COMMUNITY PLANNING IN URBAN GARDENS:

INTEGRATING CHILDREN AS PARTICIPANTS IN THE LOCAL FOOD

SYSTEM

An Undergraduate Research Scholars Thesis

by

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ABSTRACT

Community Planning in Urban Gardens: Integrating Children as Participants in the Local Food System

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Literature Review

Community planning begins with the design of physical spaces. Historically, these designs have catered exclusively to the "normate" template of a Caucasian, young adult, able bodied male. Universal Design, the notion that inclusive design happens beforehand and not through careless afterthoughts, originated from the disability movement that counters this normate template. However, the concept is now decreasing its reference to disability and increasing its focus on accommodations for as many people as possible throughout their lifespan. Its basic principles benefit even those who fit the normate template and are especially applicable to making urban gardens more accessible to children. When implemented, Universal Design not only minimizes requirements for human interaction with community space, but also legitimizes the participation of children in that interaction (Hamraie, 2017).

Even when participants are not actively gardening, Universal Design can encourage them to interact with the garden's plants, which increases therapeutic benefits. Holistically increasing

garden accessibility in this way requires the provision of not only navigational access but also a range of senses as alternatives to visual experiences (Kavanagh, 1995). Such designs should be simple and intuitive to increase the space's usability for all people, including children (Hamraie, 2017).

However, it is impossible for a design to be accessible to everyone at every point in time. Therefore, children should also be included in Participatory Placemaking, which is the social and material process of recreating space (Benkő, Balla, & Hory, 2018). This involves bottom-up efforts that challenge the exclusion of children from community spaces (Karge, 2018).

Placemaking becomes a part of the garden's culture when it can not only create communal spaces, but also leave personal markers that contrast the community's landscape. Personal markers are created through unintentional or unconventional use (Benkő et al., 2018), which are often employed by children without adult approval. This contributes to low rates of youth participation in community planning and is reinforced by the idea that children are victims or problems, not experts in their own stage of human development. Because of this, researchers are now arguing that children should fulfill active roles in the community decisions and academic conversations that directly affect them (Frank, 2006).

This requires community planning, which is the assessment of local conditions, the creation of plans, and the solicitation of support for their implementation. Historically, these plans have seldom considered how children interact with communities outside of age-specific institutions, such as school. To change this narrative, youth participants will need to be directly involved in community planning by choosing age-appropriate tasks and developing relevant skills under the supervision of adults (Frank, 2006).

This project's emphasis on community planning aims to recognize the agency that non-normate community members exercise in procuring food security. Healthy food is commonly associated with wealth for geographic and economic reasons, despite American food culture's shifting focus from elite chefs to home cooks (McMillan, 2012). This increased attention on food scarcity has increased discourse about "food deserts" geographically isolated from grocery stores. Unfortunately, these conversations often harm communities by oversimplifying their physical and social landscapes, refusing to acknowledge systematic oppression, and treating community members like unchanging pawns who are not only influenced but also dictated by their environments (Reese, 2019). This project will attempt to counter that trend by exploring the applications Universal Design and Participatory Placemaking have in youth-oriented garden programming.

Thesis Statement

Children are integrated into community planning in urban gardens when they are included in the creation and recreation of the garden's physical and social environment.

Theoretical Framework

This project theoretically integrates Universal Design and Participatory Placemaking in the context of youth participation in the community planning of urban gardens.

Project Description

It is well established that urban gardens, when properly managed, positively impact food security, youth development, and social inclusion. However, few researchers focus on how they impact childhood food security specifically, and even fewer focus on how this effect can be

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increased through the inclusion of youth in community planning. This question is important because increasing children's participation in urban gardens increases their access to food, which increases their food security. Therefore, if we can adequately find ways to integrate children as participants in the community planning of urban gardens, we will be able to increase their food security. This type of integration requires children to be involved in the creation and recreation of the garden's physical and social environment, which can be done using Universal Design (inclusive design that increases a space's usability for the widest range of people possible) and Participatory Placemaking (the social and material process of recreating space). Literary analysis is used to develop a conceptual framework for Universal Design, Participatory Placemaking, and youth participation in community planning. Participation action research, which is based on visual survey results from a local garden program at the Boys & Girls Club (BGC), is used to understand how these concepts currently exist in Brazos Valley.

ACKNOWLEDGMENTS

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Finally, thanks go to the Boys & Girls Club at Brazos Valley for allowing me to conduct participation action research at their facility and to the parents and students who responded to my Garden Club surveys. I would especially like to extend gratitude to BGCBV staff members, and to Jessica Green in particular, for distributing surveys to Garden Club members and parents.

KEY WORDS

BGC   (organization) Boys & Girls Club of America

BGCBV   (organization) Boys & Girls Club of the Brazos Valley
                                             local branch of the BGC

BGCBV Garden Club   (program) Boys & Girls Club of the Brazos Valley's Garden Club
                                             youth program at the BGCBV

Universal Design   (concept) inclusive design

Participatory Placemaking   (concept) bottom-up changes to space

Community Planning   (concept) pre-design and post-design of community projects

INTRODUCTION

The Boys & Girls Club Experience

   The first time I re-visited the Boys & Girls Club in Brazos Valley (BGCBV) in preparation for this project was not during a Garden Club session as a volunteer but in my own time as an observer. After struggling to find space in the front parking lot, which was already full despite BGCBV not closing in another three to four hours, I parked my car in a small row of parking spaces directly facing the wired fence that encloses the garden. I chose to arrive at BGCBV alone in hopes of seeing how children interact with green space outside of Garden Club sessions. To my surprise, the entire outdoor enclosure did not contain a single person; I had become accustomed to walking past children and volunteers during my time there. Without the familiar presence of other BGC affiliates, the area felt more desolate and less welcoming.

Figure 1. Road next to BGCBV gate (10.02.2019)

The longer, more scenic route between "backyard" parking and the Boys & Girls Club entrance takes visitors around a fenced off field next to the BGC building. This route has no sidewalk, primarily consisting of overgrown grass that crowds around a well-trodden path. For the first time, I noticed rings of barbed wire lining the top of the fence. Just below the wire, tree branches littered with green leaves had climbed their way up to the wires. I had never noticed those details before, but now that I was an outsider with no volunteering obligations and no business at BGCBV other than to observe, these details were strikingly prominent.

As I made my way towards the front of the building, I could see clearly through the fence and into a field of green and brown grass. The grass' length was as starkly uneven as its color, with interlaying tall and short segments sprawled in a patchy pattern across the field. I had become accustomed to seeing BGC members and volunteers running across the field, but at this moment, the grass swayed only from the wind. The only evidence of children came from sounds of yelling and running that echoed from the inside of the BGC building.

Figure 2. Field next to BGCBV building (09.25.2019)

The Boys & Girls Club is best described as the halfway point between a park and an educational institution. Outside of basic standards of conduct, the children can do as they please. They float between various indoor and outdoor activities for no reason other than their curiosities. Management exists in concern for the safety and development of youth, but the underlying decisions that dictate their experiences are made by the children themselves.

The informal learning environment that results is a low-risk space in which failure has few consequences for the children who experience it. The trade-off for this agency is that outsiders may, consciously or not, condemn the environment for being less structured and organized than their expectations. However, the Boys & Girls Club is designed to be a comforting space outside of school and home, not a space for organized decorum. It is theoretically designed to be community building not only for the children it serves, but also for

those who serve there. As I walked toward the front entrance, I passed by student volunteers from university organizations whose demographics vastly contrast that of BGC.

Figure 3. Garden Club space at BGCBV (10.02.2019)

My biggest fear in producing an ethnography about the Boys & Girls Club was that the descriptions would be taken negatively by those who do not consider BGC's environment to be normal or ideal for youth development. BGC students are primarily members of marginalized communities, which makes them vulnerable to not only the food insecurity addressed by the Garden Club, but also to stereotypes of "incivility" and "disruptiveness", even when the behavior those stereotypes stem from is more closely related to age than class or race. However, these descriptions are paramount in understanding how youth agency exists in community space, and they epitomize the never-ending balance between young people's needs and the greater community's social expectations.

History of the Boys & Girls Club

The Boys & Girls Club of America is a national organization dedicated to after school programming. Its mission is to promote an inclusive environment for youth development. The Brazos Valley chapter opened in 1959 and now serves around 2,000 children annually (Boys & Girls Club of the Brazos Valley, 2015). The garden space in its Bryan, TX location will be used to demonstrate how the theoretical concepts of Universal Design and Participatory Placemaking have practical applications in urban gardens frequented by youth.

I joined Dr. Sarah Gatson's Aggie Research Scholars team at Texas A&M University in the spring of 2018. This team meets weekly at the BGC Garden Club, often on Thursday afternoons, to teach one-hour gardening sessions. Garden Club students perform gardening tasks, eat healthy snacks, and participate in food related knowledge activities either outside in the garden or inside in the BGC building, depending on the weather. Activities are inspired by material from the LGEG Texas A&M AgriLife lesson plan, and field notes consist of observational studies of the students' behavior. These field notes also detail what students are learning, which range from knowledge as simple as the fact that chips are created from potatoes to as complicated [relative to their age] as the water cycle. The resulting ethnography is combined with literary analysis to help researchers better understand cycles of food insecurity, realities of food access, and social relationships with food. My participation action research was inspired by this pre-existing research.

Food in America

Healthy eating is associated with financial security both socially and geographically in the United States. As a result, Americans are increasingly beginning to understand that

supermarkets, grocery stores, and farmers' markets are often inaccessible to low-income

neighborhoods that house the very people who work in those industries, not only economically

through price, but also theoretically through physical distance. These neighborhoods have been

famously touted "food deserts" for their lack of fresh food markets (McMillan, 2012).

In such communities, children are often a parent's primary motivation behind commuting

to suburban areas for fresh produce (McMillan, 2012). As a result, urban gardens and the youth

programming associated with them have often been proposed as solutions to this geographic

inequity.

However, the over-simplification of food insecure communities as "food deserts" and

food donations as the solution to their hunger is at best misleading and at worst harmful.

Sociologist Ashanté M. Reese explains that, in the case of black communities, this rhetoric has

often been used by well-meaning food security advocates to congratulate white organizations

that deliver "good" food while ignoring how black residents have grown food for generations

(Reese, 2019). This assumption treats the environment like a scenic backdrop that community

members are unidirectionally affected by. It acknowledges what they lack (fresh food) while

ignoring what they have an overabundance of (corner markets, convenience stores, etc.). It

discounts the way they express agency by overlooking how they already shape the environment

to meet their biological needs and to socially connect their past to their future (Reese, 2019).

Although BGCBV Garden Club is more centered on age than race, it attempts to address

similar issues of agency by rejecting the commonly held notion that healthy relationships with

food require outsiders to unidirectionally alter children's lives. Instead, it works to incorporate

healthy eating into lifestyles that children, out of necessity, have already adopted. BGCBV

Garden Club members maintain low commitment key-hole gardens within the time frame they already spend at BGCBV, and plants taken home are ones that can easily be replanted and grown.

This research project is centered on the before mentioned themes of youth agency and food geographies. Chapter One will focus on its theoretical framework, Universal Design and Participatory Placemaking in the context of youth participation in community planning. The next chapter will explain the conception and distribution of visual survey methods used at the BGCBV Garden Club. The final chapter will analyze results and explain how they are especially relevant to youth participation in community planning. Overall, this project will demonstrate how community programs intended to increase childhood food insecurity can be designed and executed with the consideration of young people's agency.

Topics of interest

Some questions concerning this research topic include the following:

1. How can children be integrated as active and legitimate participants in spaces not specifically designated for them?
2. Who has the authority to oversee community programs, and when do bottom-up activities need the intervention of said authority?
3. How do we address the power gap between children and adults without compromising technical proficiencies required for community planning?
4. How can functionality be prioritized over design even when precise design plans are needed for project approval?

5. Should community members' sense of belonging be prioritized over outsiders' sense of comfort?

6. How can the need for accessible/cheap materials and labor be balanced with the need for sustainable/consistent resources and staff?

7. How do we prevent children from becoming disappointed and consequently discouraged from future participation?

8. How can the success of community planning be measured?

This research project will directly address questions 1-5.

CHAPTER I

RESEARCH BACKGROUND

Universal Design in the Physical Environment

What is Universal Design?

Universal Design was conceived during the 20th century as activists were urging designers to better consider the needs of elderly and/or disabled people. Discourse around this concept has since decreased its reference to disability while increasing its reference to functionality. Today, the main mission of Universal Design is for public spaces and common household items to accommodate the widest variety of people possible throughout their lifespans. Although some may consider these intentions to be overly lofty and idealistic, their presence and prioritization greatly impact the usability of community space (Hamraie, 2017).

Inclusive design outcomes are most successfully achieved through adherence to the following principles: equitable use, flexibility in use, simple and intuitive design, perceptible information, tolerance for error, and low physical effort (Hamraie, 2017). These principles have been adapted from human-machine interface practices to lower the mental and physical requirements for human-environment interaction. They do so by accommodating for the widest range of user preferences (visual, auditory, tactile, etc.) possible as opposed to exclusively following the minimum disability regulations required to maximize sales (Hamraie, 2017). This practice decreases the stigmatization of non-normate populations, such as the disabled or elderly, while increasing accessibility for all populations.

How can garden planners achieve inclusive design?

In accordance to Universal Design principles, a garden's physical design should focus on improving accessibility and redirecting attention to the gardens' plant masses.

Examples of accessible design directly applicable to gardening include the following:

- Paving a walkway through the garden

- Choosing a consistent pattern for the walkway's path

- Raising planting beds to at least knee-level height, depending on the plants being displayed

- Displaying container plants on tables or shelves (Kavanagh, 1995)

Many of these guidelines adhere to the Universal Design principle of low physical effort (Hamraie, 2017). Raised planting beds and table/shelf displays both make plants more physically accessible to visitors. In most community gardens, these accommodations are performed to suit the average standing adult. Therefore, it is important for a youth-oriented garden to adjust such measurements according to their target population. That way, children who use the garden have greater physical access to its plants.

Building a paved and consistent walkway is indicative of simple/intuitive design, another Universal Design principle (Hamraie, 2017). By lowering the minimum amount of cognitive effort required of visitors to see the plants, designers can increase the garden's accessibility

Another measure of a garden's inclusive design is the accessibility of its gardening tools, as demonstrated in the following examples:

- Using simple handles for doors and water faucets

- Balancing water cans to increase their weight distribution

- Providing visitors with far-reaching shovels, trowels, etc.

- Making furniture such as chairs, tables, and stools adjustable for the user's height (Kavanagh, 1995)

Again, most of these guidelines directly relate to Universal Design principles (Hamraie, 2017). Balancing water cans, using far-reaching tools, and making furniture adjustable to height uses human-machine interface design to require lower levels of physical effort from the user. This principle, when applied to garden tools, makes not only observing but also interacting with the plants an accessible part of the garden experience.

The usage of simple handles and faucets refers to the previously introduced principle of simple/intuitive use (Hamraie, 2017). Although door handles and water faucets are general tools found in any community space, the latter is especially applicable to garden planning as faucets are often the source of water for garden plants. When these tools are designed intuitively, they make even the most basic tasks, such as washing hands and opening doors, less frustrating. By minimizing the potential discomfort of performing everyday tasks, this design allows visitors to focus instead on tasks that are intentionally new to them.

Some accessible design principles are applicable to all outdoor spaces. The following principles do not directly address the plants themselves but allow the visitors to have a more pleasant and welcoming experience at the garden:

- Minimizing how many plausible irritants and pollutants are present

- Sheltering visitors from the wind, sun, and other potentially unpleasant weather elements

- Reducing glare from the garden's building materials

- Providing alternatives to the visual experience of garden visitors (for ex- touch, even taste if safe to do so)

- Arranging furniture in a way that visually draws attention to the garden's plants

- Removing details and furniture that discourage or interfere with visitors' engagement with the environment (Kavanagh, 1995)

These guidelines focus more on the general experience of anyone who enters the garden space, including non-visiting staff members and visitors with no intentions of intensely interacting with the garden itself. By following the Universal Design principle of equitable use (Hamraie, 2017), they decrease the potential stigmatization of visitors with non-normate medical and physical needs. This includes age groups more sensitive to external weather conditions (such as young children or the elderly), people with severe allergies, and people with visual, auditory, and other sensory impairments.

Some of these methods are especially relevant when placed in the context of youth participation in community gardening. Accommodating for the children's average size dictates the height of raised plant beds and the length of far-reaching supplies. Children also benefit from physical, and not just social, reminders to re-direct themselves to the garden's plants, which may come in the form of clearly defined walkways or intentional furniture arrangement.

One thing to consider is that these goals are often difficult to consistently uphold. For example, committing to a specific pattern for the garden's walkway may interfere with the garden's layout if it ever changes to include a growing number of planting beds or container plants. However, even though it is nearly impossible for Universal Design to be perfectly

executed in practice, designing with these principles in mind is a critical first step in facilitating inclusion in public space.

Participatory Placemaking in the Social Environment

What is Participatory Placemaking?

Participatory Placemaking refers to the social, material, and often political processes that community members use to transform communal space (Benkő, Balla, & Hory, 2018). These bottom-up efforts personalize space, improve its usability, and challenge outsiders' de-legitimatization of it (Karge, 2018). This can occur through processes as small-scale as individual, unintentional change and as large-scale as organized, municipal planning (Benkő, Balla, & Hory, 2018). Placemaking is necessary not only for fixing accessibility issues that were overlooked in the design process, but also for adapting a space to changes in function or population.

During Budapest's Communist era, results of Participatory Placemaking symbolized changes in the community's cultural and political landscape. For example, residential buildings were re-functioned to contain an increased amount of common space and a decreased prevalence in individualistic design. This transformation was a direct reflection of changes in the occupants' social environment. In contrast, residents during the latter era of privatization began to rearrange living spaces to include personal markings and contrast the building's homogenous landscape. These transformations were most notably in front-facing areas of property, such as porches and balconies. Residents used them to either consciously or subconsciously counter the historic disruption of their agency. Such "design by use" transformations strengthen the community's

sense of place by reflecting the social values they have deemed relevant (Benkő, Balla, & Hory, 2018).

In the context of present-day Brazos Valley, design by use transformation helps young people create a sense of belonging in places outside of school or home and encourages them to fulfill needs that have been historically de-legitimized by the adult world. This has been executed through modifications as simple as placing hand-paint art on the brick walls of keyhole gardens.

Figure 4. Keyhole Garden at BGCBV (11.21.2019)

How can community planners encourage Placemaking?

Participatory Placemaking was analyzed by Project for Public Spaces (PPS) and consolidated into a set of well-defined, detailed principles (Karge, 2018). Although it is impossible for Placemaking to be mechanically implemented, these principles help community

members understand it as a method of practice (Karge, 2018). They can be grouped into the following four categories:

- Community network and vision

- Structural function and design

- Iterative development and testing

- Dealing with obstacles and constraints (Karge, 2018)

Community network and vision is primarily concerned with stakeholder relations and how they affect the development of both knowledge and physical space (Karge, 2018). This aspect of Placemaking is what my participation action research will focus on.

In order to successfully strengthen stakeholder relations, garden planners must systematically recognize the community as "the expert". This involves acknowledging community members for their inherent understanding of the area's physical environment and social needs (Karge, 2018). As a result, individual adaptation of space, as opposed to top-down modification, is encouraged.

Placemaking also suggests that community membership be prioritized over professional experience when delegating basic planning decisions; professional expertise, despite its value, is not enough to understand the local population's environment and motivations. Such forms of networking are important not only because they allow stakeholders to partake in the space's maintenance, but also because communities that discourage stakeholder participation leave inactive residents no other option but to wait on professionals and government officials for change (Benkő, Balla, & Hory, 2018).

Beyond the community's network and vision, Placemaking is also concerned with the space's function and design (Karge, 2018). This concept will not be verbosely explained because it involves the previously explored Universal Design issues. However, it is important to acknowledge that successful Placemaking requires designers to prioritize the space's usability over their artistic goals (Karge, 2018).

All these goals require iterative development and testing, which call for ongoing alterations. This can be achieved by asking frequent visitors to provide input on areas for improvement and by using cheaper and more malleable materials (Karge, 2018). In the context of gardening, such Placemaking is most easily conceptualized using homemade planters. Instead of using designated planters, garden planners can reuse dishes and mugs, or even less traditional items such as shoes and basketballs (Michaels, 2019).

Unfortunately, cheap materials conducive to alternation are less conducive to long-term development because they often need replacement (Karge, 2018). In the case of re-purposed "planters", the objects used may not be as suitable for different stages of the planting, growing, and harvesting process as a specially designed planter would be, which may create future complications. In such situations, garden planners should adhere to the first concept of community network by asking residents if their need for malleable materials overrides their need for long-term consistency.

Lastly, dealing with obstacles and constraints relates to the garden's external situation. For example, fire regulations may prevent a rooftop community garden from operating and budget cuts may prevent it from being re-opened at another location. One solution would be to re-locate the garden through inexpensive interventions. This is possible through donations, volunteer labor, and recycled or upcycled material. Of course, this idea creates other

complications as it relies primarily on volunteer labor, which fluctuates strongly due to its absence in wages (Karge, 2018).

Overall, these concepts serve as guiding principles to the practice of Participatory Placemaking in community space. However, implementing this practice is often logistically difficult to do. This difficulty varies in intensity depending on the space's function, the project's external circumstances, and the community's needs. In the theoretical execution of Placemaking, communal issues are presented to and resolved by community members most affected by them. Unfortunately, accessibility constraints and logistical concerns often keep communities from achieving this goal. Regardless, adherence to Participatory Placemaking is an important part of creating inclusive community projects.

Youth Participation in Community Planning

What does community planning entail?

Community planning involves the pre-design planning and post-design implementation of community projects (Frank, 2006). Therefore, inclusive and holistic success in community planning requires both Universal Design and Participatory Placemaking, as Universal Design conceives appropriate accommodations while Placemaking adjusts those implementations for individualized or unforeseen use.

Such planning affects personal development among individual community members and long-term change among the community's practices and culture. It requires communicative, technical, and sociopolitical skills for successful implementation, the latter of which has been delineated as the most difficult for children to acquire. Acknowledging the importance of

community planning is critical in understanding the relevance of young people's participation in it and in the Universal Design and Participatory Placemaking it entails.

How feasible is youth participation in community planning?

Historically, young people have experienced one of the most uneven participation rates in community planning. This is because they often lack the adult support needed to proceed with plans or even know where to begin in the planning process. This impedes community development because children have valuable perspectives on community life, even outside of the aspects they are traditionally prioritized in (such as education or childcare). Additionally, community participation is an effective way for young people to exercise their political rights and begin their active participation in democracy (Checkoway & Richards-Schuster, 2003).

Community participation rates among youth are often determined by societal assumptions about their development and character. These assumptions can be divided into the following four categories:

- 'Developmental": based on the idea that adults are more competent than youth
- "Vulnerable": based on the idea that youth are susceptible to abuse and need adult protection
- "Legal": based on the idea that young people are citizens in progress and need adult guidance
- "Romantic": based on the idea that youth have separate, even superior, qualities from adults (Frank, 2006)

These assumptions make youth-oriented community planning difficult to achieve when they become the central determinant of regulations on youth participation (Frank, 2006). Instead,

community planners should understand that the adult supervision needed for project completion does not detract from the unique skillset of children working on said project. This gives young people the agency to make important decisions while keeping expectations realistic for everyone involved.

Contrary to popular belief, most barriers youth participants face stem not from a lack of technical skills but from a lack of socio-political competencies. More specifically, children tend to have a difficult time with the perspective taking and collective decision making required in community work. They also have more limited access the resources and personal connections required for the mobilization of their ideas (Frank, 2006).

However, this does not mean that young people are incapable of fully participating in socio-politically centered community projects. The success of such projects relies on the capacity building of youth in not only their skills but also their confidence. This involves youth-oriented activities sensitive to the interactive preferences of children, which are often removed from more traditional, classroom styles of learning. Such capacity building activities address the discrepancy between youth capabilities and project demands while giving adults consistent roles throughout the development process (Frank, 2006). Although this process may be frustrating for both adults and children, it is fundamental to the inclusion of youth in community programming and design.

CHAPTER II

METHODOLOGY

Research Design

The distributed surveys use visual methods to incorporate child-centered research. These methods give children theoretical access to the survey-taking process by making it age appropriate, as the survey itself is comparable to activities children participate in on their own accord. As a result, survey respondents were given a relaxed atmosphere with minimal adult influence and maximum free expression (Young & Barrett, 2001). This was used to better understand the BGCBV Garden Club's existing and aspired socio-spatial geography.

In an ideal example of participatory action research, the "mosaic approach" would be used to combine visual and verbal research methods. This approach allows researchers to use personal supervision and verbal guidance to avoid incomplete or unusable responses (Clark, 2010). However, this robust survey method was not realistic for my project's time restrictions. As a result, a small section of dialogue, which would have otherwise been verbally presented by a survey moderator, is included in the first page. Its function is to introduce the survey's purpose.

Out of the survey questions, three require yes/no answer choices. The three remaining questions are pictorial: they either ask students to choose between various photographs or ask them to draw their own pictures. These formats are intended to make the survey taking process less strenuous for respondents, regardless of age.

Survey Distribution

IRB approved surveys and parental consent/child assent forms were given to the Boys & Girls Club at Brazos Valley to distribute to Garden Club attendees. The parental consent forms gave permission for the children to take the survey, while the child assent forms confirmed the respondents' approval.

At first, the BGCBV front office handed stapled stacks of surveys and consent/assent forms to Garden Club members while they were being picked up. However, parents rarely encountered the front office during daily pick-up. As a result, this distribution resulted in low response rates. Even though many surveys were completed, they were often returned un-accompanied by consent/assent forms. This means that parents were either preoccupied with other tasks, or that the forms were being misplaced before they could even be received by the parents.

As a result, consent/assent forms were taken home with an explicit, one-week deadline to be turned in or denied by. After the forms were received, children whose parents had already given consent were handed surveys to complete during their next visit to BGCBV. This method greatly improved response rates as it expedited the return of parental consent forms and minimized the amount of time required of BGCBV Garden Club members outside of their regular BGC commitments.

Sample Population

As of 2019, children at the Boys & Girls Club of the Brazos Valley fall within the 6-18-year age range. Most BGCBV members are Black or Hispanic, with 65% of the children from

single parent households and over half of the children from households below the median

household income.

CHAPTER III

RESULTS

Response

The survey used in this research project asked BGCBV Garden Club members what vegetables they prefer, whether they visit the Garden Club outside of regular gardening sessions, if they garden at home/school, and what they like/dislike about the Garden Club. Their answers are recorded in the following diagrams:

Chart 1. Question 1
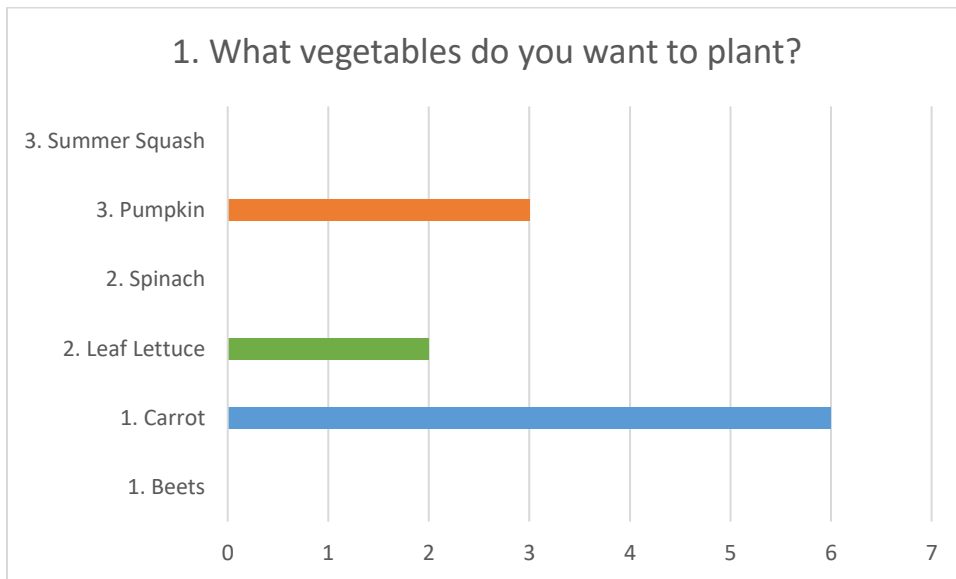
Note: Students were asked to choose between three sets of two choices. These choices were separated by planting season as noted in the chart (for ex – Choice 1: Carrot or Beats, Choice 2: Spinach or Leaf Lettuce, etc.)
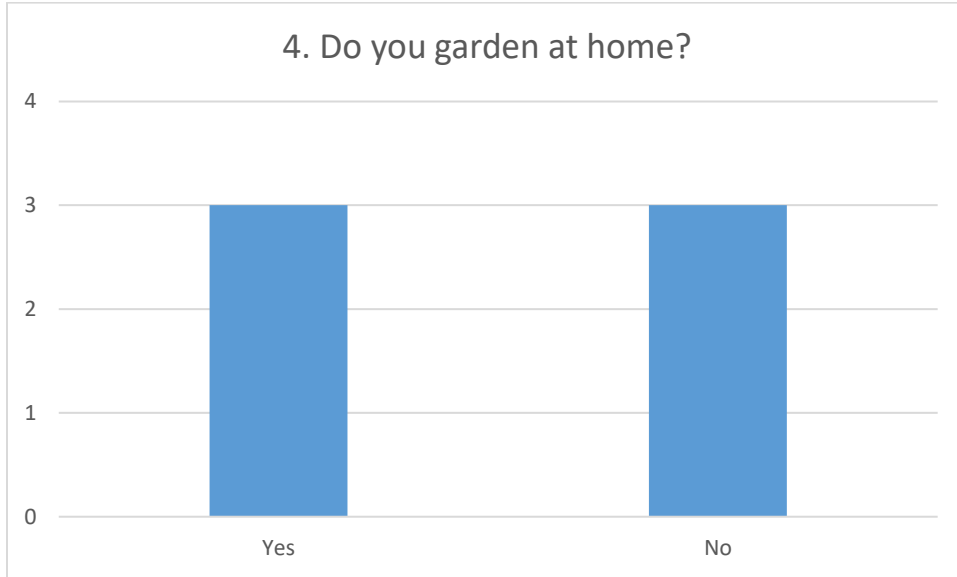
Chart 2: Question 2

2. Do you visit the Boys & Girls Club Garden when there isn't Garden Club?

	Yes	No
7		
6	■	
5		
4		
3		
2		
1		
0		

Chart 3. Question 3

3. Do you garden at school?

	Yes	No
6		
5		■
4		
3		
2		
1	■	
0		
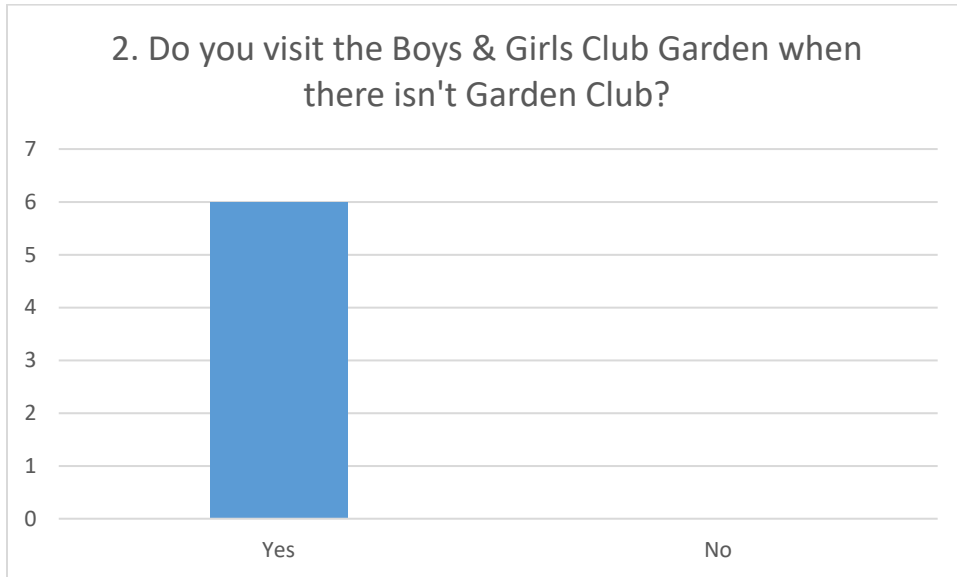
Chart 4. Question 4
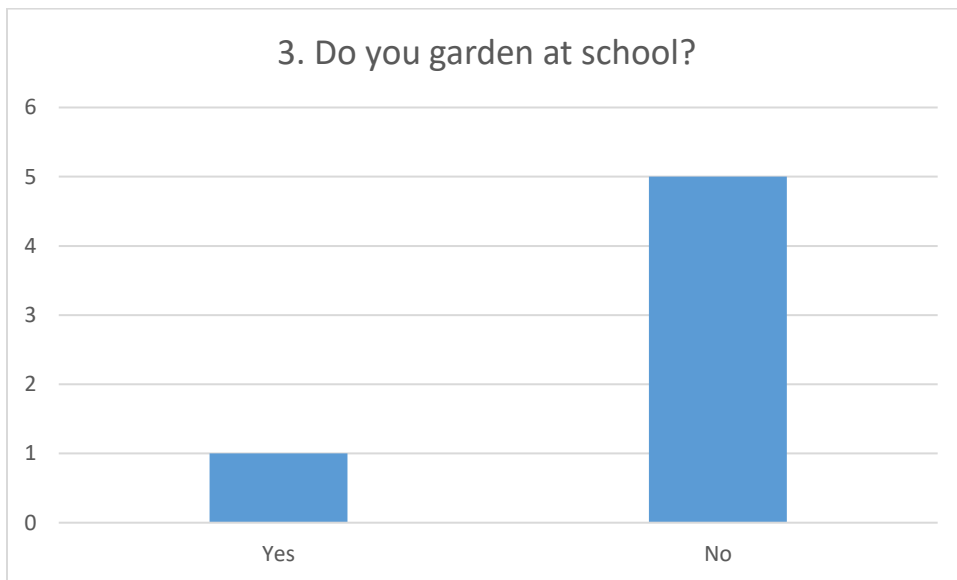
4. Do you garden at home?

Note: One "no" respondent states: "But I am going to start a garden at home"

Table 1. Question 5

5. Draw something you like about the Garden Club.	
Participant 1	[illegible]
Participant 2	Carrot
Participant 3	Growing plants, playing with friends
Participant 4	Growing plants
Participant 5	Growing plants
Participant 6	Eating carrots

Note: These answers are interpretations of the students' free draw responses.

Table 2: Question 6

6. Draw something you don't like about the Garden Club.	
Participant 1	Being sad
Participant 2	[blank]
Participant 3	Getting bug bites, Mosquitos
Participant 4	[blank]
Participant 5	Hummus
Participant 6	Apple pears

Note: These answers are interpretations of the students' free draw responses.

Analysis

Although surveys were taken non-collaboratively, participants showed a clear preference for the same types of vegetables, most notably carrots. All students, including those who did not answer the survey question completely, voted for growing carrots. Additionally, carrots were depicted in two of the participants' free draw exercises as aspects of the Garden Club that they enjoy. In contrast, staple snack items such as hummus and apple pears were depicted as aspects of the club that respondents do not enjoy. Therefore, it can be concluded that Garden Club members hold relatively strong opinions on the club's framework and execution.

From the perspective of community planning, these results mean that carrots should have a significant presence in planting and snacking during future Garden Club sessions. If certain snacks were disliked by multiple children, Garden Club coordinators could also consider reducing their importance to the club's "menu". However, the elimination of non-preferred foods

depends on the foods' comparable alternatives and the program's overall purpose. Program leaders would have to ask the following: Is the Garden Club more concerned with habit enforcement or general food exposure?

This consideration epitomizes the conflict Participatory Placemaking often encounters during execution: When should Placemaking be unmonitored? When should it require the intervention of authority? In this case, planted vegetables, as opposed to colored wall paint, are core components to the program's primary goal and structure. Therefore, it would be reasonable for a higher authority to execute the community members' input with moderation. However, such authority needs to also be cognizant of whether the program goal itself deserves modification to adapt to the community's changing desires and situation.

Additionally, respondents to the Garden Club survey consistently referred to their personal use of community garden space, with all of them stating they visit the Boys & Girls Club Garden outside of its regular Garden Club sessions. However, only three out of six respondents reported gardening at home. Out of the remaining three, only one student stated they had plans to garden in the future. Gardening at school was even less prominent, with only one student reporting their personal participation in school gardening.

My hypothesis, which is based on existing literature in Universal Design and Placemaking, is that these results reflect discrepancies in youth agency between the Boys & Girls Club, home, and school. Whereas students can visit the BGCBV garden as they please, they often do not have the same degree of choice over their activities at home or school. Although this does not always necessitate a change in those spaces' power structures, it does reflect the positive impact that programs like the Boys & Girls Club have on school aged children's social development.

Children are often excluded from gardening activities at home and school because those institutions were not designed to prioritize their participation in such activities. However, flattening a space's social hierarchy to give children more agency in gardening raises the following questions: Will the technical proficiency of gardening be compromised, and if so, can that compromise be minimized? Could resulting activities interfere with further use of the space? Is the presence of youth-oriented gardening congruent to the role that space has in the child's life?

In the case of youth gardening, parental or academic guidance could greatly increase technical proficiencies in the garden's outcome. However, parents may be too preoccupied with other domestic or financial obligations to holistically support their children's gardening endeavors. Likewise, it is often un-feasible for teachers to develop gardening lessons in addition to their regular academic instruction. Of course, lack of skill and diligence in gardening rarely results in substantially negative effects on communal space, outside of an authority figure's pride or an outsider's disdain. However, other activities such as stove cooking or home building may prove to be more consequential.

Ideally, future BGCBV Garden Club surveys would receive responses from a wider sample population. This could be achieved with a longer project time frame. Future surveys would also use the "mosaic" approach, which allows trained survey moderators to walk individual students through questions and activities. Moderators would read the questions audibly, label free draw responses, and ask follow-up questions to avoid the types of illegible, incomplete, and possibly uninformed responses present in this research project.

CONCLUSION

This project uses participatory action research to demonstrate the amount of agency young people in local garden programs currently do and theoretically could have in community programming and space-shaping. My visual survey methods show that children at the BGCBV Garden Club have similar preferences for what vegetables to grow and equally opinionated, albeit less uniform, complaints about the Garden Club experience. Their strong concerns with community programming are congruent with existing literature, which imply that youth participation rates are uneven not because of young people's lack of interest but because of lack in adult support (Checkoway & Richards-Schuster, 2003).

Additionally, all respondents reported personal use of the community Garden Club space outside of regular gardening sessions. However, only half of respondents reported personal use of their gardening skills outside of that space, with fewer respondents gardening at school than at home. One possible explanation for these discrepancies is that they reflect progressively decreasing levels of youth agency at the Boys & Girls Club, home, and school, respectively. However, the reader should consider that survey results included a small sample size and multiple incomplete and illegible answers. Future participation action research at the BGCBV should include larger sample sizes and incorporate verbal methods into survey presentation to minimize this research limitation.

The continued goal of this project is for BGCBV Garden Club volunteers to use its information towards future lesson planning. However, the Boys & Girls Club of the Brazos Valley has since been closed until further notice in response to the unforeseen 2020 COVID-19 pandemic. As a result, continued executions of Participatory Placemaking at the BGCBV Garden Club will also be postponed.

Regardless, the BGCBV Garden Club and its surveys serve as an example for how Universal Design and Participatory Placemaking, which incorporate the physical and social creation and re-creation of space, can be used to integrate children as active and legitimate participants in community spaces; this can even apply to spaces that were not specifically designed for the needs of children. While these concepts are fundamental to inclusive community programming, their execution often raises questions of practicality. A few of these questions were addressed in the literature analysis of this research project and will be summarized in the following responses:

1. Who has the authority to oversee community programs, and when do bottom-up activities need the intervention of said authority?

    Although such programs require diverse academic and professional viewpoints to remain holistically successful, the leadership and intervention of bottom-up activities should be reserved for participants who understand not only the project but also the community at large. This is because community members are more likely to understand the situation and needs of the people their projects were intended for.

2. How do we address the power gap between children and adults without compromising technical proficiencies required for community planning?

    Age related power gaps can be minimized by helping children develop the skills their project requires prior to its execution. Afterwards, adult intervention should be as limited as possible to tasks critical for personal and community safety. Although the results may be less technically proficient, this structure is ideal because it prioritizes youth development over

external project standards. This is critical because youth-oriented projects too often prioritize adults' societal standards over young people's motivations or needs.

3. How can functionality be prioritized over design even when precise design plans are needed for project approval?

Functionality is prioritized over design by using malleable materials, creating flexible activity guidelines, and minimizing the prioritization of aesthetic over usability. Project leaders may need to compromise these ideals in consideration of material durability, city regulations, and social appeal. Even so, compromises should prioritize community members' needs over authority members' design goals.

4. Should community members' sense of belonging be prioritized over outsiders' sense of comfort?

This question is especially relevant to both planned and unplanned use of community space (such the painted keyhole gardens depicted in Figure 4 of Chapter 1) that encounter societal understandings of organization and cleanliness. My project suggests that unless outsiders' sense of comfort is critical to the space's purpose or city regulations are being violated, activity regulation should prioritize community members' sense of belonging to increase their theoretical access to the spaces intended for them.

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APPENDIX

The following figures consist of student responses to the free draw portion of the Garden Club survey. They are grouped according to the question they answer.

5. Draw something you like about the Garden Club.
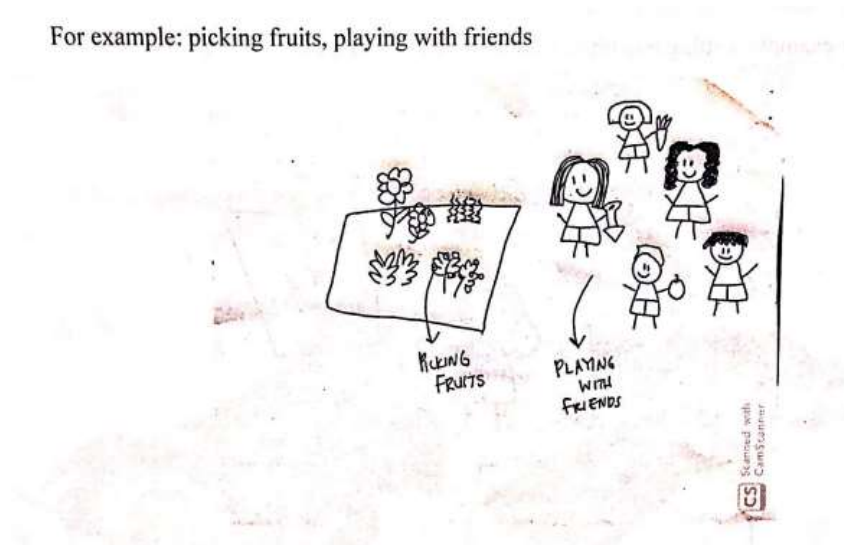

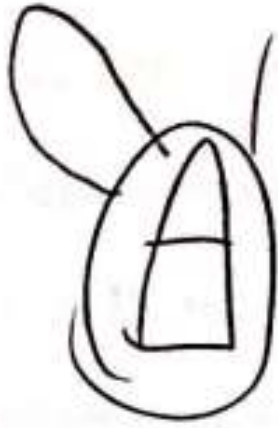Figure 1: Provided Examples: "Picking fruits" and "Playing with friends"

Figure 2: Respondent 1: [Illegible]

Figure 3: Respondent 2: "Carrots"
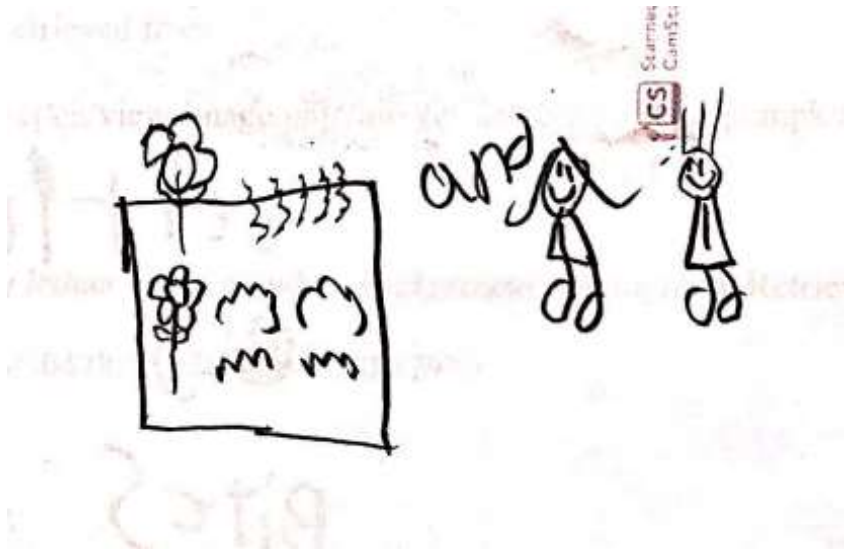
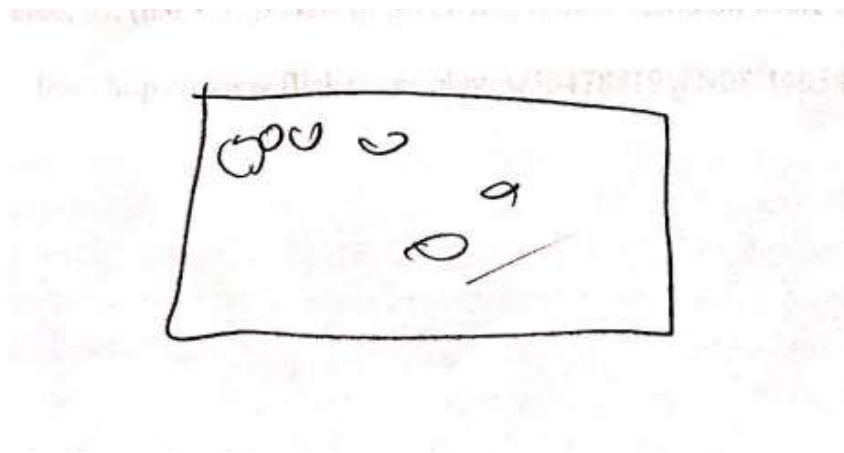Figure 4: Respondent 3: "Growing plants" and "Playing with friends"

Figure 5: Respondent 4: "Growing plants"

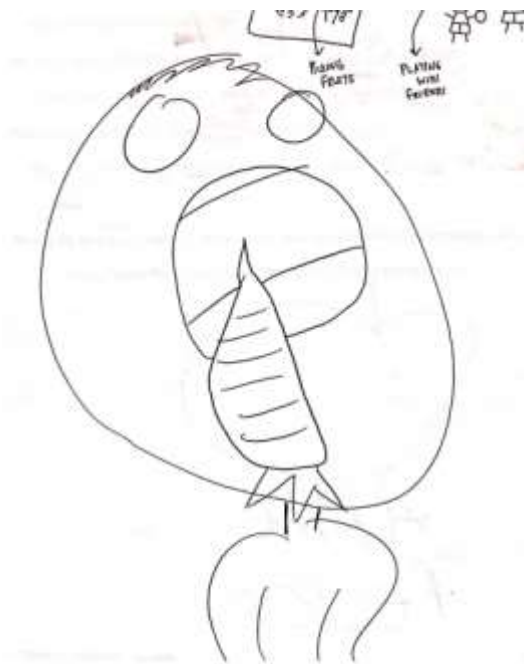Figure 6: Respondent 5: "Growing plants"

Figure 7: Respondent 6: "Eating carrots"

6. Draw something you dislike about the Garden Club

For example: getting bug bites, waiting for carrots to grow

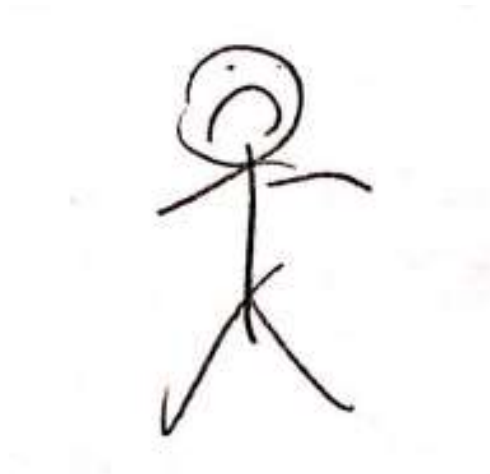Figure 8: Provided Examples: "Getting bug bites" and "Waiting for carrots to grow"

Figure 9: Respondent 1: "Being sad"

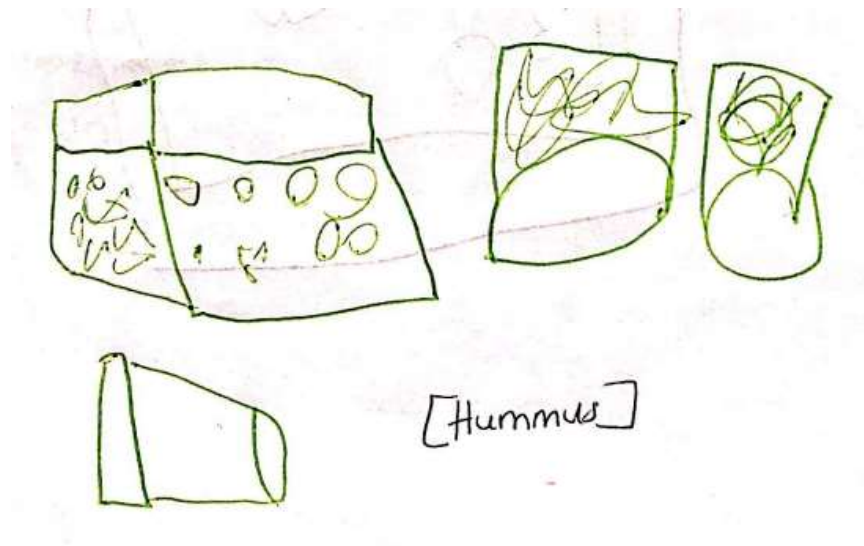Figure 10: Respondent 3: "Getting bug bites" and "Mosquitos"

Figure 11: Respondent 5: "Hummus"

Note: [Hummus] was marked by a researcher the respondent had explained their drawing to.

Figure 12: Respondent 6: "Apple pears"