

Seeds to Soil: Growing Food Access and Community

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ABSTRACT

Seeds to Soil (S2S) is a grassroots initiative centered around growing food access in classified food deserts and building community through one's empowerment and the group's shared experience of contributing to the local food system. S2S gardeners are given *gratis* the resources and information to grow their own food. Subsequently they can share questions and progress with each other online documenting otherwise isolated sidewalk conversation to include any interested parties. These virtual interactions raise new awareness for other community members and lead to group understanding and future collaborations.

Author Keywords

Design activism, participatory design, grassroots, food system, food access, food justice, environmental justice, social justice, urban agriculture, sustainability, public intervention, collaboration, cooperation, community.

ACM Classification Keywords

K.4.2. Computers and Society: Social Issues.

INTRODUCTION

The issue surrounding food deserts can be a vicious cycle. Because many inhabitants of food deserts are typically of low-socioeconomic class they do not have the means to enable change themselves and need assistance from the government. A neighborhood like Central Harlem was long neglected by city officials who turned a blind eye because of the rampant violence and drugs starting in the 1970s. This neglect included food injustice, which in turn affected the health and well-being of these Central Harlem residents. This feeling of neglect has also impacted residents' perceptions of community members around them; there is a general sense of distrust as a result from the crime in the area and therefore some resistance to engage with other community members. An increase in development and gentrification of the neighborhood in the early 21st century has brought in more diversity and business into the area;

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however, long-time residents are critical of the extensive development as it raises costs making it more difficult for them to afford to stay [10].

The driving design question behind the Seeds to Soil (S2S) initiative is "how to engage the Central Harlem community in food justice and sustain participation?" The answer is designing a no-barrier-to-entry public intervention to enable Central Harlem residents to start growing their own food. This initiative not only provides S2S gardeners access to healthy foods and a sense of self empowerment, but also because it is open to anyone, it can bring together people from a breadth of socioeconomic and cultural backgrounds to connect over a shared experience. The interactions begin at events where people plant mystery seeds to take home, continue through a virtual community website where S2S gardeners can post about their seed progress, and grow at future S2S events with in-person conversations and collaborations.

What is a food desert?

A food desert is any area in the industrialized world where healthy, affordable food is difficult to obtain. It is prevalent in rural as well as urban areas and is most prevalent in low-socioeconomic minority communities, and is associated with a variety of diet-related health problems [11].

What is food justice?

Food justice is ensuring the benefits and risks of where, what, and how food is grown and produced, transported and distributed, and accessed and eaten are shared fairly [3].

DOMAIN-SPECIFIC COLLABORATION

This intervention is designed for a specific domain and user group: food justice engagement by the residents of a particular urban food desert, Central Harlem in New York City. S2S is the result of a collaboration between an interaction designer and a social justice advocate who are both interested in promulgating social change around health and wellness and cooperation and conflict resolution.

COMMUNITY INTERVENTION

By providing all the materials and basic information needed to get people started, anyone can join the S2S bandwagon and start growing their own foods at home. The next level of involvement, which is not required but encouraged, is visiting the S2S website and sharing stories, photos, or comments about your plants with the S2S community. This small virtual interaction is the catalyst to connect S2S

gardeners who have yet to meet in person. Then as more S2S events take place and as more people visit and post to the website then the more connections made between neighbors. By taking part in a shared activity S2S gardeners will have a conversation starter connecting people regardless of occupation, race, ethnicity, age, or socioeconomic class.

The first two S2S events took place at Carrie McCracken TRUCE Community Garden (CMTCG) located in Central Harlem at St. Nicholas Avenue between 117-118th Streets. Holding the initial events at the garden gave S2S a stronger presence with and greater acceptance by community members as a legitimate organization with a positive goal. This partnership has created a symbiotic relationship: S2S raises awareness of the garden to otherwise unknowing passersby, and CMTCG's network of gardeners spreads the word to friends about S2S and supports S2S's efforts with suggestions, advice, and some supplies.

Location: Central Harlem



Figure 1. Central Harlem map, NYBits.

Central Harlem is located in Upper Manhattan, between 110th and 155th streets. Its western boundary below 123rd is demarcated with two parks - Morningside Park and St. Nicholas Park. The western border above 123rd is St. Nicholas Avenue and above 141st is Edgecombe Avenue. Its eastern border is Fifth Avenue [8]. Central Harlem has a reputation as an urban historically minority/low- to middle- income neighborhood.

According to Michelle Jackson's research its "neighborhood history of institutional racism and structural violence towards the neighborhood has severely impacted the residents access to basic needs and services within the community including the access to fresh, affordable foods impacting their health and well-being. It's this power disparities that brought about the [food] injustice in the neighborhood" [4].

User Research

According to a 2006 New York City profile, the 2000 census recorded Central Harlem as 67% African American [5]. (In a 2005 census Harlem was recorded as 72% African American [10].) In surveying and interviewing members of the neighborhood many identified themselves as Caribbean and Senegalese immigrants and Southern transplants with cultural roots in agriculture and farming. When asked about their interest in growing their own foods, many responded that they would be interested to and would if they were living in their hometown or home country, but they didn't think it was feasible to do it living in an urban environment like New York City.

On the whole interviewees also agreed that they did not have good access to healthy and affordable foods in the neighborhood. Until recently no grocery stores in the area had fresh produce (a Best Yet grocery store opened in February 2011), and what is available is considered expensive. There was also criticism towards most grocery stores in the neighborhood promoting unhealthy junk food and vocal concern for their effect on people's health. Diseases like obesity and diabetes, both big problems in the area, were specifically mentioned. According to the 2006 New York City profile, adults in Central Harlem are more likely to be obese and more likely to have diabetes compared to the rest of Manhattan and New York City [5].

Research also included surveying the target audience's comfort level with technology. Everyone surveyed has access to email and browses the internet, and most of them use text messages. Some people are members of social networks like Facebook, and a small number of people said they are accustomed to posting content or messages to websites.

Community and Gardening

Building community around the activity of gardening is a tried-and-true practice. Community gardens have been the setting for extensive research in collaboration as well as conflict resolution [4]. Community gardens have also allowed minority groups to carve out their own space and reap financial and food security through self-sustained farming. A stellar example of such progress is the Nuestras Raices organization in Holyoke, Massachusetts: the Puerto Rican residents of Holyoke with their cultural roots in homestead farming joined forces to take over and revitalize an abandoned lot. They eventually grew their holdings to thirty acres including many gardens and a community center "where youth and older generations interact and learn about the culture of growing food – native, healthy, and good for the community" [3].

Mark Winne, former executive director of the Hartford Food System in Connecticut, also reports his experience witnessing the cause and effects of communal gardening. In his book *Closing the Food Gap: Resetting the Table in the Land of Plenty*, Winne reflects:

"...Like Thoreau, we were 'learning the language of these fields' so that we might better know ourselves, forge meaningful bonds with one another, and express ourselves more fully in our present community and beyond [13]."

DESIGN CONCEPT

The initial S2S concept started with idea that anyone should be allowed to take part in the interaction regardless of education, socioeconomic class, age, or cultural background. Therefore the intervention had to happen at a neutral and public location with all materials provided on site and at no cost. Providing the supplies and information

needed to get started enables anyone who wants to garden to do so and benefits the community on the whole:

“...it has been proven worthwhile for communities to make a public commitment to providing land, horticultural training, soil and compost, and other means of support to enable people who want to garden to do so... Doing so affords them the opportunity to come together in community to grow” [13].

It is important to point out that becoming an official member of a community garden such as CMTCG is a commitment of a small monetary fee and a larger set of responsibilities. Members expect each other to be accountable and care for their share of the garden and to work together with other members and communicate as a team; the garden's upkeep is a collaborative effort.

On the other hand, S2S is a minimal commitment that can grow the interest to join a bigger operation over time. Anyone can get started, can experience a transformation felt from the self-empowerment of caring for a plant, and can develop an appreciation for growing plants with others. Also anyone can visit the S2S website and see the public seed posts and comments and even post comments so anyone can contribute to the S2S interaction.

Precedents

A design precedent is Leah Gauthier's "Sow-In" project where she gathered a group of people in New York City at her art installation and had them sow seeds in sustainable paper planters [2]. Afterwards the group distributed the seeds and referred recipients to the Sow-In website for specific care instructions. Gauthier's attempt to spread seeds and enable people to start growing their own food plants is a noble effort in micro-farming, but there is a missed opportunity in the plant's caregiver not actually sowing the seeds.

It is S2S's expectation that its gardeners will be involved from the very start, taking part in the first sowing of the seeds, and seeing how easy it is to get started. Over time as the plants grow the novice gardeners can turn to other S2S members, including seasoned gardeners, for additional technical assistance.

Another precedent referenced by S2S is Sprout Robot (SR), a web service that sends you specific seeds to plant based on your geographic location and time of year [9]. SR also provides timely reminders based on your plant's sprout date (for example notifying you when to move your plant from its indoor location to outside). SR's functionality is useful to gardeners, but SR's model suits individuals growing independently of anyone else and relies upon regular access to technology. S2S uses SR to select mystery seeds ideal for the target area and time of year and then relies on community-based interaction for sharing planting information and tips.

S2S introduces a limited amount of technology into its designed interaction by asking S2S gardeners to log onto the S2S website and post photos or comments about their plants. The "Where's George" site is a precursor to S2S online seed tracking implementation. "Where's George" allows visitors to enter the unique serial number from a one-dollar bill thus logging where it the bill currently is; visitors can also see the previously logged locations for a particular bill [12].

SEEDS TO SOIL: THE INTERACTION

A user begins the interaction at a S2S event. By taking the first step of planting a seed in a starter cup to take home the user has quietly joined the S2S community and can participate to whatever level he feels comfortable participating. Ideally the user visits the S2S website, posts about his seeds, and returns to future S2S events and meets other S2S gardeners. A video summarizing the experience is available at: <http://vimeo.com/lienbtran/seedstosoilstart>

Seed-Planting Events

During a S2S seed-planting event a passerby is asked if he wants to plant a seed to take and grow at home. A S2S organizer explains S2S's vision for giving people access to their own fresh foods, and if the passerby responds affirmatively to planting, then he is taken through the planting process: (1) poke holes in the bottom of the cup so excess water can drain out, (2) put a few inches of soil in the bottom of the cup, (3) sprinkle the mystery seeds on top, (4) add another few inches of soil, (5) spritz water to the top to ensure there's moisture, an essential ingredient for seed germination, (6) cover with saran wrap and secure it with a rubber band to create a warm incubator for the seeds, and (7) mark the seeds with their codename in order to refer and cross-reference with other S2S plants later. This process is very quick and easy to understand and complete for most people of any age or cultural or even language background.

A S2S organizer then explains and provides this new S2S member with a printed plant care guide giving instruction on how to care for the newly sowed seeds. The member is also referred to the S2S website and asked to post about his seeds progress over time. After this engagement with the S2S community (the organizers and other aspiring gardeners currently present) the newest member of the S2S community leaves with plant in hand.

Seed Tracking

After receiving a S2S plant the hope is that plant caregivers will share their plant's progress and comment on other plants. Caregivers may visit seedstosoil.org, and if they haven't already, can sign up for an account and then start posting about their seeds. When creating a Seed Post the person must identify their seeds by their codename; S2S also welcomes more experienced gardeners who want to share progress of plants not given to them by S2S, which would be identified as "Other Seeds."

Keeping S2S seeds a mystery appeals to people's curiosity and gives extra incentive to visit the site to either guess or see if someone else has guessed what each plant is. And there is satisfaction for being the first person to correctly identify a plant. There is also an inherent cooperation by trusting the information posted by other S2S members and sharing guesses, stories or comments respectfully. Also anyone can view the seed posts and comment so the experience does not have to be limited to only people growing seeds. It is the hope that those who are skeptical at first will be inspired by the increasing number of S2S plants out there and will want to eventually join.

RESULTS

S2S advertises seed planting events by posting on physical community boards, on the S2S Google Group email list, on the S2S website and Twitter account, and most importantly by word of mouth. Michelle Jackson, a long-time resident of Central Harlem and CMTCG member, taps into her neighborhood and garden network to spread the word about S2S's food access initiative. A week after the first S2S event Michelle's neighborhood was buzzing about S2S, and we were encouraged to repeat the event.

In its first month S2S has had two planting events (both at CMTCG) and has passed out 40+ plants. The seed recipients included both males and females ranging from: 2 to 50+ years of age; White, African American, Hispanic, and Asian race; avid to non-gardeners; individuals to families; S2S friends to anonymous neighbors. It is important to note that the first event took place in the pouring rain and the second one on a sunny day. Both events were decently attended, and the fact that we launched in inclement weather established S2S as a reliable and dependable organization, which are traits valued by this community.

At the second event we had new as well as returning S2S members. One returning member brought back two plants that were transferred to bigger pots, and another came back to chat with us and then planted a second plant. New members included a church reverend offering to be a future S2S blogger (he's a self-proclaimed farmer) and a mother who had seen our poster and then spent an hour at the garden with her two-year-old and signed up to take on the community garden's strawberry plants.

After less than three weeks since the first event, the website has 7 unique members, 20 seed posts, and 10 comments. Most of the documented plants have sprouted, and one person has correctly guessed the identity of his plant. While only 15% of total plants distributed have been documented, these initial numbers show promise and indicate that the virtual interaction is accessible to at least some of the target users. S2S anticipated that users would be slow adopters to seed posting yet still wanted to introduce some technology and documenting to see what would happen. S2S also expects that people will be more inclined to post once seeds have sprouted or grown significantly which will take more

time. Nevertheless the verbal sharing of seed progress around the neighborhood confirms people's excitement about growing plants on their own at home, and enthusiasm is infectious.

PARTICIPATORY DESIGN

In setting up the first interaction S2S quickly realized that it had much to learn and to benefit from community members. The ideas coming from and observations of our target audience shifted, shrank, and grew our original design approach in unpredictable ways. Without being asked, the community graciously joined in on the interaction design and rightly so. Good designers should listen to target users and key stakeholders as it is ultimately for and about them: "Long-term participatory design is an emergent process that blends ethnographic methods with participatory design [6]." S2S's design process started with a base understanding of its target user group, but there is still much to learn about and from users over time and to evolve accordingly.



Figure 2. Central Harlem community member pitching in.

NEXT STEPS

Viewing this project as an experiment in participatory design means S2S should continue to closely engage with community members and observe and listen to their ideas. This behavior ensures that S2S members have a voice and to an extent democratic control, one of the pillars of cooperation [1]. The project will continue through summer 2011 and evolve as new opportunities and ideas come. Some ideas include seed planting events at community block parties and holding events for S2S gardeners such as food and recipe swaps and potlucks.

The online seed posting interaction may require S2S to do more proactive posting and informing (visually) the number of events, people participating, seeds given out, etc. Quantifying S2S's reach will help communicate internally and externally S2S's progress towards its goal of increasing food access in Central Harlem. Also by providing more information about seed distribution – for example, "14 Miles plants distributed, 10 still undocumented" – S2S members may feel a greater urgency to claim and take ownership of virtual seed listings. Also the website needs to provide more supporting information on how to care for each type of seed distributed so there is true knowledge sharing and education both in-person as well as outside a physical event. S2S hopes to get feedback from users about what they want or need and really let the experience grow based on the community's input.

S2S is also actively getting involved with the food access and food justice movement by attending conferences and workshops and networking with experts. S2S hopes to learn from the practices of food justice advocates and be a part of the ideation for new forms of food advocacy.

CONCLUSION

Designing for a specific community on a serious topic requires an acute awareness for the range of users and ability to listen to their interests, concerns, and needs. S2S is in its infancy and will continue to learn through observation and by directly engaging with the community to find what does and does not work. This is the beginning of a longer term participatory design process; we at S2S are not experts but happen to have a vision we think others can and should get behind. So S2S success will come with cooperation and collaboration with Central Harlem residents to ultimately get more of them involved in the fight for food justice, to contribute to their local food system, and ultimately to engage with each other.

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