

EXPLORING PRIORITIES FOR A DESIRABLE FOOD SYSTEM IN FLINT, MI

By

Rachael Roberts-Toler

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ABSTRACT

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A persisting obstacle in Flint, Michigan is the organization of its food system and resulting low food security, i.e. the accessibility, utilization, and availability of foods (especially healthy and lead adsorbing foods). Participatory research that relies on local knowledge of the Flint food system can help identify a more desirable future that better reflects the needs and wishes of the community. The aim of this thesis is to a) identify a process and protocol for visioning in urban food systems and b) identify community priorities for a desired food system in Flint. In order to reflect the social-ecological nature of food systems, the resulting visioning process was carried out with stakeholders representing production, distribution, and consumption, a novelty given values are usually elicited from only one group, representing a single facet of the food system. Eight visioning workshops were held and the conversations inductively coded for values, guided by the theory of ‘values as priorities’. The qualitative analysis yielded 16 values and accompanying statements described participants’ priorities for a desirable food system in Flint: affordability, comfort and safety, common good, convenience, economic Justice, economic opportunity, education, feeling of community, food diversity, food waste, fresh and natural food, health, local Food, proximity, tradition, and urban agriculture. The results demonstrated that stakeholders’ values extend beyond achieving food security and reflect the dynamic, interconnected nature of our food systems. The resulting values can be used by Flint stakeholders to operationalize visions for the Flint food system.

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1. Introduction

The city of Flint, Michigan (MI) is facing food, public health, and socioeconomic issues reflective of the economic degradation occurring in southeastern Michigan since the mid-twentieth century (Sadler and Highsmith, 2013). A persisting obstacle in Flint, Michigan is the organization of its food system and resulting low food security, i.e. the accessibility, utilization, and availability of foods (especially healthy and lead adsorbing foods). These issues are evidenced by Flint's poverty rate of 41.2%, coupled with the extensive food assistance infrastructure that currently exists in the city (US Census Bureau, 2016). Approximately 170 food pantries are actively being used within the city of Flint (Food Bank of Eastern Michigan, 2019). Currently, researchers within the Department of Community Sustainability (CSUS) and from Flint are coordinating a large transdisciplinary project, *The Flint Leverage Points Project (FLPP)*, to identify specific "leverage points" for improving environmental, economic, and social quality in the Flint food system (Flint Leverage Points Project, 2019). The FLPP project recognizes that due to the structural nature of the conditions (especially poverty and food insecurity), it is important to adopt a systems-based approach when thinking about how to improve conditions in the Flint food system (Ericksen et al, 2012). This thesis is situated within the FLPP and aims to explore priorities for a desirable food system in Flint, MI. The thesis aims to achieve outcomes both as an individual study and within the larger project, by carrying out participatory and systems-based research, allowing community organizations such as non-profit leaders, food bank organizers, producers and distributors to collaborate with researchers to investigate the interconnected nature of any potential issues facing the food system.

Community input is important for fostering an understanding of the food system that accurately reflects the needs and goals of the community (Warren and Rajasekaran, 1993), and to build trust with local stakeholders within the food system, in collaboration with community

leaders, to help implement food programs that move towards the community's desired future. Such community input is particularly important in Flint, as since the Flint water crisis (explained further below), there has been an influx of research into Flint carried out by external researchers, which in some cases has eroded trust between community members and the academic community (Key et al., 2019). Faculty within the Department of Community Sustainability (CSUS) at Michigan State University have collaborated with community partners in participatory research within Flint to research some of the ongoing effects of the water crisis and have strong relationships within Flint. Due to the unique circumstances associated with working in a community where trust between residents and researchers is a challenge, participatory research models are necessary for successful collaboration and partnerships (Key et al., 2019). Participatory research is defined by Cornwall and Jewkes (1995, p. 1667) as the focus "on a process of sequential reflection and action...with and by local people rather than on them." Participatory research values local knowledge in conjunction with knowledge of the researcher and therefore is also defined by shared ownership of the research process (Kemmis and McTaggart, 2007). However, participatory research occurs on a spectrum- associated with varying levels of involvement from community partners (Shirk et al., 2012). It is, therefore, important to note that this thesis does not include community members in the analysis process, as some participatory studies do. Instead, the research methods and protocol were piloted with a panel of community partners advising FLPP, the Community Consultative Panel (CCP), who helped guide the appropriateness of the project and hone the research tools for use with the community.

The overall goal of this thesis is to clarify the priorities for a desirable future held by a diverse sample of Flint residents using participatory methods. While Flint is currently facing

food security challenges, the Flint community has much to be celebrated and recognized for. Flint has a history of activism and community organization, especially since the peak of the water crisis. The following section provides a brief history of the Flint.

1.1. Brief history of Flint

Flint has a long history of social, economic, and environmental challenges that have contributed to the current state of the food system (Sadler and Highsmith, 2016). Notably, the economic geography of Flint has been heavily influenced by the fluctuating job opportunities provided by the General Motor (GM) plants in the Flint area (Sadler and Highsmith, 2016). In its height in the 1970s, GM employed approximately 80,000 workers in Flint, half of its population of 190,000 (Bourque, 2009). This period represented an increase in the overall tax base within Flint and investment into infrastructure. However, progress was halted due to two subsequent plant closing within GM that impacted Flint in 1986 and 1991, with unemployment rates rising to 15.7% in 1991 (Levin, 1991; US Bureau of Labor and Statistics). The deindustrialization caused by GM's exodus lead to massive unemployment and depopulation of the city with loss of 34,000 jobs after the plant closures and population decreasing from 200,000 to nearly 100,000 in the late twentieth century (Highsmith, 2015; Sadler and Highsmith, 2016). The abrupt decrease in tax base was reflected in Flint's degrading infrastructure. Specifically, the mass movement of many white families from within the city to other, more suburban areas outside of Flint left a struggling working class with no way to maintain the city's infrastructure that until recently had been supported by 200,000 taxpayers (Sadler and Highsmith, 2016). Some of the effects of this depopulation include worsening education systems within the city and displacement of black residents in Flint due to mass demolition of poor neighborhoods to make room for new housing developments and new infrastructure (Highsmith, 2015).

While socioeconomic issues continued to worsen in the city, racial tensions were heightening in Flint due to several social and political actions, especially related to white families leaving Flint and the demolition of predominantly black neighborhoods. First, the Fair Housing Bill, passed by US congress in (1968), sought to dismantle red-lining by granting African Americans the right to purchase homes anywhere in Flint, caused an increase the density of the black population in inner city Flint (Sadler and Lafreniere, 2017). Neighborhoods became increasingly segregated following the Fair Housing Bill, despite the laws intention of promoting desegregation. This caused unequal development of infrastructure and resources within different areas of the city. Poor families, were unable to leave areas experiencing high levels of blight and degradation. These neighborhoods often overlapped with predominantly black areas of the city (Highsmith, 2015). Today, Flint remains one of the most segregated cities in the country (Highsmith, 2015; Sadler and Lafreniere, 2017).

Economic degradation continued into the early twenty-first century, putting the city in an especially vulnerable position when the financial crisis occurred in 2008 (Sadler and Highsmith, 2016). The city was put under emergency management in the years leading up to and after the 2008 financial crisis. Ultimately, the emergency manager played a key role in eventually switching the city to Flint water from Lake Huron water in order to save money (Goodin-Smith, 2019). The ensuing Flint water crisis exacerbated many of the underlying issues related to poverty and food insecurity. The crisis began after city management switched the public water supply from Lake Huron to Flint River water on April 25, 2014 (Brush et al., 2015). Flint water was polluted and poorly treated, resulting in an outbreak of bacterial infections such as diseases related to *legionella* and *e. coli* bacteria (Zahran et al., 2018). In response, the city issued an advisory recommending that residents boil their water before use and ultimately increased

disinfectant in the water supply to dangerously high levels without adding anti-corrosives to combat the impact chlorine was having on the city's pipes (Brush et al., 2015). The corrosive nature of the disinfectant resulted in lead from city pipes leaking into the water, ultimately causing serious health concerns for Flint residents (Brush et al., 2015). Different communities in Flint were disproportionately impacted and the structural issues that pre-existed within the city, namely racial and socioeconomic disparities, were intensified under these emergency circumstances (Grimmer, 2017).

In 2016, the poverty rate in Flint was 41.2%, more than three times higher than the national average (US Census Bureau, 2016). Therefore, by the time water crisis began, the structural issues experienced during and leading up to the 2008 financial crisis were still persisting in Flint. Decades of research show that poverty and food insecurity are inextricably linked, with populations below the poverty line much more likely to experience food insecurity (e.g., Smith and Booth, 2001; Oriola, 2009). Zezza and Tasciotti (2010) argue that urban, poor populations are especially vulnerable to shocks in the food system. Years of disinvestment in Flint's urban infrastructure, due to the shrinking tax base, has left Flint's working class vulnerable to both poverty and food security, two structural factors that are crucially related (Cook and Frank, 2008).

It is important to understand the social and economic history of Flint to recognize how the food system is not positioned for residents to maximize its potential outcomes, primarily food security, and how ideal food system outcomes may be different across populations. For example, different racial and ethnic groups within the city may have different priorities based on their individual histories and experiences. The differentiated experiences with Flint's food system makes it especially important to include a range of perspectives when exploring visions of an

ideal food system (i.e., a system that maximizes accessibility, utilization, and availability of foods).

1.2. Flint Food System

With more than 170 food pantries¹ operating within Flint, it is clear that the food system exhibits a reliance on food assistance infrastructure, which indicates low food security (Food Bank of Eastern Michigan, 2017). The level of food security is supported by national data, with the food insecurity rate for Genesee County sitting at 16.5% (compared to 11.8% nationally) and 19% of Michigan's fifth congressional district using the Supplemental Assistance Nutrition Program, both in 2017 (Feeding America, 2017; US Census Bureau, 2017). A recent study shows that grocery stores within Flint are providing high amounts of less nutritious foods (e.g., non-perishable canned items, foods with high sugar and fat content) especially within communities with a high level of socioeconomic distress (Shaver et al., 2017). The same study by Shaver et al. (2017) finds that supermarkets are only present in areas of higher socioeconomic status, which shows differing levels of accessibility to food between groups of different socioeconomic (Shaver et al., 2017). Specifically, larger stores that offer lower prices are typically far away from residential areas or outside of Flint entirely. These options are more accessible to wealthier neighborhoods in Flint's suburbs, while poor neighborhoods rely on corner stores with less healthy, more expensive options.

Finally, poor nutrition in Flint residents implies that consumers are not maximizing the benefits from the food available (Sadler et al., 2013; Shaver et al., 2017). Evidence from the Genesee County Health Needs Assessment Report shows that obesity prevalence Genesee County was approximately 5% higher than the national average in 2016 and ranked in the bottom

¹ In this thesis, a food pantry refers to a location, usually run by volunteers at Churches or other community centers, where the public can access free food.

ten counties of Michigan for health behaviors, which combines indicators such as physical activity and nutrition (Greater Flint Health Coalition, 2019). Poor nutrition levels are not only reason food security is an important issue for Flint. The aforementioned water crisis resulted in elevated blood lead levels, especially in children (Hanna-Attisha et al., 2016). One way to mitigate the effect of lead adsorption is to consume lead adsorbing foods, which often overlap with healthy foods (Academy of Nutrition Dietetics, 2016). However, if Flint consumers are responding to the limited options that are available to them, especially limited grocery store options offering health food, accessing such lead-mitigating foods is difficult. Resources that promote utilization of healthy and lead adsorbing foods are critical to combatting this facet of food insecurity and would be expected to feature heavily within a vision of a desirable future. However, community input is imperative to identify which food system outcomes maximize benefits for the diverse range of groups within the community. A detailed explanation of food systems and food security is presented in the following section.

1.3. Theoretical Framework

To address the goals of providing a set of food system values to key stakeholders and a way of understanding how values relate to a systematic understanding of food, this thesis incorporates two major frames: food systems and values. To understand food systems, as per the FLPP project, this thesis relies on Ericksen's interpretation of food systems - as a set of activities and outcomes, ranging from production through to consumption, which involve both human and environmental dimensions and thus are nested in the broader social-ecological system (Ericksen, 2008). The thesis understands values as priorities, as articulated by Tadaki et al. (2017) which is a broad framework for understanding values. I have integrated the two to understand how values as priorities relate to participants' relationship with the food system as per Ericksen's conceptualization (2008), shown in Figure 1.

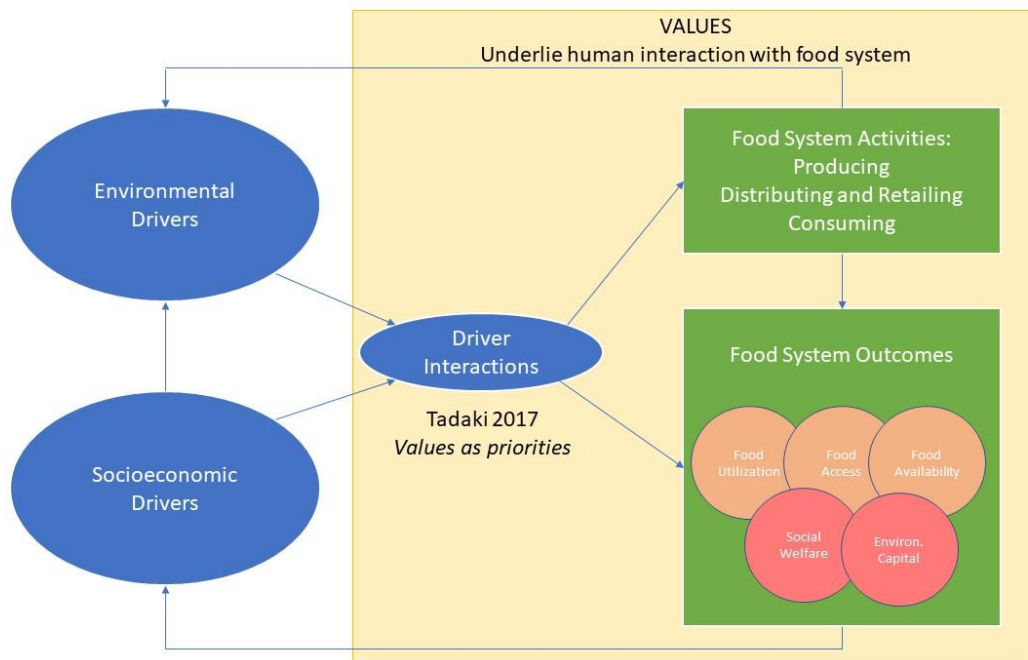


Figure 1 – Theoretical framework shows Eriksen’s (2008) conceptualization of a food system (green) including activities and two broad categories of outcomes - food security (orange) and social and environmental welfare (red). The food system is influenced by broader drivers of change (blue), and values (yellow) underlie the food system activities and outcomes as well as where external drivers interact with the food system.

Figure 1 shows Eriksen’s (2008) conceptualization of a food system (green) including activities and outcomes, as nested within broader drivers of change (blue). Values (yellow) underlie the entire food system, but Tadaki et al.’s (2017) understanding of values as priorities were added to this conceptual framework to frame driver interactions because individual and group priorities may impact how one interacts with the food system and the types of outcomes they prefer, which may or may not include food security (orange) or social and environmental welfare (red).

1.3.1. Food systems

Figure 1 details a list of **activities** associated with different sectors of the food system: producing food, distributing and retailing food, and consuming food (Eriksen, 2008). Eriksen’s conceptualization also includes processing and packaging, however this activity is not

represented in this thesis in order to more accurately represent an urban food system, given consumption is the most prominent activity and most processing and packaging occurs outside of the city (Goldstein et al., 2017).

These food system activities lead to **outcomes**. It is important to note that in Ericksen's framing, food security is a core outcome but not the *only* food system outcome – there are also outcomes related to social and environmental welfare. Social welfare indicates that food systems influence income, employment, and social, political, and human capital, while environmental welfare indicates that food systems influence ecosystem services and natural capital (Ericksen, 2008). As such, Ericksen demonstrates that food system actors may have priorities for the food system that are not related to or go beyond food security. With respect to food security, this thesis follows Ericksen (2008) in understanding that food security is composed of four main elements - access, utilization, availability, and stability, as outlined by the Food and Agriculture Organization (Clay, 2002). Prior definitions of food security emphasize availability or the actual food available to a person (Maxwell and Slater, 2003). In urban systems, availability can be especially challenging, as (given the lack of production in urban areas) residents are dependent on the retail sector. Grocery include a wider variety of food options, especially compared to neighborhood corner stores. While availability is important, Sen showed that accessibility is the key facet of food security, particularly for households dependent on the retail sector for their food (Sen, 1982). Access is "the ability of a unit to obtain access to the type, quality, and quantity of food it requires" and is determined by how people can convert their assets into food – i.e., the price of food and the income of the household will determine their food access and thus food security (Ericksen, 2008; Sen, 1982). Social, economic, geographic, and political factors can impact food accessibility. For example, residents of Flint have to travel to the suburbs

outside of Flint for larger grocery stores which stock a broader and cheaper range of produce, and often resort to closer, corner stores with less healthy and more expensive options. Such interactions between access and availability also influence utilization, or the “individual or household capacity to consume and benefit from food’ i.e. its nutritional value (Ericksen, 2008). Finally, maintaining a stable food system and decreasing the impact of ecological and political shocks on availability, access, and utilization is imperative to achieving food security (Clay, 2002; Ericksen, 2008).

Ericksen’s model shows how the food system is connected to socio-economic and environmental **drivers** outside of the food system. Her understanding of these drivers interacting with each other and the food system in a dynamic manner is critical to the systems perspective – all systems are dynamic, and the interconnected and globalized nature of our food systems means they are susceptible to both direct and indirect shocks (Ericksen, 2008). To ensure food system outcomes means a system must be able to cope with those shocks to protect the other elements of food security and welfare outcomes. This is why stability, the ability to maintain a system state despite external shocks, is an important part of understanding food security (Ericksen, 2008). Flint has a history of instability on both ecological and political systems, creating shocks that could be considered drivers, such as the water crisis rearranging the food system (Sadler and Highsmith, 2013). The water crisis is an example of both a socio-economic and environmental driver influencing the food system (and the wider social-ecological system). First, the change in water quality can be understood as an environmental driver. Second, the crisis had enormous economic and social consequences that resulted in increased racial tension and worsened economic hardship (Sadler and Highsmith, 2013). Specifically, economic hardship impacted which foods were accessible to people. Racial tension influenced where people felt comfortable

obtaining food. These drivers of change, as Ericksen argues and as demonstrated in Flint, impact the possible outcomes of the food system.

In order to achieve a more desirable food system, it is important to investigate which outcomes are important to stakeholders. One way to approach this is to discuss what Flint residents' *values* are in relation to a desirable food system. In other words, what are residents' priorities for an optimal food system? As per the framework laid out by Ericksen, residents will have specific activities that they regularly engage in and resulting outcomes, both of which can be used as a basis for forming and articulating their priorities. The connection between food system priorities and values is a critical link in this thesis, both methodologically and theoretically, and is outlined in the next section.

1.3.2. Values

Values underlie all of the activities within the food system, as shown in Figure 1 in yellow, and influence how individuals interact with it. In this thesis, values are used to understand the types of food system outcomes people prioritize. Commonly, values are disaggregated as to what they apply to, but instead of purely environment or social values, this thesis understands values as encompassing both aspects of the food system. Figure 1 shows that food system drivers, both socioeconomic and environmental, interact together to help determine food system outcomes. Values underlie these processes and determine how individuals engage with the food system and the outcomes they prioritize. Tadaki et al. (2017) present '*values as priorities*,' i.e. that an individual has values that influence one's decision making. Values as priorities has been linked to public decision making, behavior, and motivation for actions in psychology (Dietz et al., 2005; Jones et al., 2016; Ives and Kendal, 2014; Wallace et al., 2016). Values as priorities is a useful explanation of values because it seeks to understand the "patterns of priorities" among affected *groups* of people, usually in relation to environmental problems (Tadaki et al., 2017:pg 5).

There is a relatively small literature analyzing values associated with food systems. Much of existing food values literature encompasses two major areas, 1) motivation and behavior relating to food producers and 2) individual choice in consumption decision making (Campbell-Arvai et al., 2014; Ulvila, 2018; Whitely et al., 2018; Vermeir and Verbeke, 2006; Zhou et al., 2013), and do not reference value theories specific to food systems, but instead pull from two existing frameworks—social frames such as social value theory (Schwartz, 1992) and environmental frames, often related to agricultural values (Dietz et al, 2005).

Schwartz originally proposed a set of ten values that are universal to human behavior and motivations (Schwartz, 1992) and has been continuing work in value theory since, publishing an updated explanation of his values in 2012 (Schwartz, 2012). The ten values he proposes are: power, hedonism, benevolence, security, achievement, simulation, spirituality, self-direction, universalism, tradition, and conformity. Case studies from the food system values literature referencing Schwartz' (1992) theory of values as a social values frame often study producer or consumer behavior (Bullock et al., 2017; Graham, 2015; Linan, 2019; Lusk and Briggeman, Manan, 2016, 2009; Puska, 2019; Thorgerson et al., 2015; Vermeir and Verbeke, 2006; Zhou et al., 2013). These values capture a portion of participant's priorities for the future, but do not capture the dynamic interaction of social and environmental aspects of the food system within that future.

In Dietz et al.'s (2005) seminal review of environmental values, it was underscored that the application of environmental values varies significantly based on discipline (e.g., economics, public health, and psychology). Despite the myriad of definitions that have subsequently developed and been used to describe environmental values, major environmental values that have emerged in the social sciences include self-interest, altruism, traditionalism, and openness

to change (Dietz, 2005). Many different versions of these values have been applied in environmental case studies including green consumption behavior (Rodriguez, 2011; Peattie, 2010), sustainable and urban agriculture practices (Lincoln and Ardoin, 2016; Shamsudin et al., 2014), and sustainable food options (Campbell-Arvai et al., 2014; Ulvila, 2018; Whitely et al., 2018).

Several of Schwartz's social values overlap with the environmental values identified in by Dietz et al., implying an important interaction between social and environmental values when considering how individuals relate to the food system (2005). Hence, there is a need for a theoretical framework which reflects the food system as a whole, including both social and environmental sub-systems and the dynamic processes within them, with values specifically related to food systems, which therefore integrate social and environmental values. However, the literature cited above shows that both production behavior and consumer choice case studies pull from either environmental or social value frames, but rarely combine the two to dynamically represent social-ecological interactions in food systems. This is one of the key research gaps this thesis aims to address by using Tadaki et al.'s (2017) conceptualization of values to **create a social-ecological set of values related to food systems**. The importance of understanding food using systems thinking is underscored by Ericksen (2012)—acknowledging the dynamic and interconnected aspects of how food sectors and activities interact is crucial for accurately and holistically capturing the reality of the system and its range of complex outcomes. Using a purely environmental or social value frame cannot facilitate this dynamic understanding. Specifically, values are relevant to both social and environmental aspects of the food system as they underlie the socioeconomic and environmental drivers that impact the food system.

Importantly, Tadaki et al. (2017) reference Schwartz's understanding of values because an important aspect of Schwartz's conceptualization of values includes "desirable goals" (Schwartz, 2012; pg. 3). However, instead of providing a deductive list of values like Schwartz (2012) and Dietz (2005), Tadaki et al. (2017) offer an inductive way of understanding values which is critical in this context for three reasons. Firstly, values as priorities has not yet been applied to food systems as a whole, although it has been applied to certain activities within the food system i.e., urban agriculture (Piso et al., 2019). Therefore, no list of values as priorities within food systems exists to utilize in a deductive analysis. Secondly, given the lack of trust in Flint, an inductive and participatory approach was required and instead of working from an existing set of values, it was important to choose a broad framework for understanding values that gives Flint residents the ability to identify their own values with respect to the food system. Therefore, having a broad understanding of values as priorities allows for the coder to inductively identify them in the data rather than deductively, from a pre-determined list. Finally, Tadaki et al.'s framework is connected to the future—values as priorities are described as ideas in reference to a desirable end state (Tadaki et al., 2012; Rokeach, 1979). Therefore, the theoretical framework used in this thesis and presented in Figure 1 draws from the conceptualization of values as priorities proposed by Tadaki et al. (2017), which is well-suited to the goal of this thesis – to consider how a set of food system values may emerge from thinking about the future.

In order to address the two research gaps of food system specific values and a systems thinking approach to understanding values as they relate to the food system, this thesis will provide a novel framework for analyzing values as priorities specifically related to the food system as conceived by Ericksen (2008). The results from this research uniquely contribute to

current food systems and value theory literature in both its evocation of food system language and application of values as priorities framing to food systems research. This thesis aims to apply this integrated understanding of values within a visioning protocol to elicit conversations about priorities for the future (Tadaki et al., 2017)

1.4. Visioning

Visioning, a tool used to explore optimal futures, has become popular in academia, the public sector, and industry (Cornish, 2004). Visioning has yet to be applied to food systems research, thus underscoring the need for a protocol specific to food systems. Tadaki et al.'s conceptualization of values as priorities is an appropriate framework for understanding the values that are elicited from visioning because thinking about the future is embedded within the theory (Tadaki et al., 2017).

In practice, visioning manifests as a semi-structured discussion on desirable futures or in specific statements (i.e., consensus statements) that groups or individuals create together (Cornish, 2004). While consensus statements are useful as they represent an agreed upon idea from a group of people, a collaborative discussion may offer a wider range of ideas. Consensus building involves a group agreeing on specific statements that reflect the various viewpoints represented while collaboration can be defined as a group discussing potential desirable futures (Walzer, 1996). A collaborative discussion that results in multiple iterations of a desired future is ideal for a data collection exercise because it represents heterogeneity within the community whilst consensus statements provide less variation. Acknowledging the ideas of diverse groups within the community is crucial within this thesis so that different perspectives about desirable futures within the food system are captured. This thesis aims to identify values as priorities about the future food system with community members from multiple food activities – production, distribution and consumption. While the sample used in this thesis is not representative, due to

the resource limits associated with collecting in-depth qualitative data from a large population, such as in Flint, it still aims to represent these diverse roles.

Both Walzer (1996) and Cornish (2004) acknowledge the wide swath of procedural differences when it comes to implementing visioning, which is in part due to its usage in many different contexts and sectors, with visioning protocols developed by actors with varying roles and backgrounds. **Visioning has not yet been applied specifically to food systems or to elicit values**, therefore this thesis used visioning applied in other contexts, usually community development, to inform the protocol and application of visioning. A structure for visioning that would be appropriate in urban food systems is the protocol used at a city level to help communities plan for the future, either generally or in terms of a specific issue. In Alexandria, Virginia, a visioning exercise was implemented by the Institute for Alternative Futures to investigate community priorities for future development within the city (Bezold, 1996). In their analysis of the visioning process, Bezold (1996) identified five stages:

1. Identification of problems
2. Identifications of past successes
3. Identification of desires for the future
4. Identification of measurable goals
5. Identification of resources to achieve those goals

These five stages capture the range of potential outcomes for a visioning exercise and most visioning exercises follow the general structure of these stages (Cornish, 2004). All five stages can be applied to food systems visioning, but were reduced to the first three since the goal of the thesis is not to operationalize community visions, therefore the last two stages did not apply – focusing on the first three facilitated the best elicitation of values from the visioning discussion.

The combination of problem definition and the identification of desired futures generates important discussion amongst stakeholders. Additionally, identifying what success has looked like in the past can help clarify ideas among stakeholders when considering how to vision the future. The last stage would ideally include relevant decision makers so that local people are able to collaborate on solutions and a way forward towards the desirable future. While these stages exhibit how visioning can serve as a planning exercise for communities, it can also be used as initial step in a wider project exploring desired futures. A visioning exercise will elicit conversation amongst participants about what they would like to see in a desirable food system. These conversations generate qualitative data from which values as priorities can be inductively coded. This process is explained more thoroughly in the following chapters.

1.5. Thesis Outcomes

The goal of this thesis is to **identify community priorities for a desired food system in Flint through a qualitative analysis of visioning workshops**. This thesis does not have explicit research questions or hypotheses and instead aims to investigate the broader issue of exploring visions for the Flint food system according to Flint residents using a framework of food systems and values. The thesis employs a novel approach to understanding food system values because it recognizes the dynamic, interconnected nature of food systems – to this end I’ve created and will test a novel theoretical framework combining Ericksen’s food systems approach with values, specifically values as priorities from Tadaki et al. (2017). The participatory study aims to produce 1) a set of values related to food systems and 2) a framework for approaching a systematic understanding of values relating to both environmental and social aspects of food systems, instead of a single aspect of producer/consumer choice or behavior. Both of these outcomes will serve as tools for scholars and practitioners to investigate how values influence how urban populations understand and interact with the food system. Specifically, other cities

can apply this visioning protocol and food systems value framework to help inform how to manage their food system based on community needs.

2. Methodology

2.1. Epistemology and Research Design

This thesis is a qualitative investigation into how residents in Flint, MI prioritize future outcomes relating to the food system. This research is not meant to be representative of the Flint population and instead serves as a case study of subsets of the Flint population and their priorities for the future. This thesis was approached with a postpositivist paradigm, operating under the assumption that our understanding of reality is ultimately fallible and thus that reality is something that cannot be objectively understood (Kawulich, 2012). This paradigm is essential to how this research is conducted because it relies on accuracy checks (in the form of pilot focus groups) from community members based on the understanding that researchers' knowledge is inherently flawed. That is, operating under a postpositivist paradigm formally recognizes the limits of any singular understanding of reality, especially as an outsider to the system in question. Therefore, this project relies on both academic and local knowledge to create an understanding of the Flint food system. This epistemological identity inspires inductive reasoning embedded in the qualitative analysis process.

2.2. Population and sampling strategy

While food systems are complex and involve many actors, the Flint food system can be summarized into three groups: production, distribution, and consumption, as per Ericksen's (2008) framing of food system activities, shown in Figure 1. Production can be understood as agriculture or capacity building resources for engaging with food production, such as individuals involved with urban agriculture or providing/receiving assistance for agriculture-based work. Distribution involves the movement of food from production to food access points on multiple scales. Importantly, this thesis includes both retail and food assistance distribution in this category. For example, the movement of food from the food bank to a pantry qualifies as

distribution. The Food Bank of Eastern Michigan (FBEM) is an essential actor in the Flint food system in terms of providing food and resources to smaller pantries. the transfer of food from food access points such as stores and food pantries to the public. It is critical to remember the 170 food pantry locations in Flint associated with FBEM, distributed 4,065,123 pounds of food and water in 2017 alone (Food Bank of Eastern Michigan). These numbers indicate a high volume of residents relying on these various access points. Consumption includes selecting, preparing, eating, and digesting food (Ericksen, 2008).

The population within each of these sectors in Flint is unknown because it difficult to break down exactly the extent to which the Flint population is involved in each food system activity. However, the proportions for US cities show that consumption is by far the largest sector in urban settings while activities such as processing, packaging, and large scale production generally take place outside of the cities (Goldstein et al., 2017; Pothukuchi and Kaufman, 1999). However, production is still included in urban food systems due to the emergence of urban agriculture in Flint and many other US cities (Kaufman and Bailkey, 2000). However, due to the unequal distribution of actors represented in these sectors, it is not appropriate to have equal representation within our sub-samples for production, distribution, and consumption. Therefore, I chose a sample that is reflective of the distribution of these stakeholders within the Flint food system. Additionally, I asked representatives of similar groups to attend the same workshop, for example the Latinx community, so that participants knew they were in a safe place with members of their community who might resonate with some of their concerns.

While preliminary data about food pantry usage and involvement within food production and distribution can inform the sampling strategy, a complete list of actors is not attainable for each of these three groups. To obtain an appropriate make-up of the three major groups in the

Flint food system, the advice of the CCP was solicited to better understand the make-up of each group. CCP members outlined several key sub-groups of consumers it would be important to include (parents of school aged children from multiple socio-economic and racial groups, seniors, neighborhood leaders, the Latinx community), in addition to individuals involved in production and both retail and food assistance programs to represent production and distribution. Due to the racial tension and segregated nature of neighborhoods in Flint, participants were recruited from a diverse range of neighborhoods, as suggested by the CCP. While we did not have a representative sample according to the racial make-up of the city, recruiting on a neighborhood level was an important part of include diverse perspectives. Although the Latinx community is overrepresented in our sample, the exact number of Latinx residents is higher than recorded in the census given the undocumented community.

The sampling strategy was a non-probabilistic application of snowball sampling – the CCP provided the connections and introductions to leaders within each of the key sub-groups. For parent workshops, participants were recruited through a K-12 family program. Participants from the senior groups were recruited through a local senior center. The Latinx group came from connections at a local community center, and neighborhood leaders were recruited from two city-wide groups. Participants from distribution and production were from local non-profits, churches, and food pantries. Individuals involved in the retail sector (both restaurants and stores) were actively recruited, but only one representative attended a workshop. Many of the people I spoke with were unable to take time off or spare staff to speak with us. After several attempts to organize workshops with small, medium, and commercial sized retail representatives, our team was unable to find a time where multiple participants were available. This is a limitation of the study and will be addressed in further research.

2.2.1. Data collection and sample summary

Eight workshops were held to capture the priorities for a desired food system according to different groups (consumption, distribution, production) within the food system, with some iteration for the largest sub-group (consumption), to address socio-economic and racial diversity within this population. Table 1 summarizes the workshops and their samples. Two workshops were held with community members involved with food production and distribution. These food system activities are combined for this set of workshops due to their relatively small size compared to consumption activities. The remaining six workshops were held with community members involved in consumption activities within the food system. All workshops included a facilitator and a notetaker.

Table 1 – Workshop Participation Summary

Workshop	Population	Participants	Sub-Group
1	Parent Groups*	5	Consumption
2	Parent Groups	10	Consumption
3	Senior Groups	7	Consumption
4	Neighborhood Leaders	1	Consumption
5	Latinx Community	10	Consumption
6	Production and Distribution – food assistance programs	4	Production and Distribution
7	Distribution – food assistance programs	1	Distribution
8	Neighborhood Leaders	6	Consumption

*The two parent workshops were recruited from the same source. Two workshops were held to accommodate scheduling differences among participants.

As stated above, the participants were not representative of Flint’s broader population, with the Latinx and senior population potentially overrepresented based on census data that estimates the Latinx population at 3.9% in 2019 and seniors at 12.5% (US Census Bureau). There was some

overlap between groups as senior participants (65 and above) attended almost every workshop, i.e. parent groups and as neighborhood leaders.

Saturation, or when the researcher is no longer identifying new themes within the data, was achieved after conducting eight workshops (Bernard et al., 2010) - the same values and themes were repeated by almost every workshop. Two additional workshops were after held reaching saturation but were not analyzed for the thesis due to time constraints.

2.3. Visioning Protocol

The final visioning protocol included questions concerning the future of the food system, what community members value about the food system, and barriers to achieving a desired state. The structure of this exercise (with three sections, see Table 2) was partially informed by a visioning event facilitated by the City of Portland, OR, which informed urban planning by incorporating the public's opinions on a desired future (City of Portland, 2007). The protocol includes three main questions in gray that each sub-group were asked, several questions that sub-groups were asked based on the food system activity they were representing, and two final questions that each group is asked (see Table 2). Additional questions were added based on visioning implemented by Elkins et al. (2009) to probe discussion on barriers to achieving the desirable futures. Neither Elkins et al. (2009) nor the City of Portland's 2007 protocol were directly related to food, so the protocol for this thesis was modified to be relevant to food systems.

The visioning protocol was piloted with the CCP at a FLPP meeting in February 2019, with five participants, two facilitators and one notetaker. The notes for the pilot workshop (answer content and feedback about the facilitation) were then qualitatively analyzed to identify major themes, as opposed to value coding, with a specific focus on how to improve the protocol. After the workshop, the protocol was revised, incorporating the feedback from CCP. Specifically, CCP members were cautious that the language of the protocol relied on systems

wording which they felt may not be accessible for every sub-group that was invited to participate. Supplementary questions based on activities surrounding each sub-group of the food system were also added to elicit conversation about day-to-day experiences with the food system. The final protocol is presented in Table 2.

Table 2 – Visioning Protocol Color Coded for Consumption, Production and Distribution. The table is color coded to indicate which groups were asked which sections. Each workshop included the grey questions while any additional questions depended on the sector of the food system each workshop identified as.

Food System Component	Activity	Question
All	All	What do you appreciate most about the current Flint food system and why?
		Think about the food system in the past (Clarify temporal boundaries if necessary). What has worked well? What has not worked well?
		Imagine Flint in 20 years in the future and all your hopes for the food system have been realized. What is different about the food system?
Production	Urban Agriculture	Is urban agriculture a part of your desirable future? If urban agriculture is a part of your desirable future, what benefits do you see it bringing to Flint?
Distribution	All	Is there anything you wish you could change about consumers' experience of obtaining food? Think specifically about where and how people get food.
		What types of food do you want to see in a desirable food system?
	Emergency Food Access	What role do you think food pantries, food banks, or soup kitchens will have in your desirable future?
		To what extent do you see the population of Flint depending on these services in your desirable future?
		What is necessary to improve how food pantries, food banks, or soup kitchens function in the food system?
Consumption	What resources replace those provided by these access points?	
	Food Waste	What would you change about how you manage food waste?
	Food Availability	Is there anything you wish you could change about your experience of obtaining food? Think specifically about where and how you get food.
	Food Access	Is there anything you wish you could change about the price of food?

Table 2 (cont'd)

	Food Utilization	Is there anything you wish you could change about how healthy your food is?
All	All	What are the barriers to achieving this desirable food system?
		Reflecting on our discussion today, what things have we discussed are most important to address in order to achieve a desirable future for the Flint Food System? Is there anything that you can think of that we have not covered in this discussion?

2.4. Ethics

There was no risk posed to participants during the workshop process. The workshop protocol did not ask directly about traumatic or deeply personal events and thus did not pose any psychological threat. The project went through the expedited IRB approval process based on the protocol outlined above in Table 2. Michigan State University's Institutional Review Board reviewed and approved all methods and procedures used in this (MSU Study ID STUDY00002899) on 7/17/2019, determining the project to be exempt under 45. CFR 46.101(b) 2. This study has also been approved by the Flint Community Ethics Review Board (CERB). At every workshop, participants were asked to give written consent to participate in the study before data collection commenced using an IRB-approved consent process. Each participant's contributions were anonymous and their identities were not shared beyond the research team.

2.5. Data Analysis

Content analysis is a qualitative method that can be used to analyze interviews, focus groups, media, or other texts (Hsieh and Shannon, 2005). Content analysis typically occurs using a transcription of an interview or focus group (Hsieh and Shannon, 2005). However, Halcomb and Davidson (2006) suggest that verbatim transcription may not be necessary in every situation.

Instead of transcribing the workshops, as is typical for qualitative analysis, I coded directly onto the audio files using the mixed media coding feature in MaxQDA. There are both limitations and benefits to this type of coding. Forgoing the transcription process saves a considerable amount of time and resources as you begin the analysis process because coders can begin coding immediately following data collection. However, not having transcribed data can make it challenging to locate specific passages, especially relevant when you are sharing the dataset with multiple team members who have varying degrees of familiarity with the data. Since I facilitated and coded all of the workshops, it was easy for me to navigate the data. Other FLPP team members who were not at all of the workshops but were co-coding for validity, however, were not able to move through it as easily. Audio coding without a transcript also caused the process of writing about the results to take longer. Instead of pulling from a typed-out transcript, quotes and passages needed to be transcribed during the writing of the results chapter. However, I have yet to find any limitations of this method in terms of the validity of the analysis. Understanding this facet of the process may require more experience with transcribed data analysis in order to have a more in-depth point of reference for both approaches.

The structure of my coding process mimics widely accepted methods described in Bernard et al.'s *Analyzing Qualitative Data: Systematic Approaches* (2010). The inductive nature of the coding process is an important aspect of my overall approach to coding and represents how I was guided by grounded theory within the analysis process. Grounded theory methods can be described as coding approaches that start by building concepts directly from the data and “develop[ing] progressively more abstract conceptual categories to synthesize, to explain and to understand your data and to identify patterned relationships within it” (Creswell and Miller, 2000; pg. 28). I also wrote memos during and after each workshop and revisited them during the

analysis process. Although these memos were not formally coded, reviewing memos during the analysis process helped me contextualize some of the data. Specifically, I noted patterns that I saw emerging at the time, flagged important quotes, and gave important context to some conversations in terms of who was and was not speaking. One of the limitations of analyzing workshop data is the occurrence of cross talking. The memos I wrote during the workshops helped organize some of the confusing moments of crosstalk as I went through the analysis process. The process of memoing and inductive coding are key elements of grounded theory coding (Bernard et al., 2010).

After coding the eight workshops, it was clear that I was coding more of the data than I needed for the values analysis. Thus, I started the process of refining my codebook down to only values as priorities. First, I made sure to fully equip the lens of Tadaki's (2017) values as priorities while going through the values I identified. Many of the things I coded were not values and I had to save these observations for later. Next, I combined and separated codes when appropriate. I realized that many of my codes could be encompassed by an underlying value, and I combined several codes into one group. I also separated codes that I had previously thought went together. My codebook contracted and expanded several times as I attempted to refine it with this strategy (Mayring, 2000).

After approximately 9 rounds of combining and separating codes to reflect values, I reviewed literature concerning food values (Campbell-Arvai et al., 2014; Ulvila, 2018; Whitely et al., 2018; Vermeir and Verbeke, 2006; Zhou et al., 2013) to see if what I found matched or contrasted published scholarship. I did this after all of my coding was done to make sure my identification of values was inductive and that I was open to new and different ideas. I then did a final work through of the data to ensure my codebook was saturated. Figure 2 presents a

visualization of my data analysis process, loosely based on analysis steps suggested by (Mayring, 2000).

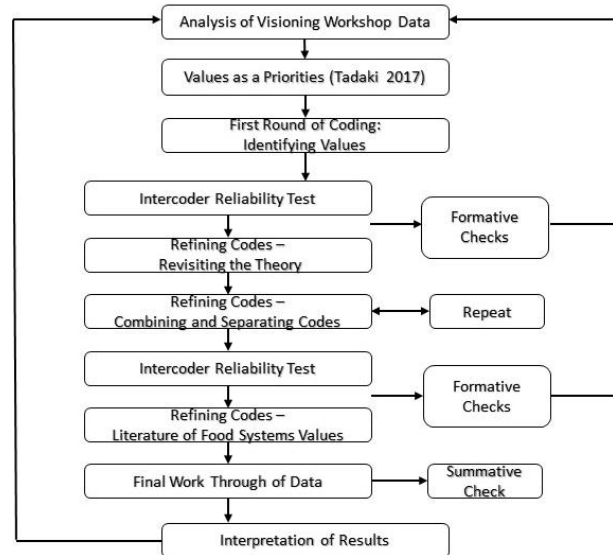


Figure 2 – Analysis process adapted from Mayring (2000), outlining the formative and summative checks involved in analyzing data and the inductive coding process, ultimately leading to the interpretation of results.

2.5.1. Reliability testing

My coding process was validated by intercoder reliability. A second coder and I met after both individually coding the first workshop to compare results. The second coder and I had similar results, as determined through in-depth discussion of the data (Lombard, 2002). Although a popular method of determining reliability is percent agreement between coders (Hayes and Krippendorff, 2007), I opted to for a discussion because of the inductive approach to coding a broad data set. Much of our codes differed slightly in terms of wording but matched conceptually. The nuances of this would not have been captured by a quantitative agreement test. But through discussing this together we were able to completely agree on concepts and naming

of the codes. After determining that there was coder agreement, I coded four workshops before meeting with the second coder again.² We met three times in total throughout the analysis process to discuss new codes and to discuss my progress with coding in general, as shown in Figure 2.

2.5.2. Evolution of Codes into Final Values

The codes evolved multiple times before a final list of values emerged. For example, food availability was a parent code that I realized did not reflect a specific value. Instead, there were several underlying values within this code and food availability then became food diversity, healthy foods, and fresh and natural foods. In another iteration, healthy foods became health to reflect a more holistic understanding of healthy engagement in the food system.

Another initial parent code that changed in the final codebook began as generational differences. I struggled at first to find the value motivating the passages that I coded for this concept. The reason I had initially flagged tradition as generational was because it was most explicitly spoken about in the workshop I held with the senior populations. However, after revisiting the rest of the workshops, it became clear that multiple populations were referencing changes in tradition, usually religious, cultural, or familial.

One of the values that changed the most in the analysis process was economic justice. The passages related to this value were originally coded as less focus on profit as I struggled to find an underlying value to describe what participants were referring to. It was important to me to clearly separate it from economic opportunity, because one value elicits economic growth and development, while the other challenges this phenomenon and is centered around limiting development in Flint in an effort to protect local people and businesses.

² The second coder was a member of the committee for this Masters of Science Thesis

Convenience, which originally represented convenient options in regards to space and time, needed to be separated into convenience (specific to easy, time saving food options) and Proximity (having grocery stores physically close to individuals). While having close grocery stores may be a facet of convenience, it is an issue that is specific to Flint as many major grocery stores left the city after the water crisis (Shaver et al., 2017). As a result, many residents are forced to travel outside of the city to grocery shop. Therefore, many participants had opinions surrounding proximity of stores and the original value of convenience did not reflect this specific concern. Therefore, the final codebook reflected a total of 16 values. The next chapter describes each of these values, providing quotes and examples of how these values were understood across workshops.

Finally, validity can be achieved through “member checking,” or returning to stakeholders with contextual knowledge of the system in question to check the accuracy of a study’s findings (Bernard et al., 2010; Creswell and Miller, 2000). The results were presented to five CCP members upon the completion of data analysis. Each CCP member was asked if they felt the values represented what they know about the community’s priorities for a desirable food system and if they thought anything was missing. Each of the CCP members felt that the list represented a comprehensive understanding of how their community envisions a desirable food system.

2.6. Limitations

One limitation of this thesis was the lack of representation from the retail sector within the distribution group. Scheduling conflicts presented significant challenges when attempting to arrange a workshop dedicated to the retail sector. Several workshops were attempted with retailers but every workshop was either canceled, held with one attendee, or held without any attendance. Corporate policy also constrained some potential participants associated with large retail chains from engaging with research. After six months of recruitment efforts, it was

determined that a workshop with retail representatives would need to occur after the completion of this thesis. Therefore, visions from the retail sector are not represented in this portion of the study which is important because those in the retail sector may have diverging values from the rest of the subgroups in this study. Retail managers have a different relationship with the food system than other types of distributors. For example, those working in retail may come encounter people that represent a wide variety of food security levels whereas assistance distributors mostly interact with food insecure populations. In the future, the FLPP plans to continue to attempt engagement with the retail sector.

Additionally, there were portions of the Flint population that were unable to participate in our workshops. For example, our protocol was not accessible to the deaf and hard of hearing community, which has an above average presence in Flint due to a local school for the deaf. Our protocol was also not formally translated into Spanish. For the Latinx workshop, a trusted community leader translated questions to Spanish in real time and then translated participant's responses. Not having the full transcript or translated audio of this workshop limited the depth with which I was able to analyze the data. This may limit the validity of the data analyzed during this workshop, as I was not able to quote directly from many of the participants. Scholarship within qualitative methodology acknowledges the concern associated with using a translator in qualitative research (Larkin, 2007). However, the overall saturation of the results across workshops helps to validate the results of this thesis. Additionally, the Latinx community is only one sub-group included in this sample. The data gathered from other workshops supports the analysis of the Latinx workshop by confirming the importance of similar values.

This data would benefit from an analysis informed from feminist scholarship (Lather, 2004) and critical race theory (Parker 2019). The results of this thesis include important themes

concerning gender and race, especially related to the value of comfort in safety. A critical race theory framework may be especially appropriate in Flint due to the city's history of segregation and racial tension (Highsmith, 2015). Neither branch of scholarship is included in the theoretical framework of this thesis. However, these topics should be expanded upon in further analysis of this data.

While this thesis includes significant limitations, I am confident in the results presented based on the validity checks of intercoder reliability and reaching data saturation. Additionally, it is important to note that further analysis on this data will be conducted, which may also serve to validate these results. The values presented in this thesis will also be used as inputs in various exercises associated with the wider FLPP project. FLPP is designed to incorporate multiple checks to our data based on community feedback, specifically through the FLPP. These values will continue to be used and tested as the project continues.

3. Results

The final 16 values and accompanying statements that explain the application of this value for a future food system, are presented in Table 3. They are ordered alphabetically and are not ranked by importance or weighted differently. The sections pertaining to each value vary in length and number of quotes used - this does not indicate the importance or prevalence of the value. There are several reasons the following sections vary in length. First, some values are more straightforward than others. For example, affordability and health are two values that have clear meanings and ties to the food system. Additionally, the distribution of quotes may be because of the data collection process and analysis style. Specifically, workshops with up to ten people can be difficult to pull short and clear quotes from. In larger workshops, participants spoke over each other frequently, and some parts of their conversation was difficult to hear when analyzing the recordings. Some workshops were much longer and had more participants (some workshops had one participant while others had ten) and therefore yielded more quotes than others, causing some workshops to be overrepresented when choosing quotes. Additionally, the workshops were analyzed using audio files instead of transcripts, which potentially made identifying quotes more difficult because for each quote I had to listen and transcribe the relevant data. However, while the distribution of quotes may not be even, the following chapter explains each value, and how it connects to workshop data.

3.1. Affordability - Food should be more affordable

Affordability as a value is relatively straightforward – one of the core elements of a desirable food system is being able to afford the food you need and want. Participants in every workshop wanted consistency in how things are priced across different stores within the same chain. When asked about a desirable future, one participant who was involved in food distribution said he

would like to see “better prices...or at least price matching” (Workshop 4). A participant representing consumption said: “I think the most important thing that we discussed is to be able to access the food that we need...it’s the same thing with price, I don’t understand how Meijer’s can charge you \$1.99 for jalapeños and you can go to Pontiac and get [much better prices]” (Workshop 5). This participant is describing how not only does she need to travel outside of Flint for the types of food she needs, but to find food that is more affordable.

One of the limitations of this thesis was the lack of participation of the retail sector due to scheduling conflicts with potential participants. Most small retail managers were interested in participating but could not find a time to leave their stores. However, in large grocery store chains, managers were constrained by corporate policies that limited their ability to speak to researchers about their stores. This may have influenced their reluctance to participate in the study. Therefore, I have a limited perspective on this topic as both consumers and people involved with food assistance understandably cite lower prices as a part of their ideal future.

3.2. Comfort and Safety - There should be more places I feel comfortable and safe in the food system

The issues of feeling comfortable and safe in the food system had different contexts and a range of intensities. Some participants from the parents and senior workshops expressed that feeling safe as a woman is important to them in their perceptions of the food system. One woman commented on her reservations going to some stores within Flint because of comfort and safety issues.

“Participant 1: I mean mine is because I’m a woman and like, even, I won’t go to the [Corunna Road Kroger] because even, like, the manager is inappropriate, and the security guards are inappropriate.

Participant 2: No I get it, that’s a problem there.

Murmured Agreement

Participant 1: You can't be a woman, and anything womanly- and go in places. So, I just skip Kroger's, that's why I go to Davison and Swartz Creek for things...yep, I purposely drive way further than I need to. I've had people follow me to my car and mess with me...Just because I don't know, I'm a woman, because I did my hair that day, I have no idea.

Participant 2: Same thing happens to my wife" (Workshop 1).

Black participants frequently mentioned feeling at risk for racial profiling in some grocery stores. One participant described the experience of being in such stores as having "things that remind you of your place" (Workshop 2). These "things" include enhanced security on black customers, a sense of surveillance while shopping, a limit to the number of children per adult, and a general unwelcoming attitude in stores. The Latinx community spoke about being vulnerable to violent hate crimes and the possibility of deportation in food spaces. The Latinx workshop occurred several days after a hate crime targeting the Latinx community made the national news.³ A translator explains one of the participant's comments:

"All the children can think about now...all the children and adults...is how do I prepare myself? And so they say 'well, I can run into the freezer' or 'I can hide under the table,' you know? So this fear has become so rampant, so real, that...especially our community is thinking about 'what do we do if it happens to us.'" (Workshop 5).

Therefore, feeling comfortable and safe is a real issue in the Flint food system at varying degrees of intensity. Many residents, for the reasons described above, don't feel comfortable at

³ On Saturday, August 3, 2019 a gunman killed 22 people (and injured 24) at a Walmart in El Paso, Texas. The gunman was targeting Latinx individuals (Lavandeara, 2019)

certain places. While this issue impacts the food system, it reflects larger structural issues of racism, xenophobia, domestic terrorism, and sexual harassment.

3.3. Common Good – The food system should promote public welfare

Overall, participants believed that everyone should have access to food, either by purchasing themselves or, if that is not feasible, through federal assistance or volunteer work. There is an implicit acknowledgement that food security is an important piece of public welfare..

Specifically, in Flint, there is a wide network of food pantries and soup kitchens, and this value reflects support for this work. Assistance distributors also spoke about the importance of their work and their desire for more federal and state support. Consumption participants often spoke about the importance of receiving federal support at the individual level through programs such as Supplemental Nutrition Assistance Program (SNAP) or the Women, Infants and Children (WIC) program and their desire for these resources to be available and used by more people in the Flint community. Producers, distributors, and consumers all expressed concern with cuts to food assistance programming. One participant described the current situation in federal funding for food assistance: “[The government] is cutting them back, food stamps” (Workshop 7).

Distributors were able to see the effects of assistance program cuts on a large scale - they witness changes to these programs firsthand and attribute their challenges to budget cuts made by the current administration. Additionally, participants, especially those who were seniors, viewed the Church as a source of help for the community. “We have Churches on every corner...so if I am in this little community and there are poor people, poor families in this community- that Church sitting on that corner ought to be able to take care of that block of people” (Workshop 3). This quote implies that whether participants view the government or the Church responsible for providing help and resources, there is a general sentiment across workshops that everyone in the

community should be provided for. Importantly, this sentiment is not exclusive to those who rely on food assistance resources, but to everyone in the food system. This value is applicable to all consumers regardless of their resources highlighting how participants believe the food system should promote public welfare.

3.4. Convenience - There should be convenient food options

Often Flint residents want, or have no choice but to rely on, food that is easily obtained.

Convenience was commonly reported by families who have limited time and need options that fit their schedules, such as individuals in the working class that are maintaining multiple jobs.

Therefore, , convenient food was often in reference to pre-prepared, fast food options.

Participants in several workshops noted that fast food is cheaper and easier for people with time constraints and that it can be difficult for them to overcome the things that are keeping them from changing those habits. Specifically, parents who work several jobs do not have time to cook for their families as often as they would like. “It’s sometimes a challenge to get to [the grocery store], you’re working, you can’t get to the market before it’s closed” (Workshop 2). Therefore, some parents are constrained by the amount of time spent working in order to support their families, making prepared food a more feasible, convenient option.

3.5. Economic Justice – The food system should prioritize the wellbeing of the community over profit

Participants expressed concern about corporations putting chain stores in the cities in the future, with profits leaving the city and not benefiting the local community and economy. economic justice therefore refers to a food system where development prioritizes positive community benefits in Flint instead of large corporations from outside of Flint. In one of the parent workshops I held, the participants conversed about how they feel taken advantage of by both government entities and corporations:

“Facilitator: So the fact that they’re motivated by-

Participant 1: Money.

Facilitator: Money? Ok.

Participant 2: Well, and uh, I mean...I guess there’s a large debate whether or not Flint actually gets cared about.

Participant 3: Yep, that’s true.

Participant 2: and whether or not we’re just being, you know, used.” (Workshop 1)

There was a perception among participants in several consumer workshops that the government is motivated by profit and government entities were spoken about similarly to corporate powers. It is important to note that this sense of distrust toward the government is likely tied to the water crisis, which has eroded trust between Flint residents and all levels of government, as discussed in Chapter 1 (Key et al., 2019). In general, corporate entities are described as being extractive without a sense of loyalty to the community in Flint, as one mother describes below:

“It feels like [some stores in Flint] are in the community just taking and then they just go...They’re here to get their dollar, that’s it- whatever it takes to get their dollar and go, you know, back to wherever they go” (Workshop 2).

Participants repeatedly demonstrated in multiple workshops that they perceived corporate entities to be focused on economic profit and this prioritization was associated with negative outcomes for their communities.

3.6. Economic Opportunity – There should be opportunities for economic advancement

In contrast to Economic Justice, this value is focused around economic development and new opportunities for advancement in a future food system. In general, this manifested in some participants’ hope for job opportunities in the food system or economic growth for Flint as a

whole. One participant expressed interest in more food-related jobs within the city. “[There should be] more jobs, you know, for the people that live here” (Workshop 1). Additionally, participants spoke about economic growth in Flint more generally, acknowledging the potential for the city to grow in the near future. Several participants mentioned economic growth specific to downtown Flint and the potential business opportunities that could come with increased development downtown. Some participants spoke about the growth in Flint in positive terms. They associated development in Flint with increased food options and economic success for Flint residents. This stands in direct contrast to other participants’ concerns over fair and just development in Flint. There was no pattern demographically in the data in terms of who was and was not concerned about economic development.

3.7. Education - There should be opportunities to learn food skills (cooking, gardening, nutrition, canning)

Education was a common topic of conversation among participants and was referenced in several contexts. Many participants wanted to learn specific skills (e.g., canning, cooking, gardening). One neighborhood leader mentioned that she would like to learn how “preserve all of these extra fruits and vegetables that we are dealing with” (Workshop 8). Not only did the entire workshop express agreement, but several other workshops, especially parent and senior workshops, also expressed interest specifically in canning and preserving skills. Some participants were interested in learning food preserving skills that they hoped would also address the issue of food waste. Education often overlapped with discussions of health. Participants repeatedly hypothesized that other people would eat healthier if they were educated with the proper culinary skills. One participant in particular felt strongly that those who were learned basic culinary skills would be able to make healthy food taste good enough to eat regularly. One participant explained: “So it’s not so much the taste as it is the education, the way [food] is prepared. You can take seasonings -

ginger and spices- and you can make things taste well, but if you don't know how to do that then you won't [eat healthy food]" (Workshop 2).

3.8. Feeling of Community – There should be a feeling of community in the food system

In every workshop, participants mentioned how they want to feel closer to their community. For participants, community spanned from neighbors, church members, extended family, or city-wide interest groups. Participants want to share food with each other, to know their neighbors and eat together, to have closer relationships with the people they get their food from, and to have spaces for gathering, all of which will support the development of a community. For example, one participant reflected on how food sharing created a feeling of community in the food system when growing up:

"I remember we used to invite people over, we would- we would take turns and "okay this week we are going to have dinner and we are going to invite *compadres* so and so, *compadres* so and so," and we would all eat the food, you know? And then the next week we would go over to the *compadres*, or [other] *compadres*..." (Workshop 5).

Many participants across demographic groups in addition to the Latinx community, expressed similar sentiments and communicated that their ideal future incorporates a sense of community that they have seen in the past, usually stretching back to their childhoods.

3.9. Food Diversity – The food system should offer a variety of food options

In every workshop, participants cited that they want more types of food to choose from, including the ability to easily find different kinds of food around Flint. Some participants spoke about how they need to travel to multiple stores, or even outside of the city, to find specific foods. One participant in Workshop 1 mentioned that having vegan and vegetarian options was extremely important to her, but mentioned that non-meat and non-dairy options were difficult to

find within the city. This value also encompasses the availability of culturally significant food. For example, the Latinx and black communities both emphasized the importance of having foods available that reflect their culture and preferences. One participant expressed the importance of having culturally significant foods available in grocery stores for both the consumer and the retailer: "...they didn't sell African American products and it was an issue to where it hurt them bad and they went out of business...That is an issue. You need to be able to provide more of a variety for everyone" (Workshop 2). The participant went on to say that, ideally, grocery stores would do research about the neighborhoods they call home and that the stores would "ask questions" about the needs of the surrounding community.

For the Latinx community, having access to culturally significant food is an important part of their desirable future. Many of the participants cited that they were impressed with the amount of Latinx food items that could be found in large grocery stores surrounding Flint. However, some of them described how it is necessary to go to a different city to find the products they desire. One participant cited how difficult it is to find masa harena with appropriate texture for making tamales. Some of the Latinx participants described how they rely on specific stores that have bilingual resources or availability of familiar foods. One participant stated that "[Walmart] caters a lot to the Latino community" (Workshop 5) when describing their food selection. In fact, the participant continues, "Walmart is one of the only places nearby that you can get sliced and breaded fajita meat" (Workshop 5). At the end of the discussion one of the participants emphasized the importance of this value: "The most important thing we discussed is to have access to the food that we...we...eat every day" (Workshop 5).

This value has some overlap with the tradition value, as choosing culturally relevant food is indeed an important part of tradition for some families. However, the food diversity value

refers more to the actual food available to people instead of the actions associated with that food. Culturally diverse food is related to a specific type of food; the recipes and social events surrounding the food is related to tradition. Additionally, a variety of food choices is important to consumers for reasons that are external to their cultural backgrounds. When talking about food diversity more generally, participants often cited it as a positive characteristic of the current food system they hope would continue into a desirable future. One exception to this would be the senior groups, who referenced the lack of variety in the boxes of fresh food they receive daily from a local non-profit. “Each meal that I get five days out of the week I may eat two or three of them...because they are giving you the *same thing*. Every day I know I got asparagus and carrots. Every day.” (Workshop 3). Participants referenced variety being important to them in both food assistance scenarios (food boxes, pantries, soup kitchens) and retail.

3.10. Food Waste – The food system should minimize food waste
Consumers, producers, and distributors were concerned about food waste. For them, a desirable food system has a plan to tackle this problem. There are also cultural motivations for not wasting food. For example, the Latinx community communicated that it is part of their culture to use everything (Workshop 5). Additionally, food distributors were especially concerned about the food given away at pantries that does not get used.

“Participant 1: ...but there’s also a problem with an overabundance of food...

Murmured agreement

Participant 1: And let me- let me, let me expound upon that. There’s an overabundance of food...and you find tons of it on ground, in the trash cans, in the garbage dumpsters at car washes, and I know because I look.

Participant 2: Oh, I see it.” (Workshop 6)

As demonstrated above, food waste was a bigger problem for the production and distribution sector. For producers who are able to provide local, fresh, and healthy options to Flint residents, it is important to note that food is still going to waste. As such, waste raises important questions about the barriers that prevent people from taking advantage of the desirable aspects of the food system that already exist in Flint. Specifically, participant's prioritized availability of fresh and local food in Flint (see below). However, the producers that I spoke with in Workshop 6 are providing this directly to the community without seeing it be fully taken advantage of. This implies that there are other constraints and barriers associated with being able to realize these priorities.

3.11. Fresh and Natural Food - The food system should offer natural food options
Participants did not want their food to be totally transformed during the processing phase of the food system. That is, they expressed preference for food that does not have large amounts of additives and is less processed, particularly senior groups. Instead, they came up with their own term: "real food."

"Participant 7: [There are] too many preservatives, yup, [canned goods] just sit on the shelf...

Facilitator: Mhmm

Participant 7: [My mother] used to cook from scratch, okay? And I, I think about everything.....when I think about eating, it's like her food.

Participant 2: You mean like, "real food"?

Participant 7: Yeah, "real food"

Participants chuckle

Participant 2: You don't have to eat a lot of it in order to get what you need.

Facilitator: What is “real food”?

Participant 2: What about preservatives? Real food is food that God gave us, it’s from scratch.

Participant 3: Mhmm

Participant 3: [humans are] acting like we are better than God

Participant 2: Real food is where man didn’t come in and manipulate it” (Workshop 3).

This sentiment may come from a lack of trust from food regulating authorities or the desire to manipulate food themselves instead of having it happen via outside sources. In general, participants preferred to either be in control of or personally witness any major changes being made to their food. This value presents an interesting contradiction, as the same groups who prioritize fresh and natural food also prioritize convenient, prepared meal options. Prepared foods often have preservatives and additives to extend the longevity of their shelf life. These competing priorities represent the complex needs of consumers. While fresh and natural food may be a priorities, economic and time constraints necessitate the important of easy and convenient options.

3.12. Health – The food system should offer healthy food options

Having more healthy choices was consistently important to participants and was brought up as a priority for participants in every workshop. The way in which health was spoken about was in terms of nutritional value and portion size. One participant commented, in reference to consuming unhealthy foods: “our portion control is out of whack” (Workshop 2). Healthy choices are especially important in Flint due to potential lead exposure as a result of the water crisis. In addition to lead exposure, participants mentioned how having other health conditions necessitates the consumption of healthy food: “We have a lot of people who have diabetes, who

have cancer or are survivors of cancer, who have kidney failure- and the food [we are eating] does not go along with those conditions” (Workshop 3). This is emphasized by the evidence of poor nutrition throughout Genesee County and related to the high poverty rates. The same participant mentions that while some of the food pantries and food assistance programs have healthy food, they do not offer enough to last people throughout the month and this results in resorting to unhealthy food options.

Health was also frequently mentioned in tandem with affordability and education. Participants often mentioned that healthy food was more expensive than junk food. One participant commented “a lot of the healthier food, I wish the prices were cheaper” (Workshop 1). Many participants also expressed a desire to learn more about cooking healthy food so that they could incorporate healthier options into their diet, bridging with the emerging value of education.

3.13. Local Food - The food system should offer more local food options

Participants want food that comes from places in and around Flint. While production in Flint is limited, participants are interested in having food that comes from Michigan farms. Some grocery stores already offer Michigan grown food in Flint, and participants spoke highly of these options. A participant in Workshop 1 mentioned that she appreciated how some larger chains, such as Meijer, denote which produce comes from local farms. In general, local options were spoken about as a positive attribute of the food system and an area of potential for economic development. One participant clarified that local options are important for “not just produce, but the meat” (Workshop 2). Interestingly, participants in the same workshop associated the Farmer’s Market in its previous location as having more local options compared to new market.

Other stores such as the Hamady Brothers and the Local Grocer were seen as important elements of the local food system that participants generally wanted to preserve.

3.14. Proximity – There should be food options that are close to me

The value of Proximity was originally grouped into Convenience. However, during pilot interviews it became clear that easy, convenient options are different than options that are close. Having grocery options that are easy to get to was important to participants. Proximity refers to options that close to home, work, and transportation routes. This is an important caveat as stores that are close are not also easy to get to, particularly as many participants expressed that they rely on public transportation to get to grocery stores. As mentioned before, this issue is especially important to Flint residents as most major grocery stores are outside of the city. In the years leading up to the water crisis, many large chain grocery stores left the city. Therefore, participants expressed that they wanted more grocery stores in Flint, presumably because having easy access to grocery stores in Flint is in residents' recent memories. One participant reflected:

“We had places where we had everything we needed, where we didn't really have to come outside of that area- we had grocery stores, I mean like, mom and pop grocery stores, uh, we had, shoot, you know, we had everything that we needed” (Workshop 3).

The discussion of mom and pop stores appeared frequently in consumer workshops. People described how they would walk somewhere within their block and get food from locally owned stores where they knew the people they worked with. These stores were close in proximity to their homes, but they also fostered a sense of community, which is discussed in the values of feeling of community and local food.

3.15. Tradition – The food system should increase focus on tradition

Tradition was important for participants in every sub-group that participated. The specific traditions varied, but people wanted to revisit food rituals of their past, relive family traditions, and be able to live out the cultural traditions in a food system that supported their needs. The senior groups emphasized the need to focus on family in the food system, especially sharing more home cooked meals within the household. As one participant explains, religion is also a component of tradition - “We’ve fallen away from God...we’ve gotten our priorities mixed up” (Workshop 3). However, the emphasis on religion was almost exclusive to the senior groups. In contrast to food diversity, tradition is not about the types of food consumed, but the actions associated with food. For example, the tradition of homecooked meals refers to the process of cooking and eat as a family instead of the type of food that people are eating.

3.16. Urban Agriculture - The food system should increase support for urban agriculture

Participants want more opportunities to engage in urban agriculture through local agriculture activities. One participant commented: “In my dream food system, I would definitely be a gardener” (Workshop 3). This sentiment was widely shared among participants across workshops. However, it is important to note that participants cited “not having enough time” as their biggest barrier to engaging in urban agriculture which again ties in with the value of convenience, and is likely shaped by the economic system and particularly the context of Flint. Participants cited having limited time because of working multiple jobs or having family responsibilities. Therefore, economic constraints are linked to time constraints and influence how people interact with the food system. However, there was also interest in engaging in community farms and general support for their presence in Flint, which would address the time barrier and allow urban food production to be in the food system.

3.17. Summary of values across workshops

Table 3 – Final values and statements created from analysis of the workshop data.

Values	Statements	Workshops where referenced
Affordability	Food should be affordable	1,2,3,4,5,8
Comfort and Safety	I should feel safe and comfortable in the food system	1,2,4,5,8
Common Good	The food system should promote public welfare	1,2,3,6,7,8
Convenience	The food system should have convenient food options	All workshops
Economic Justice	The food system should prioritize community outcomes over economic benefit	1,2,3,4,6
Economic Opportunity	The food system should support local ownership and economic advancement	1,2,3,4,5
Education	There should be opportunities to learn food skills (cooking, gardening, nutrition, canning)	1,2,3,5,6,7,8
Feeling of Community	There should be of a feeling of community in the food system	2,3,4,5,7,8
Food Diversity	The food system should offer a variety food options	1,2,3,4,5,6,8
Food Waste	The food system should minimize waste	1,2,3,5,6
Fresh and Natural Food	The food system should offer natural food options	1,2,3,4,5,6,8
Health	The food system should offer healthy food options	All workshops
Local Food	The food system should offer local food options	1,2,3,5,8
Proximity	There should be food options close to me	1,2,3,4,8
Tradition	There should be respect for tradition in the food system	1,2,3,5,8
Urban Agriculture	The food system should increase support for urban agriculture	1,2,3,5,8

The distribution of values across workshops is understood by frequency of occurrence and percentage of the audio file coded by each value. The distribution of values across workshops is listed in Table 3. Convenience and health were discussed in all workshops. Food diversity, education, and fresh and natural food were mentioned in seven out of the eight workshops. Affordability, common good, and fresh and natural food were mentioned in six workshops. Comfort and safety, economic justice, economic opportunity, food waste, local food, proximity, tradition, and urban agriculture were mentioned in five out of the eight workshops. This variation is likely related to the size of the workshops. Two of the workshops only had one participant and represented a singular perspective on the food system, which is partly why some of the values (food waste, economic opportunity, local food, tradition, and urban agriculture) did not appear in those specific conversations. Additionally, larger groups with greater diversity may generate a more in-depth discussion about some of the topics included in the protocol. In general, more detailed data was collected from larger workshops.

At the end of each workshop, an evaluation was given to each participant. The evaluations included demographic questions such as age, race, and income in addition to questions aimed at measuring food security. However, these evaluations were not coded to each participant. Therefore, this thesis cannot comment on the breakdown of values by demographic groups. However, one of the consumer groups included the senior population, so it is possible to summarize which values were most prominent according to this specific demographic group - tradition, feeling of community, and fresh and natural food were especially important to the seniors. These values were the top three coded values, in terms of percent of the audio file coded, in the senior group workshops.

4. Discussion

The goal of this thesis is to produce 1) a set of values related to food systems and 2) a framework for approaching a systematic understanding of values relating to both environmental and social aspects of food systems, instead of a single aspect of producer/consumer choice or behavior. To do this, I have employed a theoretical framework integrating Ericksen's (2008) food systems conceptualization and Tadaki et al.'s (2017) theory of values as priorities. The following chapter aims to discuss how the resulting 16 values fit into the theoretical framework that I've presented in this thesis in order to inform how the results of this thesis relate back to food systems and value theory. This is the first application of food systems thinking and values as priorities to food systems research. Therefore, the below sections aim to compare and contrast how these findings relate to existing food values research and identify how existing case studies exhibit important gaps, specifically a systems thinking perspective on food values, which this thesis aims to address.

4.1. Activities

The visioning protocol employed in this study was designed to elicit a systems-based understanding of food in Flint, a key facet of which are the food system activities as described by Ericksen (2008) – production, processing and packaging, retail and distribution, consumption. Processing and packaging, while referenced by Eriksen, was not included in thesis to better reflect the reality of an urban food system. Each value was discussed in the context of each of subgroup (i.e. consumption, distribution, or production), which were each defined by their associated food system activities. Therefore, all 16 values can be directly tied to food system activities defined by Ericksen (2008). For example, urban agriculture is directly tied to producing food. Food diversity can be linked to retail and distribution as it refers to what kinds of foods are

available in different stores around the city. Finally, values such as tradition and food waste are related to how people choose to consume food. However, even values relating to a specific activity reflect a systematic understanding of food in Flint as participants considered the whole system when they determined their priorities. While participants were asked to speak about the food system based on the perspective of their subgroup (nested within a particular activity), they were prompted to consider how each subgroup may dynamically interact i.e. how activities might interact. Therefore, while some values are more directly applied to food system activities than others (for example urban agriculture and tradition), each value emerged from an understanding of activities and how they relate to the wider food system. The systematic understanding of food in Flint applied within the workshops is a unique application of values theory.

After considering how the values overlapped with food system activities, it became clear that they also overlapped with food system outcomes, as shown in Figure 3 and discussed on the next page.

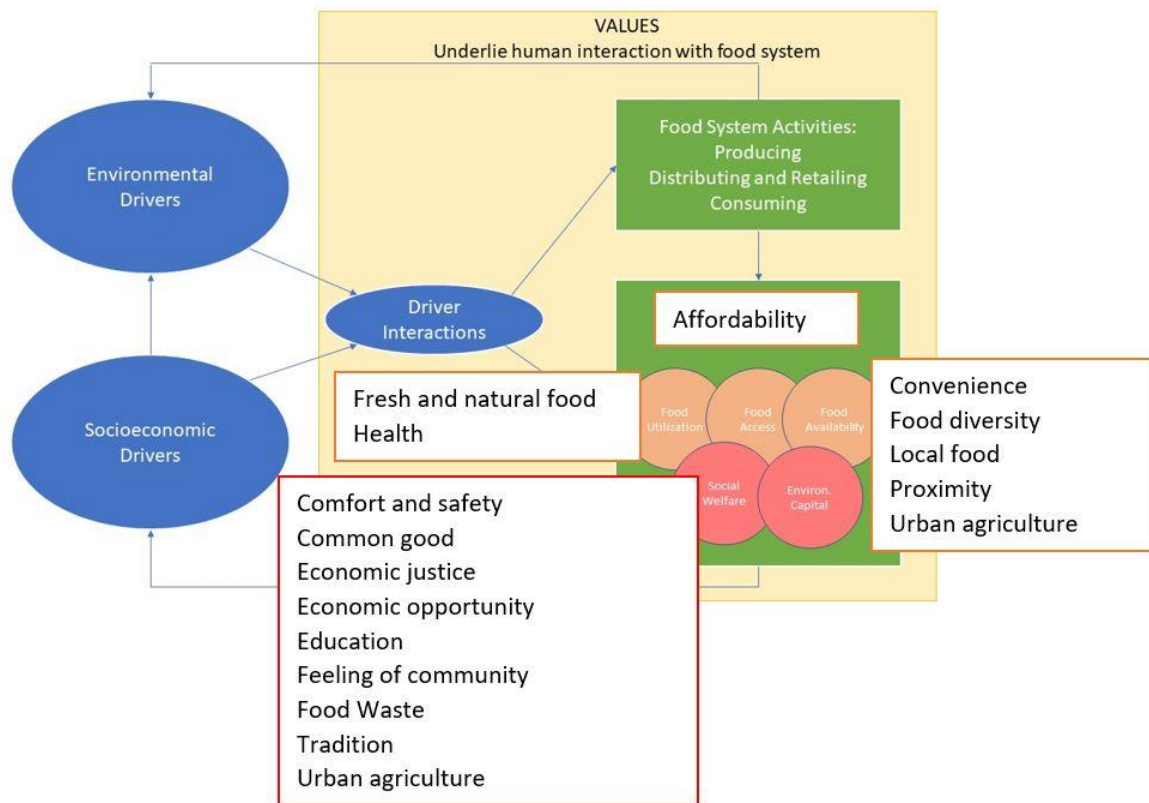


Figure 3 – Application of the 16 resulting values within the food system outcomes showed that the largest group was related to social welfare, then food security, with none affiliated to environmental welfare.

4.1.1. Outcomes – food security

Ericksen's (2008) model of food systems shows food security as the main food system outcome, understood through accessibility, utilization, availability, and stability (see Figure 1; Ericksen, 2008). Several of the values in this thesis align directly with food security outcomes: affordability, convenience, food diversity, fresh and natural food, health, local food, proximity, and urban agriculture.

- Access: Affordability, i.e. the price of food, aligns directly with access – a central component of food security (i.e. the *economic* availability of food). As most consumers in Flint do not produce their own food, they depend on other sources, usually farms and processing

plants outside of the city. Therefore, consumers must then purchase food in order to obtain it, thus highlighting the importance of accessibility (Sen, 1982; Ericksen, 2008).

- Availability: Convenience, food diversity, local food, proximity, and urban agriculture are all related to availability, or the foods *physically* available in the food system (Ericksen, 2008). Convenience refers to how easily available prepared meals are to consumers. Proximity is linked to the availability of food in stores that are close to consumers. Local food refers to the availability of food from local producers. Food diversity refers directly to the types of food available, such as culturally significant foods. Urban agriculture relates to the availability of local and fresh food from within the city.

- Utilization: Health is directly tied to food utilization, which is tied to how food is actually used and whether or not people are getting the necessary nutrients out of the food they eat (Ericksen, 2008). Fresh and natural food is also tied to utilization because of its overlap with health. Fresh and natural foods are often also considered healthy foods. Participants were especially concerned with the additives and preservatives that might be in their food, which is linked to the potential nutritional benefits or hazards related to each of the foods.

- Stability: Interestingly, none of the values directly related to stability. This may be because stability is an assumed attribute of a desirable food system. This is not necessarily surprising because people may not think about the potential shocks that may impact their food systems, as many of these shocks are difficult to predict. For example, while there were many structural factors that made put Flint in a vulnerable position in 2014, the water crisis was impossible to foresee, especially considering the massive social and environmental costs the city is still experiencing as it recovers from the crisis. Therefore, members of the Flint food system

may be more concerned with the current issues they are facing over the potential shocks the system may experience.

4.1.2 Outcomes – social and environmental welfare

The majority of the resulting values represented food system outcomes *beyond food security* - Ericksen (2008) describes these additional outcomes as pertaining to social and environmental welfare. No values were directly aligned with environmental welfare. One potential reason for this is the urban setting of the Flint food system. Actors in urban food systems, especially consumers may feel less connected to the food production process because the majority of it occurs outside of city boundaries. Urbanization and industrialization have changed the way that humans interact with nature (Mayer and Frantz, 2004). Specifically, consumers may be separated from the direct processes and impacts of food production. Consumers are generally limited in their food system experiences to what occurs within the city. Therefore, it may not be surprising that participants prioritize other aspects of the food system over the environmental.

The remaining values represent different aspects of social welfare: common good, comfort and safety, economic justice, economic opportunity, education, feeling of community, food waste, tradition, urban agriculture. Common good, comfort and safety, and feeling of community all contribute to positive food system experiences associated with how individuals relate to their respective social systems. Each of these three values are based in social interaction and refer to ways in which participants are interacting with the people around them, whether that be other consumers (feeling of community) or distributors (common good, comfort and safety). Economic justice, economic opportunity, and education all refer to important resources, or ways of organizing resources, that contribute to social welfare. Specifically, economic opportunity implies an economic benefit from professionally engaging with the food system; economic justice implies a just distribution of profit and economic resources; and education is a resource

that allows people to take full advantage of the food system through learning new skills.

Tradition refers to a desirable food system outcome where people are able to engage with food in ways that acknowledge their religious, familial, or cultural traditions. In other contexts, urban agriculture and food waste could be related to environmental aspects of the food system.

However, in Flint participants described them as related to social welfare outcomes. For example, participants spoke about food waste in terms of cultural practices of using up all parts of their food or an interest in cooking smaller portions of food, not in terms of the waste of resources that go into producing food or the resulting greenhouse gas emissions. The priority of urban agriculture is related to participants' social and health related goals, as participants expressed interest in urban agriculture as a community building activity and a source of healthy food, as opposed to the potential environmental benefits associated with urban agriculture.

Interestingly, urban agriculture relates to both food security outcomes and social welfare outcomes. This overlap is a demonstration of how priorities may exist on multiple scales and in reference to both city-wide and household food systems.

My interpretation is that the majority of values align with social welfare outcomes because of Flint's unique culture of collective action and social justice. Many Flint residents are involved with community advocacy and are aware of the socioeconomic issues within the city. Evidence of this can be found in the large number of interest groups that exist in Flint, especially on the neighborhood level. In general, social activism and public participation is prevalent in Flint, especially in response to the water crisis. This is reflected in many of the participants' priorities, such as common good and economic justice. While the activism and advocacy within the city may represent a push for collective welfare, many citizens are concerned about their individual rights, particularly within the food system. Research on collective action has shown

that individuals personally benefit from collective actions efforts (Tropp and Brown, 2004). Therefore, participants in this study, particularly those who are food insecure or working to address food insecurity, may have been influenced by the awareness and action surrounding social issues within the city and may have prioritized outcomes relating to social welfare.

4.2. Socio-economic and environmental drivers

Socio-economic and environmental drivers impact the operation and outcomes of the food system from a larger scale. As demonstrated in this chapter, all of the values discussed can be applied to the theoretical framework of the Flint food system, a product of the visioning protocol prompting participants to imagine their priorities for a desirable future based on this understanding of a food system. Given the nested and dynamic nature of food systems, the values may be applicable to multiple scales, both temporal and spatial. Figure 3 demonstrates this by representing food system activities and outcomes at both the household and city-wide food system scales. For example, urban agriculture and exist on a household level when if a family or individual chooses to maintain a personal garden in their backyard. On a city level, urban agriculture could take the form a community garden or hoop house. Additionally, several values could also be understood as socio-economic drivers, existing *outside* of the boundaries of the Flint food system. Economic justice and tradition are two examples of how the values have manifested as both food system outcomes and socioeconomic drivers, dependent on the scale discussed in the workshops. Tradition may represent priorities related to a past food system, since many participants reflected on the past when talking about their food traditions. Some of the food traditions mentioned by participants also occurred in food systems outside of Flint. For example, the Latinx community referenced celebrations they would have involving food in Mexico. These traditions were eventually brought to Flint, but represent a socio-economic driver of food culture – an external driver resulting from another food system, and thus multiple scales

of food systems interacting. Economic justice refers to both the Flint food system, and other structural issues that may exist at a national scale. For example, the value of economic justice may be motivated by tensions between different socioeconomic classes, which manifests in the form of working people feeling hesitant towards corporate entities entering in the Flint food system. These structural issues exist both in Flint and on a much larger spatial scale in the US.

There are no values that align with environmental drivers. This is somewhat surprising due to some of the environmental drivers that have affected the food system in recent years, namely the water crisis. Data was collected more than five years after the advent of the crisis, so participants' thinking may have been different in 2019 than in 2014 when it first began. Although there were no values related to environmental drivers, external events like the water crisis still clearly influenced participants' priorities. My data suggests that participants might think about the social aspects of these events more than the environmental ones. This is also demonstrated by the lack of values related to environmental welfare.

4.3. Overlap with existing research

Social and environmental values underlie both types of drivers and thus the whole food system. My literature review has shown that the food values literature does not capture a systematic understanding of food and instead speaks to specific facets of the food system, such as consumer or producer choice and behavior (Bullock et al., 2017; Graham, 2015; Linan, 2019; Lusk and Briggeman, 2016, 2009; Puska, 2019; Thorgerson et al., 2015; Vermeir and Verbeke, 2006; Zhou et al., 2013). My interpretation is that the values outlined by Dietz (2004) and Schwartz (2012) may help explain environmental and socio-economic drivers respectively, instead of capturing the food system in its entirety. The following section compares and contrasts the values presented in this thesis with existing case studies and demonstrates why the theoretical framework presented in this thesis is a novel contribution to food values literature.

The values I found in the literature, specifically studies based on Schwartz's (2012) value classifications, mirrored one of the values I found in my own coding process (Bullock et al., 2017; Graham, 2015; Linan, 2019; Lusk and Briggeman, 2016, 2009; Puska, 2019; Thorgerson et al., 2015; Vermeir and Verbeke, 2006; Zhou et al., 2013). Tradition directly overlapped with Schwartz (2012), which may be because tradition is one of the values in this thesis' dataset that represents a social facet of the food system, when informing broader socio-economic drivers. While, Lusk and Briggeman (2009), for example, refer to tradition as "traditional consumption patterns" when relating it to the food system, my characterization goes far beyond consumption choices (Lusk and Briggeman, 2009). Tradition for visioning participants was portrayed as a value that influences interaction with the food system more generally. To them, tradition meant more than what you choose to eat, but who you eat with, how you prepare it, and where you get your food - this is the key distinction between tradition and food diversity, as tradition is associated with action and food diversity is associated with specific food items. Dietz also discusses tradition in his 2004 review of environmental values, where his discussion of "traditionalism" references Schwartz's (2012) values. Dietz reviews how Schwartz's understanding of tradition is related to environmentalism, for example, he cites a study that uses Schwartz's framing of tradition to consumer choices related to vegetarianism (Dietz, 2004; Schwartz, 2012). The case study exhibits how the value of tradition motivates how people interact with cultural forces related to their consumption patterns (Lindeman and Sirelius, 2001). Importantly, both authors do not apply a systematic understanding of how tradition relates to the entire food system – just to consumption. In contrast, the dataset I have presented represents values elicited based on the perspective of systems thinking.

The majority of the 16 values were unique to my findings and did not appear in food values literature. Having recently undergone (and in many ways is still experiencing) a crisis that was a national focal point for several years makes Flint a relatively unique city and its history is inextricably linked to its food system. Economic justice aligns with social welfare outcomes as shown on figure 3. However, economic justice was not reflected in the food values literature that I encountered using Schwartz's (Bullock et al., 2017; Graham, 2015; Linan, 2019; Lusk and Briggeman, Manan, 2016, 2009; Puska, 2019; Thorgerson et al., 2015; Vermeir and Verbeke, 2006; Zhou et al., 2013) or Dietz's framework of values (Campbell-Arvai et al., 2014; Lincoln and Ardoin, 2016; Peattie, 2010; Rodriguez, 2011; Shamsudin et al., 2014; Ulvila, 2018; Whitely et al., 2018). Economic justice may have been inspired by circumstances potentially unique to the Flint food system because of Flint's unique history that has shaped its food system and the people within it. Participants implied a trend of extractive behavior by corporate power in recent history. The water crisis may have made people more aware of these trends through mobilization, collective action, and frequent public dialogue. This trend of public participation has highlighted some of the social and economic issues within the city, which may motivate participants to prioritize economic justice.

Another example of a value that was similar to one of Schwartz's values was the value of comfort and safety, which I have aligned with social welfare not socio-economic drivers. Comfort and safety shared some similarities to Schwartz's (2012) value of security but was unique enough to require its own classification. In this thesis, I class it as an outcome that is a result of other structural, socio-economic factors that externally impact the food system. For example, comfort and safety may be a priority for participants as a result of other socio-economic drivers such as gender and racial inequality. Herein lies the difference - for Schwartz

(1992), security is applied to the wider system and encompasses more of these structural factors. He describes the defining goals of security as “safety, harmony, and stability of society, of relationships, and of self” (Schwartz, 1992 pg. 6). Physical safety is an important aspect of this thesis’s value of comfort and safety, especially in terms of being safe from violent hate crimes. However, the value extends to the psychological sense of safety. As described in the results chapter, comfort and safety was not limited to physical threats and often was tied to tension in terms of racial or gender-based bias and harassment.

4.4. Outcomes for academia

As noted above, much of the existing literature on food values is based on Schwartz’s (2012) core values surrounding individual consumer food choices, especially related to organic and nonorganic options (Bullock et al., 2017; Graham, 2015; Linan, 2019; Lusk and Briggeman, Manan, 2016, 2009; Puska, 2019; Thorgerson et al., 2015; Vermeir and Verbeke, 2006; Zhou et al., 2013). Therefore, this research is a contribution to food values literature as it captures perspectives from multiple sectors of the food system and is focused on interaction with the food system as a whole instead of food choice specifically. These results reflect values based on a dynamic relationship with food *understood as a part of a system*. In addition to food choices, participants were asked to consider issues facing the food system as a whole and were prompted on topics such as the experience of obtaining food, food waste, the viability of food assistance in the future, and how their personal histories impact their priorities. The data elicited from these discussions, while validated by much of the previous work done in food values research, offers a unique perspective that the literature is currently missing.

Additionally, this thesis provides an example of Tadaki et al.’s theory of values as priorities applied to food systems and highlights the potential for further application of this theory in food systems science (Tadaki et al., 2017). This was a successful application of Tadaki et al.’s (2017)

theory because it allowed for participants to think broadly about what their priorities are for a desirable food system, without constraint, and the inductive analysis thus elicited values that reflect multiple elements of the food system. Overall, the values and framing of values in food systems presented in this thesis represent a novel contribution to food values literature.

4.5. Outcomes of the findings for the community

The goal of this thesis is to identify values for a desirable food system in Flint, MI. However, this thesis does not aim to operationalize these values into the Flint food system. These values will serve as a valuable tool for community members who are in leadership positions in existing and future food programs, and thus in a position to operationalize specific aspects of these results. Specifically, the values presented in this thesis can be used to inform more specific visions and scenarios for Flint that illustrate desirable futures that match the values of community members.

These values can also serve as a check for future food system plans and programs as they outline what is most important to the community. Many current food programs are focused on improving food security outcomes in the food system, particularly food access – i.e. providing free food to those who require it. The majority of values presented in this thesis represent outcomes beyond food security, specifically related to social welfare - this should be an important takeaway for leadership within the Flint food system.

One of the potential limitations of using visioning to understand future food systems is that it may elicit responses that are exclusively positive and that do not take into account the realities and limitations of the food system, especially because visioning prompts people to imagine a desirable future. However, my findings show an overwhelming acknowledgement of the presence of food insecurity among participants. Instead of imagining a food system where food

security was eliminated, participants discussed ways the food system could be managed more efficiently and desirably to address the issues and limitations facing the Flint food system.

A briefing note summarizing these findings will be available for public dissemination through the FLPP website and networks. I will work closely with the CCP to produce a document that summarizes these findings while ensuring that it is accessible and meaningful to community members. Additionally, the visioning protocol will be made available for practitioners and researchers to implement. Workshop evaluations showed that participants found the experience of the workshops useful, specifically, participants found it valuable to realize how many of their priorities were shared among their respective groups. These evaluations, in addition to the results presented in this thesis, demonstrates the success of the protocol presented in Chapter 2. Other researchers and practitioners interested in understanding how their community's priorities for a desirable future can apply this protocol to their own cities. The values presented in this thesis represent the priorities of a sample of Flint's population, and other who apply the protocol can expect different values to emerge and for those values to relate differently to the respective aspects of the food system and its potential outcomes.

4.6. Suggestions for further research

This thesis has provided a set of values to understand the Flint food system in addition to a framework for relating values to the food system, specific visions or scenarios for how to build a desirable future in Flint. While I have identified ways community members may use the results I've presented, I have not suggested specific ways to manage the food system or achieve any of the priorities presented above. Therefore, further research is needed to clarify how these values might be concretely embedded within plans for the Flint food system.

The results of this thesis have been and will be applied in several ways within the FLPP project. For instance, the values found in this study serve as the basis for a sorting exercise

conducted with 25 Flint residents, the goal of which is to learn more about what values are most important to residents and how different values are group together when sorted from most to least important. Additionally, several of the values that are ranked highly by participants in the sorting exercise will be used as the basis for a mental modeling exercise to help clarify how stakeholders see the relationships between core values in the food system. In this case, the values will act as defining features of a desirable food system in Flint.

These research activities will help clarify how different groups may prioritize values differently among participants, which values are most important overall, and how other factors within the food system (or other cross scale interactions) influence how these values manifest in the food system. Further research should address the specific organizations that help provide resources or programs that reflect the priorities of community members. Existing entities such as community hoop houses, social advocacy organizations, and block groups may represent goals that align with some of the values that have emerged from this research. However, my results show that these values are not being fully realized. Additional studies should investigate the barriers that may be preventing different programs and organizations in Flint from fully implementing these goals.

Researchers should also implement the visioning protocol in other cities. The results are likely to differ to this study, as how values map onto food systems is contextual and based on the unique priorities of the stakeholders involved. Comparing and contrasting the results from this study and any implementations in other cities outside of Flint would be a useful contribution to understanding how values interact with the food system.

4.7. Conclusion

The goal of this research was to conduct a case study with Flint residents to explore their values associated with a desirable future food system. I achieved this goal by designing the first

visioning protocol specific to urban food system and conducting eight visioning workshops with a diverse subset of Flint's population. The analysis resulted in 16 values and accompanying statements. These values reflect participants' engagement with the food system as a whole and captured the dynamic nature of social and environmental aspects of the system.

Currently, there are no value frameworks that are specific to understanding food systems. Additionally, the case studies that discuss food system values only acknowledge a specific facet of the system, such as consumer choice and behavior. My novel theoretical framework combined Ericksen's (2008) food systems framework with Tadaki et al.'s (2017) theory of values as priorities and provides a framework for a systems-based understanding of food values. The visioning protocol is also a methodological contribution to food systems research and practice and can be utilized by interdisciplinary scholars and practitioners interested in further understanding food systems, specifically urban contexts. However, scholars in sustainability sciences, public health, philosophy, and psychology may find this framework especially useful due to how food values and food systems theory is in conversation with scholars from these disciplines.

The emerging food system values presented in this thesis represents a novel contribution to values and food systems literature. In addition to providing a set of values to stakeholders in Flint, the protocol and framework proposed in this thesis can be applied to other food cities by scholars and practitioners in order to understand how to better manage their food systems based on community priorities.

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