on a watershed, defined by geology, rather than on neighborhoods defined by history, cultural perception, and zoning choices, participants included residents both of communities which had organized in the flow of this increase in neighborhood governance and with members of immigrant and refugee communities who were now, if Winders is correct, more likely to be seen as immigrants to the region than as residents of Nashville's neighborhoods. Winders documents that, in the neighborhood-level planning meetings that proliferated in the early to mid-2000s, when the Mayor's Office of Neighborhoods had a major "push" to hear the voices of the neighborhoods, meeting after meeting that she attended included only white participants. This, she said, was noted by community participants as well, and facilitators had lamented that they simply did not have the budget to send out multiple announcements or announcements in multiple languages (Winders 2012). Winders did not note whether even English language announcements were sent to immigrant community centers during her research, though the reference to "multiple announcements" presumably indicates that they were not. In my own research, I observed that at least some government representatives tend to view the problem of increasing immigrant access to community participation as a language issue; however, all immigrant communities in Nashville now contain many members with strong English skills, and the focus on language as "the issue" may prevent local government (and NGOs and non-profits) from "seeing" other barriers to involvement that could be more easily—and inexpensively—addressed. In Nashville, Guleed had noted that knowledge rather than language was generally the most important barrier to both green space enjoyment and civic participation. It is interesting that there is little in the literature to specifically address this, although one California-based study did report that survey and focus group

data had revealed that “absence of information regarding organizations and volunteer opportunities” was the most consistently reported barrier to participation among immigrants. This study also noted that immigrants are often not connected to the social networks that result in recruitment to mainstream (non-ethnically oriented) groups (Ramakrishnan and Viramontes 2006). In Nashville, these social networks often take the form of neighborhood associations or neighborhood-based social groups, and due to the system of governance, lack of knowledge about these groups may have implications both for establishing a connection to the community and to access to public participation opportunities in outside organizations. The mid-2000s neighborhood planning initiatives spawned a situation in which the “neighborhood,” as defined by those who attended meetings and contributed opinions on what was important to them ceased to be synonymous with the “community” of people who lived in the boundaries that were being defined. The literature reviewed in Chapter 4 indicates that immigrants do frequently volunteer in their communities, and this was confirmed by immigrants in Nashville who described involvement with community centers and faith-based groups. These types of volunteer work are certainly forms of civic engagement; however, barriers to the specific forms of civic engagement encompassed by participation in public planning initiatives, city-sponsored efforts, and similar efforts of external NGOs associated with these activities have important implications for the extent to which immigrants can engage with the greater community of Nashville.

In addition to the difficulties immigrant residents from some regions may experience in navigating local government and identifying opportunities for participation, several other knowledge-related barriers are also relevant. One of these is simply that, depending on where a person is from, some environmental issues would either not be concerns in countries of origin, or would never register as concerns against the backdrop of more pressing problems. For example, Guleed, who first discussed the relationship of knowledge to engagement with me, said that the concept of water pollution still seems strange to him. He looks outside his office window and sees the fast-flowing Cumberland River; the water itself looks

clean, but he can see the trash in it, and sees that after a rain there is "more stuff floating in the river and more water coming from outflow areas." He infers that if there is more trash after a rain, there are probably more pollutants that he can't see running into the river during that time as well. In Somalia, he said—at least where he was from—it was possible to go to most streams and "take a hand of water and drink it, and you didn't have to worry about pollution. . . most people didn't really have things to throw away that weren't biodegradable." He says that it still seems strange to him that drinking from the river here would be likely to make him sick, although he accepts that it is a fact. Likewise, while he is not a recreational fisherman, he has heard that mercury builds up in fish, and knows that people are warned to limit their consumption of fish from certain areas. He was fairly sure this was not a problem at all in Somalia, though if it was, he noted that many people there are not in a position to avoid eating available food due to concerns about mercury bioaccumulation. In any case though, it wasn't an issue he had heard about at all before leaving his home country, and he thinks that it's natural that the government groups and non-profits that formulate educational message for the population often forget that immigrants are coming to the country with background knowledge that differs from that of native-born citizens. Most people here grow up hearing about pollution as a formal topic of concern, even if they don't understand all of the specifics regarding what the major sources of pollution are, and how they negatively impact humans and the ecosystem. Any educational message that these people see will build upon this baseline familiarity in a way that it may not for those who did not grow up amidst an established public discourse on the problem of pollution. For that reason, Guleed thought that people from developing countries might be more likely to do things like throw the oil from an oil change on the ground; in low population areas, an individual action like that wouldn't harm the environment in the way that it does in an urban center, and he thought that people from such rural backgrounds might be more likely to be unaware of the problems associated with such actions. (This last observation was the only one he provided that was based on speculation rather than observation—a point that will be

returned to momentarily). He also noted that many are not aware of how the water that comes out of the tap is connected to the water in lakes and rivers; those who own houses rather than rent tend to know more, he said, since they receive water bills, and thus receive a starting point for gathering more information about the process. It is worth noting that Metro Water is the only one of the environmentally oriented government entities with which a typical resident is likely to *have* to engage, and that even this engagement is limited to homeowners.

One of the interesting things about this part of the conversation with Guleed was that it showed a lack of knowledge about what native-born United States citizens actually know and do. A later section of this chapter will explore the ways in which non-profit and governmental agency perceptions of immigrant motivations may make engagement with these communities more difficult, but it is worth noting that immigrant perceptions of natural-born citizens may be inaccurate as well. Almost everything Guleed told me about knowledge barriers in the immigrant community was fairly specific *to* the immigrant community—or at least, the issues he raised as relevant were likely to be much more prominent for immigrant communities than they would be even for marginalized groups of natural-born citizens. This last set of items regarding pollution and understanding of runoff was different, though. He was no doubt correct about the fact that the concept of environmental pollution may not be in the background memories of Nashville residents who grew up in places where it wasn't a pressing concern—but regarding specific behaviors, he was assuming greater knowledge (or application of knowledge) on the part of native-born citizens than seems to be justified. Dumping car oil inappropriately is a fairly common practice among people born in this country, and for that reason, reminders of how to properly dispose of oil are very common in general environmental messaging; Metro Water, for example, publishes a pamphlet containing this message (Metro Water Services). In general, when US-born respondents talked about the major sources of pollution, their assumption was that the biggest sources are point sources (although research respondents who were not professionally engaged with these

issues never used that term). That is, while they knew that their own everyday actions could impact the environment, they thought that the biggest sources of pollution were factories and other entities related to corporate mass production. If an interview topic opened with a mention of pollution, rather than "water pollution," air pollution was nearly always mentioned before water. I mentioned this during the interview with Guleed, and he was very surprised to learn that this particular problem was common among people born in the United States, and that leaving the tap water running when it wasn't necessary was also not a behavior restricted to the immigrant communities (Metro Water also has found the need to publish multiple flyers on this topic). (Metro Water Services ; Metro Water Services). He was surprised that groups like the Non-Profit were doing education on these topics and that the target audience was *not* primarily the immigrant communities. In some cases, his perception that native born citizens have more knowledge of these issues may not be incorrect, though the assumption that having the knowledge will result in the appropriate behavior is not fully accurate. Nashville natives who engage in some non-ideal behaviors may well be motivated by convenience in spite of knowing that they are "not supposed" to do these things, while immigrants may simply not have heard messages about proper oil disposal and water conservation. This is speculation, however, since I never spoke with anyone who reported on their own typical procedures for oil changes or water use. I did speak with non-immigrant residents about runoff, however, and found that this was not a topic that many people seemed to know much about. Research participants expressed concerns about interrelationships between water and land use, but this was usually related to fears of flooding, even before the May 2010 flood. No one ever spontaneously mentioned pollution as a related problem, and it was hard to engage people with the idea of reducing pollutants by redirecting water flow. In fact, Guleed's spontaneous observations about the nature and implications of runoff after a rain were the only such observations offered during the entire course of research—and his description of the process was more coherent

than that of any native-born lay person who became engaged with the topic, although he ended his musing by saying that he did not feel he understood these issues well.

One other example from Nashville is illustrative of the problem of "knowledge barriers" in communication with a population; in this case, the example reminds us that "knowledge barriers" can apply to any population, even if they become more common among those who have not been in the United States for long. In Flatrock, recall that Cal and others had started a community garden. It was meant to build on the momentum of the festival, give people an opportunity to meet during other parts of the year, and tie in to nutrition classes to be held in the community center. The nutrition classes, were very well received, but the garden never did draw quite the numbers of people they had hoped. Cal thought that one reason for this was that there was already such a big ethic of gardening in the area that the people who live really close to the community center already have their own gardens. (And, as will be discussed later, for those who do not live extremely close, public transportation schedules may not facilitate an easy visit to work in the garden for a reasonable amount of time). More importantly, perhaps, Cal also wasn't sure they had found the right way to clarify the way in which the garden worked to a broad audience. It had become clear over time that both native-born residents and members of immigrant communities were unsure of the rules that guided participation in the garden program, and awareness of its very existence was low. This may have been exacerbated by the garden's geography. The plot was in plain view, not far from the door of the community center, but in spite of this, many people failed to notice it. During the period of research, no members of the community who were not active in the Flatrock Heritage Foundation ever expressed awareness of the garden, and if it was mentioned, expressed no recognition. Several were sure that I was mistaken in its location, due to the fact that they went to the community center several times every month and had never seen it—and I had walked right past it multiple times myself without noticing it as well. The Heritage Foundation had assumed that Internet announcements combined with what should have been the high visibility of the

garden in a well-regarded, well-used community center would be sufficient to engage participants. However, the plot was not as visible as it seemed to be, and community base knowledge on how such a garden should work was low. The term "community garden," which was included on the sign for the plot, did not have a defined meaning for those who read it. Guleed had indicated that the rules and practices associated with public participation are culturally diverse and not intuitive to learn, and that as a consequence, members of immigrant communities are not always aware of options available to them in regards to becoming involved with public initiatives. In the case of the garden, though, many established Flatrock residents were also unaware of the "rules" for participation. If most interactions in green spaces have a less "scripted" quality than indoor actions, here in the garden we find a circumstance where a frame has been placed on the open space, and a new script of behavior is apparently needed. The garden, like a meeting, is a place where specific work is done, and presumably, it must have rules for appropriate use in a shared setting. This is all well and good in a situation like the one Anita tried to initiate, in which she could personally facilitate the understanding of the people she worked with. In fact, it is possible that since she worked with people who already had a history of gathering produce from land that they did not solely own, she might have an easier time engaging people by tapping into existing patterns of knowledge. Members of the Kurdish community seemed even more knowledgeable about the concept, and the idea of sharing garden plots among the community was one that they already believed in. Most US-born people, however, have *not* grown up with such an experience, and in Flatrock, this lack of knowledge among native-born citizens may have combined with uncertainty about appropriate use of public parks in immigrant communities to create a situation in which very few people understood how the garden could be used. In a later interview, an African-American woman using the trail at Antioch Park independently mentioned having seen such a garden elsewhere in the city, and commented that she had not known such things existed. She wasn't sure who interested residents should contact if they wished to become involved, or what level of

involvement might be typical, though she had a strong interest in the idea. This conversation was, perhaps, indicative of the general knowledge of many in the area. This woman was well-educated, employed in a professional job, and spent quite a bit of time out and about in the city; she had lived in Nashville most of her adult life. However, her knowledge of the mode of public participation in community gardens was low, and she was unsure even of the protocol for raising her own knowledge. In essence, she was in a similar position to that which Guleed described in his fishing license anecdote; the community garden idea was so far outside her experience, that she did "not even know where people find this out." While community gardens exist in other areas of Nashville, they are not prevalent in Mill Creek Watershed, and residents consequently may have only minimal background knowledge of their workings. In this case, the barrier may be as high for native-born residents as it is for immigrants; in fact, in some cases, it may be higher. The Kurdish woman who had discussed planting of fruit trees had not used the term "community garden," but she had, in essence, described a wish to institute such a thing in the form of a small fruit tree orchard.

The knowledge barrier may be among both the most formidable and the most actionable barriers to engaging immigrant residents to participate in environmental initiatives in Nashville. The previous chapters have linked the valuation of outdoor public space to meanings associated with home and neighborhood. "Neighborhood," in Nashville though, is partially a matter of engagement with local government via a model of local governance that is relatively new even in Nashville (Winders 2012). Lack of knowledge regarding how this process works may separate immigrants from communities and from opportunities for contributing to public discourse about what happens in the areas they live. It is interesting that, in diverse communities, established residents seemed to feel that gatherings in outdoor public places helped to facilitate growth of community cohesion; worth considering, then, is the question of whether initiatives like the watershed association planned by the Non-Profit might be designed in ways that took advantage of this attribute of outdoor public places to facilitate growing

levels of civic participation. The organizers of the Flatrock festival have already begun to invite local government agencies and non-profits to set up booths, encouraging them to claim a place in the microcosm of neighborhood that the festival provides. At the Walk with the Mayor events, a variety of government employees were scattered throughout the walks, ready to speak with participants in that informal setting that was *not* bound by the stricter scripts of formal public participation meetings. Volunteers handed out information on relevant aspects of Metro services to those who attended. These instances are suggestive of ways in which outdoor volunteer days and events might be combined with the longer term plan of initiating a public meeting process to facilitate civic engagement among people who have, so far, not become engaged in this level of public discourse.

Community Opinion Regarding Immigrant and Low Income Residents

While suspicion towards immigrants, as well as resentment of low-income populations of any kind certainly exists in Nashville, and was cited as a potential barrier to participating in outdoor recreational activities for some, it was generally not mentioned by native-born research participants as a factor related to their own perceptions of parks, environmental issues, or general life in Nashville. After the flood, some white residents of a low income area whose homes had been badly damaged expressed simultaneous concern for some Egyptian children they had seen sleeping outside and concern for themselves, in relation to this, as they thought about potential for looting. Even in this conversation, though, the group quickly reached a consensus that this had never been a problem before, and that if looting happened, it would more likely be carried out by what one local man termed “good old fashioned rednecks” than by immigrants. Other groups, as has already been noted, specifically felt that drawing people from varied backgrounds into inviting public outdoor spaces was the best approach that could be used to gradually break down the barriers that existed between neighbors; far from expressing concern about meeting immigrants in community centers and parks, some thought that the more of this that occurred, the more progress would be made. One theme that emerged occasionally, though,

related to the level of perceived access to support for land use projects that was available to "diverse" and "low income" communities. Environmental representatives sometimes expressed a desire to highlight work in southeast Nashville in grant proposals, because "it's good to show diversity." In some cases, the statements were as non-specific as that, and the contribution of the "diverse" elements was apparently not envisioned to be more than simply living in the general area. In other cases, a true partnership between environmental groups and immigrant groups in the grant process was envisioned, though the perception that this "diversity" component would increase likelihood of success remained strong. To a lesser extent, this trend was also present in discussions relating to "low income" neighborhoods. Occasionally, the perception could be the source of some resentment. At one public meeting in which participants were invited to contribute to a brainstorming session to develop a "vision" for the future of Nashville, the subject came up. Firstly, it was notable that virtually all attendees at this meeting were white, typical of the experience described by Winders' research in the city several years earlier. Judging by appearances (admittedly dangerous), it was apparent that most participants in the meeting were economically comfortable. Most were well-dressed, and all were present for a nearly all-day meeting in the middle of the work week, a luxury that low income community members may seldom be able to afford. During discussion in this meeting, land use in relation to conversion to parks, greenways, and other public outdoor spaces was discussed. One resident of a well-off area bordering on some land that is a current source of debate expressed strong concern that the area would be bought by an entity that is undesirable in terms neighborhood character. One of the problems, she thought, was that "all of the interest and resources always goes to the low income communities." She expressed strong concern that no one ever thought well-off communities needed help in situations like this, and that it was always the poorer sections of town that got help establishing parks and other good, usable public outdoor spaces. The particular area under discussion actually did have a large existing park with an active nature center—one of only a few in the

county. However, the opinion that a form of reverse discrimination existed against well-off communities desiring help moderating land use patterns in their communities was strongly expressed.

Government and NGO Knowledge Regarding Immigrant and Low Income Communities

While an understanding of immigrant knowledge regarding park existence and public process practices in the United States is important to understanding potential barriers to participation, it is equally important to examine the knowledge of native-born citizens regarding immigrants and other subsets of the population. In the course of this research, several opportunities to look at these issues from this side arose when government or NGO employees would express opinions about likely barriers to engagement that immigrants might face. Preceding sections have already described several instances in which government and NGO assumptions about the motivations and barriers experienced by immigrant communities were not reflective of those perceived by actual members of those groups. The fishing license issue, for example, was cited by several government and NGO representatives as a concrete example of a language problem, in spite of the fact that many besides Guleed have probably never become familiarized with the concept at all. These particular conversations occurred with people who assumed that immigrants would have an interest in at least some issues relevant to the environment or wildlife conservation. It was fairly common, though, to find representatives of government groups and NGOs—generally with inclusive opinions regarding immigrants—who did not expect these communities to engage with these issues at all. At a public meeting of the Non-Profit, when the effort to engage immigrant communities was described, a prominent older citizen (not a staff member) stated that she would have thought that to be impossible to do. She didn't express any antipathy towards any of these communities; she just assumed that the interest wouldn't be high there, and that the other barriers to bringing them into the group's efforts would be too much to overcome. In another instance, a Metro employee involved with community outreach described his recent surprise at learning of the Kurdish interest in gardens and trees. This individual had worked with immigrant communities on social issues

and believed that immigrants contributed greatly to the city. However, when considering initiatives in which to reach out to these groups, he stated that "I just wouldn't have expected them to be into that. I always think of them as being in the desert, but really I know they are from a fertile area. It hadn't occurred to me that [tree planting, garden, and park initiatives] would interest them for some reason." This man's office is not one that overtly deals with environmental issues, but since his work does involve improvement of neighborhoods, issues like tree planting and park access are relevant to his job, and he was interested to think that the Kurdish community might be a potential partner for certain kinds of these efforts. This conversation was enlightening given the context provided by the Winders (2012) research, described earlier, which had identified a disconnect between the Mayor's Office of Neighborhoods and the immigrant communities; while the MON is the governmental organization most directly behind efforts to increase neighborhood "livability," the group's points of entry to the community are largely devoid of immigrants. Other research has documented both the tendency of members of the dominant culture to assume that immigrants and minorities have little interest in environmental issues (Whittaker, et al. 2005) and the fact that, in reality, members of these communities may express high levels of concern regarding these topics (Floyd and Noe 1993; Hunter 2000; Pfeffer and Stycos 2002; Whittaker, et al. 2005).

Leaders in the immigrant communities are aware of the fact that people from outside their communities define "immigrant issues" more narrowly than immigrants themselves might define them, and they expressed some ambivalence regarding this narrowed perception. On the one hand, they would like community groups to know that more established members of their communities might welcome the chance to participate in a wide variety of initiatives, even though they acknowledge that even some fairly established immigrants are not well-versed in the procedures for getting involved in such activities, and could use support in this regard. On the other hand, this group of immigrants has achieved a functional level of English, found employment, and found stable housing; they are doing fairly well,

while the newer members of their communities have immediate, and more pressing needs. There isn't time to address everything, and consequently environmental engagement is not likely to be taken up as a major cause by any of the centers that attempt to help newly arrived immigrants reach a point of stability. Omar, a well-established Somali resident, volunteered that "government people . . . think this wouldn't be a big issue for immigrants, but it isn't true that they don't care about it." However, he acknowledged there was only so much time he could devote to such things; as a leader in a community of people who often have not yet attained his level of security, he sees little choice but to prioritize facilitation of ESL classes, jobs training, housing location assistance, and help navigating access to health care, while simultaneously wishing that Nashville at large was aware of immigrant willingness to become involved with a wider range of activities once these basic necessities were in hand.

This and the preceding sections have been focused primarily on issues related to immigrant populations in Nashville. However, in the consideration of knowledge about "the other," it is worth noting that erroneous preconceived notions about what members of a given group might be interested in are not limited to assessment of people from other cultures. This became subtly apparent during the late stages of the Task Force's work to plan a meeting to launch the Watershed Association. Discussion was focused on the identification of groups who could be fruitfully contacted to send representatives, and, in fact, most people there assumed that there would be some level of interest in the immigrant communities. They had decided that any relevant chambers of commerce would be contacted and invited to come as well, and current representatives would reach out to homeowner associations and neighborhood associations. One member of the Task Force noted that the Donelson neighborhood would be especially worth reaching out to, since several revitalization efforts were already getting off the ground there, and the concept of improving the watershed might be attractive in that community. Interestingly, Crieve Hall was not mentioned as a target for outreach. This oversight was interesting given that, in many ways, Crieve Hall and Donelson are similar; in fact, it could be said that Donelson, where many of the homes

were built in the late 1950s, is just a few years behind on the same path that Crieve Hall followed (development in Crieve Hall had reached a point requiring a dedicated elementary school by 1954 (Crieve Hall Neighborhood Association 2009b). Both of these neighborhoods had (and still have) a high number of homes occupied by original owners, though, as the population has aged, newer, younger residents have begun to move in and to create "revitalization efforts." These are well underway in Crieve Hall. At the time of the Task Force meetings, these were somewhat less established in Donelson, although, as the Mill Creek Task Force member had noted, several substantial efforts were underway and picking up momentum. The oversight in the list of invitees, in spite of the high level of interest expressed by Crieve Hall residents during interviews raises the question of whether preconceived notions were influencing the invitation list. It is important to note that, had the meetings proceeded and had inviting Crieve Hall been suggested, an invitation would doubtless have been extended. No intentional exclusion is likely; what was interesting was that, in the list of neighborhoods to contact, one of the few in which any active interest had been expressed was so easily overlooked. Two potential reasons come to mind—in addition to the possibility of pure chance, given the nature of the brainstorming sessions and the ways in which topics can become unintentionally lost in the chain of conversation. One possibility is the fact that the focus had been centered so strongly on engaging new demographics, especially from groups fitting different ethnic and/or socioeconomic descriptions than the typical neighborhood watershed group member. "Diversity" had become a bit of a key word, and there was also awareness that highlighting this aspect of the neighborhoods might help secure additional funding, especially if there was a way to frame the proposal in terms of environmental justice. Economic diversity was also seen as being of some importance, and Donelson, while it does house good schools and a fair number of educated professional younger residents, still includes some neighborhoods with high poverty rates; in fact, at the highly-rated neighborhood elementary school, 56% of children qualify for free lunches. (Greatschools 2010b). This is in contrast to Crieve Hall, in which

only 38% of children qualify (Greatschools 2010a). Crieve Hall is more economically secure, statistically—and, in the minds of some Task Force representatives, may not be seen as a good target. When I first encountered interest in Crieve Hall and mentioned this at a Non-Profit meeting, the reaction was one of surprise. As a new resident, I hadn't "known better" and had approached the neighborhood like any other, unaware of its history, population demographics, and general reputation. One of the Non-Profit staff members commented "I wouldn't have thought there would be interest there. It's a fairly well-off area. I don't know if we've approached them. It's mostly a lot of older people, and pretty conservative." It was also noted that many residents there were Republicans. The assumption was that these groups—older people, conservatives, and Republicans—would not be interested in the issues of Mill Creek. However, while interviews never included questions about political parties, people sometimes self-identified as being "conservative" or "traditional." Many of these people reported enjoying hunting or fishing, and these interests, at least, provide a potential avenue of engagement. Further, the perception of Crieve Hall residents as being predominantly elderly was outdated; many younger people had moved into the neighborhood, and organized it in ways that made it very accessible to involvement in neighborhood projects. The younger members of that community, like the Non-Profit, assumed that older residents might not be engaged by the idea of "saving the earth"—however, they strongly believed that they could be engaged in activities that benefited the watershed if the other values of these older residents were taken into account when projects were advertised there. Whether or not the prevailing sentiment regarding motivations for older residents was accurate or not was never adequately assessed during this research.

Landscape and Fear: Barriers for Undocumented Residents

In the above section, leaders in the Somali community were quoted as expressing desire for a general recognition of a broader range of immigrant community interests, even though complicating factors make it difficult for community leaders to devote substantial time to non-core issues. This desire was

echoed in the Latino community as well. In fact, one community leader, “Alberto,” was willing to help facilitate my research precisely because he hoped to document immigrant interest in issues related to access to neighborhood green space, primarily because of the considerations relating to health and general well-being. However, he emphasized the presence of other barriers to engagement with outdoor public spaces which may be unique to portions of the Latino community. Guleed had noted that the lack of familiarity with the concept of outdoor public places could make some immigrants nervous and afraid of doing the wrong thing when visiting them. Not everyone is sure whether it’s acceptable to let children climb on a rock off of a path, or to come to the park without knowing someone associated with it, or to feed the ducks. He described this as a low level nervousness though, rather than a true fear. Alberto described different experiences that caused concern in the Latino community—particularly among undocumented immigrants. In contrast to what Guleed had stated was typical among new residents from the Somali community, most people Alberto works with have good knowledge both of the existence of parks and of what is considered acceptable behavior within them. In spite of this though, an outing to a park may be associated with danger. For an undocumented resident, he said, a map of Nashville may be defined less by landmarks and routes than by gradations of risk. Home is a safe place. A community center or known friendly organization is also safe. And, he said, “when people are out at the lake or in a park, they are enjoying themselves with their families, enjoying nature and everything. I think that fear usually goes away then; people aren’t thinking about that. They’re just having a good time.” He emphasized that members of Nashville’s Latino community really do like to have a good time outdoors, particularly by visiting the location generally just known as “The Lake” (referring to several public access shores of a large lake located just outside of Mill Creek watershed). The lake, and the parks, it seems, at least a good proportion of the time, may be safe too. The perceived danger is not in the destination, but in the road to get there—a circumstance reflective of earlier work that has identified prejudice or perceived prejudice in any area that a person must travel through to

reach a park as forming a barrier just as surely as would prejudice encountered while actually at the destination (West 1993). Alberto, an immigrant who is now a United States citizen, detailed more specific fears, however, commenting that "for me and for my family, going to the lake is just going to the lake. We get in the car, we go there, when we're done we get in the car and go home." For undocumented residents, however, getting in the car is putting oneself and one's family into a state of heightened risk, and this is a concept that is increasingly worrisome to the community. According to Alberto, this was less of a problem in the past, but due to the passage of Immigration and Nationality Act Section 287(g) legislation (hereafter referred to as 287(g)), undocumented residents can now more easily be deported for very minor infractions.

Some background relating to this law is helpful here. The 287(g) program is a section of the Immigration and Naturalization Act that deputizes local law enforcement professionals as immigration agents with the right to detain and screen individuals regarding immigration status. The law was initially passed in 1996, but no local agency entered into the program until after the terrorist attacks of September 11, 2001. The Davidson County Sheriff's Office began participation in 2007[12] (Davidson County Sheriff's Office 2009), with the express purpose of obtaining the ability to deport individuals for misdemeanor crimes. Davidson County uses a "Jail Enforcement Model" which means that, in theory, law enforcement officers will not interrogate people on the street; this will only be done in jail, after someone is arrested. In 2008, the Tennessee Highway Patrol/Department of Safety began participation in 287(g), but they adopted the "Task Force Model," in which patrol officers who are mobile within the jurisdiction are trained to check immigration status of people they encounter in the course of routine duties (Armenta

[12] On August 20, 2012, Davidson County Sheriff's Office announced that it will not renew its participation in 287(g) upon its expiration. The program will be replaced with the federal Secure Communities program which automatically screens foreign born arrestees when booked into jail (Davidson County Sheriff's Office 2012)

2012; Nguyen and Gill 2010). By 2010, Davidson County police had detained 7,887 immigrants, of which 68% were deported (Winders 2012).

This is notable, because while practices may vary, the stated goal of 287(g) is to allow local officers "necessary resources and latitude to pursue investigations relating to violent crimes, human smuggling, gang/organized crime activity, sexual-related offenses, narcotics smuggling and money laundering" (U.S. Immigration and Customs Enforcement). However, in Davidson County, after several tragedies in which an undocumented resident with multiple prior DUI convictions got into wrecks that killed a total of six people, law enforcement became frustrated with what seemed to be the preventable nature of these events. Policymakers noted that punishments for DUIs not involving deaths are minor and do not serve as effective deterrents, and that the same is true for petty crimes that may be predictors for likelihood of later committing a major, violent crime. This is true for all who commit these crimes, but for native-born citizens, there may be no recourse. For undocumented immigrants, however, the Sheriff's Office saw what they described as an opportunity to deport before serious crimes were committed. (Davidson County Sheriff's Office 2009), and as of 2010, nearly 80 percent of deported immigrants from the greater Nashville area had initially been stopped for misdemeanors or traffic violations (Winders 2012). Since the initiation of 287(g) in Davidson County, there has been an ongoing debate about whether or not local law enforcement disproportionately arrests people who appear to have other countries of origin, about whether the law is good or bad for public safety over all, about whether the law is cost-effective, and about what segments of society are most affected by the partnership. This debate is outside the scope of this research. What is central, however, is the impact the partnership may have on the behaviors of foreign-born residents in Nashville who do not have histories of misdemeanors or other crimes.

According to Alberto (and to some of the sources cited above, behind the wheel of the car is now one of the most dangerous places to be for undocumented immigrants, as it is one of the places where it is easiest to break a minor law. Failure to use a turn signal, travelling a few miles per hour over the speed limit, being late on an emissions test, or getting into a minor fender bender—whether at fault or not—are actions that could result not in annoyance, as they would for other Nashville residents, but in the end of life in the United States. These fears affect general levels of participation across the community. Alberto reported that participation in events at the community center he is associated with has gone down, and while he believes that there are several reasons for this, he cited deportation fears as among them—particularly given a past event in which people on their way to a community center ESL class were pulled over and eventually deported. English classes could be considered essential, but given the potential consequence, people in this situation are likely to ask themselves whether they really have to go before they get in the car. If the perceived risk is enough to deter families from attending English classes and community center fiestas hosted by friends, going to a purely recreational destination at a location owned by either the government or some unknown entity must necessarily be a substantial consideration. This is an interesting reversal of the normal implications of urban green space's status as an entity that is embedded in its surroundings and defined as much by the attributes of areas outside of its borders as within them. While other watershed residents described ways in which green spaces facilitated connection to the neighborhood that surrounded them, undocumented residents were subject to fear that travel to such places could lead to the severance from it.

Of course, even if risk is lower once in a park or recreational area, it is not absent, nor is it perceived to be so. On my third meeting with Alberto, he elaborated a bit more on this topic, and told me a story that he believes specifically impacts the way many of the people he works with define risk in relation to outdoor activities. Several years ago, he said, five or six undocumented Latino residents had been fishing in Nashville when they were approached by a ranger or similar park official. They were fishing in a public

place, where fishing was allowed, but the ranger asked to see their fishing licenses. None of the people in the group had licenses, and so they were picked up, and eventually all deported. Alberto was familiar with the concept of fishing licenses himself, but wondered how many more recent immigrants had any idea that there was a law requiring them to have a license to fish. As already discussed, there is evidence that many people are unaware of this requirement. The story of this young fisherman is often cited in policy papers and news articles intending to illustrate the unintended consequences of 287(g) legislation (Tennessee Immigrant and Refugee Rights Coalition 2009), and to the extent that this story is general knowledge, it certainly creates a barrier to fishing, and potentially to park use, that is located at the site of recreation. The story also brings to light another instance of the complexity of navigating public outdoor spaces for people not originally born in this country. Alberto, like Guleed, is very familiar with life in the United States, fluent in the English language, and more knowledgeable than most native born citizens about governmental processes. He hadn't originally been aware of the concept of law enforcement officials whose jurisdiction related only to parks and wildlife though, and during the interview was still not entirely sure of the nature of their powers. He doubted that any newer residents had any idea that such officials existed at all, or that a license was something they could be asked to produce. For immigrants with citizenship, lacking a fishing license would most likely result in a fine, or possibly even nothing more than a warning. For immigrants here legally, even if not citizens, deportation is unlikely. For undocumented residents, though "what would be a fine for anyone else led to them and all of their families having to leave the country. What was supposed to be a nice day enjoying the lake turned into a disaster." This story, Alberto said, has gotten around, and is well known within the community. That may mean that many people are now familiar with the concept of a fishing license. However, since in Tennessee a social security number is necessary to obtain a resident license, the knowledge is not easily actionable (Tennessee Wildlife Resources Agency 2012).

Given the fear of deportation that can be associated with driving and the paucity of parks in southern Nashville, it is notable that of the two (three, if the small area at the Coleman Community Center is included) urban parks that are more or less in that part of town, one of them is within sight of the jail. This particular park has a picnic area near the parking lot and a paved trail that makes it easy to exercise, although it falls short of some other parks due to the fact that the trail is not a loop. The trail is attractive, though, if one's goal is to spend time in a place that doesn't feel very close to downtown Nashville; it runs along the creek for almost its entire length. For the first half of the trail, views are of water and trees, and it's one of the more "nature-like" of places in southern Nashville. At the end of the path, there is a playing field where some children's sports league functions are held, so nominally, at least, the park is in a multi-use area. Between these two ends, though, there are some stretches where the creek and the trees are on the left, with open spaces on the right, separating the path from the Department of Corrections offices, which are in very plain sight for part of the trail's length. Signs for the jail are also evident on the roads around, and depending on which way a person comes, there may be some fairly imposing views out the windshield on the way. This park has a bus stop directly in front of it, and while the stop isn't particularly well-connected to general Nashville routes, it does exist, making it potentially accessible for those without cars or those who prefer not to drive. However, its existence is little-known. At one point, when I attended a meeting of people interested in immigrant community issues, someone asked me what parks were in the watershed. When I named this one, the response was a blank stare. This was common, both in and out of the immigrant communities, and in many cases, no amount of description produced recognition of this park. In this case, though, when I clarified that "it's near the jail," multiple people said "oh yes . . . THAT one"—and nothing else.

I did not conduct formal field surveys of racial or ethnic backgrounds of park visitors at any point. However, at Antioch Park, on any given day, people of a variety of races and ages were present, and it was possible to hear conversations in several different languages over the course of a standard hour-

long visit. At Ezell Park, however, general observation indicated that visitors tended to be white, older, without children present, and English speaking. Across multiple visits, I saw a total of one Spanish-speaking family having a picnic, and they were notable both for the language spoken and the presence of children in the group. Aside from this one instance, I never heard any language other than English spoken there.

Even when a park is not near an obvious center of law enforcement, fear of deportation may be a factor related to access. The largest park in Nashville, with the most diverse set of landscapes and the only relatively central nature center is “across the river” from where most of the Latino community lives. While this park is not officially within the study area, its proximity and status make it worth a brief discussion in terms of accessibility. Its relevance is heightened by the fact that activities conducted by the Non-Profit are frequently scheduled there, and that residents of Mill Creek Watershed were, at various times, particularly invited to attend these events. In spite of the diverse offerings of Shelby Park, there are few crossing points to get there from southeast Nashville. For almost everyone in the neighborhoods Alberto works with, the trip requires use of both back roads and interstate highways. Three separate associates of the immigrant community noted that “crossing the river” was something few people would feel comfortable doing. Further, while Nashville park enthusiasts born in the United States virtually always talked about their attachment to Shelby Park, no one from any of the immigrant communities of southeast Nashville ever reported feeling a similar attachment for it; indeed, none ever mentioned it at all, unless it was mentioned by me first. Due to the nature of the interview sample, this observation is far from conclusive, but it is suggestive, in the context of other interview statements. Much earlier in the research, the subject of an upcoming community event to be held at Shelby Park came up during an interview with another leader in the Latino immigrant community. I was told that the people she works with would be likely to have interest in events like this, but that interest would be higher if they were nearer to home. She didn’t think anyone would “cross the river” and go to an event

at Shelby. This interview was taking place in the same quadrant of Nashville as the interviews with Alberto, and so the people in question would have faced the same travel requirements. At the time, I didn't know enough about the broader issues to realize that there might be more to the perceived reluctance than sheer inconvenience, but these earlier conversations came back to me later, after Alberto provided clarification. It came back to me too, that in my own experience, the first two times I went to that park, I had a hard time finding the entrance I was aiming for, and was unsure as to whether the entrance I used was valid the first time, due to lack of signs. The entrance did turn out to be acceptable, but as I was driving within the park, a park official stopped me and told me, fairly aggressively, that I couldn't be on the road I was on, and asked why I had ignored the sign. (When I backtracked, it turned out that one of the directional signs had been twisted and pointed in the wrong direction). The entrances and the roads in the park were not highly legible, even if the park had strong legibility once the car was left behind in a lot. Legibility was no higher in the area surrounding the park, where multiple rapid lane changes on the interstate are necessary to cross the river from southeast Nashville. That section includes an area where several highways coincide and run together for short bursts. Mile marker signs often only indicate one of the highways, and internet directions, when I first lived here, frequently instructed drivers to go south when one should go north, or to go west when a highway's signs offered only south/north options. The fact is that going to this park for the first time (and quite possibly the second and the third) with southeast Nashville as a starting point carries a high risk of the kind of confusion that leads to minor traffic violations and unintended trespassing. For me, the worst consequences were being a few minutes late to an appointment and a vaguely unpleasant encounter with a park official. For others, the consequences are potentially severe enough to justify avoiding the risk of "crossing the river."

Transportation Considerations

Transportation may be a barrier to accessing urban green space areas even when deportation fears are not affecting residents' decisions to drive. While an estimated 91.6% of households in Nashville have access to a vehicle, this still leaves a substantial minority without access to personal transportation (U.S. Census Bureau 2010b). Further, the percentage of multi-resident households in which only one car is available is substantially higher (U.S. Census Bureau 2010b). Immigrants recently arrived to the United States may either not have access to a car or not possess a valid drivers' license; Census data indicates that overall rates of vehicle access are not markedly lower among the foreign-born population (U.S. Census Bureau 2010a), but several respondents mentioned that private transportation is an issue during the months immediately following arrival, and that even after a car and drivers' license is acquired, families in which at least one adult does work outside the home may only have one car. This situation, I was told, disproportionately affects women. In these cases, unless the neighborhood in question is particularly walkable, public transportation may be the only reliable means of getting either to parks or to essential locations such as work, English as a Second Language classes, or shopping. In this regard, difficulties may be presented by lacks in Nashville's public transportation offerings; some areas of the city are not served by bus routes, and many others are served by routes that run only infrequently. Many of these underserved areas have high immigrant populations, and focus groups conducted as part of the Immigrant Assessment Report found that immigrant and refugee participants cited infrequently operating transportation services as a barrier to accessing necessary social services; social service agencies themselves acknowledged that the public transportation deficit was a major limitation on the amount of work they could do with immigrant communities. One of the major policy recommendations to come out of the assessment was that the city "increase the frequency with which transportation services operate between the southeast quadrant and the other areas of Nashville" (Cornfield, et al. 2003). Nashville Metropolitan Transportation Authority has indeed attempted some creative solutions to these problems. Frequency of busses along some routes has either been expanded, or has a concrete

timeline for institution of expansion (Nashville Metropolitan Transportation Authority 2012). This has not occurred in Antioch, which has a particularly high population of foreign-born Latinos. However, Metro recognizes that Antioch's rapid growth has caused it to "outgrow" many formerly adequate resources and has begun plans to address deficits in transportation, parks, libraries, and social services (Metropolitan Government of Nashville and Davidson County 2012). One attempt to address inequities has been instituted in a service known as BusLink; this is an on-demand shuttle service through which users can call for a shuttle to transport them from one BusLink stop to another, even if the regular bus is not running at that time; one of these stops connects to routes that go into the center of the city with more frequency than any available within Antioch. There is no charge above standard bus fare for use of this service, and the portion of the MTA's website that describes the BusLink service is available in both English and Spanish, as is the map showing valid stops. However, while this service does have the potential to increase access to important services, and may even serve as valid transportation to work, the area surrounding Antioch Park is completely unserved. For those residents without cars, inadequate public transportation may be the limiting factor both for participation in outdoor recreation activities and for participation in meetings intended to involve the community in watershed (or other) initiatives.

Unconnected Views: Representations of Greenway and Transportation Networks

The previous sections of this chapter made several mentions of geographical considerations in relation to barriers to participation in outdoor recreation and watershed initiatives. Clearly, the areas surrounding public parks may influence access to them, both due to effects related to desirability and to effects related to ease of travel. The identification of barriers of this nature is not unexpected, given the embedded nature of the green space concept in Nashville; just as these places are valued for their connections to the wider community, so must any attribute that leads to a park becoming an "island" in the city reduce either accessibility or appeal.

Of course, the extent to which factors of this nature may constitute a functional barrier is influenced by other factors, including, as evidenced earlier in this chapter, knowledge regarding park location and transportation possibilities. Knowledge levels relating to these topics may in turn be influenced by the nature of information that is available to the community. Outreach materials advertise the existence of opportunities to residents as well as provide information on how to take advantage of these opportunities. They help to "frame" the preliminary information that residents will have regarding a given topic, and may help determine how people come to see opportunities in the context of their everyday lives. In Chapter 2, this topic was touched on briefly, with the inclusion of a watershed map that defined the boundaries of the watershed clearly, but did little to "place" the watershed in the greater landscape of the city. Within the watershed, there was little resident knowledge *of* the watershed, but there was value for places of importance to watershed health. These parks and "green spaces" were seen by residents as being deeply embedded in the fabric of the neighborhood and the city, while the professional map showed the watershed as an environmental concept that is "out there," disengaged from everyday life. (And, as it happens, residents do easily see environmental issues as being disengaged from everyday life; the connection of valued parks to watershed health is not one largely acknowledged among laypeople).

The tendency of maps with an environmental focus to include few social landmarks is not limited to the efforts of the Mill Creek Task Force in Nashville. Metro's main map of greenways is visually a bit more appealing than the "draft" version of the watershed map, but it limits itself to its topic, showing Davidson County, its major roads, the Cumberland River, and parks marked in green, with greenways marked as black lines with numbered leaf-shaped images adjacent to them. Gray lines show areas that are intended to be developed into greenways in the future, and dashed black lines indicate trails that are currently under development. Airports are included in this map, as well as a few landmarks. Most of these are parks, but Opryland, the State Capitol, and major Universities are marked as well (Greenways

Nashville 2011)—selections that seem appropriate given the city-wide scale of the map. By and large, though, the map shows an "image of the city" that appears to be a network of parks and greenways, divorced from the neighborhoods that they are embedded in. A more localized map that shows only the three segments of Mill Creek Greenway similarly disengages "green" Nashville from the built environment, with greenways and streams marked, but no landmarks aside from a few blurry road names given.

At the most local level of greenway mapping though, we see a reappearance of the city in the sea of green. Each greenway segment has its own map, which is comprised simply of a satellite view from Google Maps, with trails and trailheads superimposed in green. The sidebar information of these maps includes greenway rules and a telephone number for park police that walkers can use in case of emergency. These maps did not require the use of expensive GIS programs to create, and undoubtedly required less work than the published map of the overall system. They are not distributed in paper form, and when the "print" button is pressed, a much less detailed view is generated. However, perhaps by accident, these maps put the greenways into the city in a way that is much closer to a representation of the way residents talk about the region. One can see that the Blue Hole Road stretch of the Mill Creek Greenway (an official name which no one ever recognized when it was mentioned in interviews) makes a wide circle with Antioch High School, and is near the playing fields of the school. One can also see the Antioch Community Center and its parking lot on the map. People who attend Antioch United Methodist Church or Antioch First Baptist Church might notice that the greenway is less than a mile away, and begin to see it as a potential after-worship destination. Those dining at Fat Mo's Burgers might notice the same thing, and opt to walk off a few of their French fries. Admittedly, what Google Maps "chooses" to show is rather haphazard. Several other churches that are near the greenway are not labeled, nor are some of the local restaurants convenient to the location, though a jewelry store and an appliance repair shop are featured. (Greenways Nashville 2008b). Google does not actively choose establishments likely

to be favored by residents, but occasionally, by chance, it includes them, and creates a way of seeing the greenway that is connected to everyday life and reflective of the ways in which people use it. Unfortunately, the strategy of using a Google map may backfire on the other stretch of Mill Creek Greenway, which is known as the Ezell Park section. Here, the satellite view shows no restaurants or churches within the frame. This is accurate, as there aren't any nearby. Instead, the map shows an unlabeled section that appears to be a large dead zone in satellite imagery, but in reality is a quarry. Many large, gray, obviously industrial buildings are visible. So is the jail, though only the police patrol base is labeled (Greenways Nashville 2008a). In this case, the area looks more attractive in the undetailed print version, and makes an argument for the potential utility of maps specifically designed to highlight the very nature of greenways, which is, indeed, to allow for the experience of nature in an urban environment, but also to provide an alternative network for interacting with the amenities of the city. Park and environmental professionals often do well creating outreach materials that focus on the first goal; they inconsistently succeed in conveying the focus on the second goal. Greenways are in cities, not in national parks. Some of the people who frequent the greenways certainly do so simply because they want a little time away from the city but can't *get* away from the city. Others, though, want to exercise, want to let their children burn off energy, want to walk somewhere pleasant, whether it is "natural" or not, or are attracted to "urban nature" at a moderate level, happy to embrace it if it isn't too inconvenient to the rest of their lives. They are more concerned with briefly getting away *to* a place that allows them to meet these goals than they are with getting away *from* an urban environment (Hammitt 2000), and those who live in areas that are well served by the greenway system see this as a source of community pride. Note that the greenways in the watershed are not typically embedded in residential neighborhoods with strong identity; however, partially outside of the watershed, the community of Donelson does have such an embedded greenway system, which was a great source of pride to research respondents who lived there. While none of these trails are in the watershed, this is

irrelevant to residents, who are "seeing" Donelson as a neighborhood rather than Donelson as a site partially within the watershed border. For most users of this and other greenways, connectedness of the greenway system to other destinations is valued.

Notably, the other type of map that might be important to potential park-seekers errs on the other side of the spectrum. The Nashville Metro Transportation Authority publishes a map of the entire bus system, just as Greenways Nashville publishes a map of all greenways under its jurisdiction. Inevitably, maps of this geographic scope must be limited in detail; however, in the Transportation Authority map, a fairly representative depiction of the city as lived by its residents is achieved. Many non-park landmarks are included; all major medical centers are shown, as are malls, universities, post offices, museums, tourist attractions, and major businesses, which are listed by name. Schools are not named, but icons showing their locations are included throughout the map. Parks are also included (in the large map only; they and other landmarks tend not to be evident in the zoomed in, route-specific maps that the MTA also publishes). On the large, area-wide map, every park in Mill Creek Watershed is present as a green patch; in most cases, though, the names of the parks are not given, and the nature of the green patches may be unclear, as the map's legend does not explain them. The zoo is shown as a green patch, and this is marked by name, but the only other Mill Creek Watershed park that is labeled is the large Radnor Lake State Natural Area. In fact, only a tiny corner of this park is located within the watershed, and it is not particularly accessible by public transportation. Bus routes pass within a mile of the park, but they travel along an interstate, and no stops are located near park entrances. However, the smaller local parks that do have bus stops located nearby are almost never named, either in the map at large or in the area of the map that represents the Mill Creek Watershed. Antioch Park, which is home to the largest segment of Mill Creek Greenway, is unnamed, though its accessibility from the school is clear to one who knows what the green patch on the map represents. Ellington Agricultural Center is labeled, but its associated park and greenway are not; a viewer would need to be previously aware of the

parkland around the Center to look at the map and realize that recreational opportunities existed there. Ellington, at least, has a bus route passing within walking distance of its entrance, and both parks occupy relatively uncrowded areas of the map, so addition of labels pointing these places out could draw bus riders to visit them. The second park that includes a segment of the Mill Creek Greenway is also pictured as a green patch, and one of the bus lines is seen as terminating right in the midst of this space, where the bus line converges on one of the blue blocks that indicates a building, business, or attraction. The box is labeled, and since the label covers most of the available space in the green park-designating area, a new resident relying on the map for navigation in the city would be unlikely to infer the nature of the green area; the label says "Sherriff's Correctional Complex" (Nashville Metropolitan Transportation Authority 2012).

One important point of note on these maps is the tendency to assume that most readers will know what the green patches represent. However, this is problematic. Even for people familiar with this convention, the nature of each area may not be clear, and the other information on the map, as in the case of the jail above, may cloud the issue. Further, some of the green areas represent places that charge to enter, like the zoo, and others represent fairgrounds and other locations whose public accessibility status may be more ambiguous. This issue becomes more significant in terms of access if one calls to mind the comments of Guleed, who emphasized that in his country of birth, green was not the color one would associate with nature. Given that newly arrived immigrants may be more reliant on public transportation than others, this difference in cultural metaphor could have real implications for attainment of knowledge about outdoor recreational opportunities in the city.

What is notable in both the "nature-oriented" maps and the "city-oriented" maps is a division between the two geographies, as if they occupied separate layers of Nashville rather existing on a single plane—and of course the watershed map appears to exist on a different plane altogether. With the exception of

some happenstance inclusions in the Google Maps, watershed and greenways maps show a world of parks (sometimes), uninhabited green spaces, and myriad streams, creeks, and lakes, with roads that appear to travel only between and around these locations. Transportation authority maps show important medical, business, and indoor recreational destinations, but include almost no explicit labels of parks, and absolutely no labels of greenways. This division begs the question: What might an engaging and useful watershed map look like? This will be explored in the final chapter of this dissertation. For now, though, the discussion is intended as an examination of how this "framing" of city views by organizations may influence resident knowledge of opportunities and exacerbate some of the other barriers to participation identified earlier in this chapter.

Barriers from the Perspective of Organizers: What Past Studies Say about the Burden of Facilitating Public Participation

The discussion in the previous sections focused heavily on barriers to participation in outdoor activities or public forums from the perspective of potential participants. It examined ways in which various forces may deter laypeople going about their lives from participating in these processes, while giving little attention to the perspective of the other actors in these scenarios. These are the organizers—representatives of government or NGO entities that try to effect some change in action or participation among residents of a community. Any discussion of barriers to implementation of an outreach initiative must consider the matter from this perspective in addition to that of members of the community. In the case of this research, a general overview of encountered barriers was presented in Chapter 1, and the next chapter will examine the effects of one major unforeseen barrier—the flood—in some detail. Before entering into that discussion, however, it is useful to consider the broader landscape of the challenges organizations may face in the institution of a participatory endeavor. This section of the chapter will undertake to do this, framing the discussion around a review of the limited literature on the topic.

The majority of the literature that examines such initiatives focuses on the benefits of engaging citizens in the decision-making and implementation process. (The word "citizens" was chosen with reason, and is reflective of the literature dedicated to this topic). Such involvement has been widely encouraged in environmental programs at least since the 1990s, during which time the Environmental Protection Agency (EPA) began a strong push for national and regional improvements in environmental policy decisions, with emphasis on use of participatory methodologies that were "designed to maximize the use of scarce resources, encourage local support, and consider the economic well-being of communities" (United States Environmental Protection Agency 1996). These initiatives have generally been based upon the idea that the more participants become involved with efforts that affect them, the more democratic and useful will be the outcomes that emerge from the process (Irvin and Stansbury 2004). This idea, in turn, rests on long-standing ideas that an engaged, involved, participating citizenry is better than a passive citizenry (Arnstein 1969; King, et al. 1998). Involvement of citizens, it is hoped, may lead to more realistic policies that take into account the "everyday lives" of the people they affect. It may also lead to less opposition to proposed changes, if the process in place succeeds in allowing a variety of voices to be heard. Further, citizens engaged in such processes may have a better understanding of the complexities involved in creation of policies or implementation of new projects, and may be more willing to accept less-than-perfect solutions, armed, as they are, with understanding of the impossibility of fulfilling all possible goals (Irvin and Stansbury 2004; King and Stivers 1998). The process of involvement, regardless of the focus of work being done, has also been considered a tool for social change, in the sense that it can transform a community's mode of engagement as its residents' understanding of process becomes more sophisticated (Beierle 1999; Thomas 1995). When citizen participation is part of the process, some members of a community may become well informed "citizen-experts," who understand many sides of complex problems, and, as members of the community, may also provide valuable insight into formation of holistic, community-minded solutions. The process itself

helps create these experts, and increases the baseline of education in the community at large as administrators and representatives from interest groups gain a platform from which to explain their rationales for supporting policies or actions that may not be immediately attractive to the public. The assumption is that when this education occurs, the creation of a certain critical mass of participants with a more sophisticated level of understanding will lead to better social and legal or technical outcomes (Blackburn and Bruce 1995; Johnson, et al. 2002; Pateman 1970). Further, increase in residents' perceived legitimacy as opinion-holders is often listed as an important reason for incorporating citizen involvement (Fox 1996; Valadez 2001); the idea is that face to face encounters increase respect on both sides. The EPA summarized its 1990s opinion by stating that "we envision that these relationships established with regional and community organizations will bring about a better understanding of environmental problems" (United States Environmental Protection Agency 1996).

The possible benefits described above accrue to citizens, society, or the environment, but potential benefits that may accrue to the individuals and entities who organize public participation initiatives are also motivators for the establishment of such efforts. It may be that administrators who maintain regular contact with those who will be affected by new policies gain insight as to what is likely to anger a community or spawn excessive division within it. If these aspects of policies can be modified or abandoned, the hope is that the implementation of new projects might be smoother and less expensive due to the greater ease of work associated with a cooperative public (Thomas 1995). In fact, while justifications for community participation generally focus on the benefits to lay participants, this prospect of a more cooperative public from the organizer's perspective may actually be more common as the primary motivating factor behind a decision to engage the community. (Irvin and Stansbury 2004; Thomas 1995). Indeed, it has been argued that this motivation is at the root of the entire trend, and that the "routinization" of citizen participation actually came about as a response to the urban protest movements of the 1960s (Howard, et al. 1994). The assumption, from the perspective of government (or

NGOs, as the case may be) is that if enough influential members of the citizenry are engaged and become supportive of efforts—not necessarily elite members of the community, but people recognized as formal or informal leaders by a wide segment of the populace—that their opinions and enthusiasm will spread throughout the community and diffuse potential opposition (Howell, et al. 1987). This may be especially important in topics related to environmental management, given the frequent perception that environmental government groups over-regulate matters of land use that should be left to personal choice.

In spite of the considerable list of potential benefits outlined in the literature reviewed so far, there is another, much smaller body of literature that details the difficulties of this process, and even, in some cases, questions the wisdom of attempting to employ extensive community involvement in as wide a variety of situations as is seen in current practice (Irvin and Stansbury 2004; Johnson, et al. 2002). It has been argued that in certain scenarios, there are disadvantages to using this process both for citizen participants and for the government or NGO attempting to lead the process. Much of the research that has drawn these conclusions focuses on government-led initiatives to institute specific policies in relation to specific circumstances. This is not quite equivalent to the Mill Creek Task Force scenario, which was comprised of a group of government and non-government environmental groups, with a non-government group providing the leadership. The Mill Creek Task Force also was not attempting to enact a specific policy, but rather to inspire behavior change and engagement in local residents (including ensuring that they were aware of and obeying certain existing regulations about what was allowed in the watershed). However, many of the potential benefits and disadvantages of instituting a community participation process are relevant to the process in Mill Creek, and this literature remains illustrative of some of the factors that could have been in play in the watershed at the time the Task Force was meeting.

Irvin and Stansbury published an article that describes an experience with strong parallels to the Mill Creek Watershed situation, and it is helpful to outline their work in some detail before exploring specifics of potential problems associated with community involvement processes. The two authors of this study had received an EPA grant to incorporate a participatory model that would allow stakeholders living near the Papillion Creek in Omaha a chance to become involved in decisions regarding new management alternatives for the watershed. Like the Mill Creek Watershed, this watershed spans both urban and rural areas and had been strongly affected by accelerated, little-restricted development in recent decades. Municipal and County government agencies were involved early on, as were some environmental interest groups. The outcomes that were hoped to be achieved by the project were broad. It was hoped that urban Omaha residents might come to view their stream system as an actual natural water body rather than as a "flood ditch." It was also hoped that both urban and rural residents of the watershed would become more informed about the causes and effects of water pollution, and might subsequently become more supportive of potentially controversial management measures such as institution of buffer zones between the streams and developed land. The researchers' intent was to put this participatory process in place and study its process and effectiveness over time. They had plans to facilitate discussion of a variety of approaches to the management situation, including an environmental focus that would improve habitats, approaches to focus on facilitation of development while implementing safeguards for flooding control, recreational alternatives such as the construction of parks and reservoirs, or alternatives in which the primary focus was flood control, which would involve the building of dams and improvements to an existing channel system. With the exception of issues relating to the channel system, which is not present in Mill Creek, all of these concepts were relevant to watershed discussion in Mill Creek, and all were planned to be incorporated as items for discussion in the planned Mill Creek Watershed Association. However, in Omaha, as in Nashville, the researchers never got past the initial stage of engaging professional stakeholders in advance of engaging the general

population. It is of note that their outreach campaign was extensive compared to that of the Mill Creek Task Force (though one reason for this is that the 2010 flood cut planning off just at the point when more aggressive outreach options were to be discussed). Articles inviting participation were run in newspapers, brochures were distributed at malls, on walking trails, at sporting goods stores, and in neighborhood groups. Landowners were also contacted directly, and people who responded to the brochures early on were called. Free pizza was offered at "conveniently scheduled meetings," though the meeting schedule considered convenient was not noted. Conscientious representatives from government and environmental interests groups remained involved in the discussions, but when a more general forum of stakeholders was planned, phone calls and mailings to those who had expressed interest resulted in only fifteen people who agreed to attend the forum. On the day of the forum, only one community representative appeared. The resident participation aspect of the project was considered a failure and not pursued further. The authors, who in their article had already reviewed general barriers to success for participatory projects, proposed several specific problems that likely prevented success in Omaha. First of these, and perhaps most relevant to the Nashville situation, was that the project failed to define the problem. Instead, they proposed discussion of alternatives to aspects of the watershed that residents were accustomed to and, for the most part, were neutral to. Relatedly, residents were fairly ambivalent about both the government and environmental issues. The authors noted that Omaha residents were fairly satisfied with government agencies in the area—at least to the extent that there was little real hostility against them. There were also no major forces of public sentiment associated either with protection or expansion of property rights or with environmental improvement in relation to the watershed. The residents of Omaha, the authors concluded, "[appear] to require a crisis—or at least a defined policy issue—to motivate participants, as well as a decision-making structure that grants authority to citizens. Even with those elements, however, the local climate of passive acceptance of representative governance may still have complicated any participatory effort"

(Irvin and Stansbury 2004). There is evidence that initial engagement with a local problem may commonly be a precursor to the development of a more comprehensive identity of environmental orientation (Kempton and Holland 2003). A problem in Nashville, as in Omaha, was that no local "entry level" environmental issue had penetrated the general consciousness of the community. Everyone knew that pollution was a problem everywhere, that recycling was a good idea anywhere, and that rapid development was occurring—but in spite of this, the crayfish and the general health of the watershed were seen as definable issues only to organizers. Residents did not view them as present, specific local concerns. Of note is the fact that many of the neighborhoods with strong identity and sense of place had originally organized in response to some issue that was perceived to affect the longstanding community. It is likely that the tendency not to become engaged with initiatives in lack of a clear defined problem is not unique to the environmental domain; however, judging from the experience in Nashville, it does appear that residents more readily self-define issues that they see as relevant to their neighborhoods. Environmental issues, with their perception of being extra-neighborhood, may be more difficult to "sell"—though, if we recall the findings of Larson and Latch, who studied participation in both neighborhood and watershed associations, environmental issues may well be embraced when they are framed as work in support of the community (Larson and Lach 2008).

Irvin and Stansbury outline what they conclude are ideal circumstances for resident participation, and their points in this regard provide some insight into ways in which a Mill Creek Watershed initiative might—potentially—be instituted in a format that is engaging to the community. They and other authors acknowledge an established set of basic needs, which, for the most part, were met or on track to be met both in Omaha and Nashville—that is, transparent decision-making, competent facilitators, regular meetings, and a representative group of stakeholders. They further note the need for there to be sufficient financial resources in place to support what is almost always a long process of learning followed by a long process of decision making. These needs have long been acknowledged as

foundational requirements to a successful process (Beierle 1999; Howard, et al. 1994; Irvin and Stansbury 2004). However, the authors build upon these basic requirements to propose a more extensive framework for evaluating the potential benefit of a citizen participation program and suggest that cost and benefit be examined prior to implementation in all cases. They make an attempt to define low and high cost situations, as well as a framework for assessment of likely benefit, resulting in four potential categorizations which may be combined with one another to assess the appropriateness of a participatory process: Low-Cost situations, in which engagement of the community is likely to be easy and require little cost or effort from organizing bodies; High-Benefit situations, in which, regardless of the ease of engaging the community, the potential for benefit is high enough to justify the attempt; High-Cost situations in which the community is likely to be difficult to engage; and Low-Benefit situations in which, regardless of the ease or difficulty in engaging the public, the benefits that could be reaped are not great. Clearly situations which combine low-cost and high-benefit scenarios are ideal for initiation of public participation strategies, while high-cost, low-benefit situations may not be well-suited to the strategy, whatever popular wisdom about the universal benefits of citizen participation may say. Some "cost" indicators are related to the community, such as already present levels of volunteerism, income levels that allow or don't allow potential participants to devote leisure time to regular meetings, a geographic and transportation situation in which all potential stakeholders are not too dispersed and can reach a meeting location without too much trouble, and relative community homogeneity (that is, relatively few potential groups with defining interests that would require representation). This last factor may be defined as much by the actual topic in question as by social factors, since levels of homogeneity may differ in relation to community feelings on various issues. Several other factors are more directly related to the topic in question. For example, the more technical information that potential participants would need to be able to master to become informed enough to participate meaningfully, the higher the cost of the community participation initiative. Finally, cost is affected by

whether the topic is considered an "issue" by the community at large; as indicated above, if no problem is perceived, or if the community is aware of no alternatives to a given situation, the cost of engaging the community will almost always be high (Irvin and Stansbury 2004).

Potential for benefit is affected largely by community attitude towards government and any bodies associated with making decisions related to the issue. If animosity is high, then there is potential for a carefully, thoughtfully implemented citizen participation initiative to allow agencies to gain validation from the community, or to break gridlock. Relatedly, if the issue itself is perceived as a crisis, the benefits of involving the community may make implementation worthwhile. Higher benefits may also be realized when it is possible to use a facilitator who is known and respected to all representatives, and when it is possible to engage very influential community representatives as well (Irvin and Stansbury 2004). The authors argue that in situations that are both high cost and low benefit, implementing citizen participation programs may be wasteful, as there is a strong likelihood that limited resources will be used with zero return of benefit to either community or policy makers. They do not argue against the use of participatory process, but rather argue for targeted use, with careful consideration as to which issues, in the context of a finite budget, "are critically in need of stakeholder involvement before (and during) implementation" as opposed to those projects which would "be unusually laborious to accomplish in a participatory format" (Irvin and Stansbury 2004).

One of the potential reasons for evaluating the appropriateness of a participatory approach in advance is that of the cost of this process is high in terms of both money and time. It takes a long time to recruit, educate, listen to, and negotiate with community members using this model, and even longer to make and institute decisions. The professionals who are recruited to lead the process must devote substantial time to it, at the expense of other activities (Lawrence and Deagen 2001). This was a problem in Nashville, where budget cuts and staffing pressures forced various agencies to temporarily or

permanently withdraw their representatives from the Task Force over the course of the planning period. One source summarizes the situation as follows: “a community dialogue . . . is neither cheap, fast, nor easy. Its application is limited to instances where the issue is critical, the political process is deadlocked, and there remains sufficient time to complete a yearlong public process” (Weeks 2000). In such situations, the high cost of citizen participation might be made up in avoidance of explosively negative public sentiment. For an issue in which the public does not have a strong vested interest, however, there is reason for concern that choosing a public participation approach by default may not be economical.

Another potential weakness of the citizen participation approach is that the methods commonly outlined for its implementation tend to work best for small, relatively homogenous communities, but to be employed without much modification in communities of varying sizes. For example, in a city like Nashville, expecting a handful of citizens—no matter how prominent—to become engaged with an idea and then successfully spread their opinions to enough people to lead to a serious change in public opinion or behavior may be naïve. In a larger, diverse community, finding prominent residents who are acknowledged as leaders by everyone is difficult, and a far greater number of them would need to be involved before the diffusion of opinion expected of the participation process would be likely to occur; when using the model in communities like this, it is essential that citizen participants who represent definable constituencies become involved, and this, of course, is harder to achieve than a simple gathering of a critical mass of people who can engage their neighbors (Irvin and Stansbury 2004; Ostrom 1990). In Nashville, a specific goal of the watershed effort was to draw a group that was demographically reflective of the diverse population living in the area. However, it quickly became clear that this outreach would require substantial time and effort on the part of organizers; time constraints perceived by established immigrants who had strongly supportive views related to the environment made participation in a non-essential effort difficult. This qualitative evidence collected in Nashville may go some ways to explaining the findings of one study conducted in New York City, in which immigrants

were just as likely to behave in environmentally responsible ways as were native-born residents, but were much less likely to become involved in environmentally focused efforts (Pfeffer and Stycos 2002). In Nashville, immigrants cited lack of knowledge of the civic participation process as a barrier to involvement of more recent arrivals, and additional barriers including language, transportation, deportation fears, and suspicion of the government were all cited as well. So was the fact that native-born community leaders were likely to assume that these groups would not be interested in environmental efforts; even though this was not the assumption of the Task Force, this circumstance created a background in which few invitations of the sort the Task Fort wished to extend had made their way into immigrant communities in the past. Further, environmental initiatives may carry extra "baggage" when compared to other opportunities for civic participation. There is a longstanding perception that environmentalism is the provenance of white middle and upper income citizens intent on preservation of wilderness (Melosi 1995). It may not be seen as a mindset with urban localization, or one that regular "urban" residents could easily engage with in their day to day lives. In fact, in Nashville, native-born residents, upon learning the subject of my research, had a strong tendency to direct me to their contacts who "knew more about" those issues—twice, I was directed to the Non-Profit as a resource before I had had an opportunity to mention my association with their efforts. Notably, these conversations occurred with people who were already very involved with efforts that the Non-Profit would have termed environmental in nature. In one instance, the speaker was actively involved in nuisance flood mitigation, while another resident who expressed little involvement with environmental efforts was active in efforts to increase recreational access to waterways. For these residents, who *were* white and middle to upper income, environmentalism was still seen as something either to be directed towards wilderness (which they supported), or handled by professionals engaged with a larger, non-local picture. To them, the issues with which they were involved were social rather than environmental—a further reflection of the distinction between embedded urban nature and the "away"

nature of wilderness. Urban nature, virtually always, is a social entity, and in many cases, current engagement with it may be seen as social activism rather than environmentalism—and, tellingly, the two are commonly distinct in the public mind. In addition to this context which tends to cause urban environments not to be seen as the provenance of environmental efforts, the idea that environmental efforts are not welcoming places for immigrants is not without foundation; in the 1990s, the Sierra Club debated a proposal that would have seen the organization adopt an official stance favoring the limitation of immigration to the United States (Rangel 2008). The proposal was, for the most part, centered on the problem of overall population growth rather than race, and it was defeated by a strong margin—but it was debated seriously, and many felt that the organization did not fully distinguish itself from organizations with racially motivated immigration curbing agendas (Clarke 2001). The debate—even without the potential for racial undertones—is one that helped feed an idea that environmentalism is somehow at odds with human concerns. If this idea continues to have force, it may add to the list of barriers to establishing broad participation in the implementation of environmental efforts in neighborhoods with highly pressing human problems.

Another little-discussed difficulty with establishment of citizen participation programs is that of complacency. Irvin and Stansbury note that the process usually works from the assumption that if the right opportunities for participation and empowerment were made available, citizens would embrace the opportunity to take part in the democratic process. However, they also note that hammering out the details of policy and implementation procedures can be tedious, time consuming, and meeting-heavy processes, which in truth, is a complex full of qualities that the average person prefers to avoid when possible. In Nashville, the environmental Non-Profit echoed the assumption described above, asserting that if people received the education required, they would embrace the opportunity to act upon it. Meanwhile, a representative of a non-profit with extensive experience in facilitating neighborhood organization stressed that “people don’t want another meeting.” This latter assessment is more likely to

be accurate when the community is "complacent"—that is, when the issues being discussed are not contentious or particularly energizing to the majority of the community (Irvin and Stansbury 2004; Lawrence and Deagen 2001). One particularly illustrative study showed that this may be the case even for an environmental issue historically likely to engage public concerns (Army stockpile sites for chemical weapons). Members of the public living near the affected areas expressed high levels of intent to become involved in a participatory process. However, fewer than one percent of the population actually followed up by calling to request more information on how to participate (Williams, et al. 2001). If engagement of the community in a process to address stockpiled chemical weapons was difficult, an extrapolation to predict the ease with which a community could be engaged in a process to protect a watershed and invertebrate that residents have never before heard of is not encouraging.

The problem of achieving equitable representation in citizen participation processes is also difficult, and may undercut the potential for expanding empowerment and representation in the democratic process. Citizens participating in these initiatives are not compensated for their time, and this may have the unintended consequence of increasing the likelihood that the process will become dominated by a few individuals with particularly strong views (Irvin and Stansbury 2004; Steinberg and Clark 1999). One study of fifty-three focus groups found that residents participating in these initiatives consistently reported that representation was not equal, and felt that the public participation process was unfair because of this. (Smith and McDonough 2001). Additionally, while most participants are not paid for involvement in such work, some who attend as representatives of businesses or government agencies may receive compensation for the time they spend with the initiative, and participants of this type may also become more likely to dominate the process (Curry 2001; Irvin and Stansbury 2004). Equality within the group may also be affected by general social factors, with there being some evidence that college graduates and higher income residents are more likely to participate in this type of initiative (Weber 2000). Low income residents may be harder to engage for a variety of reasons, prime among them the

simple necessity for these residents to prioritize activities that could provide for their families (Russell and Vidler 2000), as was asserted to be a factor by leaders in Nashville's immigrant communities. In Nashville, the Mill Creek Watershed Association never fully launched; however, given the high economic, educational, age, and cultural heterogeneity of the region of recruitment, it is likely that effective moderation to avoid the problems described above would have proved both challenging and essential.

In such a situation, assessments of "readiness" in relation to the intervention must be applied both to residents and to the organizing body (Hull, et al. 2010). Notably, readiness is not equivalent to willingness or enthusiasm, and its assessment requires a variety of targeted questions to be asked and answered with honesty. How much support will the organization be able to provide short term and long term? Can they support participants who have limited English skills? Do their schedules contain times for meetings and events that coincide with the schedules of residents of the community they hope to engage? Do they have time to educate the community on the issue at hand at a more basic level than they have been accustomed to doing in the past? (For surely the "readiness" of the community in this case was very near "No Awareness"—a stark contrast to the Non-Profit's past efforts in which interested residents were involved from the beginning). These are important questions, and serve as reminders that both the community *and* the relevant initiating bodies must be "ready" if a proposed initiative is to be successful. In regards to communities with large immigrant populations, there is little in the literature to address the needs associated with involving this group in environmental efforts, and little acknowledgement of the possible need to educate on the civic aspects of issues as well as the environmental ones.

The inherent readiness of both communities and professional groups for implementation of an initiative is constantly moderated by the communication that goes on between groups. Outreach communication

in a participatory context is intended to engage interest, foster trust, and convince diverse groups of residents that environmental issues are of relevance to their lives. In some cases, however, the content of outreach communication may serve to create a barrier rather than surmount one. At the root of these constructed barriers may often be the previously described institutional belief that knowledge almost inevitably leads to behavior change. That is, that if people can be made to hear the message and understand it, they will care about the problems and will change their behaviors accordingly (Heimlich 2010; Kollmus and Julian 2002). The Non-Profit believed strongly in this model, and it formed a foundation for the efforts of the Task Force as they worked to institute a Mill Creek Watershed Association. They offered educational papers and educational meetings on the assumption that such education would be both a draw and a facilitator of further recruitment. However, in spite of the prevalence of this belief among environmental professionals, research has shown that pro-environment attitudes and strong knowledge do not consistently lead to behavior change among target audiences (Jacobson, et al. 2006; Monroe 2003; Schultz 2002). Perversely, attempts to mitigate this communication disconnect by appealing to motivators other than desire to benefit the environment may lead to further problems. Environmental professionals often present the public with easy-to-adopt behavior changes, but then rely upon what one author termed "naïve economic theories of human behavior" when promoting them (Johnson, 1994). In this framework, humans are conceived as caring about the environment primarily because of the resources that can be derived from it. Consequently, research and education efforts are directed at identifying ways in which people can be persuaded to make personal sacrifices for the environment, and assessing the value they place on the environment in terms of the sacrifices they are willing to make for it (Clayton and Opotow 2003). Organizations attempting to conduct educational outreach may focus heavily on these messages that speak to economic and pragmatic concerns under the assumption that they are more likely to motivate laypeople than other messages would be. In Nashville, the Non-Profit briefly attempted this approach when they

emphasized energy savings in their tree-planting event outreach. However, research has shown that people do not generally determine the value of nature in ways that are economically based (Clayton and Opotow 2003). Their values in association with preservation or protection of the natural environment may be strongly connected to feelings of social and individual identity (Clayton and Opotow 2003), as was clearly the case among Nashville's communities. They may also be associated with religious or morality-based beliefs about what is right and wrong (Kempton, et al. 1995). One Nashville participant did describe an ethic of stewardship associated with his Christian beliefs, stating that he attempted to act in accordance with the Biblical directive to care for the earth. Some have noted that Islam carries a similar focus on human responsibility towards nature (Aamar 1995), but that this ethic may manifest in values related to cultivation and bestowment of order (Mahkzoumi 2002). This was not explored deeply in the current research, but it is interesting to note that the values expressed by the two Kurdish Muslim participants were framed not in terms of religion, but of Kurdish heritage and nation. Islamic Somali participants likewise did not overtly express religious reasons for their values. If any generalization may be made, though, it was among this group that intrinsic value for the simple existence of nature was most likely to be expressed. Clearly, assumptions that behavior change is most likely to be achieved through the mobilization of economic or very simple pragmatic values relating to nature inadequately reflect the values that people actually place upon it. Of note, however, is the fact that some preliminary outreach strategies did work in the watershed. While the Non-Profit is dedicated to the use of educational outreach to engage members of the community, and while it also attempted to reframe outreach messaging with an economic message, it accompanied these efforts with an additional strategy, in which residents were simply invited to participate in an event where they could also receive information. *This* strategy appeared to be effective, and indicated that in the watershed, in spite of very substantial barriers, there is some reason for optimism with regards to future environmental public participation efforts. This success indicates that a slower process will likely be needed, however. Those

who attended “events” did express interest in learning about environmental issues once they were there, but it appears unlikely that they would have been inspired to attend an educational meeting based solely on a published invitation. The avenue to instituting a participatory process in Mill Creek Watershed may need to pass through experiential stages prior to the initiation of regular meetings (a conclusion that was, in fact, drawn by the Non-Profit).

Concluding Thoughts on Barriers to Access

This chapter has shown that, while values associated with urban green space in Nashville are often high, most people experience at least some barriers to spending time in these places, while others experience barriers to participating in volunteer or participatory opportunities. Some of these barriers, such as limited time or concerns about safety, are common across all groups, but prove to be more problematic for residents with lower socioeconomic status. Others affect immigrant communities almost exclusively; perhaps most pervasive, and most actionable, among these barriers are those relating to knowledge. On the one hand, not all immigrants may have arrived in Nashville with knowledge about the existence of parks or the workings of public participatory process—let alone knowledge of where parks and volunteer opportunities are located and how to get to these locations. On the other hand, however, organizers of neighborhood and environmental efforts may not be aware that, after the initial years in Nashville have passed, “immigrant issues” becomes a broader topic. Many immigrants are interested in these environmental concerns, but still uncertain of the process for engaging with them; government and non-profit awareness of this interest is variable, however, and even when awareness is high, there may be limited capacity to deal with the needs of a population that is extremely diverse in regards to baseline knowledge of the issues at hand.

In exploring these barriers encountered by both residents and professionals in the Mill Creek Watershed, more is at stake than convenience, enjoyment, or success of a public participation initiative. If parks, pleasant streets, and other green spaces can stand in metonymic relation to neighborhood, a

barrier to accessing these places means more than the deprivation of an enjoyable view. There are social implications to these exclusions, just as there are consequences—and opportunities—associated with the barriers that may preclude people from participating in environmental efforts. Chapters 3 and 4 have dealt heavily with the consequences—or rather, they have detailed the deeper values associated with green space and neighborhood and thus elucidated what a barrier to participation really implies. The next and final chapter of this dissertation will end with an examination of opportunities.

CHAPTER 6

THE FLOOD AND ITS AFTERMATH: CONCLUSIONS AND RECOMMENDATIONS

The previous chapter described a number of potential barriers both to resident enjoyment of urban green space and to formation of a community-based Watershed Association in southern Nashville. Many of these barriers, once recognized, might have been surmountable, and as of the end of April 2010, the Task Force had considered most of these problems and identified ways that they might be addressed through a participatory process. There was awareness that the undertaking bore some of the characteristics that Irving and Stansbury have described as being indicative of a "high cost" public participation launch, as public outreach related to the watershed had not been carried out in this area in the past, and no members of the community had come forward about starting such a group. In spite of this, the potential to protect the crayfish and to benefit the urban watershed and its neighborhoods led to the initiative also being considered to be "high benefit," thus justifying time, expense, and effort in relation to the launch of the group. The flood, however, changed everything, adding a primal, structural assault to the network of possibly manageable difficulties that had already existed in the community. This chapter will look at the end of the watershed association initiation project in light of the flood. It will examine why it mattered so much, and how it affected both community and Non-Profit plans, motivations, and values. It will also examine the opportunities that remain after the flood, or that indeed, in some instances, may have been created by it. These will be discussed as recommendations for future efforts in the watershed, and will serve as a conclusion to the reporting of this work.

The Watershed Association and the Flood

One day, about a week after the flood, I stood in the parking lot of a small trailer park near a creek, where a group of people surveying the damage began to speculate on why the devastating flood had happened now. One man, who was from another state but who had lived in Nashville for over twenty

years, said that the trailer park flooded after every heavy rain, though of course those floods had not been of the same magnitude as the one that had just occurred. He asserted that the reason it had been so bad this time was that a short time before, "they" had come and dredged the creek, but stopped a bit upstream of the trailer park because "they found some bug up there they didn't want to disturb." He continued with a frustrated statement: "I understand wanting to save things, but how can you compare a bug to human life?" (The "bug" was the Nashville crayfish; at a meeting that took place not long after, an employee of a government department associated with the dredging confirmed that there was no other animal in the watershed that would stop this process). Several other people were part of this conversation, and one of the local volunteers who was helping to clean up debris, agreed: "yeah . . . *move* it or something." The same man who had originally expressed frustration at actions that, on that day, at least, seemed to be favoring a "bug" over a human, then went on to acknowledge that development patterns and building practices were contributors too, saying that "people are supposed to be caretakers of the earth, but it seems like we're always destroying it." One of the volunteers enthusiastically responded that "WE are helping," to which the man who had just lost his home replied "we're still always destroying it, I've learned that."

In some ways, this exchange encapsulated a general climate of opinion after the flood. On the one hand, there was a desire to place some blame, and perhaps a desire to be sure that there were actions that could have been taken to prevent the flood, even if they had not been carried out. The residents of the trailer park all intended to stay there if they could, and it would be better to feel that next time, something could be done to prevent such an event. This desire to stay helped make clear another aspect of the community mood after the flood, which was a strong pride and renewed love of place. The people who had suffered losses in the trailer park valued their community, valued a sense of neighborliness that they often referred to, and even explicitly expressed the value they placed on the trees, grass, and the stream behind the trailers that had recently all but destroyed them. This mood was prevalent across

Nashville, where the already-present senses of place associated with neighborhoods became, for awhile, expressly articulated ideas. In keeping with the ability of neighborhood to serve as connection point to the larger city, this pride was expressed in relation to both neighborhood and Nashville. Residents were focused on preserving the valued aspects of their communities that remained and rebuilding what was lost; witness the Flatrock Festival, held in spite of the flood, and the frequent statements by cleanup volunteers that Nashville was acting in accordance with its place in the "Volunteer State."

Layered on top of this desire to blame for an inadequacy and strong expression of love of place was a more nuanced understanding that general development patterns had something to do with the flood. Interestingly, at that point I'd been conducting research for several months and found no resident laypeople who had anything to say about the crayfish, or any strong interest in hearing more about it. Likewise, the topic of storm water runoff due to increased percentage of impervious surface in the watershed failed to engage interest, even though this problem influences both flood risk and wildlife health. In the months before the flood, the environmental issues most engaging to people had appeared to be tree planting and anything else that had the additional benefit of beautifying neighborhoods or improving health. The floodwaters, however, brought a need to understand, and a surfacing of memories about topics that residents might previously have viewed as irrelevant to their lives. It was interesting that in these efforts, the river and its tributaries remained blameless in people's conversation; proposed causes were always human—human development choices or humans favoring a "bug" over people. In some ways, the flood opened channels of conversation on watershed issues in the community; for once, water was all anyone was talking about, and there was widespread belief that various human actions could have lessened the impact of the natural disaster. However, the flood also closed down, for an indeterminate amount of time, the previously planned methods of engaging the community. Even the man who made the statement about the crayfish didn't really believe that the government chose the life of crayfish over the lives and homes of humans. He'd been talking about the

frequent smaller floods in the area which periodically did minor damage to homes, and was really expressing an opinion about a perception that the endangered species' well-being was being placed over the general convenience and well-being of people—with the unintended consequence of real devastation. However, *after* the flood, the experts could all be presumed to know the potential consequences. If people were to be convinced to support sustainable development, and to channel storm water appropriately on their own properties, the central motivation now had to be human well-being and rebuilding of beloved neighborhoods. It could not be protection of an invertebrate, no matter how endangered and unique. This was a substantial shift for a Task Force that had originally been dedicated to framing its narrative around the crayfish, and had, indeed, received support to carry out this work in the watershed because of the crayfish's presence there. During the Task Force meeting that took place sixteen days after the flood event, there was much discussion on how to move forward to hold the first public meeting of the new Mill Creek Watershed group and not "spend the whole time talking about the flood." It is important to note here that every individual in the Non-Profit and Task Force was horrified by the loss of life and property that the flood had caused, and many had spent time assisting in the cleanup. However, they faced a professional dilemma, and reluctance to change course was due largely to a fear of seeming opportunistic in the wake of the flood; it was a consequence of this concern that when it came time to talk about the next steps for the Watershed Association, it was difficult to retrench the original plan of dispassionate education. The government, the Red Cross, Hands on Nashville, many churches, and quite a few local and national non-profits were already dealing with the human effects of the flood, and they had the resources and experience to do it best. The Non-Profit and Task Force had different strengths, and in the earliest part of the first post-flood meeting, there was an expressed hope that some segment of the population could still find a non-flood focused educational "watershed 101"meeting worthwhile. Hence the attempt to find a way to hold a meeting that was not all "about the flood." Eventually, however, there was acknowledgement that even a year in the future,

"talking about water will mean talking about the flood in this area." With further discussion, and after considering the comments about the crayfish and dredging that had been expressed in the community, it was tentatively decided to wait until September to plan a community meeting. That would be over four months after the flood. By then, people whose homes were damaged would know whether they could rebuild or not, and would have begun to move forward with their plans for the future. Emotions could be assumed to have settled some by then too, though the Task Force members who worked closely with the community cautioned that they wouldn't be gone, and that Mill Creek Watershed, by that time, wouldn't be a haven for crayfish in the community's eyes, but a potential danger zone that someone—the government most likely—should be expected to mitigate. It was decided that the meeting would be structured to accommodate this, with the first half specifically slated for flood discussion, and the second half reserved for education about the nature of watersheds in general and the Mill Creek Watershed in particular. One Task Force member even noted that some positive focus might be possible by then. It was already known that it would not be possible to rebuild on every flooded property, and in the areas where rebuilding wasn't feasible, new opportunities could emerge. Some of those locations could be turned into parks, and it could be worthwhile to engage people in discussion of these possibilities, and of their desires for the use of those lands. At earlier meetings of the Non-Profit, similar ideas had been proposed, with suggestions to facilitate community participation in post-flood stream cleanups and stream assessments being prominent. Getting excessive debris out of streams can help prevent future flooding, in addition to being of assistance in reinstating streams as scenic and recreational neighborhood amenities, and community stream assessments can help track the quality of local waterways over time—a potentially useful activity following the contamination associated with a flood event.

It is notable that the foundation of these discussions was a belief that people would be more interested in becoming involved in this kind of work following the flood. Interviews in the community indicated

that there was indeed potential for higher involvement in efforts of this kind, though in those conversations, very particular motivations consistently emerged. In the weeks following the flood, emotions were high, and everyone's focus was on the loss of life and loss of homes and livelihoods that many had faced; the need to rebuild basic infrastructure was paramount. Even in that early post-flood time, though, people were expressing fierce love of their communities and determination to make things better than before. This "better than before" mentality is where work like that which was proposed in post-flood Task Force and Non-Profit meetings could potentially have found traction after several months had passed—and might still gain support now, over two years later. Human health, family bonding, and aesthetic beauty were frequently cited reasons for supporting environmental work before the flood, and both the current research and the literature indicate that volunteers of all types often value the ability of volunteering to make them feel part of something bigger (Kaplan and Kaplan 2008). In this case, watershed residents might have valued the opportunity to improve the aesthetics of their neighborhoods after the flood, and might also have embraced the sense that they were helping establish the safety of their waters for kayaking, wading, swimming, and other recreational activities that provide opportunities for families to come together and for people to exercise in fulfilling ways.

As noted previously, the concern about appearing opportunistic informed the initial attempt to continue with the original plan of launching the Watershed Association with a "watershed 101" educational focus rather than immediately examining the approaches briefly explored in the preceding paragraph. The potential of this strategy for failing to engage residents due to perceived lack of relevance or appropriateness has already been discussed, but it is also important to note that there were some undercurrents to public opinion that might also have caused such a strategy to lead to conflict. While the vast majority of people in Nashville were sympathetic to those affected by the flood, there was an inevitable sub-current of discourse that blamed the victims. By the end of May, when people discussed displacement around the "water cooler," there was already occasionally someone who mused "but I

wonder why they didn't have flood insurance." (Quite a bit of the damaged property wasn't in the 100 year flood plain). At one public meeting on water quality (scheduled before the flood but held after), a participant had been very vehement in her references to those who had lost their homes, saying that people shouldn't have built in flood plains if they didn't want this to happen, and that it didn't really matter that some residents had had the flood plain moved to them rather than the other way around. It was unclear how much accountability she thought rested with the government for granting variances, but she clearly thought some of it rested with the individuals for building or living in the flooded areas. No other meeting participants voiced support for this woman's opinions, and many expressed strong disagreement. However, the exchange revealed a type of thinking that was present in the community. This backdrop of minority opinion makes it clear that any attempt to bring people from the watershed together, discourage them from talking about the flood—even if "talking" meant "blaming" once participants saw all of the representatives from Metro in the room—and "educate" them about how watersheds work held potential to be construed as an attempt to blame residents for living their lives in a way that allowed the flood to impact them so strongly. Some in the trailer park had already, without much rancor, expressed their opinion that the welfare of humans was being placed below that of creatures that, though endangered, couldn't really think or suffer loss. After much discussion, and some trepidation regarding the possibility for becoming mired in the problems described above, the Task Force did decide to modify their efforts. The concept of "education" remained central at that time, though a seed had been planted regarding the concept of reframing that education's tone around the need to "rebuild." Based on the interviews I had conducted before the flood, and even the limited data I had collected after, this idea might have gained some traction had it been able to move forward. However, none of this came to be. No public Mill Creek Watershed Association meeting was held in September and no more Task Force meetings were held to plan or support such an endeavor later. One reason was the simple fact that available staff time on the parts of Task Force members and community

leaders was now largely taken up by directly flood-related work. Personnel support was reduced, while the complexity of actually launching the watershed group was markedly increased due to the new need to reframe almost every aspect of the effort. In one sense, the flood created an opportunity; it provided a situation which could make people notice the watershed, and perceive it as something that impacted their lives and was in need of being addressed. The literature indicates that agreement on the existence of a problem increases the likelihood of community involvement (Irvin and Stansbury 2004), and it had been clear that previously, water quality in relation to crayfish habitat was not a centrally agreed upon concern. However, the flood simultaneously increased the need for more complex, reframed, and nuanced outreach, and reduced the support that could be provided by government, non-profit, and social service groups. Additionally, just as "regular people" who are invited to participate in environmental decision making require choices comprised of reasonable alternatives if they are to become engaged, experts require the same. It is necessary for meeting hosts to develop choices that, in all cases, are likely to produce improvements to the aspects of the environment they are focusing on, while at the same time ensuring that these choices also contain elements that are already of value to non-engaged members of the community. Determining these values is a time-consuming task, and the reasonable plan of engaging community leaders to engage their own constituencies by helping to make connections that were meaningful to them was much easier planned than implemented. Existing community leaders are often already busy leading too many other things, and those who the Non-Profit reached out to generally expressed great enthusiasm about participating, but were unable to take on another major planning role. This trend was even more prevalent among immigrant communities than it was in neighborhood association groups. While the latter subset contained a relatively high percentage of people with some leisure time to devote to such activities, this was less often the case in immigrant communities. Representatives from Somali and Latino communities lamented both the fact that immigrants are inaccurately perceived as not being interested in issues such as the environment and the

fact that, in cases where a relatively small percentage of the community had become well-established in Nashville, the resources of community leaders of necessity must be directed towards issues of housing, language instruction, job skills training, transportation, and other basic matters of survival. The communities' established leaders are the best points of entry into communities, but they seldom have additional time to take on yet another leadership role, or another regular planning meeting. Nevertheless, several of them were willing to consider involvement, and had engaged with me regarding the possibility of learning more about the initiative. After the flood, though, the limited time these leaders had available for such efforts was eliminated. Attention was fully taken by issues of emergency housing, supplies, and general social support for their communities. With community leaders and government representatives similarly depleted due to flood-related responsibilities, the Non-Profit eventually decided that for the present, its watershed work would consist of carrying out modified versions of activities it had always conducted. Education to businesses and engaged residents was adapted to meet the needs of a post-flood Nashville. Rain barrel construction workshops and rain garden planting efforts open to residents in the Mill Creek Watershed have continued, although intensive outreach in communities not traditionally served by the Non-Profit has not been pursued. It is planned in the near future, however, and it is important to note that this "conclusion" reflects only what was accomplished during the period of this research; it does not represent a decision not to continue attempts to engage a more diverse body of participants. However, given limited resources and staff time, the decision was made to simply expand general outreach in the watershed as *part of Nashville* rather than trying to start a new group with activities unique to a watershed that residents seldom knew they lived in. Rather than being founded on the idea of presenting multiple educational seminars to residents, this outreach will draw on the Non-Profit's existing pattern of combining education with active engagement in the city. This may result, for the time being, at least, in expansion primarily among the white, middle and upper class participants that have historically been easily drawn to these efforts,

but it also may result in the creation of neighborhood bases in diverse communities from which more can eventually be built. At the Flatrock festival, two young residents, each of whom were involved with general efforts to increase cohesion in their communities, came by the Non-Profit's booth to say they already had rain barrels and would love to see more of them around their neighborhood. The Non-Profit's presence at the festival mattered; many families with multiple countries of origin inquired about the community fishing day that the Non-Profit advertised at this event, and the fishing day was subsequently attended by a diverse group of people—at least some of whom undoubtedly learned about it at the Flatrock Festival. The targeted tree giveaway at a site valued by members of the Latino community mattered as well. As more people become engaged by general environmental outreach in Mill Creek Watershed communities, more potential connections with other groups may be made. For now, then, efforts in Mill Creek Watershed will take place, but they will be framed as events to help the urban streams that are embedded in the neighborhoods of Nashville rather than as opportunities to embrace a unique community built around the watershed. It may well be that even in the long term, this will be the appropriate focus. The concept of the "special" watershed did not resonate nearly as strongly as the connection to neighborhood and community for most residents. However, even if this is the case, residents of the neighborhoods in the watershed have historically been little-reached by urban environmentalism initiatives. Some groundwork has now been laid to change this, and potential ways of building upon this groundwork will be discussed in the remaining sections of this chapter.

Conclusions: An Introduction to Some Actionable Ideas

This research was originally intended to explore the ways in which residents of Mill Creek Watershed engaged with ideas related to the environment in an urban watershed, as well as the ways in which this engagement could be activated to inspire involvement in a new watershed association. In reality, however, the process of engagement with the organization could not be studied because it never happened, and the analysis of preexisting engagement, while still conducted, came to take on a form

that differed greatly from that which was originally planned. In the watershed, it became clear that "the environment" was an external location which, while often viewed as important, was hardly viewed as local. This was significant because *local* concerns were precisely the ones that held meaning for research participants. The urban parks that environmental professionals valued as stream buffers were valued as embedded, shared attributes of neighborhoods to residents, and were invested with different meanings entirely. These meanings were strongly tied to notions of health, neighborhood and home; they were bound to concerns for liveability and quality of life in the places people occupied every day. These were matters to which residents had given thought, and, importantly, they were matters on which residents believed their efforts could make a difference to their communities. It is important to note that these values reported by *unengaged* residents are not dissimilar to values reported by engaged watershed advocates in the literature; in Wisconsin, research found that members of a watershed/arboretum conservation organization cited the need to preserve land for biodiversity, exercise, recreation, and social meeting reasons, leading the authors of the study to suggest that environmental organizations might be well-served by paying more attention to such values when they design their outreach messaging (Spartz and Shaw 2011). With this in mind, specific ways of engaging community members with the efforts of a watershed association are proposed below.

Community Mapping—A "Fundamentally Social and Human[13]" Endeavor

Chapters 2 and 5 showed the ways in which official representations of the watershed, the greenways, and the transportation system may not have matched the cognitive landscapes that people employed when navigating the city. Just as importantly, these representations did not provide the information that people new to the area, or new to the idea of valuing watersheds, wished to know. The Kaplans have proposed that one way of enhancing participation in environmental initiatives might involve the

[13] Williams, Daniel R., and Susan I. Stewart
1998 Sense of Place: An Elusive Concept That is Finding a Home in Ecosystem Management. Journal of Forestry 96(5):18-23.

creation of “environments that people can comprehend, environments where people can find the resources they require for the activities they wish to pursue” (Kaplan and Kaplan 1982). To this end, the ethnographic data collected in Nashville suggests that there is opportunity to facilitate participation in this way. Better maps might be created, targeted to breach known “knowledge barriers” regarding outdoor recreation and volunteering opportunities. Conversations with residents provide some important clues as to how to do this, and strongly suggest that the inclusion of already valued local institutions and landmarks may provide a helpful “starting point” for people engaging with the concept of the watershed for the first time. For example, the greenways and parks are the primary means by which residents experience the streams and creeks of the watershed, so they should be included. Schools were frequently mentioned as central to communities, both in neighborhoods that contain mostly native born citizens, and in neighborhoods with large immigrant and refugee populations. Elementary schools in Nashville are the ones that define neighborhoods; as children get older, they get funneled to regional middle and high schools, but the elementary schools—what residents tended to call “neighborhood schools”—are very local entities. Community members feel compelled to beautify them and devote time to them. Likewise, the schools provide services for members of the community, often hosting English as a Second Language Classes, flu shot clinics, and providing other resources for low income members of the population. Leaders in the immigrant communities stressed that schools are often the first public entities that immigrants engage with, and that they provide new United States residents with their first opportunities to begin practicing the basics of civic engagement. Further, elementary school playgrounds are used by many families in Mill Creek Watershed communities, and in some cases, the schools host gardens and other opportunities for the general public. These are landmarks that are meaningful to many, and which also mesh with “everyday life.” Parents who pick their children up at school, if aware of a greenway nearby, might find opportunities to take a walk before going home. In this regard, two non-elementary schools would be important to include on any

watershed map as well. There is a middle and high school located directly on the Mill Creek Greenway; given their proximity, they would be sensible to include even if their presence is a bit anomalous. Another area school maintains a strong association with the zoo, and due to the activities that take place there, might also be beneficial to include.

In addition to schools, community centers are important local landmarks for many. The Coleman Community Center is cited as an important, vibrant place by long-established Nashville residents as well as by representatives of Somali, Sudanese, and Latino immigrant communities. All manner of local groups hold their meetings there, and, if a Mill Creek Watershed Association Task Force ever reconvenes to try to draw the public into involvement again, it would probably be the best venue in the watershed for an initial meeting, being familiar to the widest range of people. (Original plans were for the meeting to be at the zoo, which may also be an excellent choice; certainly no negative opinions of the zoo were collected in this research). However, if one community organization stood out as both familiar and trusted to virtually all definable groups of people, it was the Coleman Community Center. Additionally, there is a community center adjacent to the Mill Creek Greenway, and several community centers that focus on serving immigrant communities. In any effort that *specifically* intends to include members of the immigrant communities in Nashville, these landmarks belong on publicly distributed maps. The geography of the city in the first few years in a new country can be narrow, and many people only have familiarity with a few core locations (Handy and Greenspan 2009). A relevant community center is often one of these. Another is often a place of worship, though it would be impossible to include all area worship centers on any map, and likely contentious to pick and choose from among them.

A major theme of this research has been that urban nature areas are inherently social, embedded in their communities and laden with meanings of neighborhood and home. The suggestions for inclusion of schools and community centers above reflect this, but do not go as far as they might. Many respondents

expressed some interest in watershed-based activities as a means of either beautifying or adding to the amenities of their neighborhoods, a social motivation distinct from a primary motivation of helping the environment for its own sake. These neighborhoods were populated with networks of people, networks of local businesses that residents actively tried to support, and local endeavors and volunteer opportunities, all taking place within a bounded, discrete, *named* location. Because interest in the watershed was so often expressed as interest in neighborhood beauty and cohesion, a map of the watershed that aims to engage new participants may do well to include the boundaries of neighborhoods. Admittedly, this can become messy. Not every space in the watershed appears to be named as a discrete segment of Nashville, and occasionally a given location may occupy one space but two or more places. Flat Rock, for example, encompasses several smaller neighborhoods, and even among these smaller entities, residents on certain streets or subdivisions may feel themselves part of yet another, smaller but still cohesive community. Additionally, some strongly cohesive neighborhoods—most notably Donelson—are only partially located within the watershed. Given these circumstances, adopting a "fuzzy border" approach to a map might be useful. The addition of several of the long established neighborhood boundaries to the map might help draw in established neighborhood groups, especially when combined with the presence of schools, community centers, and other important local landmarks. If the line of the watershed is superimposed on an area that still contains some meaningful information outside of the border, the problem of dividing neighborhoods may be minimized, and the general place of the watershed in the city will be made clearer. Such an approach may also help address the fact that people value the ability to carry out everyday tasks in association with their visits to green space. In one research interview, a woman expressed a wish for the greenways to connect to everyday life a little more easily, and expressed happiness at having devised her own routes to pick up small grocery items—and one time even to go to a Target on a busy road—while enjoying green, pleasant travel on foot or by bike the entire time. Another watershed resident felt lucky

that for him, the greenway *was* near his "everyday life." He could step outside his office and visit the edge of the greenway as part of his working day, and he reported doing so several times each week. Clearly every office and Target can't be included on a map. However, if enough familiar, community-oriented, and social landmarks are included, people may be more likely to gain a sense for where the watershed is, where the greenways are within it, where they live in relationship to it, and how their everyday lives are intertwined with it. As opportunity for exposure to the natural areas of the watershed grows, opportunity for attachment and investment in them also increases, and more people may begin to attach values to the idea of the watershed as a layer of their neighborhoods.

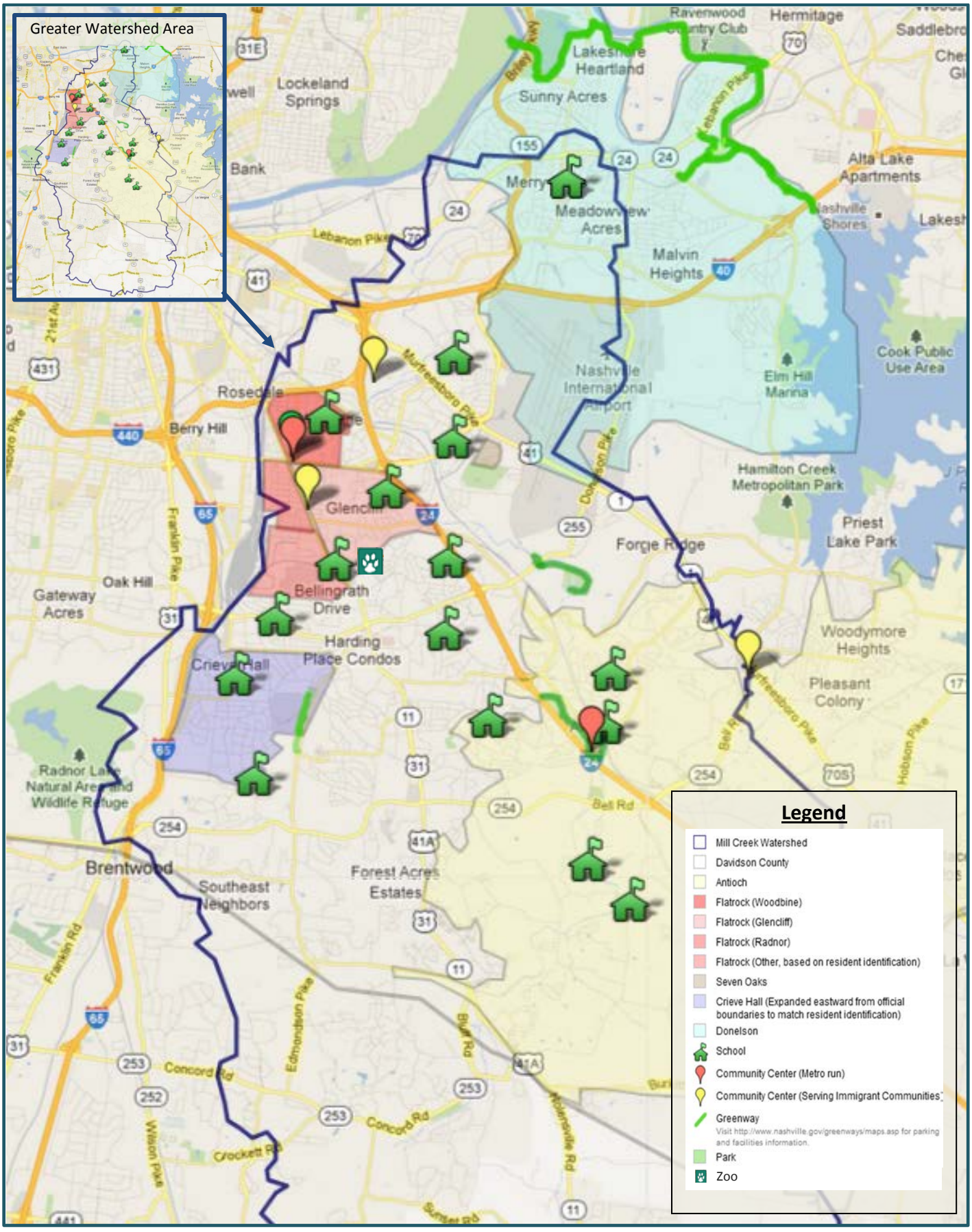
An engaging map of the watershed might also benefit from interactive components, at least when viewed on a web site—as the original watershed map was intended to be. This is most relevant in relation to the green spaces of the area, for which detailed information is not evident when viewing a static map. On the Mill Creek Greenway at Blue Hole Road, for example, there is a playground, as well as a wide open space before the actual trailhead. Very few people live close enough to this greenway to walk to it along safe routes; highlighting the fact that a trip to this location could include a walk, a picnic, and time on the playground or simply running around for children could be beneficial to those who aren't sure a dedicated trip to the greenway is justified. It would also be consistent with the stories respondents shared about enjoying picnics under the trees at that park, and of allowing their children to play on the equipment there. If the goal of maps on the watershed association web site was to help people begin to view the watershed as a place of value in their lives, inclusion of features that were already valued places in the geography could be beneficial in facilitating this connection. Such a feature could also be used to help "place" opportunities to work on watershed efforts as they came up. If volunteer events and meetings are mapped into the overall watershed map, opportunity for additional commentary in the context of the map also becomes possible. Local organizations conducting efforts of relevance could become invested in the process; for example, if the Donelson neighborhood opted to

make one of its community entrance plantings a rain garden, information about this community event could be included. So could, for example, a Crieve Hall event in which younger residents helped older ones with tree and garden planting. Community initiatives could begin to be framed as watershed efforts, and while this is no magic pill to inspire involvement, the potential to link watershed geography to existing cognitive maps is promising. The strategy would also make it possible for the web sites of local community centers and neighborhood associations to link to the watershed web site at a point with obvious relevance to the community.

Taking into account all of the observations described above, it is possible to make a preliminary attempt at an engaging watershed map. The example below combined the ideas and insights taken from the field work into a potentially interactive (but also printable) view of the Davidson County portion of the watershed that reflects some of the community landmarks that are already valued. Google Maps rather than Google Earth or ESRI ArcGIS was used to create this, and this was intentional. While slightly less polished, it is also more accessible and potentially interactive. Several community centers in the watershed (both immigrant and otherwise) offer Internet skills classes to residents; the use of a mapping application that is free and available to all allows for the possibility of instituting participatory mapping projects in the future, and also provides a clickable interactive map in a familiar format that can be embedded in any web site. (In the figure, note that the placement of the legend and watershed overview insets are formatted to fit on a standard sheet of letter paper; actual formatting would involve less obscuration of the map field).

Mill Creek Watershed Neighborhoods, Maps, and Greenways (Davidson County)

The watershed is full of places to visit, exercise, enjoy nature, and volunteer. Click your mouse over symbols to learn more. Zoom in to see what else is in the area—or use the 'Get Directions' function to see how to get to parks, greenways, and events by car, foot, bike, or public transportation[14].



[14] These functions only available on web version of map.

With a map of this nature, much becomes possible. The next three pages include zoomed views of potential uses for this map within the context of Google Maps. Three different scenarios are shown:

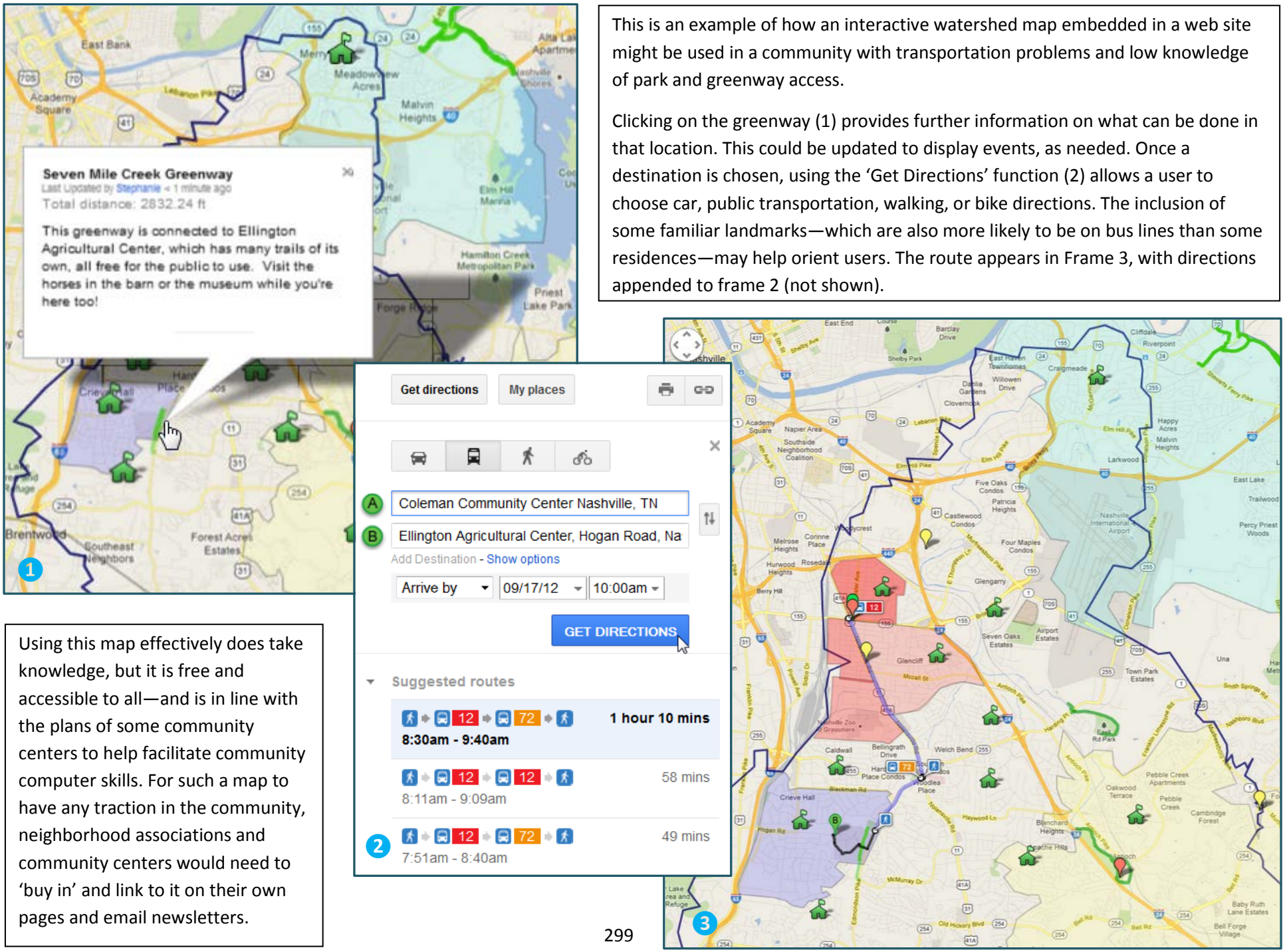
1. **Provision of meaningful information about green space in the watershed**. This view shows a "popout box" that can appear when a place is clicked; in this case, it gives viewers additional information about the fact that a greenway is contiguous with the park land of Ellington Agricultural Center. It also shows the way in which Google Maps' 'Get Directions' function can be employed to show public transportation routes to the area.
2. **Advertisement of watershed-related events**. This view shows information about an event in the context of its location, along with public transportation information.
3. **Potential mitigation of uneven accessibility.** This view is admittedly centered outside of the watershed. However, it addresses a concern that was mentioned several times by watershed residents—namely, that the best park in the city was virtually unreachable to many who either did not have cars or had reason to fear driving them in uncertain territory.

Taken together, these examples show potential ways of combining the professional sense of place of the watershed itself with that of the residents who live in the watershed neighborhoods. They also show that by combining the visual field with an engine that can generate directions and zoomed in views that show greater detail than initially accessible, some means to address barriers to enjoyment and participation might be identified.

How an Interactive Watershed Map Might be Used—Example 1 (Figure 3)

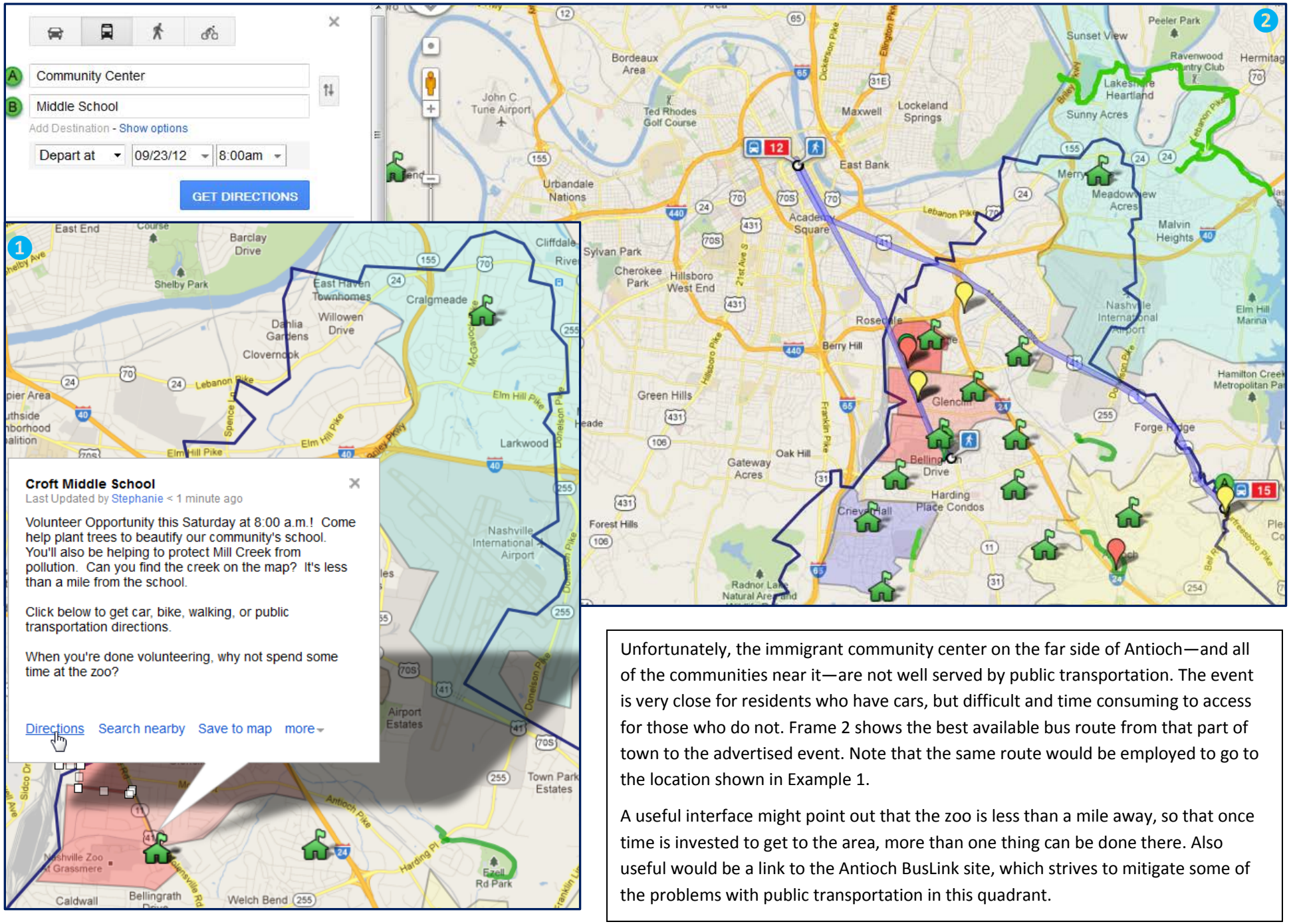
This is an example of how an interactive watershed map embedded in a web site might be used in a community with transportation problems and low knowledge of park and greenway access.

Clicking on the greenway (1) provides further information on what can be done in that location. This could be updated to display events, as needed. Once a destination is chosen, using the 'Get Directions' function (2) allows a user to choose car, public transportation, walking, or bike directions. The inclusion of some familiar landmarks—which are also more likely to be on bus lines than some residences—may help orient users. The route appears in Frame 3, with directions appended to frame 2 (not shown).



Using this map effectively does take knowledge, but it is free and accessible to all—and is in line with the plans of some community centers to help facilitate community computer skills. For such a map to have any traction in the community, neighborhood associations and community centers would need to 'buy in' and link to it on their own pages and email newsletters.

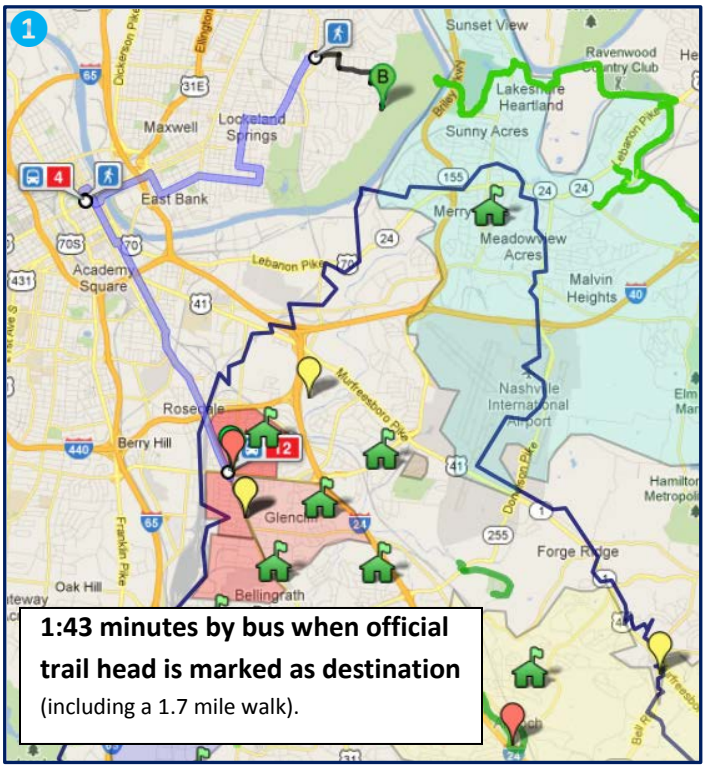
How an Interactive Watershed Map Might be Used—Example 2 (Figure 4)



Unfortunately, the immigrant community center on the far side of Antioch—and all of the communities near it—are not well served by public transportation. The event is very close for residents who have cars, but difficult and time consuming to access for those who do not. Frame 2 shows the best available bus route from that part of town to the advertised event. Note that the same route would be employed to go to the location shown in Example 1.

A useful interface might point out that the zoo is less than a mile away, so that once time is invested to get to the area, more than one thing can be done there. Also useful would be a link to the Antioch BusLink site, which strives to mitigate some of the problems with public transportation in this quadrant.

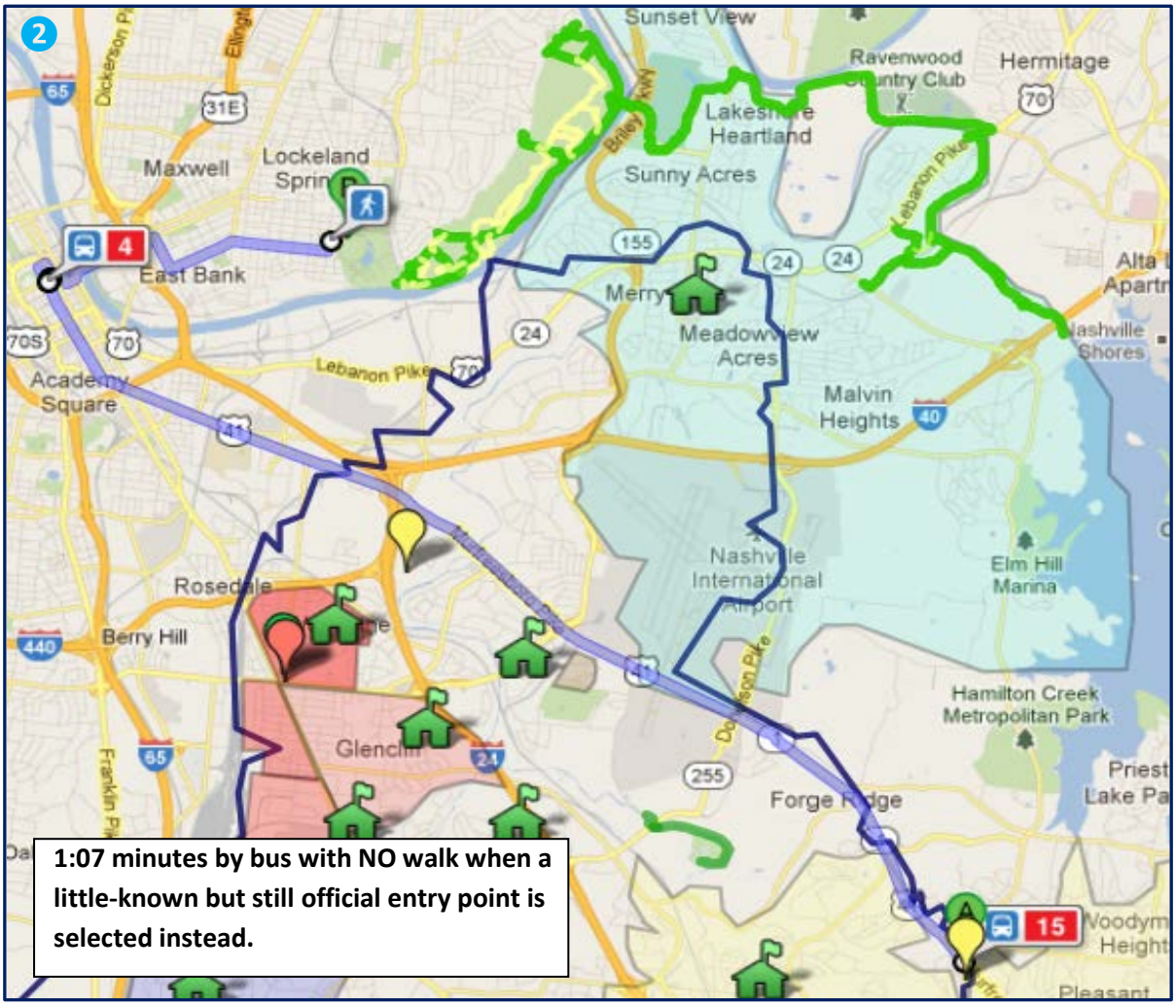
How an Interactive Watershed Map Might be Used—Example 3 (Figure 5)



Shelby Bottoms is outside of Mill Creek Watershed, but it is the largest outdoor recreation area in the city; lack of access from southeast Nashville is problematic in terms of both health and recreational equity (See Frame 1). Barriers here can be mitigated with application of some local knowledge—a neighborhood entry point to the park that is NOT feasible for those traveling by car, but that shortens the trip considerably for those traveling by bus. (See Frame 2).

Shelby Bottoms has miles of trails, which are connected to additional trails via the greenway system. It also has a fishing pond and a nature center; two hours to get to this park is a stretch, but considering its offerings, one hour is reasonable. An interactive watershed map could help residents access this important city resource. Additional information to include might be a reminder that bikes are allowed on city busses.—or rentable at the park itself for enjoyment and exercise. This map would also benefit from translation to Spanish.

Note that while not shown, the trip from Coleman Community Center is similarly shortened by this "trick."



In their web forms, these maps would of course be accompanied by information relating to the watershed *as* watershed, and the major intent of the proposed Mill Creek Watershed Association web site was to provide education about both the watershed and relevant volunteer and meeting opportunities.

Leaders at one of the community centers serving Latino immigrants were specifically interested in the idea of participatory mapping, and talked with me about how such a map might be developed collaboratively between community center members and those representing the watershed effort. The creation of such a map was to be attempted as part of this research, in fact, but in the end, circumstances at the community center made recruitment within the necessary time frame impossible—although it is planned as a post-research activity. However, preliminary discussion was informative, and helped define some of the mapping attempts shown above. The leadership at the community center believed that a useful map would include the greenways and parks, along with routes to access them. Bus routes and stops could be indicated, along with suggested routes for any required walk from the bus stop to the park. The inclusion of other entities near the parks and greenways could be helpful in placing them in a broader context that would allow for better planning on the part of potential visitors. The community center would have been included as a landmark, and community members would have been asked for other landmarks to include as well; the community center leadership proposed that this effort could be incorporated into their existing efforts to improve computer literacy. Google Maps contains all of the obvious information regarding streets and parks as well as the ability to superimpose lines marking greenways, markers labeling landmarks, and even additional, labeled information, all of which are demonstrated above. Alberto saw this as an opportunity both to facilitate access to outdoor recreation opportunities and to teach people how to use Google Maps—a generally valuable skill. It is unknown whether an effort such as this would directly facilitate participation in a public process; however, it is likely that such an effort could increase access to outdoor

recreation opportunities, and potentially to relevant volunteer opportunities. Further, the collaborative process might open broader discussions about community values, and lead to the discovery of new ways in which groups participating in the mapping might be engaged in community efforts.

Heritage Gardening and Community Art

The planting of rain gardens to help manage storm runoff is already an activity encouraged and facilitated by the Non-Profit. More than any other existing outreach activity, these efforts may speak to established values that already exist within the watershed's communities. Throughout the research, gardens were associated with both community cohesion and preservation of heritage by immigrant respondents and natives of Nashville. Members of both the Kurdish and Latino communities expressed value for the cultivating and gathering of food, activities that were beloved both because of their connections to a remembered heritage and their ability to foster social cohesion. Native residents of Flatrock were described as having a strong ethic of gardening. In Crieve Hall, younger residents report that the older members of the community value the plants and flowers that have been part of their neighborhoods for generations, seeing them as markers of heritage, while the young residents value their aesthetic appeal. There is an opportunity here. By nature, rain gardens incorporate vegetation native to the areas they are planted in; framing a rain garden as a heritage project might be of interest to many, particularly if some of the long-loved flowers that are already present in the community can become part of these new landscapes. In Crieve Hall, there are already structures in place to facilitate such efforts. The homeowners association regularly hosts educational seminars where such instruction could be introduced, and a committee of the association already facilitates efforts to share work among old and young members of the community. They have developed means of ensuring that all who wish to be involved in projects may contribute whether they have physical barriers or not, and they welcome new ideas for projects that the community can share. Potential roles in this project could include research into native water-tolerant plants, identification of areas in which a rain garden might be

functionally beneficial, planning of garden layout, initial planting, and ongoing maintenance. There are several valued community places in which such efforts might be embraced, and the strong ethic of valuing gardens in yards presents further opportunities. So does the ethic of "neighborliness" that was so frequently cited among members of this community. Clarifying the ways in which these gardens may help mitigate nuisance flooding for the neighbors of those who plant them speaks to a community ideal of helpfulness, and highlighting this may be a strategy that is useful both in Crieve Hall and in the communities of Flatrock and Donelson, which also hold strong community identities.

One other core activity of the Non-Profit is the leading of workshops to create rain barrels. At times, those who participate decorate their barrels, and this again provides a small opportunity, particularly for communities like Flatrock which have both a strong network of valued local artists and an established venue for the display and sale of that art. Flat Rock has a history of commissioning artists to create murals in otherwise unsightly areas of the community, and of supporting new local artists. They have also created a strong network of businesses that feel invested in their community. Encouraging a few of these valued businesses to install rain barrels and commissioning local artists to decorate them in themes reflective of the Flatrock identity might spark interest among other members of the community, which could be mobilized in the traditional rain barrel workshop model that the Non-Profit frequently uses. Of potential interest is the fact that many businesses in the area are now owned by immigrants, and are already "connected" to the culture of Flatrock through their financial support of the festival; asking both community centers and businesses owned by culturally diverse residents to contribute to this effort could draw interest. Jacobs has identified that parks located in mixed use neighborhoods fare better than others (Jacobs 1961), and in Mill Creek Watershed, this tendency seemed to be reflected in residents' fuzzy-bordered cognitive maps that included both green space and residential and business structures as parts of the same unit. Ideas that could help the environment while also drawing attention to local businesses, providing opportunities to learn or work together, adding beauty, or building upon

history were more valued than simple “efforts to improve the environment.” Taking advantage of this value for “mixed use” work when planning rain garden and rain barrel efforts might well be beneficial in facilitating participation.

Considering Flooded Lands and Health-Related Goals

The idea of involving residents in discussions on land use decisions after the flood was one that, judging from interviews, would have been likely to engage residents. Even before the flood, some watershed residents were involved with efforts to create a kayak launch or park in an area that had flooded repeatedly; this is a responsible pattern of development that does not increase flooding, and was wholly in keeping with the goals of the Task Force. Given the involvement of Metro in the Task Force, one way of engaging the community might have been to involve them in post-flood discussions about specific proposed uses for specific parcels of land. Incorporating broader education on water quality and watersheds within this framework might have proved to be a way of engaging both interest and participation (although undoubtedly, a public meeting on this subject with Metro representatives present would also have resulted in the airing of a certain amount of government blame). The Task Force had begun to consider incorporation of this strategy, although it was not implemented. However, future efforts to engage the community might still base themselves on this theme. Even before the large flood event, these issues were present in the community and spontaneously mentioned by residents. Two years after the disaster, opportunities to have these discussions continue, and emotion is now running less high. Focus in this area might combine a topic of interest in the community with a structured method of presentation in which community members could assess real options with confidence. One proposal in the literature suggests that “greening” urban water infrastructures such as storm ponds could create more small parks with greater access for a wide variety of people while simultaneously involving them in broader discussions of water quality and management (Wendel, et al. 2011). Identifying concrete (literally and figuratively) scenarios in which something similar could be

accomplished in Nashville might lead to an interesting platform of discussion. For example, given the general interest in health among community members, community opinion on ways in which these places could be used to improve physical activity and child play opportunities could be sought. Is a simple track such as the one that runs around Coleman Park sufficient? Or would residents like to see the addition of stations that facilitate other exercises periodically on the path, such as are available in some locations outside the watershed? Alternatively, would a community garden better address the health-related needs of the community? If so, what do residents think would be the barriers to general participation that would need to be addressed? What are the needs (and barriers) that the community experiences regarding bicycling opportunities? Could any of the barriers associated with short segments of greenway be avoided by careful attention to placement in purchased flood areas? Such an undertaking would be complex, of course, and would require a strong initial understanding on the part of the facilitators regarding what scenarios were possible; giving participants an open field to propose changes that will never be undertaken may lead to resentment if it causes people to feel that their voices were not heard (Irvin and Stansbury 2004), but a defined discussion of known possibles could be engaging—and, as plans proceeded, continued activity in the form of stream cleanups or monitoring programs might be implemented in these repurposed places, as described earlier in this chapter.

Work with Immigrant Community Centers

The suggestions outlined above overlap with a broader suggestion for engaging immigrant communities. This is that the community centers are important as a means of connection for outreach. The idea of neighborhood was among the most meaning-rich found in this study of southeast Nashville. However, just as most residents do not recognize a meaningful geography of watershed, many residents have yet to engage with a geography of neighborhood. This problem may be most prevalent among immigrant communities, for reasons described both by Winders (2012) and by participants in the current research. However, there is evidence that working with immigrant community centers may provide a point of

entry that can be employed in ways similar to the traditional model of contacting homeowner and neighborhood associations. The organizers of the Flat Rock festival had done this to good effect, and the single instance in which this was employed in watershed outreach efforts indicated that it could be a useful strategy. Before the tree giveaway, in addition to the generalized posting of fliers and craigslist advertisements, email outreach was conducted at several Latino community centers and a Kurdish community center, and the opportunity was announced at the Nashville Immigrant and Refugee Task Force monthly meeting. Basic information was translated into Spanish, and the giveaway was held at a Catholic church serving the Latino community. These were very brief email messages and announcements, which took little time to undertake. Outreach materials were short and given only in English (although information distributed at the event was available in Spanish). In spite of their very limited nature, these efforts had effects. A representative of the Latino community center was enthusiastic and agreed to pass the word along at the center; this combined with the verbal outreach of a man based at the church resulted in high participation from the Latino community. Further, after the event, a representative of the Kurdish community emailed to say that someone had passed the original email message on to her after the event, and she wondered if any trees were still available for the community center. They were, and she was enthusiastic about participation in related work efforts in the future, although her interests lay in aspects of the work that involved action rather than meetings. Whether Cal's earlier observation that the Kurdish community seemed "less meeting obsessed" than American culture is accurate or not, interest in some kind of involvement was expressed, as were suggestions on what aspects of the work were valued by the community. Given the minimal effort employed, and the complete absence of immigrant participation before this event, the outcome was notable. Immigrant (and other) community centers should be included in email distributions of event fliers that normally go to neighborhood and homeowner associations. One piece of added information that might be useful here is the inclusion of relevant bus routes to event and meeting locations.

Selecting these locations to be accessible by bus and paying attention to the timing of busses on the route when scheduling events might facilitate participation. So might asking community center leaders to help highlight the social and skills acquisition opportunities inherent in participation. Several immigrant leaders acknowledged that local government complexities are difficult to engage with for new residents, though one Somali leader stated that the people he serves are *very* interested in increasing their knowledge in this domain. He reported that many come to him with direct questions about the roles of various people and entities in Metro government. This indicates an opportunity; an initiative like the watershed association includes the opportunity to interact with government representatives and to learn more about the process by which the city of Nashville is governed. Working with community centers to discuss ways in which the broader goals of the environmental initiative could contain elements that would help some participants meet other goals, such as those related to increased civic engagement, could be useful.

Final Thoughts

None of the suggestions outlined above, based as they are in non-environmental meanings, are intended to imply that engagement with the core environmental messages of the Non-Profit is impossible. Rather, they strive to identify ways in which currently unengaged residents might be brought to the point of desiring the education available through an organization like the Non-Profit. Research in the watershed showed that for residents, urban nature is valued in accordance with its ability to match a "prototype" of green space, and that the places that residents come to value serve as connection points to concepts of neighborhood identity, social cohesion, memory, and health opportunities. In this schema, the concept of "the environment" is currently external to the local meanings associated with green space and neighborhood, and while residents may strongly value the opportunities to undertake actions that environmental professionals would view as environmentally beneficial, residents who participate in such efforts tend to view them as opportunities to help their

communities, improve health, or connect with their heritage. The goal of outreach, then, must be to find the means to make “the environment” a local place to residents, so that the activities they undertake for their communities may be seen as relevant to the health of neighborhood streams and creeks as well to human health and well-being. The suggestions offered above are derived from the current values of the community as expressed in the course of the research, and serve as starting points for facilitating engagement in diverse communities such as those found in Mill Creek Watershed.

REFERENCES

88th Congress, 2nd Session
1964 Wilderness Act. Public Law 88-577

Aamar, Nawal H.
1995 Islam and environment. *In* Population, Consumption, And The Environment. Religious And Secular Responses. H. Coward, ed. Pp. 123-136. Albany: State University of New York Press.

Abd-allah, Mohammed A., and Maha A. Abdallah
2006 Effect ff Cooking on Metal Content of Freshwater Crayfish *Procambarus clarkii*. Chemistry and Ecology 22(4):329-334.

Anderson, Benedict
1983 Imagined Communities: Reflections on the Origin and Spread of Nationalism. London: Verso Books.

Armenta, Amada
2012 From Sheriff's Deputies to Immigration Officers: Screening Immigrant Status in a Tennessee Jail. Law & Policy 34(2):191-210.

Arnold, Chester L., and C. James Gibbons
1996 Impervious Surface Coverage: The Emergence of a Key Environmental Indicator. Journal of the American Planning Association 62(2):243-258.

Arnstein, Sherry R.
1969 A Ladder Of Citizen Participation. Journal of the American Institute of Planners 35(3):216-24.

Austin, Maureen E., and Rachel Kaplan
2003 Identity, Involvement, and Expertise in the Inner City: Some Benefits of Tree-Planting Projects. *In* Identity and the Natural Environment: The Psychological Significance of Nature. S. Clayton and S. Opotow, eds. Pp. 205-226. Cambridge: Massachusetts Institute of Technology.

Barton, Jo, and Jules Pretty
2010 What Is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis. Environmental Science and Technology 44(10):3947-3955.

Beierle, Thomas C.
1999 Using Social Goals to Evaluate Public Participation In Environmental Decisions. Policy Studies Review 16(3/4):75-103.

Blackburn, Walton J., and Willa Marie Bruce
1995 Mediating Environmental Conflicts: Theory and Practice. Westport, CT: Quorum Books.

Bloch, Maurice E.F.

1998 How We Think They Think: Anthropological Approaches to Cognition, Memory, and Literacy. Boulder, CO: Westview Press.

Boym, Svetlana
2001 The Future of Nostalgia. New York, New York: Basic Books.

Brooks, Isis
2003 Making Here Like There: Place Attachment, Displacement, and the Urge to Garden. Ethics, Place and Environment 6(3):227-234.

Brulle, Robert J., and David N. Pellow
2006 Environmental Justice: Human Health and Environmental Inequalities. Annual Review of Public Health 27:103-124.

Bryant, W. Keith, et al.
2003 Participation in Philanthropic Activities: Donating Money and Time. Journal of Consumer Policy 26(1):43-73.

Buijs, Arjen E., Birgit H. M. Elands, and Fransje Langers
2009 No Wilderness for Immigrants: Cultural Differences in Images of Nature and Landscape Preferences. Landscape and Urban Planning 91(3):113-123.

Burgess, Jacquelin, Carolyn M. Harrison, and Melanie Limb
1988 People, Parks and the Urban Green: A Study of Popular Meanings and Values for Open Spaces in the City. Urban Studies 25(6):455-473.

Byrne, Jason
2012 When Green Is White: The Cultural Politics of Race, Nature And Social Exclusion in A Los Angeles Urban National Park. Geoforum 43:595-611.

Catholic Charities of Tennessee
2011 Know Your Rights Campaign, Vol. 2012. http://www.cctenn.org/services/immigration/know-your-rights-campaign, accessed March 12, 2012.

Cattell, Maria G.
2002 Remembering the Past, Re-Membering the Present: Elders' Constructions of Place and Self in a Philadelphia Neighborhood. *In* Social Memory and History: Anthropological Perspectives. J.J. Climo and M.G. Cattell, eds. Lanham, MD: AltaMira Press.

Churchman, Arza, and Michal Mitrani
1997 The Role of Physical Environment in Culture Shock. Environment and Behavior 29:64-86.

Clarke, Alice L.
2001 The Sierra Club and Immigration Policy: A Critique. Politics and the Life Sciences 20(1):19-28.

Clayton, Susan, and Susan Opotow

2003 Justice and Identity: Changing Perspectives on What Is Fair. Personality and Social Psychology Review 7(4):298-310.

Cobb, Edith
1977 The Ecology of Imagination in Childhood. New York: Columbia University Press.

Cohen, Deborah A., J. Scott Ashwood, Molly M. Scott, Adrian Overton, Kelly R. Evenson, Lisa K. Staten, Dwayne Porter, Thomas L. Mckenzie, and Diane Catellier
2006 Public Parks and Physical Activity Among Adolescent Girls. Pediatrics 118:1381-1389.

Cohen, Deborah A., Terry Marsh, Stephanie Williamson, Kathryn Pitkin Derose, Homero Martinez, Claude Setodji, and Thom McKenzie
2010 Parks and Physical Activity: Why Are Some Parks Used More Than Others? Preventive Medicine 50, Supplement(1):S9-S12.

Cohen, Deborah A. Thomas L. McKenzie, Amber Sehgal, Stephanie Williamson, Daniela Golinelli, and Nicole Lurie
2007 Contribution of Public Parks to Physical Activity. American Journal of Public Health 97(3):509-514.

Cole, Donald C., Jill Kearney, Luz Helena Sanin, Alain Leblanc, and Jean-Phillippe Weber
2004 Blood Mercury Levels Among Ontario Anglers and Sport-Fish Eaters. Environmental Research 95(3):305-14.

Comber, Alexis J., Chris Brunsdon, and Edmund Green
2008 Using a GIS-Based Network Analysis to Determine Urban Greenspace Accessibility for Different Ethnic and Religious Groups. Landscape and Urban Planning 86:103-114.

Coombes, Emma, Andrew P. Jones, and Melvyn Hillsdon
2010 The Relationship of Physical Activity and Overweight to Objectively Measured Green Space Accessibility and Use. Social Science & Medicine 70(6):816-822.

Cornfield, Daniel
2009 Immigrant Labor Organizing in a 'New Destination City' Approaches to the Unionization of African, Asian, Latino, and Middle Eastern Workers in Nashville. *In* Global Connections and Local Receptions: New Latino Immigration to the Southeastern United States. F. Ansley and J. Shefner, eds. Knoxville: University of Tennessee Press.

Cornfield, Daniel, Angela Arzubiaga, Rhonda BeLue, Susan L. Brooks, Tony N. Brown, Oscar Millar, Douglas D. Perkins, Peggy A. Thoits, and Lynn S. Walker.
2003 Final Report of the Immigrant Community Assessment. http://www.nashville.gov/humanrelations/docs/immigrant_community_assessment_nashville.pdf, accessed December 10, 2011.

Crieve Hall Neighborhood Association
2009a Crieve Hall Cares! http://crievehallcares.blogspot.com/2009/06/what-is-this-committee-about-and-how.html, accessed January 3, 2012

—

2009b History of Crieve Hall. http://20tn.club.officelive.com/history.aspx, accessed January 3, 2012.

Crieve Hall Tour of Homes Committee

2011 3rd Annual Crieve Hall Tour of Homes: YouTube. http://www.youtube.com/watch?v=SpjD2S0WDbg, accessed May 12, 2012.

Cunningham, Peter, Michelle Banker, Samantha Artiga, and Jennifer Tolbert

2006 Health Coverage and Access to Care for Hispanics in "New Growth Communities" and "Major Hispanic Centers." Henry J. Kaiser Family Foundation.

Curry, Nigel

2001 Community Participation and Rural Policy: Representativeness in the Development of Millennium Greens. Journal of Environmental Planning and Management 44(4):561-76.

Cutts, Bethany B., Kate J. Darby, Christopher G. Boone, and Alexandra Brewis

2009 City Structure, Obesity, and Environmental Justice: An Integrated Analysis Of Physical and Social Barriers to Walkable Streets and Park Access. Social Science & Medicine 69(9):1314-1322.

D'Andrade, Roy

1995 The Development of Cognitive Anthropology. Cambridge: Cambridge University Press.

Dahl, Rene Fukuhara

1993 Principles for Effective Cross-Cultural Communication. *In* Culture, Conflict, and Communication in the Wildland-Urban Interface. A.W. Ebert, D.J. Chavez, and A.W. Magill, eds. Social Behavior and Natural Resources Series. Boulder: Westview Press.

Dai, Dajun

2011 Racial/Ethnic And Socioeconomic Disparities in Urban Green Space Accessibility: Where to Intervene? Landscape and Urban Planning 102(4):234-244.

Davidson County Sheriff's Office

2009 287(6) Two-Year Review. https://docs.google.com/viewer?a=v&q=cache:rc6nniI7OIEJ:blackburn.house.gov/UploadedFiles/287g_Two_Year_Review.pdf+&hl=en&gl=us&pid=bl&srcid=ADGEESjeKdy4clOm-Su1iQkFmthD0Hm5ZQtQ26GNsE2NH4lTjXwIdx_3CRDf5LiEXBUe_ER29Jrhw3MSTG7nBUVkOqWPZg-iANqAnB-vJCmjjtNCFuzoNbUfCOwYHsH6v3GNTQD6GL3n&sig=AHIEtbRusJHtf_W9ZUH-QiiDbLHtOOkMuw&pli=1, accessed March 1, 2012.

—

2012 Sheriff's Office Will Not Renew 287(G) Delegation Of Authority Program Agreement Upon Expiration. Nashville. http://www.nashville-sheriff.net/2012/08/20/news-release-d-c-s-o-will-not-renew-287g-delegation-of-authority-program-agreement-upon-expiration/, accessed August 30, 2012.

Day, Rosemary

2008 Local Environments and Older People's Health: Dimensions from a Comparative Qualitative Study in Scotland. Health & Place 14:299-312.

Denton, Gregory M., Michael H. Graf, Deborah H. Arnwine, and Linda K. Cartwright
2010 2010 305(b) Report: The Status of Water Quality in Tennessee. Tennessee Department of Environment & Conservation.

DePrince, Albert E. Jr., and Kathleen Vinlove
2001 Supply Shocks, Confidence, and the State of the Economy. Midstate Economic Indicators 11(3):1-4.

Durand, Jorge, Douglas S. Massey, and Fernando Charvet
2000 The Changing Geography of Mexican Immigration to the United States: 1910-1996. Social Science Quarterly 81(1):1-15.

Ecklund, Elaine Howard.
2005 Models of Civic Responsibility: Korean Americans in Congregations with Different Ethnic Compositions. Journal for the Scientific Study of Religion 44(1):15-28.

Eff, Ellis A., and Emel C. Eff
2002 Sprawl-Inducing Migration in Tennessee: The Impact of Income and Price Differentials. Tennessee Housing Outlook 5(1):14-17.

Evans, Gary W., McKenzie L. Jones-Rounds, Goran Belojevic, and Francoise Vermeylen
2012 Family Income and Childhood Obesity in Eight European Cities: The Mediating Roles of Neighborhood Characteristics and Physical Activity. Social Science & Medicine (0).

Faber, Andrea, A. Wiley, Frances E. Kuo, and William C. Sullivan
1996 Children in the Inner City: Nature as a Resource for Play. *In* Twenty-Seventh Annual Meeting of the Environmental Design Research Association.

Ferre, M., A. Guitart, and M. Ferret
2006 Children and Playgrounds in Mediterranean Cities. Children's Geographies 4:173-183.

Fillmore, Charles
1982 Towards a Descriptive Framework for Spatial Deixis. *In* Speech, Place and Action: Studies in Deixis and Related Topics. R. Jarvella and W. Klein, eds. Chichester: Wiley.

Fisher, K. John, Fuzhong Li, Yvonne Michael, and Minot Cleveland
2004 Neighborhood-Level Influences on Physical Activity Among Older Adults: A Multilevel Analysis. Journal of Aging and Physical Activity 12:45-63.

Flatrock Heritage Foundation
2011 Flatrock Heritage Foundation. http://flatrockheritage.com/, February 9, 2012.

Floyd, Myron F., and Francis P. Noe

1993 The New Enviornmental Paradigm and Hispanic Cultural Influence. *In* Culture, Conflict, and Communication in the Wildland-Urban Interface. A.W. Ebert, D.J. Chavez, and A.W. Magill, eds. Pp. 85-98. Social Behavior and Natural Resources Series. Boulder: Westview Press.

Fox, Jonathan
1996 How Does Civil Society Thicken? The Political Construction of Social Capital in Rural Mexico. World Development 24(6):1089-1103.

Francis, Jacinta, Lisa J. Wood, Mathew Knuiman, and Billie Giles-Corti
2012 Quality or Quantity? Exploring the Relationship Between Public Open Space Attributes and Mental Health in Perth, Western Australia. Social Science & Medicine 74(10):1570-1577.

Fried, Marc
1982 Residential Attachment: Sources of Residential and Community Satisfaction. Journal of Social Issues 38:107-120.

Frumkin, Howard
2005 The Health of Places, the Wealth of Evidence. *In* Urban Place: Reconnecting with the Natural World. P.F. Barlett, ed. Pp. 253-270. Cambridge, MA: MIT Press.

Galster, George C.
2001 On the Nature of Neighborhood. Urban Studies 38:2111-24.

Gao, Yu, and Chong-Huai Yan
2007 Prenatal Exposure to Mercury and Neurobehavioral Development of Neonates In Zhoushan City, China. Environmental Research 105(3):390-399.

Garvin, Eugenia C, Carolyn C Cannuscio, and Charles C Branas
2012 Greening Vacant Lots to Reduce Violent Crime: A Randomised Controlled Trial. Injury Prevention.

Gearin, Elizabeth, and Chris Kahle
2006 Teen and Adult Perceptions of Urban Green Space Los Angeles. Children, Youth And Environments 16:25-48.

Giles-Corti, Billie, Melissa H. Broomhall, Matthew Knuiman, Catherine Collins, Kate Douglas, Kevin Ng, Andrea Lange, and Robert J. Donovan
2005 Increasing Walking: How Important Is Distance to, Attractiveness, and Size of Public Open Space? American Journal of Preventive Medicine 28(Suppl 2):169-76.

Gobeille, Alayne, Kimberly B. Morland, Richard F. Bopp, James H. Godbold, and Phillip J. Landrigan
2006 Body Burdens of Mercury in Lower Hudson River Area Anglers. Environmental Research 101(2):205-12.

Goetz, Scott, J, Robb K. Wright, Andrew J. Smith, Elizabeth Zinecker, and Ericka Schaub
2003 IKONOS Imagery for Resource Management: Tree Cover, Impervious Surfaces, and Riparian Buffer Analysis in the Mid-Atlantic Region. Remote Sensing of the Environment 88:195-208.

Gramann, James H., Myron F. Floyd, and Rogelio Saenz
1993 Outdoor Recreation and Mexican American Identity: A Benefits Perspective. *In* Culture, Conflict, and Communication in the Wildland-Urban Interface. A.W. Ebert, D.J. Chavez, and A.W. Magill, eds. Pp. 69-84. Social Behavior and Natural Resources Series. Boulder: Westview Press.

Greatschools
2010a Crieve Hall Elementary School: Teachers and Students. http://www.greatschools.org/cgi-bin/tn/other/1068#from..HeaderLink, January 4, 2012.

—
2010b Pennington Elementary School: Teachers and Students. http://www.greatschools.org/cgi-bin/tn/other/1134#from..HeaderLink, January 4, 2012.

Greenways Commission of Metro Parks Nashville
2011 Nashville Greenways. Nashville, TN. http://www.nashville.gov/greenways/, accessed April 4, 2012.

Greenways for Nashville Trailwatch Application. http://www.nashville.gov/greenways/pdfs/TrailWatchApplication.pdf, June 7, 2012.

Greenways for Nashville
2008a MC-EZ - Mill Creek Greenway -Ezell Park Section. Nashville: Google Maps. https://maps.google.com/maps/ms?ie=UTF8&hl=en&msa=0&msid=114351316891271919778.0004506a99bab6c7c4bdd&t=h&z=16, accessed August 21, 2012.

—
2008b MH/BH-Mill Creek Greenway-Blue Hole Rd., Vol. 2012: Google Maps. https://maps.google.com/maps/ms?ie=UTF8&hl=en&msa=0&msid=114351316891271919778.0004506a5987fc9a01803&t=h&z=16, accessed August 21, 2012.

—
2011 Nashville's Greenways. Nashville, TN. http://www.nashville.gov/greenways/pdfs/overallmap.pdf, accessed August 21, 2012

—
2012 Nashville's Greenways:Countywide Map (updated with Greenways Plan Information on the reverse side). Greenways for Nashville, ed. Nashville, TN.

—
2012 Greenways for Nashville. http://www.greenwaysfornashville.org/, accessed September 24, 2012.

Grundy, John, and Julie-Anne Boudreau
2008 "Living With Culture": Creative Citizenship Practices in Toronto. Citizenship Studies 12(4):347-63.

Hammitt, William E.
1982 Cognitive Dimensions of Wilderness Solitude. Environment and Behavior 14:478-493.

2000 The Relation Between Being Away and Privacy in Urban Forest Recreation Environments. Environment and Behavior 32(4):521-540.

Handy, Femida, and Itay Greenspan
2009 Immigrant Volunteering. Nonprofit and Voluntary Sector Quarterly 38(6):956-982.

Hardwick, Susan W., and James E. Meacham
2005 Heterolocalism, Networks of Ethnicity, and Refugee Communities in the Pacific Northwest: The Portland Story. The Professional Geographer 57(539-557).

Hartig, Terry
2008 Green Space, Psychological Restoration, and Health Inequality. Lancet 372(9650):1614-5.

Hawes, Ellen, and Markelle Smith
2005 Riparian Buffer Zones: Functions and Recommended Widths. Yale School of Forestry and Environmental Studies.

Hayward, Jeffrey
1989 Public Parks: Research, Planning, and Social Change. *In* Public Places and Spaces. I. Altman and E.H. Zube, eds. New York and London: Plenum Press.

Heimlich, Joe E.
2010 Environmental Education Evaluation: Reinterpreting Education as a Strategy for Meeting Mission. Evaluation and Program Planning 33(2):180-185.

Herbert, Steve
2005 The Trapdoor of Community. Annals of the Association of American Geographers 95(4):850-65.

Heynen, Nik, Harold A. Perkins, and Roy Parama
2006 The Political Ecology of Uneven Urban Green Space: The Impact of Political Economy on Race and Ethnicity in Producing Environmental Inequality in Milwaukee. Urban Affairs Review 42(1):3-25.

Hill, Carol E.
1998 Contemporary Issues in Anthropological Studies of the American South. *In* Cultural Diversity in the U.S. South: Anthropological Contributions to a Region in Transition. C.E. Hill and P.D. Beaver, eds. Pp. 12-33. Athens: University of Georgia Press.

Hillsdon, M., et al.
2006 The Relationship Between Access and Quality of Urban Green Space with Population Physical Activity. Public Health 120(12):1127-32.

Holland, Dorothy C., and Naomi Quinn

1987 Introduction. *In* Cultural Models of Language and Thought. D.C. Holland and N. Quinn, eds. Cambridge, UK: University Press.

Hollenhorst, Steven J., and Christopher D. Jones
2001 Wilderness Solitude: Beyond the Social-Spatial Perspective. USDA Forest Service Proceedings:56-61.

Holston, James
1999 The Modernist City and the Death of the Street. *In* Theorizing the City: The New Urban Anthropology Reader. S.M. Low, ed. Pp. 245-276: Rutgers University Press.

Howard, Chrostopher, Michael Lipsky, and Dale Rogers Marshall
1994 Citizen Participation in Urban Politics: Rise and Routinization. *In* Big City Politics, Governance, and Fiscal Constraints. G.E. Peterson, ed. Pp. 153-99. Washington, DC: Urban Institute Press.

Howell, Robert E., Marvin E. Olsen, and Daryll Olsen
1987 Desigining a Citizen Involvement Program: A Guidebook for Involving Citizens in the Resolution of Environmental Issues. Corvallis, OR: Western Rural Development Center.

Hull, Pamela C., Juan Canedo, Jose Aquilera, Erandi Garcia, Irma Lira, and Francisco Reyes
2010 Assessing Community Readiness for Change in the Nashville Hispanic Community Through Participatory Research. Progress in Community Health Partnerships: Research, Education, and Action 2(3):185-94.

Hull, R. Bruce
1992 How the Public Values Urban Forests. Journal of Arboriculture 18(2):98-101.

Hunter, Albert
1979 The Urban Neighborhood: Its Analytical and Social Contexts. Urban Affairs Quarterly 14:267-88.

—
1987 The Symbolic Ecology of Suburbia. *In* Neighborhood and Community Environments. I. Altman and A. Wandersman, eds. New York: Plenum.

Hunter, Lori
2000 A Comparison of the Environmental Attitudes, Concern, and Behaviors of Native-Born and Foreign-Born U.S. Residents. Population & Environment 21(6):565-580.

Hunter, MaryCarol.
2011 Impact of Ecological Disturbance on Awareness of Urban Nature and Sense of Environmental Stewardship in Residential Neighborhoods. Landscape and Urban Planning 101(2):131-138.

Irvin, Renée A., and John Stansbury
2004 Citizen Participation in Decision Making: Is It Worth the Effort? Public Administration Review 64(1):55-65.

Jacobs, Jane
1961 The Death and Life of Great American Cities. New York, New York: Random House.

Jacobson, Susan K., Mallory D. McDuff, and Martha C. Monroe
2006 Conservation Education and Outreach Techniques. New York: Oxford University Press.

Johnson, Cassandra Y., J. M. Bowker, John C. Bergstrom, and H. Ken Cordell
2004 Wilderness Values in America: Does Immigrant Status or Ethnicity Matter? Society & Natural Resources 17(7):611-628.

Johnson, Nancy, et al.
2002 User Participation in Watershed Management and Research. Water Policy 3(6):507-520.

Jorgensen, Anna, James Hitchmough, and Nigel Dunnett
2007 Woodland as a Setting for Housing-Appreciation and Fear and the Contribution to Residential Satisfaction and Place Identity in Warrington New Town, UK. Landscape and Urban Planning 79(3-4):273-287.

Kaczynski, Andrew T., Luke R. Potwarka, and Brian E. Saelens
2008 Association of Park Size, Distance and Features with Physical Activity in Neighborhood Parks. American Journal of Public Health 98(8):1451-1456.

Kaplan, Rachel, and Stephen Kaplan
1982 Cognition and Environment: Functioning in an Uncertain World. New York: Praeger Publishers.

—
1989 The Experience of Nature: A Psychological Perspective. New York: Cambridge University Press.

2002 Adolescents and the Natural Environment: A Time Out? *In* Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations. P.H. Kahn and S.R. Kellert, eds. Cambridge, MA: Massachusetts Institute of Technology

—
2005 Preference, Restoration, and Meaningful Action in the Context of Nearby Nature. *In* Urban Place: Reconnecting with the Natural World. Pp. 271-298. Cambridge, MA: MIT Press.

Kaplan, Stephen, and Rachel Kaplan
2008 Health, Supportive Environments, and the Reasonable Person Model. *In* Urban Ecology: An International Perspective on the Interaction Between Humans ans Nature. J.M. Marzluff, E. Shulenberger, W. Endlicher, M. Alberti, G. Bradley, C. Ryan, U. Simon, and C. ZumBrunnen, eds. Pp. 557-566. New York: Springer Science+Business Media, LLC.

Kaplan, Stephen, Rachel Kaplan, and Robert L. Ryan
1998 With People in Mind: Design & Management of Everyday Nature. Covelo, CA, USA: Island Press.

Kellert, Stephen R.
2002 Experiencing Nature: Affective, Cognitive, and Evaluative Development in Children. *In* Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations. P.H. Kahn and S.R. Kellert, eds. Cambridge, MA: Massachusetts Institute of Technology

—
2005 Building for Life: Designing and Understanding the Human-Nature Connection. Washington, D.C.: Island Press.

Kelly, John R.
1993 Wildland Recreation and Urban Society: Critical Perspectives. *In* Culture, Conflict, and Communication in the Wildland-Urban Interface. A.W. Ebert, D.J. Chavez, and A.W. Magill, eds. Pp. 33-47. Social Behavior and Natural Resources Series. Boulder: Westview Press.
.
Kempton, Willett M., James S. Boster, and Jennifer A. Hartley
1995 Environmental values in American culture. Cambridge, Mass.: MIT Press.

Kempton, Willett M, and Dorothy C. Holland
2003 Identity and Sustained Environmental Practice. *In* Identity and the Natural Environment: The Psychological Significance of Nature. S. Clayton and S. Opotow, eds. Pp. 317-342. Cambridge: Massachusetts Institute of Technology.

Kessel, A., J. Green, R. Pinder, P. Wilkinson, C. Grundy, and K. Lachowycz
2009 Multidisciplinary Research in Public Health: A Case Study of Research on Access to Green Space. Public Health 123(1):32-8.

King, Cheryl Simrell, Kathryn M. Feltey, and Bridget O'Neil Susel
1998 The Question of Participation: Toward Authentic Public Participation in Public Administration. Public Administration Review 58(4):317-26.

King, Cheryl Simrell, and Camilla Stivers
1998 Government is Us: Public Administration in an Anti-Government Era. Thousand Oaks, CA: Sage Publications.

Kollmus, A, and A Julian
2002 Mind The Gap: Why Do People Act Environmentally and What Are the Barriers to Pro-Environmental Behavior? Environmental Education Research 8(3):239-260.

Koskela, Hille
1999 Gendered Exclusions: Women's Fear of Violence and Changing Relations to Space. Geografiska Annaler, Series B, Human Geography 81(2):111-24.

Krenichyn, Kira
2006 'The Only Place to Go and be in the City': Women Talk About Exercise, Being Outdoors, and the Meanings of a Large Urban Park. Health & Place 12(4):631-643.

Kuo, Frances E., and William C. Sullivan
2001 Aggression and Violence in the Inner City. Environment and Behavior 33(4):543-571.

Kuo, Frances E., William C. Sullivan, Rebekah Levine Coley, and Liesette Brunson
1998 Fertile Ground for Community: Inner-City Neighborhood Common Spaces. American Journal of Community Psychology 26(6):823-851.

Kweon, Byoung-Suk, William C. Sullivan, and Angela R. Wiley
1998 Green Common Spaces and the Social Integration of Inner-City Older Adults. Environment and Behavior 30(6):832-858.

Kyle, Gerard T., Andrew J. Mowen, and Michael Tarrant
2004 Linking Place Preferences with Place Meaning: An Examination of the Relationship Between Place Motivation and Place Attachment. Journal of Environmental Psychology 24(4):439-454.

Lackey, Kelsey J, and Andrew T Kaczynski
2009 Correspondence of Perceived Vs. Objective Proximity to Parks and their Relationship to Park-Based Physical Activity. International Journal of Behavioral Nutrition and Physical Activity 6:53.

Lakoff, George
1987 Women, Fire, and Dangerous Things: What Categories Reveal about the Mind. Chicago: University of Chicago Press.

Larson, Kelli L., and Denise Lach
2008 Participants and Non-Participants of Place-Based Groups: An Assessment of Attitudes and Implications for Public Participation in Water Resource Management. Journal of Environmental Management 88(4):817-830.

Lave, Jean
1988 Cognition in Practice. CambridgeUK: University Press.

Lawrence, Rick L., and Debbie A. Deagen
2001 Choosing Public Participation Methods for Natural Resources: A Context-Specific Guide. Society & Natural Resources 14(9):857-72.

Lengen, Charis, and Thomas Kistemann
2012 Sense of Place and Place Identity: Review of Neuroscientific Evidence. Health & Place 18(5): 1162-1171.

Lichter, Daniel, and Kenneth Johnson
2009 Immigrant Gateways and Hispanic Migratoin to New Destinations. International Migration Review 43(3):496-518.

Linneweber, Volker, Gerhard Hartmuth, and Immo Fritsche
2003 Representations of the Local Environment as Threatened by Global Climate Change: Toward a Contextualized Analysis of ENvironmental Identity in a Coastal Area. *In* Identity and the Natural Environment: The Psychological Significance of Nature. S. Clayton and S. Opotow, eds. Pp. 227-246. Cambridge: Massachusetts Institute of Technology.

Liu, Gilbert C. Jeffrey S. Wilson, Rong Qi, and Jun Ying
2007 Green Neighborhoods, Food Retail and Childhood Overweight: Differences by Population Density. American Journal of Health Promotion 21:317-325.

Lo, Alex Y. H., and C. Y. Jim
2010 Differential Community Effects on Perception and Use of Urban Greenspaces. Cities 27(6):430-442.

Lotspeich, Katherine, Michael Fix, Jason Ost, and Dan Perez-Lopez
2003 A Profile of the Foreign-born in the Nashville Economic Market. The Urban Institute.

Lucas, Robert C.
1985 Visitor Characteristics, Attitudes, and Use Patterns in the Bob Marshall Wilderness Complex, 1970-82 (USDA Forest Service Research Paper No. INT-345). Intermountain Research Station.

Lynch, Barbara Deutsch, and Rima Brusi
2005 Nature, Memory, and Nation: New York's Latino Gardens and Casitas. *In* Urban Place: Reconnecting with the Natural World. P.F. Barlett, ed. Pp. 191-211. Cambridge, MA: MIT Press.

Maas, Jolanda, Sonja M. E. van Dillen, Robert A. Verheij, and Peter P. Groenewegen
2009 Social Contacts as a Possible Mechanism Behind the Relation Between Green Space and Health. Health & Place 15(2):586-95.

Maas, Jolanda, Robert A. Verheij, Peter P. Groenewegen, Sjerp de Vries, and Peter Spreeuwenberg
2006 Green Space, Urbanity, and Health: How Strong Is the Relation? Journal of Epidemiology and Community Health 60(7):587-92.

Macintyre, Sally, Laura Macdonald, and Anne Ellaway
2008 Lack of Agreement Between Measured and Self-Reported Distance from Public Green Parks in Glasgow, Scotland. International Journal of Behavioral Nutrition and Physical Activity 5(1):26.

Madge, Clare
1997 Public Parks and the Geography of Fear. Tijdschrift voor economische en sociale geografie 88(3):237.

Mahaffey, Kathryn R.
2004 Fish and Shellfish as Dietary Sources of Methylmercury and the Omega-3 Fatty Acids, Eicosahexenoic Acid and Docosahexaenoic Acid: Risks and Benefits. Environmental Research 95(3):414-28.

Mahaffey, Kathryn R., Robert P. Clickner, and Rebecca A. Jeffries
2008 Methylmercury nd Omega-3 Fatty Acids: Co-Occurrence of Dietary Sources with Emphasis on Fish and Shellfish. Environmental Research 107(1):20-9.

Mahkzoumi, Jala M.
2002 Landscape in the Middle East: An Inquiry. Landscape Research 27:213-228.

Martin, Deborah
2003 Enacting Neighborhood. Urban Geography 24(5):361-385.

Martinez, Teresa A., and Steve L. McMullin
2004 Factors Affecting Decisions to Volunteer in Nongovernmental Organizations. Environment and Behavior 36(1):112-126.

Massey, Douglas, Jacob Rugh, and Karen Pren
2010 The Geography of Undocumented Mexican Migration. Mexican Studies 26(1):129-52.

Mattis, Jacqueline S, Robert J. Jagers, Carrie A. hatcher, Dawn G. Lawhon, Eleanor J. Murphy, and Yohance F. Murray
2000 Religiosity, Volunteerism, and Community Involvement Among African American Men: An Exploratory Analysis. Journal of Community Psychology 28(4):391-406.

Mayor's Office of Neighborhoods
Mayor's Office of Neighborhoods, Vol. 2012.
http://www.nashville.gov/neighborhoods/index.asp, accessed April 4, 2012.

McCormack, Gavin R., Melanie Rock, Ann M. Toohey, and Danica Hignell
2010 Characteristics of Urban Parks Associated with Park Use and Physical Activity: A Review of Qualitative Research. Health & Place 16(4):712-726.

Mellor, David, Yoko Hawashi, Mark Stokes, Lucy Firth, Lucy Lake, Michael Staples, Sue Chambers, and Robert Cummins
2009 Volunteering and Its Relationship With Personal and Neighborhood Well-Being. Nonprofit and Voluntary Sector Quarterly 38(1):144-159.

Melosi, Martin
1995 Equity, Eco-racism and Environmental History. Environmental History Review 19(3).

Mendez, Michael
2005 Latino New Urbanism: Building on Cultural Preferences. Opolis: An international Journal of Suburban and Metropolitan Studies 1(1):33-48.

Mesch, Debra J., Patrick M. Rooney, Kathryn S. Steinberg, and Brian Denton
2006 The Effects of Race, Gender, and Marital Status on Giving and Volunteering in Indiana. Nonprofit and Voluntary Sector Quarterly 35(4):565-587.

Metropolitan Greenways Commission, and Greenways for Nashville
2012 Mill Creek Greenway: Lenox Village Segment. *In* Greenprint, Vol. Spring 2012.

Metro Water Services
Do you know how often you turn me on?
http://www.nashville.gov/water/splash/h2o_use.asp., accessed June 12, 2012

—

One drip can waste over 7,000 gallons a year. Don't let your money go down the drain. http://www.nashville.gov/water/education/public/drip.asp, accessed June 12, 2012.

—

Only YOU can protect your storm drain. http://www.nashville.gov/water/docs/education/Storm_Drain_Flyer.pdf, accessed June 12, 2012.

Metropolitan Government of Nashville & Davidson County Tennessee

2011 Mayor Karl Dean Challenges Community to "Walk 100 Miles" Towards a Healthier Lifestyle" http://www.nashville.gov/mayor/news/2011/0322.asp, accessed May 1, 2012.

—

2012 The May 2010 Nashville Flood. http://www.nashville.gov/flood/, accessed July 9, 2012.

Metropolitan Government of Nashville and Davidson County

2012 Antioch-Priest Lake Community Plan Update (Draft). Nashville, TN.

Miles, Irene, William C. Sullivan, and Frances E. Kuo

1998 Ecological Restoration Volunteers: The Benefits of Participation. Urban Ecosystems 2(27-41).

—

2000 Psychological Benefits of Volunteering for Restoration Projects. Ecological Restoration 18(4).

Mill Creek Watershed Association

2010 Mill Creek Watershed Association . . . Discovering an Urban Watershed. http://millcreeknashville.org/, accessed January 4, 2012.

Milligan, Christine, Anthony Gatrell, and Amanda Bingley

2004 'Cultivating Health': Therapeutic Landscapes and Older People in Northern England. Social Science & Medicine 58(9):1781-1793.

Mitchell, Richard

2012 Is Physical Activity in Natural Environments Better for Mental Health Than Physical Activity in Other Environments? Social Science and Medicine, In Press.

Mitchell, Richard, Thomas Astell-Burt, and Elizabeth A. Richardson

2011 A Comparison of Green Space Indicators for Epidemiological Research. Journal of Epidemiology and Community Health.

Mitchell, R., and F. Popham

2008 Effect of Exposure to Natural Environment on Health Inequalities: An Observational Population Study. The Lancet 372(9650):1655-1660.

Mohl, Raymond A.

2003 Globalization and the Nuevo New South. Journal of American Ethnic History 22(4):31-66.

Mojza, Eva J., Christian Lorenz, Sabine Sonnetag, and Carment Binnewies
2010 Daily Recovery Experiences: The Role of Volunteer Work During Leisure Time. Journal of Occupational Health Psychology 15(1):60-74.

Monroe, Martha C.
2003 Two Avenues for Encouraging Conservation Behaviors. Human Ecology Review 10(2):113-125.

More, Thomas A., and Brian R. Payne
1978 Affective Responses to Natural Areas Near Cities. Journal of Leisure Research 10:7-12.

Musick, Marc A., John Wilson, and William B. Bynum
2000 Race and Formal Volunteering: The Differential Effects of Class and Religion. Social Forces 78(4):1539-1570.

Nasar, Jack
1989 Perception, Cognition, and Evaluation of Urban Places. *In* Public Places and Spaces. I. Altman and E.H. Zube, eds. Pp. 31-56. New York and London: Plenum Press

Nash, Roderick Frazier
2001 Wilderness and the American Mind, 4th Edition. New Haven: Yale University Press.

Nashville Metropolitan Department of Parks and Recreation
2012 Fall 2012 Program Schedule, Coleman Park. Nashville, TN.

Nashville Metropolitan Transportation Authority
2011 Bike and Ride. Nashville, TN.

—
2012 System Map. Nashville, TN.

Nashville Public Television
2011 Fruits of Our Labor: A Look Inside a Kurdish Home Garden in Nashville. Nashville, TN.

National Weather Service
2011 Service Assessment: Record Floods of Greater Nashville: Including Flooding in Middle Tennessee and Western Kentucky, May 1-4, 2010. J.L. Haynes, ed. Silver Spring, Maryland.

National Weather Service Nashville Tennessee Weather Forecast Office
2010 May 1 & 2 2010 Epic Flood Event for Western and Middle Tennessee. Nashville, TN.

Nawyn, Stephanie J.
2005 Faithfully Providing Refuge: The Role of Religious Organizations in Refugee Assistance and Advocacy (Working Paper 115). San Diego: Center for Comparative Immigration Studies,University of California.

Nerbonne, Brian A., and Bruce Vondracek

2001 Effects oLocal Land Use on Physical Habitat, Benthic Macroinvertebrates and Fish in the Whitewater River, Minnesota US. Environmental Management 28(1):87-99.

Nguyen, Mai Thi, and Hannah Gill
2010 The Costs and Consequences of Local Immigration Enforcement in North Carolina Communities. The Latino Migration Project, The Institute for the Study of the Americas, University of North Carolina at Chapel Hill.

Nichols, Geoff, and Rita Ralston
2011 Social Inclusion through Volunteering: The Legacy Potential of the 2012 Olympic Games. Sociology 45(900-914).

Nielsen, Thomas Sick, and Karsten Bruun Hansen
2007 Do Green Areas Affect Health? Results from a Danish Survey on the Use of Green Areas and Health Indicators. Health & Place 13(4):839-850.

Office of the Mayor Metropolitan Government of Nashville and Davidson County, and The Land Trust for Tennessee
2011 Nashville Open Space Plan. Nashville: Naturally (Metro Nashville Government and The Land Trust for Tennessee). Nashville, TN.

Ostrom, Elinor
1990 Governing the Commons. New York: Cambridge University Press.

Pastor, Manuel Jr., Rachel Morello-Frosch, and James L. Sadd
2005 The Air is Always Cleaner on The Other Side: Race, Cpace and Ambient Air Toxics Exposures in California. Journal of Urban Affairs 27(2):127-148.

Pateman, Carole
1970 Participation and Democratic Theory. Cambridge: Cambridge University Press.

Payne, L, Elizabeth Orsega-Smith, Mark Roy, and G. Godbey
2005 Local Park Use and Personal Health Among Older Adults: An Exploratory Study. Journal of Park and Recreation Administration 23(2):1.

Perkins, Douglas D. and students in Vanderbilt University Department of Human & Organizational Development
2005 South Nashville Community Needs & Assets Assessment Final Report. Vanderbilt Department of Human & Organizational Development

Peters, Karin, Birgit Elands, and Arjen Buijs
2010 Social Interactions in Urban Parks: Stimulating Social Cohesion? Urban Forestry & Urban Greening 9(2):93-100.

Pfeffer, Max J., and J. Mayone Stycos
2002 Immigrant Environmental Behaviors in New York City. Social Science Quarterly 83(1):64-81.

Potestio, M. L., et al.
2009 Is there an Association Between Spatial Access to Parks/Green Space and Childhood Overweight/Obesity in Calgary, Canada? International Journal of Behavioral Nutrition and Physical Activity 6:77.

Potwarka, LR, AT Kaczynski, and AL Flack
2008 Places To Play: Association of Park Space and Facilities with Healthy Weight Status among Children. Journal of Community Health 33(5):344-50.

Pretty, J., J. Peacock, R. Hine, M. Sellens, N. South, and M. Griffin
2007 Green Exercise in the UK Countryside: Effects on Health and Psychological Well-Being, and Implications for Policy and Planning. Journal of Environmental Planning and Management 50(2):211-31.

Pyle, Robert Michael
2002 Eden in a Vacant Lot: Special Places, Species, and Kids in the Neighborhood of Life. *In* Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations. P.H. Kahn and S.R. Kellert, eds. Cambridge, MA: Massachusetts Institute of Technology

Ramakrishnan, S Karthick, and Celia Viramontes
2006 Civic Inequalities: Immigrant Volunteerism and Community Organizations in California. Public Policy Institute of California.

Rangel, Nicolas Jr.
2008 The Greeening of Hate?: Rhetoric in Sierra Club's Internal Division on Immigration Neutrality. American Communication Journal 10(4).

Ray, Brian K., and Ann Morse
2004 Building the New American Community: Newcomer Integration and Inclusion Experiences in Non-Traditional Gateway Cities. Migration Policy Institute.

Reed, Paul B., and L. Kevin Selbee
2000 Distinguishing Characteristics of Active Volunteers in Canada. Nonprofit and Voluntary Sector Quarterly 29(4):571-592.

Richardson, E. A., and R. Mitchell
2010 Gender Differences in Relationships between Urban Green Space and Health in the United Kingdom. Soc Sci Med 71(3):568-75.

Richardson, Miles
1980 Culture and the Urban Stage: The Nexus of Setting, Behavior and Image in Urban Places. *In* Environment and Culture. Pp. 209-242. New York: Plenum Press.

Rishbeth, Clare, and Nissa Finney
2006 Novelty and Nostalgia in Urban Greenspace: Refugee Perspectives. Tijdschrift voor economische en sociale geografie 97(3):281-295.

Rivlin, Leanne G.

1987 The Neighborhood, Personal Identity, and Group Affiliations. *In* Neighborhood And Community Environments. I. Altman and A. Wandersman, eds. New York: Plenum.

Roemmich, James N., Leonard H. Epstein, Samina Raja, Li Yin, Jodie Robinson, and Dana Winiewicz
2006 Association of Access to Parks and Recreational Facilities with the Physical Activity of Young Children. Preventive Medicine 43:437-441.

Rosch, Eleanor H.
1973 Natural Categories. Cogntive Psychology 4(3):328-50.

Rotenberg, Robert
2005 On the Sublime in Nature in Cities. *In* Urban Place: Reconnecting with the Natural World. P.F. Barlett, ed. Pp. 213-234. Cambridge: MIT Press

Rotolo, Thomas, John Wilson, and Mary Elizabeth Hughes
2010 Homeownership and Volunteering: An Alternative Approach to Studying Social Inequality and Civic Engagement1. Sociological Forum 25(3):570-587.

Russell, Steven, and Elizabeth Vidler
2000 The Rise and Fall of Government-Community Partnerships for Urban Development: Grassroots Testimony from Colombo. Environment and Urbanization 12(1):73-86.

Ryan, Robert L., and Robert E. Grese
2005 Urban Volunteers and the Environment: Forest and Prairie Restoration. *In* Urban Place: Reconnecting with the Natural World. P.F. Barlett, ed. Pp. 173-188. Cambridge, MA: MIT Press.

Saenz, Rogelio, Katharine M. Donato, Lourdes Gouveia, and Cruz Torres
2003 Latinos in the South: A Glimpse of Ongoing Trends and Research. Southern Rural Sociology 119(1-19).

Schank, Roger C.
1980 Language and Memory. Cognitive Science 4:243-84.

Schank, Roger C., and Robert P. Abelson
1977 Scripts, Plans, Goals, and Understanding: An Enquiry into Human Knowledge Structures. Hillsdale, NJ: Erlbaum.

Schilderman, P. A. E. L. , E.J. C. Moonen, L. M. Maas, I. Welle, and J.C. S. Kleinjans
1999 Use Of Crayfish in Biomonitoring Studies of Environmental Pollution of the River Meuse. Ecotoxicology and Environmental Safety 44:241-252.

Schlundt, David G, Margaret K. Hargreaves, and Linda McLellan
2006 Geographic Clustering of Obesity, Diabetes, and Hypertension in Nashville, Tennessee. Journal of Ambulatory Care management 29(2):125-132.

Schultz, P.Wesley
2002 Knowledge, Information, and Household Recycling: Examining the Knowledge-Deficit Model of Behavior Change. *In* New Tools for Environmental Protection: Education, Information,

and Voluntary Measures. T. Dietz and P.C. Stern, eds. Pp. 25-37. Washington, DC: National Academy Press.

Scott, David, and Wayne Munsun
1994 Perceived Constraints to Park Usage among Individuals with Low Incomes. Journal of Park and Recreation Administration 12:79-96.

Scottt, Katherine, Kevin Selbee, and Paul Reed
2006 Making Connections: Social and Civic Engagement among Canadian Immigrants. Canadian Council on Social Development.

Smith, B.E.
2001 The New Latino South: An Introduction. Center for Research on Women at the University of Memphis

Smith, David Horton
1994 Determinants of Voluntary Association Participation and Volunteering: A Literature Review. Nonprofit and Voluntary Sector Quarterly 23(3):243-263.

Smith, Patrick J., and Maureen H. McDonough
2001 Beyond Public Participation: Fairness in Natural Resource Decision Making. Society & Natural Resources 14(3):239-49.

Sommer, Robert
1989 Farmers' Markets as Community Events. *In* Public Places and Spaces. I. Altman and E.H. Zube, eds. New York and London: Plenum Press.

2003 Trees and Human Identity. *In* Identity and the Natural Environment: The Psychological Significance of Nature. S. Clayton and S. Opotow, eds. Pp. 179-204. Cambridge: Massachusetts Institute of Technology.

Sommer, Robert, Fred Leary, Joshua Summit, and Matthew Tirrell
1994 Social and Educational Benefits of Resident Involvement in Tree Planting. Journal of Arboriculture 20:170-175.

Spartz, James T., and Bret R. Shaw
2011 Place Meanings Surrounding an Urban Natural Area: A Qualitative Inquiry. Journal of Environmental Psychology 31(4):344-352.

Spotts, Daniel M., and Daniel J. Stynes
1984 Public Awareness and Knowledge of Urban Parks: A Case Study. Journal of Park and Recreation Administration 2(4):1-12.

—
1985 Measuring the Public's Familiarity with Recreation Areas. Journal of Leisure Research 17(4):253-265.

Stankey, George H.

1989 Solutide for the Multitudes. *In* Public Places and Spaces. I. Altman and E.H. Zube, eds. New York and London: Plenum Press.

Steinberg, Philip E., and George E. Clark
1999 Troubled Water? Acquiescence, Conflict, and the Politics of Place in Watershed Management. Political Geography 18(4):477-508.

Stewart, Emma
2004 Deficiencies in UK Asylum Data: Practical and Theoretical Challenges. Journal of Refugee Studies 17:29-49.

Stone Jr, Brian
2004 Paving over Paradise: How Land Use Regulations Promote Residential imperviousness. Landscape and Urban Planning 69(1):101-113.

Strauss, Claudia, and Naomi Quinn
1997 A Cognitive Theory of Cultural Meaning. Cambridge, UK: University Press.

Stuart, Susan M.
2005 Lifting Spirits: Creating Gardens in California Domestic Violence Shelters. *In* Urban Place: Reconnecting with the Natural World. P.F. Barlett, ed. Cambridge, MA: MIT Press.

Sugiyama, T., E. Leslie, B. Giles-Corti, and N. Owen
2008 Associations of Neighborhood Greenness with Physical and Mental Health: Do Walking, Social Coherence and Local Social Interaction Explain the Relationships? Journal of Epidemiology and Community Health 62(5):e9-19.

Sullivan, William C.
2005 Forest, Savanna, City: Evolutionary Landscapes and Human Functioning. *In* Urban Place: Reconnecting with the Natural World. P.F. Barlett, ed. Pp. 237-252. Cambridge, MA: MIT PRess.

Sundeen, Richard A.
1988 Explaining Participation in Coproduction: A Study of Volunteers. Social Science Quarterly 69:547-568.

Sundeen, Richard A., Cristina Garcia, and Sally A. Raskoff
2009 Ethnicity, Acculturation, and Volunteering to Organizations. Nonprofit and Voluntary Sector Quarterly 38(6):929-955.

Sundeen, Richard A., Sally A. Raskoff, and M. Cristina Garcia
2007 Differences in Perceived Barriers to Volunteering to Formal Organizations: Lack of Time Versus Lack of Interest. Nonprofit Management and Leadership 17(3):279-300.

Swearingen, William Scott Jr.
2010 Environmental City. Austin: University of Texas Press.

Tennessee Immigrant and Refugee Rights Coalition
2009 287(g) in Tennessee. http://www.tnimmigrant.org/287g/, accessed January 2, 2012.

Tennessee Wildlife Resources Agency
2012 Tennessee Fishing Licenses. http://www.tennessee.gov/twra/fishlicense.html, March 4, 2012.

The Conservation Fund
2010 Mitigation Site Report: Nashville Crayfish. The Conservation Fund.

Thomas, John Clayton
1995 Public Participation in Public Decisions. San Francisco: Jossey-Bass.

Till, Karen
1993 Neotraditional Towns and Urban Villages: The Cultural Production of a Geography of "Otherness." Environment and Planning D: Society and Space 11(709-32).

Tinsley, Howard E. A., Diane J. Tinsley, and Chelsey E. Croskeys
2002 Park Usage, Social Milieu, and Psychosocial Benefits of Park Use Reported by Older Urban Park Users from Four Ethnic Groups. Leisure Sciences 24(2):199-218.

Tuan, Yi-Fu
1976 Topophilia: A Study of Environmental Perception, Attitudes, and Values. New York: Columbia University Press.

—
1977 Space and Place: The Perspective of Experience. Minneapolis, MN: University of Minnesota Press.

Taylor, Ralph B., Stephen D. Gottfredson, and Sidney Brower
1984 Neighborhood Naming as an Index of Attachment to Place. Population and Environment 7:103-125.

Ulrich, RS, and D. Addoms
1981 Psychological and Recreational Benefits of a Residential Park. Journal of Leisure Research 13:43-65.

United States Census Bureau
2010a 2010 American Community Survey 1 Year Estimates: Selected Characteristics of the Native and Foreign-born Populations. Factfinder, ed.

—
2010b American Community Survey 2010 1 Year Estimates: Household Size by Vehicles Available. Factfinder, ed.

—
2010c Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data. Factfinder, ed.

United States Fish and Wildlife Service
1988 Nashville Crayfish (*Orconectes shoupi*) Recovery Plan (1st Revision). U.S. Fish and Wildlife Service. Atlanta.

United States Immigration and Customs Enforcement
Fact Sheet: Delegation of Immigration Authority Section 287(g) Immigration and Nationality Act. http://www.ice.gov/news/library/factsheets/287g.htm, accessed August 1, 2012.

United States Environmental Protection Agency
1996 Community-Based Environmental Protection. http://www.epa.gov/care/library/howto.pdf, accessed August 9, 2012.

US Army Corps of Engineers, Nashville District
2007 ITR/Peer Review Plan Mill Creek Watershed Feasibility Study. Nashville, TN.

Valadez, Jorge M.
2001 Deliberative Democracy, Political Legitimacy, and Self-Determination in Multicultural Societies. Boulder, CO: Westview Press.

van den Berg, A. E., et al.
2010 Green Space as a Buffer Between Stressful Life Events and Health. Social Science & Medicine 70(8):1203-10.

Vaske, Jerry J., and Katherine C. Kobrin
2001 Place Attachment and Environmentally Responsible Behavior. Journal of Environmental Education 32(4):16-21.

Walk 100 Miles with the Mayor
2011 Join Mayor Karl Dean and Walk 100 MIles of Local Parks and Greenways this Spring and Summer. http://www.walk100miles.com, accessed May 1, 2011.

Wandersman, Abraham, et al.
1987 Who Participates, Who Does Not, and Why? An Analysis of Voluntary Neighborhood Organizations in the United States and Israel. Sociological Forum 2(3):534-555.

Warburton, J., and M. Gooch
2010 Stewardship Volunteering by Older Australians: A Generative Response. Local Environment 12(1):43-55.

Watanabe, Karen H., et al.
2003 Fish Tissue Quality in the Lower Mississippi River and Health Risks from Fish Consumption. Science of the Total Environment 302(1-3):109-126.

Weber, Edward P.
2000 A New Vanguard for the Environment: Grass-Roots Ecosystem Management as a New Environmental Movement. Society & Natural Resources 13(3):237-59.

Weeks, Edward C.

2000 The Practice of Deliberative Democracy: Results from Four Large-Scale Trials. Public Administration Review 60(4):360-71.

Weintraub, Max, and Linda S. Birnbaum
2008 Catfish Consumption as a Contributor to Elevated PCB Levels in a Non-Hispanic Black Subpopulation. Environmental Research 107:412-417.

Wendel, Heather E., Joni A. Downs, and James R. Mihelcic
2011 Assessing Equitable Access to Urban Green Space: The Role of Engineered Water Infrastructure. Environmental Science & Technology 45(16): 6728-6734.

West, Patrick C.
1993 The Tyranny of Metaphor: Interracial Relations, Minority Recreation, and the Wildland-Urban Interface. *In* Culture, Conflict, and Communication in the Wildland-Urban Interface. A.W. Ebert, D.J. Chavez, and A.W. Magill, eds. Pp. 109-115. Social Behavior and Natural Resources Series. Boulder: Westview Press.

Whittaker, Matthew, Gary M Segura, and Shaun Bowler
2005 Racial/Ethnic Group Attitudes Toward Environmental Protection in California: Is "Environmentalism" Still a White Phenomenon? Political Research Quarterly 58(3):435-447.

Whitzman, Carolyn
2002 Feminist Activism for Safer Social Space in High Park, Toronto: How Women Got Lost in the Woods. Canadian Journal of Urban Research 11(2):299-322.

Wilbur, JoEllen, Peggy Chandler, Barbara Dancy, JiWon Choi, and Donna Plonczynski
2002 Environmental, Policy, and Cultural Factors Related to Physical Activity in Urban, African-American Women. Women and Health 36:17-28.

Williams, Bryan L., Hoi K. Suen, Sylvia Brown, Roberta Bruhn, Rich De Blaquiere, and Sarah E. Rzasa
2001 Hierarchical Linear Models of Factors Associated with Public Participation among Residents Living Near the U.S. Army's Chemical Weapons Stockpile Sites. Journal of Environmental Planning and Management 44(1):41-65.

Williams, Daniel R., and Susan I. Stewart
1998 Sense of Place: An Elusive Concept that is Finding a Home in Ecosystem Management. Journal of Forestry 96(5):18-23.

Wilson, John
2000 Volunteering. Annual Review of Sociology 26:215-40.

—
2012 Volunteerism Research. Nonprofit and Voluntary Sector Quarterly 41(2):176-212.

Winders, Jamie
2006a 'New Americans' in a 'New-South' City? Immigrant and Refugee Politics in the Music City. Social and Cultural Geography 7(3):421-435.

—

2006b Placing Latinos in the Music City: Latino Migration and Urban Politics in Nashville, Tennessee. *In* Latinos in the New South: Transformations of Place. H.H. Smith, ed. Pp. 167-190. Burlington, VT: Ashgate Publishing Company.

—

2012 Seeing Immigrants: Institutional Visibility and Immigrant Incorporation in New Immigrant Destinations. The ANNALS of the American Academy of Political and Social Science 641(1):58-78.

Zanolini, Rebecca

2012 Casa Azafran Breaks Ground with Seeds of Hospitatlity, Integration, and Saffron. Hispanic Nashville, April 22, 2012.

Zavestoski, Stephen

2003 Constructing and Maintaining Ecological Identities: The Strategies of Deep Ecologists. *In* Identity and the Natural Environment: The Psychological Significance of Nature. S. Clayton and S. Opotow, eds. Pp. 297-316. Cambridge: Massachusetts Institute of Technology.

Zelinsky, Wilbur, and Barrett Lee

1998 Heterolocalism: An Alternative Model of the Sociospatial Behaviour of Immigrant Ethnic Communities. International Journal of Population Geography 4(4):281-298.

Zuniga, V., and R. Hernandez-Leon

2001 A New Destination for an Old Migration: Origins, Trajectories, and Labor Market Incorporation of Latinos in Dalton, Georgia. *In* Latino Workers in the Contemporary South. A.D. Murphy, C. Blanchard, and J.A. Hill, eds. Pp. 126-135. Athens: University of Georgia Press.