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Communities Growing Gardens, Gardens Growing Communities:

Can Community Gardening Enhance Social Capital in Low Socio-Economic Neighborhoods in Jerusalem?

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Abstract

An imperative of health promotion is to foster “health-enabling communities,” where healthy choices are easy choices for community residents. Social capital, or the presence of social networks that breed individual and collective benefits, is one component of a health-enabling community. Social capital facilitates better use of health services and information, support through crisis, demand for underprovided services and may increase the body’s ability to resist disease. One challenge for health promotion policy, therefore, is to generate social capital.

The following study presents initial insight into three new community gardens in Jerusalem’s low socio-economic neighborhoods, where residents are working and managing shared plots of land. The research goal is to assess whether community gardening is contributing to individual and community social capital, in order to examine community gardening's ability to help foster health-enabling communities in Jerusalem. Results gathered through surveys, interviews and observations indicate that residents believe the gardens to be increasing community cohesiveness, providing meaningful activity for children and improving residents' health, suggesting that the gardens have, indeed, begun to enhance social capital of community gardeners and their neighbors.

Table of Contents

Tables & Figures:

Introduction

Urban community gardens are outdoor spaces in the city, designed, managed and maintained by members of the neighborhood. As outdoor community centers built and run by the community, community gardens have displayed the ability to create, deepen, anchor and mobilize the networks that make up social capital (Allen et al, 2008). Community gardens bring citizens outside. Residents gain the opportunity to work land, grow food, connect with neighbors and create visible changes in their neighborhoods. They acquire a sense of ownership over and a hands-on relationship with their own oasis within the busy city. And community gardens connect effectively anonymous urban residents to municipal and other public authorities, as well as to neighborhood organizations like schools and soup kitchens (Eizenberg, 2008).

With such a multitude of supposed benefits, it is not surprising that Hancock argues that community gardens should be integral to 21st century city development policy (Hancock, 2001). But do community gardens work everywhere, all the time? How long does it take for an affect to take place? What if a community garden is not originally the initiative of the community residents, but rather, of local government or a non-profit organization? Past research has connected between social capital and community gardens in New York (Armstrong, 2000, Eizenberg, 2008), Toronto (Wakefield et al, 2007) and Melbourne (Kingsley, 2004), among other areas (Glover et al, 2005, Wills et al 2009). This study's objective is to engage the community gardens - social capital hypothesis in three low socio-economic neighborhoods in Jerusalem, where non-governmental, municipal and local social services organizations, as well as community members have teamed up to grow gardens; to see whether, in return, the gardens have begun to grow communities.

The study features quantitative and qualitative data on each garden: *Ginat Talpiot*, in the Talpiot neighborhood, *Ginat HaNurit* in Ir Ganim, and *Ginat Ulsvangor* in Kiryat Hayovel. Community gardeners and their neighbors answered surveys, participated in interviews, and agreed for their community gardening hours to be observed. All three gardens are young by community gardens standards - each between one and three years old. Therefore, we employed two strategies for identifying contributions to social capital: Gathering social capital data of community gardeners and their neighbors according to classic indicators formed by social capital researchers, and inquiring about their perspectives on the garden's contributions to social capital-related components of the neighborhood's well being. In this way, even if changes in social capital are not found according to Method One, we may be able to suggest signs of improvement, or residents' belief in the growth of social capital, according to Method Two.

1: Literature Review

1. Social Capital

Hancock called social capital "the glue that holds our communities together" (Hancock, 2001, p. 276). What is community "glue" made of, and how is it measured? Competing definitions of social capital share the common denominator of social networks from which people derive benefit, but researchers continue to debate the boundaries of social capital and its benefits. For example, who possesses social capital? Individuals? Communities? What constitutes a "network" and how do we recognize the types of networks that lead to the benefits? And finally, to what kinds of benefits do these networks lead?

Bordieu, in 1986, described social capital as “the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition” (Bordieu, 1986, p. 248). Two years later, Coleman characterized social capital by mutual obligation, shared norms between people and trustworthiness between people (Coleman, 1988). From Bordieu’s definition, we can extract adjectives like *durable* and *mutual.* From Coleman’s, we can draw *shared*, and the presence of *trustworthiness.* Putnam cites “The features of social organization such as networks, norms, and trust that facilitate coordination and cooperation for mutual benefit” (Putnam, 1995, p. 67). Key words for Putnam are *norms, trust, coordination* and *cooperation*. On one side of the debate is Sobel, who points to “circumstances in which individuals can use membership in groups and networks to secure benefits” (Sobel, 2002, p. 139). On the opposite side is Lynch, for whom social capital is “A societal-wide capacity for inclusiveness, human rights, social justice, and full political and economic participation (Lynch, 2000)." If for Sobel, the *individual* possesses social capital, using resources like *membership* to *secure* individual-type benefits, Lynch’s social capital is *societal*, valuable and is only good to the extent that it breeds *inclusiveness, human rights* and other societal improvements.

Saegert and Winkel (2004) forge a helpful compromise, embedding social capital in the “social networks and norms that facilitate trust and the ability to achieve individual and collective goals” (Saegert and Winkel, 2004, p. 220). For Saegert and Winkel, the utility in social capital lies in connecting individuals’ relationships and broader collectives, social capital as that which mediates between individuals and groups, yielding benefits for both. In this sense, social capital very much represents the interface between

individual, relational and overall community wellbeing.

1.1 Benefits of Social Capital

Woolcock and Narayan (2000) distill the various definitions of social capital, explaining that the "basic idea of social capital is that a person's family, friends, and associates constitute an important asset, one that can be called on in a crisis, enjoyed for its own sake, and leveraged for material gain. What is true for individuals, moreover, also holds for groups. Those communities endowed with a diverse stock of social networks and civic associations are in a stronger position to confront poverty and vulnerability" (Woolcock and Narayan, 2000, p.226).

Social capital has been shown to strengthen pluralist democracy, physical health, happiness, and mental health. High levels of social capital can increase public safety and reduce vandalism and crime (Johnson et al, 2003). Social capital has also proven to help disadvantaged youth overcome limited resources and to achieve socioeconomic success in adulthood (Allen et al, 2008). It has even been shown to increase economic efficiency (Johnson et al, 2003).

Research also seems to show social capital to facilitate more effective democratic government. Putnam's 20 year quasi-experimental study of sub-national governments in Italy showed ingredients such as civic engagement, voter turnout and membership in organizations like choral societies and football clubs to explain higher government efficacy amongst identical governmental systems in different regions. Putnam used the term "organized reciprocity" to describe how what he later referred to as "social capital" fostered better government, concluding that an active citizen base and civic solidarity is

fundamental to democratic government (Putnam et al, 1983).

Social capital researchers have identified two divergent forms of social capital, each serving specific purposes. The first form, *bonding* social capital, implies strengthening social cohesion between members of an existing group, such as a community, an ethnic population within a community and a family. *Bridging* social capital pertains to diversifying ones social networks, within and beyond one's community. Bonding social capital is vital to "getting by," an invaluable resource for surviving hardship. Bridging social capital, on the other hand, allows individuals or groups to "get ahead" and tap into other networks, many of which provide benefits not readily available in or provided for by one's already existing networks. A healthy dosage of both forms of social capital, argue Woolcock and Narayan, foster the strongest access to the benefits of social capital (Woolcock and Narayan, 2000).

1.2 Social Capital and Health

Social capital is primarily a sociological term, utilized by political scientists and social psychologists (Saegert and Winkel, 2004). But it has also been employed in epidemiology and general public health and health promotion research. Lomas writes, "Millions of dollars are committed to alleviating ill-health through individual intervention. Meanwhile we ignore what our everyday experience tells us, *i.e.* the way we organize our society, the extent to which we encourage interaction among the citizenry and the degree to which we trust and associate with each other in caring communities is probably the most important determinant of our health" (Lomas, 1998, p. 1181). In fact,

Putnam showed that social capital, after poverty, had a greater influence over an individual's health than any other variable (Johnson et al, 2003).

According to Berkman and Glass (2000), among individuals with similar demographics (income, education, etc.), those with poor social networks are between two and five times more likely to die in a given period of time than those with high quality social networks (Berkman & Glass, 2000). Berkman and Syme (1979) confirmed associations between social cohesion and health, through a nine-year follow-up study in Alameda County, California. They broke down social cohesion into marital status, group membership, church membership and contacts with friends/relatives, factoring in both quantity and intensity of the relationships. They found that those with lower quantities and intensities of contact had higher mortality rates than those with higher quantities/intensities. Each measure of social cohesion impacted mortality on its own. Combining them decreased mortality rates even further. They went so far as to suggest that "social factors may influence host resistance and affect vulnerability to disease in general;" that other things being equal, stronger social networks can increase the body's resistance to getting, remaining, or dying from being sick (Berkman & Syme, 1979, p. 202).

Kawachi et al's 1997 study is another formative social capital and public health study, measuring the degree to which social capital mediates between poverty and mortality. Compiling data from across 39 states in the US, Kawachi et al measured social capital via membership in voluntary groups as well as levels of social trust. Like Berkman and Syme, they found lower levels of membership in voluntary groups and lower levels of social trust to be associated with higher mortality rates, even within socio-economic levels (Kawachi et al, 1997).

Especially relevant for this study is Kawachi et al specifically looking towards social capital as modifying poverty's tendency to result in poor health. "Disinvestment in social capital," they write, "appears to be one of the pathways through which growing income inequality exerts its effects on population-level mortality" (Kawachi et al, 1997, p. 1495). They subsequently conclude that building social capital may be one way to overcome the major disparities in health between poor and other individuals (Kawachi et al, 1997). Sun et al (2008) found similar associations between poor communities, poor health and low levels of individual social capital, concluding that when it comes to social policy, there is an important relationship between supporting the growth of social capital, alleviating poverty, and improving individual health (Sun et al, 2009).

In Israel, Epel et al (2007) compared between social capital and self-reported health, in both Jewish and Arab communities. The researchers observed high associations in the Jewish population in Israel: Those with high levels of social capital reported better health than those with lower levels. Among Arab participants, the association was lower to insignificant. The researchers hypothesized that family structure often supersedes community structure in the Arab community, and therefore, classic community-oriented social capital is either less relevant to or has a different dynamic than Western-style societies. It should be mentioned, though, that social support, one of Epel et al's parameters for social capital was, indeed, a predictor of self-rated health even in the Arab population.

Epel et al's work is important in articulating, like others, that social capital is not always a clear-cut driving mechanism for the public health. Many studies have yielded results contrary to Berkman and Syme (1979) and Kawachi et al (1997), arguing that social

capital has been overrated and has taken focus away from more important factors in public health, acting as an excuse for policy to ignore more concrete community needs (Epel et al, 2008).

A literature review on the subject suggests, though, that while social capital may not be a magic bullet that guarantees an end to all disease and community ills, and certainly does not absolve policymakers from other responsibilities to communities, it is an influential variable in at least some, or many community contexts (Epel et al indeed showed this to be true in Jewish communities in Israel). Strengthening social ties, fostering trust between individuals and facilitating social cohesion therefore remain worthy goals for policy in general and for health promotion policy, specifically. As Lynch suggests, social capital entails an increase in a community's potential (Lynch, 2000). What policymakers, communities and individuals do with that potential is a very different question. To return to Hancock (2001), social capital is just "glue", the effects of which are just as much a function of the things and materials bound by the glue, than of the type or amount of glue itself.

1.4 Measuring social capital

Much of social capital is either a function of perceptions, opinions, and feelings, or is represented by and expressed through perceptions, opinions and feelings. The intuitive way, therefore, to research social capital is to ask people about it, via surveys, interviews, and/or focus groups. Other methods of data collection have been used as well: Putnam (1995), as well as Saegert and Winkel (2004) compiled data on civic participation and

membership in organizations, from public and organizational records.

Studies measuring the effects of social capital, naturally, are often longitudinal (Berkman and Syme, for example), focusing in on a population over time to assess whether those with higher and lower levels of social capital had different levels of mortality, morbidity, likelihood of participating in crimes, finishing school, etc. Otherwise, causality is an ever-present challenge, demanding that a particular measure be proven to enhance social capital and not the opposite (that high social capital brought one to perform the particular measure in the first place) (Kawachi et al, 1997).

Epel et al applied data from an Israeli KAP (knowledge, attitudes and practices) study (3365 interviews with adult Jews/985 adult Arabs), drawing together social capital – relevant variables like social trust, perceived-helpfulness, trust in local and national authorities and social support. Self-rated health data was obtained along with socioeconomic and demographic variables, both of which were controlled for the sake of the study (Epel et al, 2008).

1.4 Policy Challenges

Social capital is branded as "capital" in the sense that just like economic capital and human capital, it is "invested" in order to yield "returns on investment," in terms of individual and societal wellbeing (Hancock, 2001). On a policy level, the advantage of cultivating social capital is in its ability to impact on multiple levels, its power virtually exponential in terms of empowering community members to create unique solutions to problems that they understand best. One challenge, though, is in social capital's vague nature. Economic capital has dollars. A social capital currency agreed upon by everyone

remains elusive; as noted earlier, research on the causes and benefits of social capital continue to be debated. A further challenge lies in the difficulty in, and sensitivity of meddling in people's relationships. Another challenge is supporting the development of social capital without suppressing it to the point where it cannot grow on its own. All of these challenges underscore the importance of continuing to study the dynamics of social capital, as well as how it is grown and deployed effectively and sensitively.

2. Community Gardens

…The lot became a place for garbage and debris and all sort[s] of things and it wasn't until I was looking at my window one day and I saw a guy with a shovel. His name was Jose Lupo and I asked what he was doing [.] [H]e said 'I'm going to clean up this lot to make a garden,' and so I said 'can I help you with it?' And he said, 'Sure.'

- Community Gardener, New York City (Eizenberg, 2008, p. 135-6)

"… Without the garden, I think we would be just a little bit more separate. Because this is something we can call our own, the whole community, the whole block, and we didn't [previously] have anything where we could all come to at once. We know we can depend on it, so it's like the heart of our community"

- Youth Community Gardener, Flint, MI. (Allen et al, 2008, p. 426)

Community Gardens are communal plots of land where community residents grow food or flowers for personal and/or collective benefit. Some gardens are divided into "family plots." Others feature a collective plot the gardeners care for together. Sometimes accessing a plot is free of charge. Other times it costs money (Glover et al, 2005, Eizenberg, 2008). Unlike standard city parks, community gardens are created, maintained

and managed by the community itself (Hancock, 2001, Eizenberg, 2008).

The umbrella "community gardens" includes "neighborhood gardens," "children's gardens," "therapy gardens" and even "entrepreneurial job-training gardens" (Borrelli, 2008). In each case, though, community gardeners are volunteers. They do not get paid (Eizenberg, 2008).

2.1 History

Urban community gardens have, for many years, provided an answer to the lack of green spaces and insufficient produce supplies in dense and highly populated cities. In the US, community gardens grew out of the waves of immigration and the general transition from countryside to city-side that accompanied the Industrial Revolution (Glover et al, 2005.).

Community gardens picked up steam during both world wars in order to compensate for farmers joining the army, and then again in the 1970s in New York and other cities, amidst growing divisions between upper class and lower class residents. Poor-neighborhood residents turned neglected and often crime-laden lots into green, clean spaces for growing food, community events and recreation, giving community gardens the grassroots orientation that continues to guide them today. Pudup sites various incarnations of "urban garden projects" in the US, each of which express the fact that community gardens have, over the years, fulfilled multiple needs: "school gardens," (1900-1920), "garden city plots," (1905-1920), "liberty gardens", "relief gardens," (1930-1939), "victory gardens" (1941-1945) and finally, "community gardens," from 1970 to the present. Liberty and victory gardens served both survival and rallying functions during wartime. The name "community gardens" articulates the importance of gardens to

urban social movements (Pudup, 2008). The United States and Canada boast a combined 18,000 community gardens (Borrelli, 2008).

Eizenberg (2008) tracks the successful confrontation between the community gardeners of New York City and city authorities/real estate developers looking to tear up the gardens and build in their stead, which resulted in a settlement in 2002 to protect the majority of the gardens. Eizenberg shows how gardens were not only the site of contestation, but also the unifying and empowering force facilitating the struggle's and future struggles' success.

Eizenberg uses data on income average and rent rates to show that in New York City, gardens sprouted up specifically in underprivileged neighborhoods (Eizenberg, 2008). Gardens now grow in wealthier neighborhoods as well, giving youth an opportunity to connect with Nature and the earth, and to provide them the opportunity to learn about where their food comes from, how to grow some of it themselves, and to incorporate values of urban sustainability into their city lives (Armstrong, 2000).

2.2 Benefits of Community Gardening

Hancock (2001) divides between four types of capital: Economic, Social, Human and Ecological. He suggests that 21st century city development target policies that impact each form of capital. Community gardens, he suggests, may be one of these types of policies. Community gardens increase gardeners' and their families' consumption of fruits and vegetables, (Allen et al, 2008), increase family and community food security (Eiznerberg, 2008, Borelli, 2008), engage community residents in physical activity (Armstrong, 2000), expose city dwellers to Nature (Borelli, 2008), provide an

opportunity for environmental education (Eizenberg, 2008) and as Borrelli puts it, present a means towards “alleviat[ing] environmental injustices" (Borrelli, 2008, p.272).

3. Community Gardens and Social Capital

Putnam attributes much of the downfall in social capital in the United States to passive forms of recreation, like television (Putnam, 1995). Gardens, an active form of leisure antithetical to the passivity of modern, urban life, present an opportunity to re-cultivate some of that lost social capital (Glover et al, 2005).

Eizenberg calls community gardening a “collective act of people, working together to change their life conditions, to create something of their own, to inspire and be inspired (Eizenberg, 2008, p. 214). Community gardens, in this way, can be prime breeding grounds for community social capital. The following are examples of social capital - related outcomes of community gardening, both for the gardeners themselves and for their non-gardening neighbors.

3.1 Deepening and Diversifying Social Circles

According to Johnson et al (2003), the development of social capital is slower and more difficult in heterogeneous communities (Johnson et al, 2003). Wakefield writes that social capital is enhanced via the development of social ties and an increased appreciation of social diversity (Wakefield, 2007). If trust and social networks are expressions of social capital, then diversity and the multiplicity of social groups challenge social capital and jeopardize its foundation. But they also present the opportunity for social capital to

be enhanced in the case that diversity births new social networks. This is the aforementioned elusive, but vital bridging of social capital.

Community gardening may be one way to bridge social capital: Egger (2007) argues that community gardens foster trust, reciprocity and social interaction. Hancock (2001) observed that community gardens allow populations the opportunity to engage in various aspects of their culture in a common space, and to share their culture with neighbors. He writes, "Each family tends to grow the foods with which it is familiar, before long they begin to ask about and learn about the vegetables that other cultures grow and use. It may not be long before this progresses to sharing recipes, sharing foods, establishing community dinners and in various ways building social networks across ethno-racial divides" (p. 279). For this reason, along with the fact of a shared workspace, Shinew et al (2004) found community gardens to be effective sites for interracial interaction, while Borrelli contends that gardens "promote self respect and cooperation in under-privileged, low-income communities" (Borrelli, 2008, p. 277).

Allen et al (2008) studied youth community gardeners in Flint, Michigan, showing the gardening experience to bring together teens, adults and elderly residents. The young gardeners increased their respect for adults in the community, and adults who worked in the gardens reported spending significantly more time with local teenagers and children than non-participating residents. Interviewees admitted to developing new relationships with other neighborhood youth with whom they previously shared little common interest. It should be added that they deepened their existing relationships, too, thus serving to bond social capital, as well, according to the definitions of Woolcock and Narayan (2000) mentioned earlier.

A successful community garden may, therefore, help to overcome low social capital levels in heterogeneous communities. Community gardens force citizens to see one another, to work in parallel with each other. Eizenberg sums up this point when she refers to community gardens as "connective tissue between past and present, among segments of identities of individuals and between one's sense of self and sense of place" (Eizenberg, 2008, p. 122).

3.2 Community Organizing

Civic behavior such as community organizing and general participation in civil society is an important component of social capital (Saegert & Winkel, 2001). Community gardeners, in charge of managing their shared space, dealing and often clashing with community residents, other gardeners, guests of the gardens, city authorities and real estate developers, often find themselves in situations of negotiation, conflict resolution and communication. Allen et al and Eizenberg both found these situations, for the most part, to yield closer communities, better equipped for encountering conflicts beyond the garden (Allen et al, 2008, Eizenberg, 2008). In addition, the common work, the administrative responsibilities and the community events held in the garden have been shown to increase the extent to which gardeners share resources (Glover et al, 2005).

Community gardens may also help residents leverage their existing social capital (Glover et al, 2005). Community gardens often act as a kind of town hall, bringing together neighbors to address pressing neighborhood issues. In Armstrong's study (2000), gardens in low-income areas were four times as likely to lead to general neighborhood-related

issues being addressed – evidence, perhaps, that while higher socio-economic level residents have other outlets for such discussions, lower socio-economic level neighborhoods do not. Gardens, therefore, offer these neighborhoods an important opportunity (Armstrong, 2000).

Community gardens, according to Eizenberg, allow gardeners to challenge assumptions and experience an alternative to the passive acceptance of the vagaries of city life and its power structures. The act of making visible changes to the neighborhood through gardening can generate a sense of hope in the potential for change (Eizenberg, 2008). Especially important for city youth, having to persevere through a long and grueling gardening season is a lesson in the patience and persistence in bringing those changes about (Allen et al, 2008). So many community gardens are developed out of vacant lots in the city, replacing areas that had presented hazards to community life, hosting unhealthy and dangerous materials as well as being hubs for criminal behavior and drug use (Schukoske, 1999). Schukoske contends that these lots are the epicenter of frustration and despair felt by inner city residents. In growing life out of vacant lots, community gardens represent a heroic resistance to the difficulties of inner-city life (Schuskoske, 1999).

The sustainability discussions in the garden can also enhance social capital and engage civic responsibility. Hancock cites the overlap between ecological capital and social capital, both being fundamental components of community capital. Most obviously, gardens keep work, volunteering and often food and flower production in the community (Hancock, 2001). But more deeply, discussions of sustainability engage not only technical environmental sustainability, but also questions of equality, distribution of

resources and other topics of general democratic discourse (Eizenberg, 2008).

3.3 Impacts on the Non-Gardening Neighborhood

A community's social capital is enhanced when social networks in the community are created and sustained (Eizenberg, 2008). Research shows that community gardens enhance neighborhood satisfaction and pride (Allen et al, 2008) and provide open spaces in the eye of the public, where residents tend to be less fearful of crime (Borrelli, 2008), all of which enable the community's social networks to thrive.

Community gardens often collaborate with schools, hosting classes on gardening and the environment (Hancock, 2001). Other gardens supply soup kitchens and elderly or poor residents with freshly grown produce (Allen et al, 2008). In New York, 37% of community gardens had relationships with schools, 11% were connected with food pantries, and 29% with neighborhood coalitions (Eizenberg, 2008).

Community gardens may also increase the residential retention rate of communities – one study found that residents were less likely to move out of communities with community gardens than communities without them (PPRC, 2003). As social capital is more prevalent among long-term residents (Johnson et al, 2003), this is another important mechanism by which gardens may enhance social capital.

Allen et al (2008) showed how youth participation in community gardening increases youth contributions to community, relationships and interpersonal skills, informal social control and cognitive and behavioral competencies. Many of the gardening youth brought

the gardening expertise they learned at the community garden to residential gardens, volunteering, for example, to mow lawns for elderly residents. Impacting the community at large served to increase the benefits of the gardens for the gardeners, too. Interviews with participating youth revealed that providing food for neighbors and making the neighborhood more beautiful was a sense of pride for many of them (Allen et al, 2008). In one garden project, a garden worked by California State prisoners, the prisoners-gardeners produced 60,000 pounds of fresh vegetables, and donated the entire harvest to senior and community centers in the very community where most of the prisoners committed their crimes (Putup, 2008).

Eizenberg writes about community gardens as safe and open spaces for spontaneous learning and sharing of skills and knowledge, a rare commodity in dense lower-socio-economic level urban neighborhoods, whose parks often become hotspots for crime and/or drugs (Eizenberg, 2008). In contrast to city parks, which create an escape from the city, community gardens offer community residents the opportunity to "relate to their neighborhoods and more fully recognize themselves in them… Gardeners engage with their living environment, critically examining it… reacting to it and transforming it" (Eizenberg, 2008, p. 131). In city parks, community residents are guests of Nature and the city's professional landscapers. In community gardens, they partner with Nature and garden according to what they, and not the municipality's landscaping company believes to be beautiful. They submit themselves to seasons, storms and cycles and grow together with their gardens. Residents develop their own "ethics of place", an awareness of the geographic and communal context within which they exist (Borrelli, 2008), and actively engage a the conversation on of neighbors and neighborliness.

Eizenberg called community gardeners in New York City "Organic Residents" who "claim their right to the city, act to fulfill their vision of the city, and utilize the special potential of the locale to constitute themselves as powerful social actors within the urban scene" (Eizenberg, 2008, Introduction, p. v). "Organic residents," she explains, "constantly engage with their environment, find their own ways to make it a supportive environment for the collective needs, claim it and produce it in their own image" (Eizenberg, 2008, Introduction, p. v).

3.4 Researching Community Gardens

Eizenberg spent seven years as a "participant observer" in New York City's gardens movement, extensively interviewing and surveying gardeners, members and managers of organizations supporting gardens, as well as representatives of the city. She also sat on and was an active member of the community gardens citywide coalition garden board committees (Eizenberg, 2008). Allen et al (2008) integrated participant observation, photography and interviews with youth, gardeners, other neighborhood residents and Flint community police officers, in order to gain a comprehensive understanding of the gardens' contributions to and relationship with the community (Allen et al, 2008). Wakefield (2007) employed the Community-Based Research (CBR) method, including participant observation, focus groups and interviews, consulting with the gardeners themselves on how to conduct the research. Borrelli (2008) focused on legal material, the laws and resolutions that protected, and did not protect New York's community gardens from demolition, relocation and/or real estate development, in order to discuss possible

improvements that might better preserve gardens and support them in the face of encroachment (Borrelli, 2008).

Both Borrelli (2008) and Eizenberg (2008) delved into the constant struggle New York's community gardeners face in maintaining control over their gardens. Borrelli suggests that the difficulty in evaluating the benefits of the gardens in a statistically conclusive way renders the gardens and their keepers powerless in the face of the hard numbers and clear benefits presented by the city and real estate developers meant to convince policymakers that the gardens are not worth protecting (Borrelli, 2008). Researching community gardens and identifying their benefits therefore provides policymakers with the material to make informed decisions when choosing whether to grant developing rights or to confer protected status upon community gardens.

Research on community gardening is young, and quickly growing. In Israel, as well, students and scholars have begun to study the effects, dynamics and characteristics of the gardens, though no studies have been published, to the best of our knowledge, on community gardens and social capital. Jerusalem's community gardening model offers an important model for study, as some of the benefits of classic community gardening are not applicable. Food security, a mainstay on the benefits lists for community gardening in the US and elsewhere, is the most obvious example. Unfortunately, Israel is not lacking in poverty. But relative to the United States, produce in Israel is affordable and available, and water is so expensive that it is not necessarily economically beneficial to grow one's own produce, at least directly. In addition, Eizenberg (2008) and Hancock (2001) noted community gardens' ability to conjure up rural memories for city-dwelling gardeners. At least from the findings of this study, Jerusalem's gardens do not accomplish this. It is true

that two out of the three neighborhoods studied are heavily populated with Ethiopian immigrants to Israel, and that there are "Ethiopian Gardens" in Israel, where specifically Ethiopian crops are grown and where Ethiopian immigrants to Israel are reconnected with their rural past. But while there are Ethiopian immigrants, mostly children, who participate in gardening activities in this study's gardens, this function does not seem to be served. Marking social capital benefits to the gardens in the absences of these needs would show a tangible importance to Israel's gardens. And study of Jerusalem's gardens will show the dynamics between community gardening and social capital in contexts where these immediate needs are not present or are not fulfilled via the gardens. A final significance to studying Jerusalem's gardens contrasts the Jerusalem backdrop for community gardening with other examples. Eizenberg (2008) showed that the basic will to survive, to have fruits and vegetables, an outdoors corner for breathing and the desire to rid the community of crime-ridden lots drove community members to create and unite around community gardens (Eizenberg, 2008). It does not seem as if Jerusalem's gardens were the reactions of residents to an oppressive urban reality. As mentioned previously, at least in the low socio-economic neighborhoods the gardens were not even initiated by the residents. In other words, at least in the beginning, these gardens did not represent any form of fighting back against the challenges of the inner city as earlier models of community gardening in the US. It will be interesting to see whether social capital develops in these gardens as it did in others, despite the lack of survival "fire" that brought about their existence.

Research Purpose, Hypotheses and Methods

The goal of this study is to identify initial contributions of community gardening and the presence of community gardens in Jerusalem's low socio economic neighborhoods to the social capital of residents involved in community gardening and to the social capital of neighbors of community gardens. The hypothesis is that community gardens increase social capital by bringing residents outside and providing a community context for healthy and meaningful activity, allowing neighbors to work and discuss together, connect to and grow towards one another.

5.1 Hypotheses

Hypothesis One: The more one is involved in the community garden, the greater one's social capital will be.

In the likelihood that hypothesis one is not confirmed, the following two hypotheses delve into the question of whether community gardeners and their neighbors perceive the gardens to be affecting their own, as well as the community's social capital, thereby setting up further study to examine, at a later date, whether social capital indeed grew in parallel to the perceptions given in this study.

Hypothesis Two: The more one is involved in community gardening, the more he or she will attest to the community garden's enhancing their own social capital.

Hypothesis Three: The more one is involved in community gardening, the more he or she will attest to the community garden's enhancing social capital in the community.

5.2 Methods

We chose to combine surveys, interviews and observation in order to attain the research objective. Community gardeners, non-gardening neighbors of community gardens who are aware of the garden's existence and residents unacquainted with the garden all participated in the survey and were interviewed, while observation consisted of attending four weeks of each gardens' weekly gardening hours, as well as an additional four two-hour observations of the gardens and the neighborhoods outside of formal gardening hours.

Surveys and interviews accounted for contributions to social capital in three ways: By obtaining general social capital data of each of the three groups to assess whether social capital increased with involvement in community gardening, by asking gardeners and their neighbors for their perceptions of the gardens' contributions to social capital indicators and by gathering qualitative data (interviews/observation) on what the community members thought about the gardens.

The combined methodology was compiled in light of research constraints: The young "age" of community gardens in low socio-economic neighborhoods in Jerusalem likely means minimal observable impacts to social capital in the neighborhood. From a research perspective, this places a red flag before concluding causality even in the event of perceived impacts. If gardeners have more social capital than non-gardeners, does this mean that the garden increased their social capital, or that residents with high social capital gravitated towards the community garden? This is a difficulty that can be remedied through experimentation and longitudinal study, but the relatively short

research period precludes the possibility of utilizing long-term methodologies.

The study, therefore, is an attempt at obtaining preliminary results while providing foundation for continued study, providing baseline data on community gardeners' social capital, demographics of poor communities' first community gardeners, the extent of and reasons for involvement in the garden, and initial opinions of residents about their community gardens. The literature does not yet provide an answer to the question, "How long does it take for a garden to make a significant impact?" Hopefully, this study will be part of the growing evidence upon which it will be possible, eventually, to grapple with this question.

5.3 Three Community Gardens

Three gardens were chosen in order to reach a sufficiently large sample size. The following gardens, chosen from Jerusalem's total of 33, were gathered into one sample based on size, "age," and community demographics. They were picked according to consultations with coordinators of Jerusalem's gardens (Levi, 2010 & Wohl, 2010), socio-economic data from the Israel's Central Bureau of Statistics' National Census (www.cbs.gov.il/census), and a Jerusalem municipality poverty index map. Each garden is less than two and a half years old. According to coordinators from the Society for the Protection of Nature in Israel (SPNI) and the *Chevra L'Matnasim*, both of whom are heavily involved in supporting Jerusalem's gardens, the chosen gardens best represent gardening in low socio-economic communities. Both organizations were asked to identify three gardens for study, and without forewarning and consultation with one another, each

coordinator mentioned the same three gardens (Levi, 2010 & Wohl, 2010). In addition, their recommendations were consistent with the census data as well as that of the poverty index map. The following describes each neighborhood and its garden.

5.31 Ginat HaHaNurit: HaNurit Street, Ir Ganim.

Source of Photos: *Garin Dvash*, the Society for the Protection of Nature in Israel (SPNI)

The poverty index of Ir Ganim[1] is six out of a possible ten. It is one of the most impoverished neighborhoods in Jerusalem, especially among non-Ultra-Orthodox Jews. 44.5% of the community is comprised of immigrants to Israel, most of whom (70.1%) arrived in Israel since 1990, including 27.6% since 2002. 40% of the immigrants are from Africa, mostly Ethiopia (CBS, 2009). There is also a large population of "veteran" immigrants, who arrived in Israel in the early years of the state, mostly from other Middle Eastern and Northern African countries. 16.8% of the neighborhood's residents have received an academic degree, while 40.7% of the residents above the age of 15 are not

[1] According to Income Tax, as provided by the Jerusalem Municipality and the Israeli Census Bureau (Azulai, 2010)

part of the workforce. There are a lot of children in the neighborhood – 42.9% of the houses have children below the age of 17 (CBS, 2009).

Discussions with residents during the research period revealed the existence of deep tension between veteran residents and the newer immigrant residents.

Ginat HaNurit sits in a previously unoccupied lot on the side of a residential building complex. Residents gardened in the space for the first time in June 2009, although they began clearing the lot back in December 2008. Residents attested to the fact that prior to the garden's existence, the lot was laden with trash and building materials.

There are between five and seven strongly contributing adults to the garden, and approximately ten children, who come to work during weekly community gardening hours (Mondays, late afternoon). The children do most of the actual gardening work, while adults supervise and help with particularly difficult or dangerous tasks. Two *gariineirim*, post high school volunteers in the Society for the Protection of Nature in Israel (SPNI)'s *Garin Dvash* come to work in the garden every week, and have formed strong connections with both the gardeners and their neighbors. Many residents not involved in the garden know the names of the *gariineirim* and wave hello when they pass by. During the Hanukka holiday, the gardeners and the *gariineirim* made a party, with residents baking doughnuts, and everyone lighting candles together with the traditional blessings and songs.

5.32 Ginat Talpiot: Derech Hevron Street, Talpiot

Source of Photos: *Garin Dvash*, the Society for the Protection of Nature in Israel (SPNI)

The Talpiot *Shikunim* (Projects) are located between Derech Hevron and Derech Beit Lechem Streets, in the largely industrial Talpiot neighborhood, located towards Southeast Jerusalem. The neighborhood, like HaNurit street, is largely populated with Ethiopian immigrants new to Israel: 41.1% of the community is non-native Israeli, while 64.8% of the immigrants have arrived since 1990 (21.9% since 2002). 32.4% of the immigrants are of African descent, mostly Ethiopian. Roughly a fifth of the community has an academic degree (22.4%). 38% of the community's above 15 year olds are not part of the citizen workforce. 40% of the households have children below the age of seventeen (CBS, 2009). The poverty index level of the neighborhood is five (Azulai, 2010).

Ginat Talpiot, the Talpiot community garden, is a combination of two gardens, one next to the other, in the front yards of a building complex. The space used to be filled by a children's' playground, which was burned in a fire. When SPNI and the local community organization, the *Minhal Kehillati* brought the idea of the community garden to residents,

a small cluster of residents were immediately willing, and able to work (Levi, 2010).

A core of three adults, one woman and two men, maintains the garden. An additional two to four adults are occasional contributors to the garden, while other adults from the adjacent buildings contribute hands and help on occasion, as well. Many children, mostly of Ethiopian parents, attend gardening hours. The gardeners meet once a week, for two hours, and conclude each session with a meeting with their two *gariineirim*, to discuss what they will do in the following week. There have been two events at the garden, attended by approximately 20 residents each. It should be noted that out of the three gardens studied for this survey, Ginat Talpiot is by far the most developed, from an aesthetic point of view. The garden began operating in April 2009.

5.33 Ginat Ulsvangor: Ulsvangor Street, Kiryat HaYovel

Source of Photos: *Garin Dvash*, the Society for the Protection of Nature in Israel (SPNI)

The Ulsvangor building complexes are part of the wider Kiryat Hayovel community in Western Jerusalem. The area's statistical zone, 1122, is also heavily populated by immigrants to Israel (33.6% of the community), but less so by Ethiopian immigrants than HaNurit and Talpiot. Most immigrants arrived after 1990 (52.6%), mostly from the

Former Soviet Union. The education level in Ulsvangor is higher than in the other communities, with 37% having completed academic degrees. And there are fewer households with children than in the two other neighborhoods (36.6%). Its poverty index, like Talpiot, is five, and 33% of the adults in the neighborhood are not a part of the workforce. A recent development in Ulsvangor, common to the classically secular Kiryat HaYovel, is what is derogatorily called *Hitchardut*, Haredi-ization of the neighborhood, meaning the influx of ultra-orthodox residents. This is something that would come up during the surveying of the gardeners and residents. 46.7% of the community residents rent their apartments, also more than in the other two neighborhoods.

The Ulsvangor garden is the culmination of four years of community efforts to carve out a community garden. Gardens originally sprouted up in the courtyards of multiple buildings on the block, but two years ago, the community decided to form one shared garden, in one area. The garden in its current location has existed for two years.

There are officially two days per week of community gardening, where between five and seven adults and some children come to work and/or "hang out." There is not yet a water pipe that connects to the community garden. As such, gardeners and the *gariineirim* make runs to neighbors of the gardens, to fill up buckets and containers of water.

There have been numerous events in the Ulsvangor garden, attended by tens of residents.

To summarize, each garden is situated in a low socio-economic status neighborhood in Jerusalem, heavily populated with immigrants, and with tensions between new and old groups. Ginat HaNurit and Ginat Talpiot differ from the garden on Ulsvangor: These two

gardens are younger, each less than two years old, the first community garden projects in their neighborhoods. Ulsvangor's garden is the product of four years of community gardening. In addition, HaNurit and Talpiot have large Ethiopian populations. Ulsvangor does not, and is characterized by immigrants from the Former Soviet Union. Despite this being the case, the gardens were combined to form one sample, as the commonalities between the gardens and the neighborhoods still serve to provide a window into the benefits of low socio-economic neighborhoods' community gardening.

5.4 The Survey

The 20-question survey was comprised of questions on social capital, involvement in the community garden, perceptions on the benefits of the garden and demographics. Social capital questions were adapted from two sources: Epel et al's (2008) social capital questionnaire, which was based on Tel Aviv University's Hebrew translation of the European Social Survey (www.bicohen.tau.ac.il) and Saegert and Winkel's 1998 study, "Social Capital and the Revitalization of New York City's Distressed Inner-City Housing." On the one hand, Epel el al's study provided already tested Hebrew versions of classic social capital questions. On the other hand, Saegert and Winkel's study focused on a smaller scale than Epel et al, with a focus on social capital within individual building complexes, a more appropriate scale for small and new community gardens. A combination of the two questionnaires was built in consultation with one of the author's of the Epel et al study, and members of the Ministry of Health in Israel's Department of Education and Health Promotion. Questions on gardens and their perceived benefits were original, as a standard set of garden-evaluating questions has yet to be identified and agreed upon in academic literature.

Surveys were completed in person – 56 out of 72 surveys were read out loud to interviewees, the answers filled in by the researcher. Many of the interviewees were immigrants to Israel, or elderly, and sitting to read and fill out the survey on their own was daunting to many of them, and most preferred to be "interviewed." This preference became clear very early on in the study, and remained consistent throughout, regardless of time of day or garden. Even most of the younger residents preferred to be interviewed rather than to fill out the survey. This fact ended up improving the research. For example, many of the residents of the community mistook "community garden" for the public playground. This point was clarified during the interview process, and would not have been realized had interviewees filled out the survey on their own.

Surveys were administered to individuals attending gardening hours, to neighbors standing outside their apartments, and by knocking on doors. Often, surveys were conducted in the residents' homes. Attempts to survey were conducted at different hours of the day to feature a broad range of residents and to accommodate their schedules.

Refusal to be surveyed primarily stemmed from two reasons: language barriers and residents' lack of time. Lack of time was most often cited during data collection after 20:30 pm. Nonetheless, response rate was high, with 17 refusals to the 72 who agreed to participate and be surveyed (81% acceptance rate). Each survey was administered in either August or September 2010.

In the survey, the following variables defined respondents' level of involvement in the community garden (The questionnaire is included in this paper as Appendix 1).

1. Geographic Proximity to Garden
2. Frequency of Passing by Garden
3. Frequency of Entering Garden
4. Extent of Involvement in Garden
5. Attendance of Event in the Garden (parties, music festivals, etc.)
6. Knowledge of Time of Community Gardening Hours
7. Attendance of Gardening Hours
8. Kids' Attendance of Hours
9. Receipt of Produce

Social capital variables included:

1. Membership in *Vaad Habayit*/Building Maintenance Organization
2. Performance of Cleaning/Maintenance work around neighborhood
3. Satisfaction with Neighbors
4. Extent of Help Given to Neighbors
5. Extent of Help Received from Neighbors
6. Feeling of Safety in Neighborhood
7. Perceived Ability to Improve Quality of Life in Neighborhood
8. General Trust of People

Respondents expressed their perceptions of the gardens' enhancing their own social capital via the following:

1. Change in Social Status in light of Being Part of the Community Garden

2. Extent of Deepening of Connection to the Community as a Result of Being Involved in/Living in Close Proximity to Community Garden
3. Increase in Going Outside Because of Presence of Garden

And they provided the following to express their perceptions of the gardens' enhancing social capital in their communities:

1. Extent of Members of the Community Being Connected More to One Another Because of the Community Garden
2. Garden's Provision of Meaningful Activity for Children

Because the overarching context of the study was to examine community gardens as health-promoting environments, respondents also answered whether they perceived the garden to be improving their own health, as well as the health of other members of the community. Finally, to assess residents' general opinions of the garden, they answered a question on the extent to which they hoped for the gardens' continued existence.

5.5 Qualitative Data Collection

Qualitative data was gathered via three means: Asking open questions in the survey, in order for community members to expand on already inquired-about subjects, asking for opinions on the garden not inquired about in the survey, and by observing weekly community gardening hours, as well as observing the garden during non-gardening hours.

5.6 The Sample

The survey was administered to three groups in each community garden neighborhood. The first group included community gardeners, those involved in the community garden, and parents of children who work in the community garden. This group has the closest "hands-on" exposure to the garden. It is hypothesized that this group will testify to the gardens' contributions more than others. While most community gardeners and those involved in the garden live in buildings adjacent to the garden, some live in nearby but non-adjacent buildings.

The second group included non-gardening neighbors of the community gardens that were aware of the gardens' existence. These residents may have a porch facing the garden, or necessarily pass by it on the way to work. This group may benefit from the garden, or may be annoyed by it or by the gardeners' presence, or they may be ambivalent to the garden. It is hypothesized that this group will attest to moderate benefits for the community and/or its children's social capital, although they will not feel as strongly about it as those more involved in the garden.

The third group includes residents of the community that do not live in buildings adjacent to the garden, or have not heard of the garden. They do not have any natural contact with the garden. The assumption of this research is that these residents will provide general social capital data for the community, against which the social capital of the community gardeners and those with exposure to the community garden may be compared. These residents are not surveyed on their opinions of the community garden, as they do not know of its existence. Table 1, below, summarizes the sample's demographics:

Table 1: Demographics of the Sample

Mean Age	Gender	Olim	Mean # Children	Education	Employment Status
42.56 Years old	40 Women 32 Men	33 Olim (21 Since 1990)	2.39	No High School Diploma: 39 H.S. Diploma/Prof. Certificate: 10 Academic Degree: 23	Employed: 38 Retired: 13 Unemployed: 8 Other: 13

Results

6.1 Involvement

Each group comprised one third of the total respondents: 24 involved residents, 24 aware (but uninvolved, and referred to as aware for the remainder of the paper), and 24 unaware residents[2]. Two thirds of those involved in the garden claimed that they were "very involved," while the remaining third reported being "somewhat involved." This is an important point to mention, as it seems that once residents chose to be involved in the garden, they perceived their involvement to be significant. This may have implications for the development of social capital, as significant involvement may lead to stronger commitments to the social network.

[2] This distribution was a function of the research design and does not reflect the ratio of gardeners to aware residents to unaware ones in the community. A concerted effort was made to ensure involved, aware, and unaware residents for each neighborhood, in order for the sample to truly encompass the three gardens as part of one unified sample. Indeed, a one-way ANOVA test found no significant differences among the gardens in distribution of involved, aware and unaware residents.

Figure 1: The Sample (N=72)

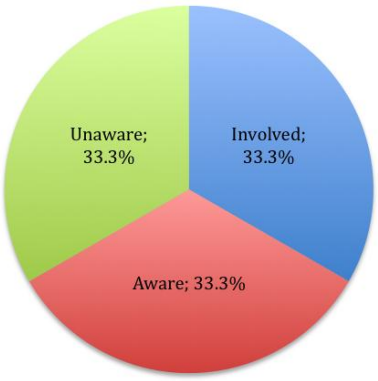
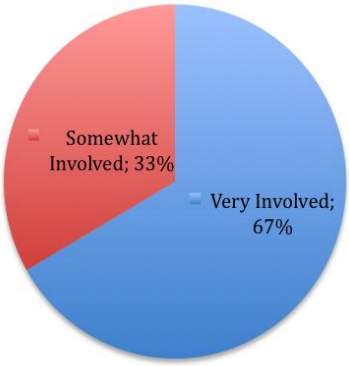


Figure 2: The Involved Group - Intensity of Involvement



We examined the various involvement criteria (involvement in the garden, knowledge of time of gardening hours, attendance of gardening hours, attendance of an event in the garden, etc.), in order to see whether there was a consistent association between all of them. This test was run in order to ensure that we could unify an "involved" variable to express the various categories of involvement, against which to test the various social capital and perception variables. Being able to address a large involved group was, for obvious reasons, more useful than having smaller groups representing many different kinds of involvements.

Data collection confirmed the above. The Cronbach alpha of the variables *Passing By Gardens, Enter Garden, Involved in Garden, Knowledge of Hours and Attendance of Hours* was 0.85, citing high levels of consistency between the answers to these questions. This allowed for the formation of one involvement factor, which was employed in further data analyses (within the involved group).

The variable "years in neighborhood" showed a trend, albeit not a statistically significant

one: Involved residents were more likely to have lived in the community for a longer time, with a mean answer of 3.83 in a scale where answer "3" meant "between six and eight years," and "4" meant, "between eight and ten years." Uninvolved residents averaged 3.04 (for aware residents) and 2.58 (for unaware residents). Answer 2 represented being four to six years in the neighborhood. Indeed the unaware residents seemed to be those newest to the community.

6.2 Social Capital

The small sample size restricted the number of variables that could be included in multivariate analysis. Therefore, univariate analyses were conducted in order to select variables to the multivariate stage, setting the significance level threshold to $p < .25$, following the procedure suggested by Hosmer and Lemeshow (2000). Social Capital variables that passed this preliminary test of association were: Presence on the Vaad Bayit ($p < .001$), aiding in maintenance of the neighborhood ($p = .007$), and the belief in one's ability to change the neighborhood ($p = .094$). The rest were not found to be significantly associated with involvement at $p < .25$.

An ordered logistic regression was then conducted with involvement as the ordinal dependent variable. This analysis suggests presence on the Vaad Bayit/building organization as the only statistically significant variable correlating with involvement in the community garden (p=0.001). When controlling for gender, age and education (Model 2), the correlation between involvement and the belief in the ability to improve

the community was marginally significant, as seen in Table 2.[3]

Table 2: Ordered Logistic Regression for Involvement and Social Capital (N=72)

Involvement	Model 1	Model 2
Vaad Bayit	1.060***	1.051***
	(0.314)	(0.341)
Maintenance	0.688	0.650
	(0.442)	(0.448)
Improve Community	-0.142	-0.206*
	(0.094)	(0.113)
Year of birth		.017
		(.019)
Gender		.666
		(.612)
Education		-.015
		(.154)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0{,}01$

6.3 Perceptions: Community Connections

Correlations were found between each of the "perceptions" variables and involvement, both for individual and community variables. It should be noted that the *N* in much of the remaining analysis is 48 and at times 24 (or less, in the case that respondents skipped a particular question, or data was recorded incorrectly), as those that were questioned on the garden included only involved and aware groups.

Table 3, which reports an OLS regression with the involvement factor as dependent

[3] Due to the small sample size and the current study's importance as initial results of community gardening, marginal significance ($.5 < p < .10$) will be reported and suggested as important areas for follow up research.

revisable shows that there was a significant correlation between involvement and both connecting variables, with an almost absolute correlation between whether the respondents believed the garden increased their feeling of connection, as individuals, to the community. In other words, the more respondents were involved in the garden, the more likely they were to feel connected to the community because of the garden. They were also more likely to consider the garden to connect other members of the community towards one another. The R-squared value before controlling for gender, age and education was 0.583, increasing slightly to 0.598 following the control.

Table 3: Relationship Between Involvement and Connections with Community

Involvement factor	Model 1	Model 2
Connect Residents	0.518**	0.549**
	(.235)	(.250)
Connect You	-0.990***	-0.998***[4]
	(.174)	(.183)
Year of birth		.009
		(.012)
Gender		.014
		(.105)
Education		-.015
		(.154)
Constant	3.456***	2.945***
	(.424)	(.996)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0,01$

An especially interesting finding is that within the aware group, 58.3% believed that the garden either slightly or greatly brought members of the community towards one another, meaning that even community members not involved in community gardening valued the garden's contribution to community connectedness. Among those involved in the garden,

[4] "0" in the question of whether the garden connected the individual to the community represented no increase in connection: hence, the negative coefficient.

all except for one of the interviewees believed the garden to connect residents of the community with one another at least slightly, while 54.2% of them (13) believed the garden to bring about a large increase in connectedness between members of the community.

The questionnaires also inquired whether involvement in the garden impacted the social status of those involved. 36.36% reported a “large improvement”, while 31.82% reported a slight improvement. 31.82% reported ‘no change.’ Nobody reported that their social status had been damaged/decreased, either moderately or significantly, because of their involvement in the garden.

Qualitative data confirmed the above. On the individual social capital level, one resident from the Talpiot garden explained that because of the garden "you feel that you can help other people." Another, describing her social status in light of the garden, said that she is “not embarrassed to have over guests anymore.” Another stated, simply, "the garden connects me to this place."

As noted by the quantitative data, respondents felt strongly about the community garden’s connecting residents towards one another, as well. One member of Ginat HaNurit explained:

"Every week we'd make a salad together from what we grew in the garden, and eat together. We'd meet. Everyone would speak about his or her past. We made a Hanukka party together in the garden - I prepared doughnuts! ... The garden is aesthetic, contributes to the unity between people, the children, the people from the block." A 24-year-old resident of Ginat HaNurit claimed that "it connects all of the residents to one

another - everyone comes to help." This was a very welcome statement for a neighborhood characterized by strong tensions between new and veteran residents. One resident, articulating his distaste with “what was happening in the neighborhood,” commented, "The people here are shits, hooligans. They don’t care about this country."

A gardener from Ginat Talpiot reported, "all of us who used to be neighbors - We're more connected to one another now. The people are happier. They say that people aren't afraid to visit anymore… We bring volunteers from abroad [to the garden]. I taught them a history of Jerusalem and of our neighborhood from the garden." In Ulsvangor, where one resident claimed “This block could burn down and nobody would care,” and another described the neighborhood by saying, "All of the Hareidim are by themselves, all of the secular residents are by themselves, and the Ethiopians are by themselves,” one community gardener explained that, "Step by step people started to understand that there's something to learn here, there's something to be a part of… It has raised the level of the neighborhood.”

According to one member of the Talpiot garden, the mechanism by which the garden connects residents to one another is communication: "It facilitates a change in communication,” she explained. “The communications and the mutual participation are the most important things - when people start working together, it builds trust." Trust is an especially hopeful addition to a neighborhood where one resident described, "When I put a trash can outside it disappears. When I put a plant there it disappears."

Not all were as satisfied: One Ultra Orthodox resident of Ulsvangor said that "there are gardens that connect residents - this one does not connect. They did not accept Hareidi

people. We were not acceptable to them." In addition, there were those from each neighborhood who expressed at least some sense of disappointment. In Talpiot, one gardener said, "the people from the neighborhood are not connected to it at all." A consistent contributor to Ginat HaNurit said that following a year of being involved, "I was disappointed - Nobody cares." And in Ulsvangor, a gardener lamented the fact that "Not many people come."

6.4 Going Outdoors

Table 4 presents cross tabulation of the proportions of opinions regarding the effect of the garden on going outdoors. About half of the interviewees (51.0%) believed that the garden brought them outside more, half of whom reported going outside a lot more. Among involved residents, 70.8% reported the garden to have brought them outside at least somewhat, with 45.8% reporting that they went outside significantly more often because of the garden. In the aware group, 30.4% acknowledged that they went outside more because of the garden. The difference in the distribution of opinions between the two groups was found to be statistically significant (p = .003).

Table 4: Involved and Aware Groups and Going Outdoors

Group	0 (Large Increase in Going Outdoors)	1 (Small Increase in Going Outdoors)	2 (No Increase in Going Outdoors)	Total
0 (Involved)	45.83% (11)	25.00% (6)	29.17% (7)	100.00% (24)
1 (Aware)	4.35% (1)	26.09% (6)	69.57% (16)	100.00% (23)
Total	(25.53% (12)	25.53% (12)	48.94% (23)	100.00% (47)

Pearson chi-squared = 11.8392, Pr = 0.003

One 76 year- old woman who neighbors Ginat Talpiot and is part of the aware but uninvolved group explained, that "because there's a bench in the garden, I can go out, sit, and have a cup of coffee. I can go and walk around the garden, and smell the plants." Another gardener was excited that "the butterflies came back!" to the neighborhood, giving her, and others a reason to go outside.

6.5 Health

Most of the involved and aware respondents felt that the garden had a positive impact on health, with involved residents feeling more strongly. More than 90% believed the garden to be beneficial to their own health. Within the aware group, 31.82% believed the garden to improve their health, at least somewhat.

Table 5 presents cross tabulation of the proportions of opinions regarding the effect of the garden on interviewees' health, and the extent to which they believed the garden to be contributing to others' health. 47.83% of the involved individuals believed that the garden brought about a large improvement in community health, and 47.83% believed in

the garden providing a small improvement in community members' health. Interestingly, although less than a third of the aware group believed that the garden improved their own health (with statistically distinct responses than those from the involved group) – 80.95% believed that the garden was contributing to others' health, 52.38% believing that the contribution was large, similar to the involved group.

Table 5: Contributions to Health by Group ("Your Health" & "Others' Health")

Group	Large Contribution		Small Contribution		No Contribution		Total	
	Yours	Others'	Yours	Others'	Yours	Others'		
Involved	45.83% (11)	47.83% (11)	45.83% (11)	47.83% (11)	8.33% (2)	4.35% (1)	100% (24)	100% (23)
Aware	4.55% (1)	52.38% (11)	27.27% (6)	28.57% (6)	68.18% (15)	19.05% (4)	100% (22)	100% (21)
Total	26.09% (12)	50.00% (22)	36.96% (17)	38.64% (17)	36.96% (17)	11.36% (5)	100% (46)	100% (44)

Pearson chi-Squared ("Your Health") = 19.695, Pr = 0.000
Pearson chi-squared ("Others' Health") = 3.186, Pr = 0.203

Respondents believed "health" to mean different things: "It's both physically and emotionally healthy," one gardener explained. On the one hand, "it causes people to be less anxious and grumpy," explained another. Another said, "I wake up in the morning, drink coffee, and look outside. It's beautiful, there are flowers and I feel good. It helps me." And on the other hand, another gardener maintained that gardening was "my physiotherapy," and another exclaimed, "It's good for the lungs!" Health outcomes resulted, according to the residents, from different sources, such as the hard work/physical activity in gardening. "We worked hard," one HaNurit gardener said. "I never understood how difficult it is to overturn soil for just five minutes!"

Residents commented on the advantages of consuming fresh produce from a known

source. One Talpiot gardener appreciated the fact that "you know what vegetables you eat, vegetables without poison."

Finally, the garden represented a stage for education on health: The Ulsvangor gardeners invoked environmental health of the community. One spoke about the garden as “an opportunity to teach ecology.” Another added, “It gets the people to learn how to be more green.” A Ginat HaNurit gardener had similar sentiments, appreciating the opportunity to learn about composting. And an uninvolved HaNurit resident stated, "A place that goes from being full of trash to being alive - that's healthy," she said. These statements came in contrast to general statements about trash and waste in the neighborhoods mentioned by residents of each garden. "They just throw trash everywhere – it doesn't matter that there are trash cans on every street corner," complained one resident from HaNurit. In Ulsvangor residents felt similarly, complaining of people letting their dogs out and not cleaning up after them.

6.6 Meaningful Activity for Children

Almost everybody believed the community garden to be providing the children of the community with a meaningful activity. "The children have something to do - to work in the garden," said one respondent. Another one, from HaNurit, was more blunt: "It occupies the children, instead of them becoming criminals." Residents of all three neighborhoods cited the value of the gardens as meaningful activity for children, and indeed 87.50% of those involved believed that the garden provided very meaningful activity for children, while only one respondent believed it to be not meaningful at all for

children. Among the aware group, 45.45%, also the largest answer group, believed the garden to provide very meaningful activity for children, while 27.27% reported that the garden provided children with moderately meaningful activity. These results are as illustrated in Table 6**:**

Table 6: Gardens' Providing Meaningful Activity for Children

Group	Very Meaningful	Moderately Meaningful	Slightly Meaningful	Not Meaningful	Total
Involved	87.50% (21)	8.33% (2)	0.00% (0)	4.17% (1)	24 (100.00%)
Aware	45.45% (10)	27.27% (6)	4.55% (1)	22.73% (5)	22 (100.00%)
Total	67.39% (31)	17.39% (8)	2.17% (1)	13.04% (6)	46 (100.00%)

Pearson chi-squared =9.501, Pr = 0.023

Some gardeners cited a change in consciousness for the children that came to work in the garden. "It raises the children's standard of living. When they see beauty, perhaps they will apply themselves more," explained a gardener from HaNurit. Neighbors of Ginat HaNurit, a father and his two twenty-plus year old sons who claimed to help out occasionally in the garden, explained that their entire interest in the garden was for the sake of the children. It is important to add that they were not speaking about their own kids, but rather, the neighborhood children. "We help in order that the children can have something to do," one explained. Excitedly, the other brother added, "It gives the kids something to do – they grew corn!" In Ulsvangor, a young boy, clearly overweight, comes to the garden twice a week to manage his own bed of vegetables. During the research period, he was growing tomatoes, squash, and watermelons. He also aided in the maintenance of the general garden. He explained that he was proud of his bed, and that

gardening gave him something to do each week after school. (He didn't mention health, but the gardening provided him with over two weekly hours of exercise.). This boy, in particular, was an example of the potential for the *gariineirim* to be role models for the local youth – the boy spoke of the *gariineir* like an older brother.

Some individuals cited the fact that children were taught about the source of their food. "The children did not know that vegetables came out of the ground - they thought they came from the factory," one gardener explained. "For the kids, that do not have any idea about these things, growing a garden, and that fruits and vegetables grow in the ground and not a factory, this is a very big thing," explained another, adding that "The children began to understand what nature is, and how vegetation sprouts out from the ground, and how complex the process is which brings us a tomato or cucumber - they did not understand that before." Finally, an aware but uninvolved resident of HaNurit, an elderly woman who claims always to have played a role in maintenance and cleanliness of the neighborhood, spoke about the importance of the garden to children, as a way for them to learn how to "respect the neighborhood," and "preserve" their space.

Getting children to work in the garden was not an immediate success, "but over the course of time, they became more attached," said one gardener. "When they started the garden, my kids didn't want to go," she explained. "But when they saw the saplings, they began to enjoy it - they even grew a garden at home… My children would say, every week, 'Imma, take our spices from the garden!'" She reported that her children grew chickpeas, corn and parsley.

There were those less positive, though, about the gardens' value to children. In the

Ulsvangor garden, one mother commented on "that garden, with 3 adults that drag 3 kids do the work for them. There are no children's activities, there's nothing interesting, it's not cultivated and it's not accessible."

The need for meaningful activity was evident from the interviews with residents. One resident from Talpiot commented that the children "just play all sorts of things and break things." In HaNurit Street, one resident was not satisfied at speaking about children's mischief, and instead chose to walk around the building complex pointing out things the children broke – stairs, walkways and the like - which the residents paid to repair, only to have them broken again by the children at night. "The children throw trash, they break everything, they destroy everything," he proceeded to explain. An elderly resident was particularly graphic in discussing the neighborhood youth: "The kids are bad, and their parents do not care. There is not one child here who is okay. They're all horrible," she said. Such sentiments underscore the need for meaningful activities for children in the studied neighborhoods.

6.7 Continued Existence of the Garden

Table 7 illustrates a cross tabulation of the proportions of opinions regarding the extent to which residents hoped that the gardens would continue to exist. 91.67% of the involved group responded that it was "very important" to them, while 50% of the aware group related that it was "very important" to them that the garden continue, 22.73% responding that it was moderately important to them. There was a statistically significant difference between the answers of the two groups (p= 0.014).

Table 7: Importance of Garden Continuing to Exist

Group	Very Important	Moderately Important	Not Very Important	Not at all Important	Total
Involved	91.67% (22)	4.17% (1)	4.17% (1)	0.00% (0)	24 (100.00%)
Aware	50.00% (11)	22.73% (5)	9.09% (2)	18.18% (4)	22 (100.00%)
Total	71.74% (33)	13.04% (6)	6.52% (3)	8.70% (4)	46 (100.00%)

Pearson chi-squared = 10.600, Pr= 0.014

6.8 Demographics

The only demographics variables statistically associated with involvement were age, with younger residents being less involved (p=0.038), and immigration (immigrants were less involved with a p value of 0.11. This is consistent with the aforementioned finding that residents in the neighborhood for more years were more likely to be involved in the garden than newer residents). The number of children, education and employment status did not show a statistically significant correlation with involvement in the garden. There were also no significant differences between involved and aware groups, for any of the demographic variables. Table 8 shows an ordered logistic regression between involvement in the community garden and demographic variables (out of the entire sample of 72 residents):

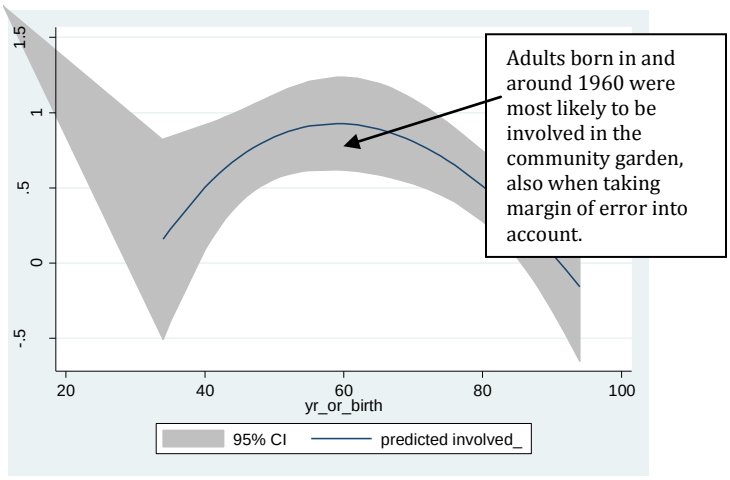
Table 8: Who are the Community Gardeners? (N=72)

Involvement	Model 1
Gender	0.505 (0.606)
Year of Birth	0.037** (0.018)
Education Level	0.253 (0.344)
Oleh or Native Israeli	1.570** (0.621)
Number of Kids	0.457 (0.115)

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Age was found to have a non-linear association with involvement: Age 50 turned out to be the most common age, while both younger and older individuals were less involved.[5]

Figure 3: Age of Community Gardeners



[5] This does not account, for children, though. Many children do work in the gardens, but they were not interviewed/surveyed in this study for ethical reasons.

6.9 Aesthetic Appearance

One variable which was not inquired about in the survey but that repeatedly came up among respondents, was the function of the community garden adding, or not adding, physical beauty to the neighborhood.

Residents were not all in agreement with regard to the physical beauty of the young gardens. One neighbor of Ginat HaNurit claimed that "to see green, a garden in the middle of the city is so beautiful." But another resident, an elderly woman who has always had a strong presence in the community and participated in Vaad Habayit and other community organizations said, "I think it's ugly. It looks like a mess. I just want flowers - I actually avoid walking by it." The same disagreement was voiced about Ginat Ulsvangor. One resident, an aware but uninvolved mother stated, "It's a very pleasant corner that makes the neighborhood more beautiful," while another resident said, "We do not go near there - it's full of trash."

Discussion

Results showed a significant correlation between involvement in the community garden and membership in the Vaad Habayit. There was marginal statistical significance (p = 0.07) to the correlation between involvement and the belief in the ability to improve quality of life in the neighborhood. Other than that, there was no correlation between the social capital indicators included in the survey and involvement in the community garden: No statistically significant difference between how much gardeners and uninvolved residents were satisfied with their neighbors, how much they tended to trust

people, how much help they provided to members of their community or how much help they received.

Method One of the study, therefore, provided little support for Hypothesis One, *i.e.* that community gardens enhance social capital. This was somewhat expected, and confirms the significance of this study as preliminary to forming conclusions regarding community gardening in Jerusalem's low socio-economic neighborhoods. Borrelli (2008) asserts that a garden's success cannot be fully measured in one or two growing seasons. Garden cultivation takes time. Gardeners need to learn how they, and their neighbors, work together and as individuals. Soil takes time to be nurtured. Plants need to grow, to flower and to bear fruit. As one gardener from Ginat HaNurit explained, "Nothing's grown yet - the garden is still in diapers… If the garden lasts a long time, it will connect residents and create a [community] consciousness, also with the immigrants - There are a lot of immigrants here." But it has not been a long time for any of the three gardens, and as such it may be that there is not yet a measurable changed consciousness, among both native Israelis and the immigrants.

What we do learn, though, from the social capital data, is that the "early adopters," those community members that have chosen to be involved in these first years of the gardens' existence, tend to be the same ones that classically were part of the Vaad Habayit. They seem to be the ones that believe more strongly in their ability to improve conditions in the community. On the other hand, they do not trust their neighbors more than their neighbors trust them, nor do they help more or receive more help. They are not more, or less satisfied with the community than their neighbors. Longitudinal study may assess whether, over time, the social capital of the gardeners does grow, and that residents help

out and trust one another more, become more satisfied with each other and feel safer in their communities.

Unlike Hypothesis One, Hypotheses Two and Three were supported by the empirical findings: Involvement in the community garden was associated with residents' belief in the gardens' impact both on individuals' own social capital and to their communities' social capital. Both quantitative and qualitative data showed this to be the case.

There was a strong correlation between involvement and feeling more connected to community as a result of the garden. This is important information, but there is a gap between such a result and the ability to conclude that working in the garden will contribute towards creating cohesive communities in Jerusalem. Would the "connecting" effect of the gardens work on everybody? Is it a durable cohesiveness that eventually spreads beyond the garden?

Aware but uninvolved residents represent an interesting group. They do not have the same emotional investment in the garden as the involved residents. Despite knowing about the garden, they did not choose to get involved. The project is not "theirs." They have simply watched. Their assessments, therefore, are crucial; the closest thing the gardens have to unbiased, or at least minimally biased observers.

This "aware" group, indeed, expressed strong support for the gardens. Some felt that the gardens improved their own lives: 31.85% believed that the garden contributed to their health. 30.40% claimed to go outside more because of the garden. These numbers, of course, were weaker than the involved groups' answers. But when it came to the gardens' importance to the community, the aware group expressed strong support for the gardens,

just like the community gardeners: 58.3% believed the garden to bring neighborhood residents together. 72.62% believed the garden to provide children with meaningful activity. 80.95% asserted that the garden was improving residents' health. And 72.73% expressed hope that the garden would continue to exist. The difference between the aware and involved groups' answers, that those involved claimed the gardens to be affecting their lives while the aware group did not, shows either that one needs to be involved in the garden in order to reap the full benefits or that it takes longer for the community as a whole to feel the benefits than for involved residents. Might there be ways to include the rest of the community in gardening activities? As mentioned in the descriptions of the gardens, there have been events in the garden, aimed at drawing more neighbors than just the community gardeners. Alternatively, it may be that it is necessary at this early stage to strengthen the core involved group, and only then truly branch out.

Nonetheless, it is clear that not only community gardeners support community gardens. Those who know about the garden tend to hold it in high regard. Based on the opinions of the aware but uninvolved group, it would appear that the gardens are enhancing social capital in the neighborhood, albeit not yet among everyone. Aware but uninvolved residents should continue to be monitored in future study - their opinions may tell the most when it comes to understanding the ways in which the garden has affected the community as a whole.

It will be interesting to see whether in the future, the number of those involved in the garden remains consistent, grows, or diminishes. How many "aware" residents will become involved? The ripple effect of the gardens perceived impact that is epitomized in the aware group's perceptions leads to the assumption that a "second wave" of

participants (after the pioneering one) may, indeed, continue to enhance the garden's importance in the neighborhood.

But will the original gardeners then lose their fire and find something else to do? Perhaps community gardening is a passing trend, the community gardens soon to be overtaken by weeds, apathy, and the next "community empowerment" project? Many of those involved in the gardens were elderly. What will happen when they can no longer be involved like they are today?

In addition, will those currently unaware of the garden's existence find out about the garden? Will they join? Will there even be an "unaware" group to study in one year, two years or three? According to one resident of Ulsvangor, "95% of the neighborhood does not even notice the garden right now." If the gardens are to have a lasting effect on the wider community, this may have to change.

One of the most important findings of the study was how much the residents felt the gardens to be providing meaningful activity for the children. As a Talpiot gardener said, "It is group work – it's good for the children. They learn to share, to give to others." Another significance of "meaningful activity for children" was not lost on one mother from the Ulsvangor garden: "The garden provides activity for children and a way for mothers to get together," she pointed out. In low socio-economic neighborhoods, keeping recreation local and low budget is of infinite value. Growing the ties between mothers in the community is a good example of bonding social capital, strengthening already existing social networks as explained by Woolcock and Narayan (2000). Additionally, as young mothers can come from any ethnic or social group, each with its own settings for

entertaining their children, this function of the gardens presents the opportunity to bridge social capital, to cross between social networks and create new ones, as well.

Future research can also examine whether the presence of the garden indeed impacts health. "Without a shadow of doubt, the garden contributes to residents' health," asserted one non-gardening resident of HaNurit street. Quantitative data accounted only for "health," in general, though, allowing respondents to interpret health on their own. Follow up research should be more specific in questioning residents on the impacts that the gardens have, or do not have, on different types of health – physical, mental and emotional. Residents can be surveyed on their opinions of their communities' ecological health, as well. Longitudinal study will be able to examine whether involvement and close proximity to the garden encourage healthy practices and/or make measurable impacts to any or all types of health. For example, will community gardeners and their children consume more fruits and vegetables because of their work in the garden? Will there be marked improvements to residents' emotional and psychological health because of the presence of the garden? Time and further research will tell.

The outdoors variable offered an important insight into the relationship between community gardening and social capital. A member of Ginat HaNurit claimed, "Everyone goes out and looks - that connects people very much. The fact that people sit outside connects people to one another." It is vital not to overlook the contribution of a safe place outside, especially in difficult neighborhoods, to the psychological well being of residents. An Ulsvangor gardener maintained "that there is a certain draw for people that want a change, a small change from home." "For my youngest," a gardener from HaNurit explained, "this is very different from his routine at home." Going outside thus acts as an

important channel through which the gardens may enhance social capital. If a diverse group of residents utilizes the gardens in this way, it can bridge social capital as well.

Eizenberg (2008) showed another conduit through which gardens bridged social capital: by forging connections with community organizations and institutions. Will Jerusalem's gardens form such connections, as well? Whether the gardens branch out to additional institutions is another litmus test on the gardens' utility in cross-pollinating between existing networks in the community, and in creating new ones. On the policy level, this may be one area where organizational partners and supporters, as well as municipal or other governmental bodies supporting the gardens can leverage their contacts, resources and experience.

Future research will also be able to examine whether there are negative affects to the community as a result of the garden: The results showed a trend of the involved residents having lived in the neighborhood for longer periods than uninvolved residents. If the garden serves to strengthen their group – bonding their social capital – it certainly is positive. But Woolcock and Narayan (2000) warn of potential negative effects of bonding social capital. For example, highly bonded groups tend to be more exclusionary than others. One non-gardenening neighbor of Ginat Ulsvangor, curiously the oldest of the studied gardens, found this to be the case already, mentioning that her children were not accepted into the group, as they were *Hareidim*, ultra-orthodox, and unwanted by the veteran residents. If gardeners indeed remain more likely to be veteran residents of the community without involving new residents, their growing social capital may become increasingly toxic, perhaps exacerbating, rather than lessening racial tensions. Research may confirm whether this "over-bonding" is a growing, diminishing, or non-existent

effect. This is a necessary challenge policymakers and supporting organizations must face, if gardens are meant to enhance, and not detract from cohesiveness in the community.

An aspect of the garden that was not inquired about in the survey was whether the garden increased pride in the neighborhood. Gardeners volunteered this information themselves: One Talpiot resident explained, "In the newer buildings, they do not have [a garden], and they are starting to notice." Indeed one of the building complexes near the Talpiot complex with the community garden has begun to request help from the gardeners to help them initiate their own garden. Gardeners from all three neighborhoods boasted about being noticed. One gardener said, "Since the garden started to grow, people pay attention, and say, "This is beautiful!"

Another issue not explicitly explored by this study, but which is important in terms of social capital, is the extent to which the residents perceive the gardens to be "theirs," created, managed and owned by them. The subject came up in discussions with the community gardeners and other residents, some of whom seemed to feel like the garden was just another service provided to them, no different than weekly garbage cleanup. One *gariineir* recalled that she felt, at times, that the residents' attitude towards them was that they (the *gariineirim*) should "Make [the residents] a garden," that this was a social service, and not a community effort.

In each garden, there was a small cluster of residents who felt differently, and expressed ownership over the gardens. One HaNurit gardener explained, "If we won't do, who will do it for us?" Members of the Talpiot garden said they would "fight for the garden"

should its existence become questioned. Residents' sense of ownership over the space is fundamental to growing social capital out of the gardens. The challenge of fostering such a sense touches upon the common difficulty in building social capital, as discussed in section one: How do outside organizations support and enable the gardens without stifling the benefits that stem from the community owning the garden space themselves?

Perhaps the significant correlation between gardeners and participation in Vaad Habayit provides an important suggestion for the ways through which gardens are initially developed: Developing the gardens with the "pioneer" residents, those that utilize the garden as another outlet for there need for civic involvement may be a way to confer the sense of ownership and weaken the perception of the gardens as another service provided by the municipality.

Finally, an important focus with policy implications is the relationship between the *gariineirim*, who are the major face of the non-profit organizations supporting the gardens, and residents. Observation was clear in revealing the very warm feelings the residents feel toward these volunteers. But there does seem to be a disparity between what the *gariineirim* and the residents consider to be beautiful. This was most apparent in Ginat HaNurit. One resident mentioned that "it's a bit depressing, the garden - the fence looks like a prison fence!" Another resident, as mentioned earlier, refused to enter the neighborhood from the side of the garden, because she thought it was so ugly. It will be interesting to see how this tension plays out, as well as how it is dealt with by resident and *gariineir* alike.

There were several challenges to this study: The biggest challenge was the novelty of the

gardens, making it difficult to isolate accomplishments. This point was dealt with, as mentioned above, by contrasting different methodologies. The fact remains, though, that the best this research offers is preliminary insight, and not conclusive evidence.

A second challenge was the research period: The summer in Israel is hot and dry – a difficult time for gardening. G*ariineirim* explained that the regularity with which children and adults showed up for gardening hours during the school year waned during the summer vacation months, and that there was more energy and more people involved in the months prior to the summer. Future research will benefit from studying during different periods of garden work.

Thirdly, the sample size was small. A sample size of 72 is small enough, and much of the data was run on 48 surveys or 24. For results to be more conclusive, a wider sample of residents should be chosen. Once again, this was in part a function of time constraints of the research period, but also size constraints of the gardens: Approximately eight visits to each garden, including the four observation visits to declared gardening hours, yielded 24 completed surveys by involved residents. Apparently, there are not many more who consider themselves to be involved. Additional gardens could not be added to the study, because none of the other Jerusalem gardens fit socio-economic and other criteria of the three studied here. A related challenge was that we created one sample out of different gardens in different neighborhoods, also because of the small size of the gardens. Hopefully, the future will provide for more community gardeners and the ability to compare between individual gardens, as well.

Finally, out of the desire to keep the survey as brief as possible, there were only twenty

questions asked. Social capital is a vast topic, with many branches and indicators unaccounted for in this study. The survey will need to be expanded or adapted, in order to gain a deeper and more sensitive window into the gardens and social capital.

Conclusion

Putnam's discussion on the fall of American social capital discusses decreases in membership in classic organizations, political parties, men's and women's clubs, boys and girl scouts, and, of course, bowling leagues (Putnam, 1995). He concedes that the remedy is not to market boys and girl scouts, but, rather, to create and encourage era-appropriate channels for developing social or community cohesiveness. As demographics, technologies and cultures evolve, new social networks will continue to emerge, each with the potential to be bonded together and bridged between. Perhaps, community gardens present a more current network through which individuals can grow their social capital.

Have community gardens contributed to social capital in Jerusalem? The literature suggests that they will, and the community residents believe that they already are, weighing on the community's social cohesion, bringing residents outside, helping them get healthy, and providing children with meaningful activity. Turning these empty and trash-laden lots, which, according to Schukoske (1999), most deeply echo the despair of the inner city into beautiful and vitality-full centers for the community is the heart of the utility in community gardening. But for the effect to make a true impact the gardens will need to last, and grow. "It's very, very pleasant - It is different than what was beforehand. But everyone needs to be involved," said one gardener from Ulsvangor. The future will

confirm whether others do, or do not become more involved.

There are both research and policy steps that may continue from where this research ends. The research level includes using the data presented in this study as baseline/benchmark data for researching community gardening in Jerusalem and in Israel, and as an additional chapter to general community gardens research, focused on young, NGO-initiated community gardens in low socio-economic neighborhoods.

On the policy level, this work expresses a general success of the organizations at work in the studied gardens. As Hancock (2001) suggests, community gardens are promising as components of 21st century community development. Members of the neighborhood, including those uninvolved, value the gardens. They believe them to be breeding social capital and improving their communities. Remaining policy prerogatives include bridging social capital by facilitating connections with neighborhood institutions, involving additional residents with diverse social networks, aligning the appearance and activities conducted in the garden with the preferences of community members, fostering the sense of ownership over the garden and ensuring that continued organizational and municipal support enhances, rather than stifles the growth of social capital.

Even in the briefest observation of the *gariineirim* at work with the residents, it is clear that the goal of the Jerusalem community gardens project is to grow communities, not just gardens. This study shows that community residents embrace this as a goal, and that they believe that goal to be attainable - that it is, in fact, already being attained. If this trend towards social capital does continue, gardens will prove themselves to be valuable additions to the city, helping to foster cohesive, vibrant and health-enabling communities

in Jerusalem, and beyond.

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Appendix 1: The Survey

בס״ד

שלום!

שמי ינאי קרנצלר. אני סטודנט לתואר שני במדיניות ציבורית באוניברסיטה העברית. אני כרגע עורך מחקר על גינות קהילתיות בירושלים, בו אני בודק אם הגינות מצליחות לתרום לאיכות החיים בשכונות בהן הן נמצאות. נכונותך למלא את השאלון הבא תסייע לי מאוד.

השאלות בודקות את שביעות רצונך מהסביבה בה אתה גר, את היכרותך עם הגינה הקהילתית ואת דעותיך על הגינה. יש לסמן בעיגול את התשובות הנכונות – יש לציין תשובה אחת לכל שאלה, אלא אם כן צוין אחרת. מספר שאלות מציעות מקום להרחבה על התשובות המוצעות – הנך מוזמן להוסיף הערות במקומות אלו. השאלות נכתבות בלשון זכר מטעמי נוחות בלבד, ומיועדות לשני המינים. אם אינך מכיר את הגינה הקהילתית, נא לדלג על שאלות 11-30.

גם אם אינך מכיר את הגינה, עדיין חשוב שתענה על שאלות 1-10, ועל השאלות המופיעות בעמוד האחרון תחת הכותרת ״פרטים אישיים״.

תודה על שיתוף הפעולה,

ינאי

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1. כמה זמן אתה גר כאן בשכונה?

a. פחות משנתיים
b. שנתיים עד ארבע שנים
c. ארבע שנים עד שש שנים
d. שש שנים עד שמונה שנים
e. שמונה שנים עד עשר שנים
f. יותר מעשר שנים

2. האם אתה משתתף או השתתפת בעבר בוועד בית, או בארגון אחר של הבניין?

a. כן, אני תמיד משתתף בוועדות של הבניין
b. כן, אני משתתף לעתים קרובות בוועדות של הבניין
c. אני משתתף לעתים רחוקות בוועדות של הבניין
d. אני לא משתתף בכלל בוועדות של הבניין

3. האם אתה משתתף בניקיון או בתחזוקה בתוך בניין מגוריך ובשטח שמסביב לו?

a. כן, תמיד
b. כן, לפעמים
c. בכלל לא

4. האם אתה מרוצה מהקשר שלך עם שכניך?

a. מרוצה מאוד
b. מרוצה
c. לא כל כך מרוצה
d. בכלל לא מרוצה

5. האם לפעמים, אתה עוזר לדיירים האחרים בבניין מגוריך, כמו לעשות קניות בסופר, להכין ארוחות, לשמור על ילדיהם, או לעזור בצורה אחרת כלשהי?

a. כן, לעתים קרובות
b. כן, לעתים רחוקות
c. כמעט אף פעם
d. אף פעם לא

6. האם לפעמים, דיירים אחרים בבניין מגוריך עוזרים לך, כמו לעשות קניות בסופר, להכין ארוחות, לשמור על ילדיך, או עזרה בצורה אחרת כלשהי?

a. כן, לעתים קרובות
b. כן, לעתים רחוקות
c. כמעט אף פעם לא
d. הם לא עוזרים בכלל.

7. עד כמה הינך מרגיש, או תרגיש בטוח ללכת לבד בשכונת מגוריך לאחר רדת חשיכה?

a. מאוד בטוח
b. בטוח
c. לא בטוח
d. מאוד לא בטוח

8. באופן כללי, האם לדעתך,

a. ניתן לתת אמון ברוב האנשים, או
b. תמיד יש מקום לחשדנות מסוימת בקשרים עם אנשים

9. האם לדעתך?

a. בדרך כלל אנשים משתדלים לעזור לאחרים, או
b. שבדרך כלל הם דואגים רק לעצמם?

10. עד כמה אתה מאמין ביכולת שלך להשפיע על איכות החיים בשכונת מגוריך
- דרג את תשובתך על סולם שבו 0 מאוד לא מאמין ו-10 פירושו מאוד מאמין

מאוד מאמין ביכולת שלי — מאוד לא מאמין ביכולת שלי

10 9 8 7 6 5 4 3 2 1 0

שאלות 11-30 דנות בהיכרותך עם הגינה הקהילתית, ודעותיך על הגינה. אם אינך מכיר את הגינה, נא דלג לעמוד האחרון של השאלון, שמבקש פרטים אישיים.

11. מה המרחק בין בית המגורים שלך לגינה הקהילתית?

a. אני גר בבניין שסמוך לגינה הקהילתית
b. פחות מחמש דקות הליכה מהגינה
c. חמש עד עשר דקות הליכה מהגינה
d. עשר דקות הליכה או יותר מהגינה
e. אני גר מרחק של נסיעה מהגינה הקהילתית

12. האם אתה עובר ליד הגינה הקהילתית מדי פעם?

a. אני עובר ליד הגינה כל יום
b. אני עובר ליד הגינה כל שבוע
c. אני עובר ליד הגינה פחות מפעם בשבוע
d. לא, אני לא עובר ליד הגינה

13. האם אתה נמצא מדי פעם בגינה הקהילתית? (כולל גינון, לשבת שם עם חברים, לקרוא ספר וכדו׳)

a. אני אף פעם לא נמצא בגינה הקהילתית
b. אני נמצא בגינה לעתים רחוקות
c. אני נמצא בגינה לעתים קרובות

14. האם אתה מעורב בצורה כלשהי בגינה הקהילתית? (כולל עבודת גינון, עבודה מנהלית וכדו׳)

1. אני מאוד מעורב בגינה הקהילתית
2. אני קצת מעורב בגינה הקהילתית
3. אני בכלל לא מעורב בגינה הקהילתית

15. האם הגעת בעבר לאירוע בגינה הקהילתית?

- כן
- לא

16. האם אתה יודע מתי יש ימי פעילות בגינה הקהילתית?

a. כן
b. לא

17. האם אתה מגיע לימי פעילות בגינה?

a. כן, תמיד
b. כן, לפעמים
c. כמעט ולא
d. בכלל לא

18. האם ילדיך מגיעים לימי פעילות בגינה? (אם אין לך ילדים, יש לדלג על שאלה זו)

a. כן, תמיד
b. כן, לפעמים
c. כמעט ולא
d. בכלל לא

אם אינך מעורב בכלל בגינה הקהילתית, יש לדלג לשאלה #22

19. מה אתה עושה בגינה הקהילתית? (מותר לסמן **יותר** מתשובה נכונה אחת)

a. גינון
b. פוגש חברים
c. מגיע לאסיפות קהילתיות
d. מבלה לבד
e. אחר: _____

20. למה אתה מעורב בגינה הקהילתית? (מותר לסמן **יותר** מתשובה נכונה אחת)

a. פעילות גופנית
b. אני נהנה מגינון
c. זה כיף
d. זה חשוב לקהילה/לשכונה שלנו
e. כדי להיות עם הקהילה שלי
f. זמן עם המשפחה
g. זמן עם חברים
h. אין לי גינה בבית – הגינה הקהילתית מוציאה אותי מהבית
i. לגדל מזון טרי
j. אני נהנה מהעבודה הקשה
k. זה מרגיע אותי
l. אחר: _____

21. לאור מעורבותך בגינה הקהילתית, האם אתה מרגיש שינוי במעמד החברתי שלך בקרב דיירי הבניין/הקהילה?

a. אני מרגיש שיפור גדול במעמד החברתי שלי
b. אני מרגיש קצת שיפור במעמד החברתי שלי
c. איני מרגיש שום שינוי במעמד החברתי שלי
d. אני מרגיש ירידה קטנה במעמד החברתי שלי
e. אני מרגיש ירידה גדולה במעמד החברתי שלי

הערות:
_____

22. האם נושא הגינה הקהילתית עולה בשיחות עם חבריך, בני משפחתך, בעבודה או עם תושבים אחרים מהשכונה?

a. נושא הגינה עולה לעתים קרובות בשיחות שלי
b. נושא הגינה עולה לעתים רחוקות בשיחות שלי
c. הגינה לא עולה בכלל בשיחות שלי

23. האם לדעתך הגינה מחברת בין תושבי השכונה?

1. היא מאוד מחברת ביניהם
2. היא קצת מחברת ביניהם
3. היא בכלל לא מחברת ביניהם
4. אני לא יודע

הערות:
_____
_____

24. היית אומר שהגינה העמיקה את רמת החיבור שלך עם עוד תושבי השכונה?

a. לא, הגינה לא שינתה את היחס ביני לבין תושבי השכונה
b. לא, אני מרגיש יותר מנותק מאז תחילת מעורבותי בגינה הקהילתית
c. כן, הגינה קצת העמיקה את היחס ביני לבין השכונה שלי
d. כן, הגינה מאוד העמיקה את היחס ביני לבין השכונה שלי

הארות:
_____

25. האם אתה יוצא מחוץ לבית, כולל למרפסת, בגלל הגינה הקהילתית?

a. אני יוצא הרבה יותר מהבית בגלל הגינה הקהילתית
b. אני יוצא קצת יותר מהבית בגלל הגינה הקהילתית
c. אני בכלל לא יוצא מהבית בגלל הגינה הקהילתית

26. האם אי פעם לקחת או קיבלת תוצרת מהגינה הקהילתית? (ירקות, תבלינים, פירות)

a. אני לוקח או מקבל תוצרת מהגינה כל שבוע
b. אני לוקח או מקבל תוצרת מהגינה כל שבועיים
c. אני לוקח או מקבל תוצרת מהגינה כל חודש
d. אני לוקח או מקבל תוצרת מהגינה פחות מכל חודש
e. אני לא לוקח ולא מקבל תוצרת מהגינה

27. האם אתה חש כי העבודה בגינה/היותך גר קרוב לגינה קהילתית תרמו באופן כלשהי לבריאות שלך?

a. כן, זה מאוד הועיל לבריאות שלי
b. כן, זה קצת הועיל לבריאות שלי
c. לא, זה לא השפיע על הבריאות שלי

הערות:

28. האם אתה חש כי הגינה מועילה לבריאות של תושבים אחרים מהשכונה?

a. כן, הגינה מאוד מועילה לבריאות של תושבים אחרים בשכונה
b. כן, הגינה קצת מועילה לבריאות של תושבים אחרים בשכונה
c. לא, הגינה לא מועילה לבריאות של תושבים אחרים בשכונה

הערות:

29. האם, לדעתך, הגינה הקהילתית מועילה לילדים בשכונה?

a. כן, הגינה מאוד מועילה לילדים בשכונה
b. כן, הגינה קצת מועילה לילדים בשכונה
c. לא, הגינה כמעט ולא מועילה לילדים בשכונה
d. לא, הגינה בכלל לא מועילה לילדים בשכונה

הערות:

30. האם חשוב לך שהגינה הקהילתית תמשיך להתקיים?
a. כן, מאוד חשוב לי שהיא תתקיים
b. כן, קצת חשוב לי שהיא תתקיים
c. לא כל כך חשוב לי שהיא תתקיים
d. ממש לא אכפת לי אם היא תתקיים או לא

הערות:

האם לדעתך יש יתרונות נוספים לגינה הקהילתית שאינן מופיעות בשאלון זה?

_____
_____

- **פרטים אישיים**
- באיזו שנה נולדת? _____

הנך: נקבה זכר

באיזו ארץ נולדת? _____ שנת עליה? _____

- מהו מצבך המשפחתי?

1. נשוי או חי עם בן/בת זוג
2. גרוש או פרוד
3. אלמן
4. רווק

האם יש לך ילדים? לא כן, כמה? _____

- מהי התעודה הכי גבוהה שיש לך?

1. תעודת בגרות
2. תעודת סיום 12 שנות לימוד
3. תעודה מקצועית ללא בגרות
4. תעודה מקצועית עם בגרות
5. תואר אקדמי ראשון/שני/שלישי (נא סמן בעיגול את התואר הגבוה ביותר שברשותך)
6. תעודה אחרת _____ ציין
7. אין תעודה

איך אתה מגדיר את עצמך בעיקר (תשובה אחת בלבד)

1. שכיר (כולל חייל בקבע)

2. עצמאי
3. מובטל
4. סטודנט
5. פנסיונר
6. עקר/ת בית
7. תלמיד ישיבה
8. חייל בחובה
9. לא עובד בגלל נכות
10. אחר, פרט: _____

- אם את/ה מעוניין/ת בתוצאות הסקר, נא לכתוב לי מייל, **ykranzler@gmail.com**, או לפנות אלי בטלפון, 054-624-8436, ואשמח מאוד לספר. תודה על שיתוף הפעולה!