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Why Garden? Personal and Abiding Motivations for Community Gardening in New York City

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ABSTRACT

We explore the underlying motivations of NYC community gardeners in order to gain greater insight into how these valued public resources support individual and community well-being. Semi-structured interviews were used to capture a range of enduring gardener motivations over time. We find that the underlying motivations of NYC community gardeners are both personal and collective. For many, community gardens provide a space for reflection and for profound connection to the natural world. Gardening was reported to be restorative, and to help to strengthen an individual's connection to a larger community or cultural heritage. Themes of joy and personal fulfillment were consistently most prevalent over time, while the impulse to improve the community decreased in prevalence, and food production and cultural identity connections became more common motivations, possibly reflecting broader social shifts in NYC neighborhoods.

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Introduction

Community gardens are a unique type of urban green space, one that can provide for creative expression and democratic practice, as well as much needed interaction with nature (Glover, Shinew, and Parry 2005; Kingsley, Townsend, and Henderson-Wilson 2009; Draper and Freedman 2010). For generations of Americans, community gardens have proved to be a source of individual and community well-being, serving as restorative oases in the dense urban matrix (Lawson 2005). Community gardens have been used to respond to a series of social crises over the last century, and have been credited with creating engaged citizens and healthier communities (Pudup 2008). They are quintessential examples of grassroots land management, which provide multiple benefits to their user-managers (Stone 2009). Community gardens are maintained primarily by volunteers, who spend a great deal of time and effort to maintain these spaces, despite numerous challenges that include threats of demolition, shifting neighborhood dynamics and acquisition of resources (Campbell 2017). Community gardens are also shaped by the tension between competing publics and institutional arrangements, including a neoliberal tendency toward commodification and the rollback of state service provision

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(Eizenberg 2013; McClintock 2014). As such, urban gardens have been both celebrated as resistant to such neoliberal tendencies and also critiqued as privatized entities that may exclude as much as they include certain practices and people, particularly in the face of intense population pressure and displacement in gentrifying neighborhoods (Eizenberg 2012). Evidence suggests that certain types of gardeners (activists versus consumers; citizens versus entrepreneurs) as well as certain institutional arrangements lead to greater or lesser neoliberal tendencies and practices within the garden (Barron 2017). Others have suggested it is the presence of gardeners who act at the intersection of self and community that ensures the garden to be a less privatized and commodified space (Veen et al. 2016).

Given these nuanced tensions and challenges, what motivates individual gardeners to voluntarily maintain community gardens as public spaces? And in what ways do these motivations change over time? Gardeners may be motivated by factors that go beyond the stewardship of nature or the provision of food but rather demonstrate an expression of cultural identity or civic engagement (McVey, Nash, and Stansbie 2018). Greater insight into the individual motivations and how they are shared across the gardening community will help ensure that these spaces continue to exist as beneficial public resources. Furthermore, the meaning and importance of these spaces to gardeners over time is relevant 'beyond the garden gate' as it may reveal an abiding aspect of civic life that is essential to urban sustainability (Ramaswami et al. 2016; Sampson 2017).

The social structure of community gardening distinguishes it from other types of landscaping or urban farming practices. Community gardens are community-managed spaces that provide varied functions including recreation and relaxation, food production, public assembly, and space for cultural events (Saldivar-Tanaka and Krasny 2004; Mees and Stone 2012). As community-managed open space, the gardens provide rare opportunities for volunteer stewards to shape the physical form of urban land to produce multiple sociocultural ecosystem services (McMillen et al. 2016). Often arising from an opportunity to take over vacant or unused urban land, community gardens are typically considered to be any piece of land cultivated and managed by a group of people, using either individual or shared plots on private or public land.

Myriad claims have been made by planners, resource managers, and scientists about the benefits of community gardens to individuals and communities, including the provision of: fresh produce, neighborhood open space, and educational opportunities; individual, community, and environmental health, well-being, and resilience; neighborhood restoration or stabilization; and refuge from environmental disaster (Twiss et al. 2003; Westphal 2003; Lawson 2005; Wakefield et al. 2007; Kingsley, Townsend, and Henderson-Wilson 2009; Okvat and Zautra 2011; Chan DuBois, and Tidball 2015). Scholars have argued that community gardens can nurture democratic citizenship, civic values, and participation in advocacy or policymaking among their members (Baker 2004; Glover, Shinew, and Parry 2005; Eizenberg 2013). Gardens are also seen as one way in which residents can reclaim space and revitalize neighborhoods, though their presence may also contribute to neighborhood gentrification (Glover 2003; Krones and Edelson 2011; Wolch, Byrne, and Newell 2014). Over the course of time, community gardens can foster social resilience, strengthening collective efficacy and attachment to place (Teig et al. 2009; Comstock et al. 2010). Many have framed the garden as a social–ecological site and a place of innovation and exchange—an incubator for

strengthening social cohesion, neighborhood equity, and human well-being that is critical for an engaged civil society and urban sustainability (Krasny and Tidball 2009; Tidball and Stedman 2013; Ramaswami et al. 2016; Sampson 2017).

As sites of urban nature, community gardens may also provide restorative benefits to individuals in the face of daily stress and attentional fatigue experienced as part of city life. Natural settings, including those within urban areas, can aid psychological restoration and provide the psychophysiological benefits of renewing cognitive and response capabilities (Herzog et al. 1997; van den Berg, Hartig, and Staats 2007). Research has found that in addition to attentional recovery benefits, restorative environments provide the distinct and potentially more profound benefits of personal reflection (Herzog et al. 1997). The opportunity for reflection while in a community garden or other urban green space may lead to the development of environmental identity: "a sense of connection to some part of the nonhuman natural environment that affects the way we perceive and act toward the world; a belief that the environment is important to us and an important part of who we are" (Clayton and Opotow 2003, pp. 45–46). A related concept is place identity, which refers to the component of identity that is associated with feelings about a particular space (Clayton and Myers 2015), and place attachment, which describes emotional ties to place (Hidalgo and Hernandez 2001). Through their stewardship of the urban environment, community gardeners can strengthen their attachment to place, which is important for identity development and is also an indicator of social resilience (Clayton and Myers 2015; McMillen et al. 2016). We also know that community gardens are places of civic engagement and social networking. These activities tend to strengthen collective efficacy and mitigate the impact of social inequities—conditions essential for achieving urban sustainability, particularly in the face of urban social change associated with gentrification, such as population displacement and neighborhood affordability (Wolch, Byrne, and Newell 2014; Ramaswami et al. 2016; Sampson 2017).

Much of the existing literature reviewed here focuses on the measured or perceived benefits of community gardens or other urban green space. A recent review of urban community gardening research finds enjoyment of nature and enhancement of spiritual or cultural practices to be less common motivations in the published literature than the desire to consume fresh food and enhance social cohesion (Guitart, Pickering, and Byrne 2012). Motivations for community gardening are often assessed using survey questions with Likert-type scales, sometimes supplemented with in-depth interviews with gardeners or garden program coordinators (e.g., Armstrong 2000; Shinew, Glover, and Parry 2004; Ohmer et al. 2009). Several of these studies have called for a landscape-scale temporal approach to qualitative research about personal motivations for community gardening, which may provide greater insight into why this form of urban environmental stewardship persists and the role it plays in sustaining active care of gardens across neighborhoods and over time. This study seeks to better understand the motivations of gardeners in New York City to learn what might be abiding about this practice over time.

Although community gardening has played an important role in the lives of Americans for over a century (Lawson 2005), we do not know what sustains the commitment to gardening, given that both people and place are dynamic. During the period of our study (2003–2011), New York City experienced significant changes in environmental governance, as the city's population grew by nearly 300,000 residents and Mayor

Michael Bloomberg implemented sustainability policies to address this growth (US Census 2015). During this time period, urban agriculture sites also became more prevalent as many New Yorkers developed an increased interest in local food (Campbell 2016). As a result of these changes in demographics and policy, one might expect to find a change in motivations for community gardening. Or, it is possible that at both the individual level and across the city, motivations for gardening remain constant, reflecting basic relationships between city dwellers and urban green space that are unaffected by larger societal trends.

Here, we build on the work of Svendsen (2009), who found that personal motivations of individual gardeners include the mitigation of stress related to personal life changes or transitions associated with a decline in neighborhood conditions. In this context, community gardening provides an opportunity for gardeners to adapt to changing conditions in their personal life and/or the community that surrounds them that can include significant population and economic pressures, social changes, psychological stress of losing the garden for housing or other urban development. Given the landscape of change, do the motivations to garden remain stable or do they change over time? This study attempts to answer this gap in the literature through a systematic analysis of interviews with primary contacts from the same New York City community gardens in 2003 and 2011.

Methods

New York City's community gardening program is one of the largest in the world (Lawson 2005; Campbell 2016). The New York City Department of Parks & Recreation's GreenThumb program (GreenThumb) has been historically supported through Community Development Block Grant funding from the U.S. Department of Housing and Urban Development, and was initially envisioned as a temporary program to address the problems associated with vacant land in low-income communities. The significance of community gardening to urban populations and the environment has not always been widely recognized (Lawson 2004). In New York City, the recognition that community gardens and other neighborhood green spaces were essential to urban living came from local activists engaged in the creation and struggle to maintain green spaces in their community (Fox 1985; Schmelzkopf 1995). In the 1990s, many gardens were reclaimed for housing or other types of development, but the majority were protected under court order, the result of several lawsuits filed against the City of New York. Today, there are many community gardens with legal status ranging from designated parkland to incorporated land trusts. Still, the struggle for community garden land tenure remains on the minds of many gardeners and urban green space advocates today (Campbell 2016, 2017).

In 2003, the authors worked with GreenThumb to conduct an assessment of community gardeners with the specific intention of learning more about the underlying and individual motivations for community gardening (Svendsen 2009). GreenThumb staff members conducted semi-structured interviews with each garden's lead representative at the GreenThumb office and took detailed notes to capture specific language used by the gardeners to describe their feelings and motivations.

Building on this data set, we conducted a new round of semi-structured interviews in 2011 that also examined membership, programming, partnerships, and motivations for community gardening. This longitudinal dataset provides a comprehensive study of the largest community gardening program in United States, which serves over 8000 registered garden members in more than 500 gardens citywide (Mees and Stone 2012). During the summer of 2011, follow-up interviews were conducted by phone with one primary garden representative from each garden that participated in the 2003 study and was also known to exist in 2011 according to the most recent garden registration list. We identified 102 gardens in this sample and were able to conduct follow-up interviews with 86 primary garden contacts for an overall response rate of 84%. Interviews were approximately 15–30 min in length and to mirror the 2003 study, included the question "Why do you garden?" This manuscript includes the analysis of gardeners' self-reported motivations described in answering that question. Because the respondent was also the designated garden representatives, interviewees were encouraged to answer from their own personal perspective and not to give a general list of reasons or speculations about why other members participate in the community garden. For 27 gardens in our sample, the same primary contact was interviewed in 2003 and 2011, and in the other cases a new primary contact was interviewed from the same garden, resulting in a total of 172 interviews with 145 individual gardeners over the two time periods. In 2003, 93% of the gardeners interviewed had been primary contacts more than 5 years, while 69% of those interviewed in 2011 had been primary contact for more than 5 years. It is likely that many interviewees were established garden members before they became the primary garden contact.

The 2011 interviews were recorded and transcribed, and the data were read and coded by the authors alongside the responses to the same question asked in 2003. Using an inductive approach to the analysis of qualitative interview data, the authors identified key themes in the motivations of community gardeners during an initial round of coding interview responses. The inductive approach allowed key themes to emerge directly from the data, rather than restricting analysis to codes derived from existing literature about gardener benefits or motivations (Lofland et al. 2006). Key themes were agreed upon and discrepancies were discussed until consensus was reached between the coders (Warren and Karner 2015). Using this revised coding scheme, a second coding resulted in all transcripts being coded to the six primary themes presented and discussed in detail in the following section. Each individual's response to the question could include multiple themes. To further ensure dependability of the data, preliminary findings and general interpretations were discussed with peers active in the field of community gardening and urban environmental stewardship. In this study, the sociocultural context of GreenThumb community gardens was well-known to the authors as both having previous experience working directly with community gardeners. This type of embeddedness can help to minimize misinterpretation of meaning introduced by self or the interviewees (Baxter and Eyles 1997).

Of the 86 community gardens included in our study, 38 (44%) are located in Brooklyn, 24 (28%) in the Bronx, 23 (27%) in Manhattan, and 1 (1%) in Queens. This distribution is similar to that of community gardens citywide: 41% in Brooklyn, 29% in Manhattan, 22% in the Bronx, 7% in Queens, and 0.5% in Staten Island (GreenThumb Contact List 2011) . Historically, Queens and Staten Island have had fewer community

Table 1. Coding frequencies for primary garden contacts from (a) 86 community gardens in study sample and (b) 27 gardens where primary contacts remained consistent across both time periods (subset of the 86 gardens in total sample).

Themes	2003 Responses (%)	2011 Responses (%)
(a) Motivations for gardening (complete sample, $n = 86$)		
Enjoyment	64	77
Personal History	7	34
Improvement	42	24
Community	20	20
Food	5	20
Education	10	15
(b) Motivations for gardening (consistent contacts, $n = 27$)		
Enjoyment	78	81
Improvement	59	44
Personal History	11	30
Food	0	19
Community	15	11
Education	11	11

Percentages add up to more than 100% because each interview response could include more than one theme

gardens than the other boroughs due to the lower number of Community Development Block Grants. According to data gathered during the 2011 interviews, the gardens in this study have relatively small, local constituencies. 51% of the gardens have fewer than 16 adult garden members, and additional 37% have 16–30 members; in two-thirds of the gardens, a majority of gardeners live within five blocks of the garden.

Our study did not take gender, age, ethnicity, or gardening experience into account due to issues of sensitivity in working with the GreenThumb program. Using a mailed survey containing Likert-type scale statements, Waliczek, Mattson, and Zajicek (1996) found differences in quality of life perceptions among community gardeners based on race, gender, and city size. Future research could explore these differences, particularly in light of the changing demographics in certain New York City neighborhoods, including areas where community gardens are found.

Results

As a result of our qualitative analysis, we identified six primary themes relating to why volunteers spend time taking care of community gardens. These themes are discussed in detail below, including *Enjoyment*, *Personal History*, *Improvement*, *Community*, *Food*, and *Education* (Table 1). Responses were separated into distinct themes, though the ideas in each theme do relate to one another. For example, “enjoyment” reflects the individuals’ personal process of seeking pleasure and satisfaction while “community” signals a more specific and active desire to interact with others in the garden. “Food” offers another example of a theme that may certainly be enjoyable but is also a functional product of gardening that motivates some respondents to cultivate urban land. At the same time, the themes remain distinct as they capture particular qualities that signal different drivers of individual and social action. “Personal history” signifies a connection to a broader community identity, culture or family heritage, while “improvement” means to acknowledge the physical and demonstrable act of making the neighborhood or local environment a better place. “Educate” is another distinct theme in our coding frame as

it indicates when a respondent clearly is motivated by the opportunity to actively transfer knowledge to another person. Each theme is discussed in detail below.

Enjoyment

Across both rounds of interviews, the majority of gardeners describe a motivation for gardening based upon personal fulfillment tied to feelings of joy (64% in 2003 and 77% in 2011). When asked why they garden, some individuals describe personal spiritual, emotional, or health benefits of gardening, while others simply state "I love to garden." Many gardeners use the word "love" (often multiple times), whether they are motivated by a "love to see things grow", "love of the Earth", "love to deal with people in the community", or just "love being in there."

Feelings of love, joy, and personal fulfillment are often tied to the gardener's sense of themselves. For example, one person says that they garden "because I'm a nature girl," while another explains, "That's my thing, that's my life, that's something I love. I look forward to doing it every day." Elderly or retired respondents explain that gardening keeps them busy or gives them "something to do." One gardener says of community gardening, "it's very rewarding because my children are all grown, and it's a chance to nurture something from the seed to the point of harvest, and then prepare it." Similarly, one individual "enjoy[s] being responsible for the growth of flowers and vegetables" while another likes to "assist plants, shrubs, and trees to perform their best … it's beautiful." For these gardeners the responsibility of environmental stewardship does not create a burden, but rather gives meaning to their lives.

Many individuals characterize gardening as "relaxing" or "therapeutic," and that it brings "pleasure" and "satisfaction" to their lives, making them "feel better." The garden is perceived as a mentally, physically, and environmentally "healthy" space, compared to the more "unhealthy" grey infrastructure that surrounds it. In the garden, "you can hear yourself think," and gardening "makes a wonderful break from life … you can go lose yourself in nature and are able to stop worrying about things." Physically working with "the land" or "the earth" provides gardeners a meaningful connection to their local environment. One respondent illustrates the sense of place provided by their garden: "I like it because it reminds me how close I am to nature, that I am one with the landscape." Similarly, gardeners describe being motivated by a feeling of "intimacy with nature", "the chance to serve nature," or because they "like to see Mother Nature." Gardeners also describe the "spiritual healing" that their stewardship of the land provides. One person explains: "The garden brings a feeling of peace and unity … it's like heaven on Earth." Gardening enables individuals to transcend the stress of everyday life because the practice "lifts the spirit and enables us to rise above life's tragedies."

Feelings of joy can come from the sensory experience of being in the garden, including the smell of dirt and plants, the feeling of being out in the fresh air or wind, or the chance "to have the earth run through your fingers." Such physical experiences are also depicted as "toil," "exercise" or "hard work" but ultimately bring meaning and satisfaction to gardeners' lives. They enjoy "working with the soil" and the opportunity to "get your hands dirty." Finally, gardeners find joy in the beauty of the garden and their ability to play a role in "shaping something" and visually observing change over time. One gardener explains: "I love to just watch the garden and plants change from day to day, I

find it very hopeful." The community garden provides a space for "creative outlet," "self-expression," and "an act of sculpture." This unique opportunity to engage in a relationship between gardener and garden in a densely-populated city motivates gardeners to continue their practice. It is clear from these statements that reciprocity exists between the physical space of the garden and the gardener.

Personal History

While this theme was less prevalent in 2003 (9%), 34% of the gardeners interviewed in 2011 describe reasons for gardening that are related to personal history, including family heritage, cultural identity, or past experiences. Many people reveal that they have grown up gardening or farming, whether in another country, the southern United States, or in Queens, New York. These gardeners explain, "I've been gardening all my life" or "I'm a farmer from the heart." Sometimes individuals are motivated to garden in order to feel closer to specific family members who were also gardeners and played an important role in their life. As one woman explains: "I was the only one here that wasn't born in the South gardening, so this is a way for me to learn as well, experience what my siblings were raised doing." Respondents are motivated to garden as a way of feeling connected to family members who taught them to garden and who may have passed away. Sometimes, the respondents did not actually have prior gardening experience and describe beginning their own practice after the family member passed away, as a way of honoring the individual's memory and building a legacy of their own. For many, the garden serves as a mechanism that individuals have used to help navigate through personal life transitions.

Improvement

Community gardeners are motivated to improve or restore their neighborhood or the broader environment. 42% (2003) and 24% (2011) of respondents discuss this theme, including their desire to "beautify the neighborhood" or "create a place in the community that people feel safe and at peace." Many gardeners want their own children or others in the neighborhood to have a safe space to play that would get them out of the street, which is perceived as a more dangerous environment. Improving local ecology by establishing native plants and wildlife habitat is also a motivation for gardeners. One individual takes great joy in helping bring back hummingbirds and song birds to the neighborhood. Another gardener describes their desire to grow organic food as a form of "environmental activism."

A powerful intersection between the themes of personal enjoyment and community improvement emerged from our interviews. Gardeners describe the satisfaction and gratification they feel when they are able to "make a difference in an urban area" or "contribute to the neighborhood." As one respondent explains: "… it gives me a lot of personal pride and also feeling good about myself to know that I played a major role in creating something." Gardeners are motivated to continue their practice because it gives them hope for the future and also because they believe it gives hope to others. They are driven by a desire to "create something that makes the rest of the people in the neighborhood feel great." Here, we find another indicator that gardening in the public realm

helps to cultivate our adaptive capacities in the face of physical and social challenges to the neighborhood.

Community

Across both years, 20% of gardeners cited social reasons for gardening. These motivations include general desires to “[get] together with,” “socialize,” “participate in,” or have “involvement” in their community. The garden provides a space for “making friends and … getting to know the neighborhood better” and the opportunity to “sit there with people and talk to them.” One individual remarks that in the garden, “you get to meet all these different cultures, which is pretty cool.” The gardens can provide opportunities to interact with a diverse group of people—across age, ethnicity, and socioeconomic status. One person notes that the garden brings the community together in mutual enjoyment of place: “It’s great to get together with everybody, be out in the open air, create something that makes the rest of the people in the neighborhood feel great.” The gardens are public spaces where people find personal fulfillment in coming together to restore neighborhoods and in enjoying food as a community.

Food

While many community gardens do produce food, only 5% of 2003 interviewees describe motivations for gardening related to food, including health, economic, and political motivations. However, the prevalence of this theme increased to 20% in 2011. Many people just list the myriad of fruits and vegetables that the garden produces, or describe their favorite item and how delicious it is. Some gardeners love to cook and value the fresh ingredients, whether fresh eggs or herbs: “I love good food and I’m spoiled … my goal in gardening is to eat well!” Others cite the desire for “food independence” or the ability “to control my destiny: I can feed myself and I can feed others.” As one gardener remarks, “everyone needs food” and the lack of access to fresh produce or high grocery prices provides “common ground” for gardeners to get together and create a local source of food.

Many times, local food is entwined in social, educational, or personal enjoyment motivations, as in this gardener’s story:

> When I first moved to Brooklyn I stopped eating tomatoes and I couldn’t figure out for the longest time why I used to love tomatoes, because [tomatoes from the garden] taste completely different than anything you can get in a store. That’s the main reason I enjoy gardening, and it’s an opportunity to share with people and to teach people, especially the young people who come here, because they don’t even know that you can get a tomato from your yard or you can plant parsley on your window sill.

From this response, we see that the taste of a homegrown tomato is an important motivation for gardening, but it is made more meaningful by the opportunity to share the experience with others.

Education

In a related theme, 10% (2003) and 15% (2011) of gardeners describe motivations having to do with education of others, primarily focused around production of food. Many

describe their dismay at the lack of knowledge about food and environment that they observe in young people and a desire to teach a younger generation that "things don't grow in cans." One person remarks, "… it just freaks me out that there are children that are so disconnected from their food source and I know that cannot be healthy … " In addition to cultivation, gardeners put on cooking demonstrations to teach community members how to prepare fresh fruits and vegetables. The desire to educate also links back to food independence and food security for the community. As one person describes, their motivation is "to help people learn. If you plant something, you'll be able to eat all over the world. If you find a plant and grow things then you will be able to survive." New York City community gardeners are expressing the importance of food production and preparation as cultural knowledge.

Longitudinal Analysis

How consistent are the motivations of New York City community gardeners over time? We examined changes in the frequencies of our primary themes across the 86 gardens included in the study. Although we see shifts in the prevalence of some themes, there are clear and abiding motivations for gardening, despite turnover in the population of primary contacts interviewed. Personal enjoyment remains the most common motivation, while the desire to socialize and educate remain important secondary themes. We do see that the impulse to improve the community decreases in prevalence while food has become a more common motivation. We also see an increase in the gardeners' references to personal history.

For the majority of the 86 gardens included in this study, the primary garden contact changed during the time period of our study. However, 27 primary contacts remained the same and were interviewed in both 2003 and 2011 (Table 1). Among these individuals, we see frequencies of motivations and patterns over time that are similar to the larger sample of primary contacts from the 86 gardens. Personal joy and fulfillment is the most common motivation for these 27 gardeners across both time periods. We see an increase in motivations related to food and personal history, while motivations related to neighborhood or environmental improvement decrease over time.

Discussion

The Joy of Gardening

Individual gardeners have expressed a range of motivations for gardening, many of which reveal the personal fulfillment and joy gained from their practice. Gardening was reported to be restorative and therapeutic, and provided a connection with community and cultural identity. For example, gardeners described the feeling of touching the earth, remembrance of a loved one who has passed, or spiritual practice. As one gardener explained, "I don't go to church to get in touch with God, I sit under a tree." The abiding reasons for this type of stewardship go beyond the more traditional expressions of environmental conservation or preservation, and instead reveal a need for spiritual and personal meaning.

Gardeners in this study frequently spoke of their gardening practice as defining who they are, as an integral part of their identity. Many explicitly described the profound connection to the rest of the natural world that they felt in their small patch of urban green space. This connection, in turn, provides personal fulfillment for the community gardeners, enhancing their feelings of self-esteem, autonomy (via environmental restoration and food independence) and connectedness (to the natural world and to community). Research has shown that people tend to feel most at home in the type of landscape they grew up in (Adevi and Grahn 2011), which may explain why community gardeners speak about their love of gardening in relation to their heritage or upbringing. A connection to personal history and cultural identity may motivate individuals to seek out community gardening, and over time they develop an emotional bond with the garden as it takes on the meaning of their previous gardening or farming experience. Gardening may strengthen feelings of attachment to place and place identity which can help to sustain the care and stewardship of the garden during times of uncertainty or change.

Connecting to a Greater Whole

With this research, we found that community gardens allow participants to feel a sense of purpose via connection to a larger whole, whether as part of the natural world or as part of the neighborhood community. As Clayton (2012) describes, "What people really want is a sense of themselves as belonging to a group, and yet not wholly contained in or defined by that group. People in natural settings often report feelings of belonging and connectedness, but also the freedom to be themselves" (p. 168). In our interviews, it was precisely the connection to community and the ability to take action by restoring neighborhood public space for themselves and others that contributed to many gardeners' sense of autonomy and personal fulfillment.

Our findings reveal that community gardeners' impact on the landscape reaches far beyond selecting a planting palette and keeping up with regular weeding and watering. These environmental stewards have often reclaimed degraded and dangerous vacant lots filled with trash used as sites of illicit activity. Even after a garden is created, the work of environmental and neighborhood restoration is a continuous process, as gardeners must navigate urban pollution, vandalism, rats, and real estate development, generally with very limited resources. This transformation of the urban landscape and the hard work it takes to maintain can be enjoyable and fulfilling, as gardeners see themselves reflected in the natural environment they have created. As gardeners put more time and effort into stewardship of a site, they may become more attached to it. However, it is worth noting that a garden that falls into disrepair may be a source of shame or stigma (Clayton and Opotow 2003). This may explain why some community gardeners avoid participating in garden registration or declined to be interviewed.

Gardening as a Social Act

In this study, gardeners revealed that the opportunity to educate or advocate is a motivating force for their stewardship activity. Several community gardeners expressed concern with the lack of green space in the city or the fact that children do not know where vegetables come from before they land on a grocery store shelf. It is important to

note how these individuals play an active role in their community by teaching others the value of fresh produce, organic gardening practices, or native wildlife habitat. Again, such interest in creating awareness gives gardeners great pleasure. As one gardener explained, "The look on people and children's faces when they see the abundance of fruits and vegetables gives me satisfaction." Respondents were driven to steward the garden from a perceived sense that their health and well-being were dependent upon the social and natural world of the garden, and were excited and motivated to share this experience with others.

We see similarities between our results and research findings that urban conservation volunteers' frequency of participation and tendency to continue to volunteer is more strongly motivated by personal, social, and community functions and benefits rather than by environment-related reasons (Asah and Blahna 2013). Although we did find that some community gardeners were motivated by desires to improve their local environment or to produce fresh food, these motivations were usually coupled with community-oriented goals. Very few gardeners aimed to conserve the environment or produce food without emphasizing the educational or social nature of these activities.

Our research finds that there are critical drivers that sustain the work and interest of urban gardeners in New York City. The joy that gardening provides or the personal, cultural, spiritual and family connections to gardening were abiding themes over a period of eight years. This temporal insight contributes to our understanding of how this type of volunteer stewardship can be sustained in order to maintain community-managed, urban gardens. Personal motivations for community gardening are the underlying drivers of human action, reflecting enduring personal associations, and interactions produced within the garden that are likely to grow in meaning over time. While community gardens are hailed as incubators of social cohesion and community resilience, our findings affirm the role of gardens in the lives of individual volunteers. As primary garden contacts, our respondents may be more likely to assume a community leadership role and be motivated by opportunities for collective neighborhood benefits. Yet, even for these individuals, personal motivations related to joy and family or cultural identity remained strong motivations for gardening.

Enduring Motivations and Social Change

While the majority of respondents shared abiding reasons for gardening, the changes in frequency of some community gardener motivations between 2003 and 2011 may be a subtle reflection of the social and cultural changes in New York City over the same time period. We speculate that the declining frequency of gardeners who cite being motivated by community improvement may relate to changes in the economy and conditions in the city over the decade of study. In general, the majority of the community gardens in our study are located in neighborhoods that gained population between 2000 and 2010 (NYC Department of City Planning 2014). Depending on the neighborhood, there were increases in White populations, increases in Hispanic populations, and either increases and decreases in African American populations. Areas with an increase in White population also generally saw an increase in median income, while other areas were mixed between increases or decreases in income. Despite the economic downturn during the decade of our study, indicators of school quality, public health, and crime continued to improve in

New York City (Been et al. 2012), which may help explain the decrease in community gardeners motivated to "improve" their neighborhood or local environment in 2011. Many of the community gardens in our study are located in neighborhoods with higher crime rates and lower indicators of public health and school performance than the city overall (CCCNY 2011), so improvements in these areas may affect gardeners' outlooks on their community and reasons for working in a community garden. Further research is needed to determine the relationship between continued population change and gardener motivations in both gentrifying and stable neighborhoods of New York City.

An increased public interest in urban farming, local food, and alternative food networks during the time period of our study may help explain the greater prevalence of community gardener motivations related to food. The heightened media attention given to urban farms springing up in vacant lots, on rooftops, in schoolyards and backyards helped popularize the local food movement, and may have influenced community gardener motivations even in the pre-existing community garden spaces of our study (Campbell 2016, 2017). It is possible that this increase in public discourse around local food also contributed to the number of gardeners who identified gardening as part of their family or cultural identity.

This study reveals the deeply personal motivations that have helped sustain a robust New York City community gardening population over time. In our interviews with 145 different primary contacts from 86 gardens, we captured the detailed motivations of members, most of whom had been gardening for many years. By asking them to speak about their personal experiences rather than overall benefits of gardening, we were able to understand individual motivations for involvement in community gardens and whether those changed over time. We saw similarly consistent themes among the gardeners who were interviewed in both years, showing that not only are there abiding motivations throughout the population of New York City community gardeners, but that individuals' motivations remain relatively constant over time and also reflect trends in motivations of the larger population of garden contacts. Despite turnover in primary garden contacts, consistency in the motivations for gardening over time suggests that the gardens continue to fulfill persistent functions for individuals and communities.

Conclusion

In this study, we find that the underlying motivations of New York City community gardeners are both personal and collective. Using qualitative methods that have been applied over the course of 8 years, we identify abiding and persistent motivations for community gardening over time. Individual stewards are motivated by the joy derived from working in the garden, by being in the company of others, by the growth and provision of food, by the opportunity to share knowledge, and by a desire to connect with personal history and to improve their community. Reflecting on natural surroundings provides the gardeners an opportunity for self-reflection, while the ability to actively improve the local environment strengthens attachment to one's community. In this way, the gardens are sites of personal growth and spiritual meaning that symbolize the interstitial space between self and community. One of the most significant contributions of this study is the finding that gardeners' motivations are derived from basic human desires for a spiritual and emotional connection with their past, with the soil and plants

in their garden, and with others in their community. Here, we find that individuals create meaning in their lives and are driven to garden through feelings of joy and personal fulfillment even as they address issues of environmental or neighborhood degradation. It is important to note that many gardeners do act because they care about the non-human environment. However, our study suggests that there are other, abiding motivations for their sustained action that are fundamentally more personal, which may be precisely what is needed to sustain engagement in stewardship of public space.

Through the lens of community gardening, we have found that personal motivations of individual volunteer stewards can unite with the needs and desires of other community members to produce and sustain a public good. Despite social and physical change in New York City neighborhoods and in individual gardeners' lives during the decade of study, motivations related to joy and personal fulfillment remained consistently most prevalent. We also found that gardeners convey a strong attachment to their gardens as a distinct "place" which has helped to form an identity shaped by cultural heritage, stewardship practice, and the urban environment. This suggests that the impetus for gardening and perhaps similar acts of environmental stewardship can transcend both personal and community change. The meaning of a community garden is produced and interpreted over time through exchanges with people who work or visit there, and through the embodiment of the material qualities of the garden including the plants, the sun, and the soil.

A nuanced understanding of what drives individuals to steward community gardens will help managers and decision-makers sustain these public resources for future generations. However, more research is needed to determine the environmental justice implications of social change in the neighborhoods surrounding community gardens. Community gardens provide urban residents with a unique opportunity to transform and be transformed by local public green space. As many urban neighborhoods undergo rapid demographic change, who gets to participate in this form of civic engagement and who benefits from the resulting strengthening of individual identity and social cohesion? At the same time, consistent feelings of personal satisfaction derived from community gardening may be an underlying factor that helps counteract the commodification of gardens to ensure their preservation as diverse, public spaces. The abiding motivation of joy and personal fulfillment may be a critical link between acting on behalf of self and community.

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