Journal of Agriculture, Food Systems, and Community Development
ISSN: 2152-0801 online
https://foodsystemsjournal.org

Equitable food value chains through collaborative action [in an inequitable landscape]: Insights from Buffalo, New York

Micaela F. Lipman,[a] * Domonique Griffin,[b] Erik Woyciesjes,[c] Gabriella Hall,[d] and Samina Raja [e]
University at Buffalo, The State University of New York

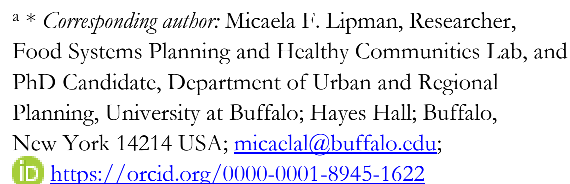
Submitted April 19, 2024 / Revised August 14 and October 24, 2024 / Accepted October 29, 2024 / Published online January 21, 2025

Citation: Lipman, M. F., Griffin, D., Woyciesjes, E., Hall, G., & Raja, S. (2025). Equitable food value chains through collaborative action [in an inequitable landscape]: Insights from Buffalo, New York. *Journal of Agriculture, Food Systems, and Community Development*, *14*(1), 207–226. https://doi.org/10.5304/jafscd.2025.141.019

Copyright © 2025 by the Authors. Published by the Lyson Center for Civic Agriculture and Food Systems. Open access under CC BY license.

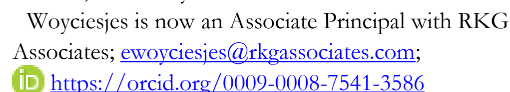
Abstract

There is growing scholarly and practitioner interest in applying collective and place-based efforts to create equitable food systems. Drawing on community coalition action theory (CCAT), this paper explores the potential for enhancing food equity through collaborative action across the food value chain. Through a case study of a collaborative initiative to promote equitable food systems, this paper documents the possibilities and pitfalls of collaborative, cohort-based efforts within the inequitable landscape of Buffalo, New York (NY). The paper relies on mixed-methods data that include key informant interviews, participant observations, and surveys of organizations that participated in the


[a] * *Corresponding author:* Micaela F. Lipman, Researcher, Food Systems Planning and Healthy Communities Lab, and PhD Candidate, Department of Urban and Regional Planning, University at Buffalo; Hayes Hall; Buffalo, New York 14214 USA; micaelal@buffalo.edu;
https://orcid.org/0000-0001-8945-1622

[b] Domonique Griffin, Researcher, Food Systems Planning and Healthy Communities Lab, and Master of Urban Planning Student, University at Buffalo.
Griffin is now the Founder and Principal of LifeSpring Consulting, LLC; dgriffin@lifespringconsultingfirm.com;

https://orcid.org/0009-0007-6370-1313

[c] Erik Woyciesjes, Researcher, Food Systems Planning and Healthy Communities Lab, and Master of Urban Planning Student, University at Buffalo.
Woyciesjes is now an Associate Principal with RKG Associates; ewoyciesjes@rkgassociates.com;

https://orcid.org/0009-0008-7541-3586

[d] Gabriella Hall, Researcher, Food Systems Planning and Healthy Communities Lab, University at Buffalo.
Hall is now deceased.

[e] Dr. Samina Raja, Director, Food Systems Planning and Healthy Communities Lab, and Professor, University at Buffalo; sraja@buffalo.edu;

https://orcid.org/0000-0002-6251-2736

Funding and Other Disclosures

Financial support for this work includes funding from the United Way of Buffalo and Erie County and University at Buffalo Food Systems Planning and Healthy Communities Lab. The University at Buffalo Food Systems Planning and Healthy Communities Lab is a community research lab, and as such, has prior and ongoing relationships with some of the grantees of the BCFSG program.

Buffalo Community Food System Grant program. Corroborating prior research, we find that initiatives that seek to foster collective action offer unique possibilities for food equity, as well as some key limitations, especially within the context of a racialized food environment. Strengthening food systems by investing in relationships across food value chains opens new avenues for collective action. To promote food equity, new forms of collective action, including functional relationships across the value chain, must address deeper structural imbalances in the food system, such as those resulting from structural racism.

Keywords
Buffalo, New York, cohort-based, collaborative funding, collective action, collective impact theory, community coalition action theory, food equity, food systems, place-based, racial equity

Introduction

Philanthropic initiatives are increasingly promoting collaborations among community organizations working together—collective action—to ostensibly promote food equity. However, the degree to which collective actions succeed in achieving food equity remains uncertain. Part of the challenge may be that many philanthropic programs represent efforts to address hunger or food insecurity, not food inequity. Food insecurity—the chronic deprivation of affordable, nutritious, accessible, and culturally preferred foods—is one narrow manifestation of food inequity (Weiler et al., 2015). In the U.S., 17.0 million households reported being food insecure at some point during 2022, an increase from 13.7 million households in 2019 (Coleman-Jensen et al., 2020; Rabbitt et al., 2023). Across the U.S., Black and Hispanic households experience food insecurity rates 9.6 and 8.0 percentage points higher than the national average, respectively (Rabbitt et al., 2023).[1] Food insecurity varies by place: 15.3% of those living in principal U.S. cities reported experiencing food insecurity, compared to 10.5% in suburban areas in 2022 (Rabbitt et al., 2023). COVID-19 heightened such food disparities across urbanicity levels (Mui et al., 2022). People experience food insecurity for a variety of reasons, ranging from, but not limited to, lack of financial resources, physical location in poor food environments, household circumstances, health status, and employment status. The disproportionate burden of food insecurity is one indication of food inequity.

In comparison to food security, which is an absolute measure of food access, food equity is an expansive and relational aspiration for procedural and distributive justice in the food system. Food inequity results from structural challenges in food-related systems and develops if food is unaffordable, unavailable, inaccessible, not culturally preferred, not evenly distributed, and/or not controlled by the community (Anderson, 2016; Poulsen, 2017; Raja, 2024). Food inequity remains a critical concern in many U.S. cities, where food resources are often inequitably distributed (Cook et al., 2004; Gundersen & Ziliak, 2015; Joyner et al., 2022; Judelsohn et al., 2021; Lee et al., 2012; Mui et al., 2021; Northridge & Freeman, 2011; Olson, 1999; Raja et al., 2024b).

People can be food secure and still experience food inequity (Juskaite & Haug, 2023). For example, a small-scale urban grower may be able to grow food to eat but may make limited profits due to high expenses (e.g., gentrifying land prices), and thus may be unable to meet other life expenses (e.g., healthcare). The farmer may also be excluded from public-policy decisions that impact their farming business (Raja et al., 2024a). Thus, while food secure, the farmer may not experience food equity. Food equity necessitates fairness in both the relative allocation of resources and the processes that shape the food system (Allen, 2010; Raja, n.d.; 2020; Raja et al., 2017b; 2018a; 2021; 2024b).

Measuring food equity is challenging—and assessing how collective action impacts food equity adds complexity (Mui et al., 2021). Measuring progress toward food equity requires measurement of factors that influence demand for food, such as relative poverty levels, as well as those that influence supply, such as the relative

[1] A principal city is a U.S. census designation for the largest incorporated area in a Metropolitan Statistical Area (MSA) which meets certain population and employment-based criteria (U.S. Census Bureau, 2023).

availability of grocery stores. The attention to relative levels and/or disparities that drive both demand and supply of food distinguishes measures of food equity from absolute measures, such as food security. Measuring food equity also requires documenting who has control over decision-making in the food system (Raja et al., 2017a; 2024a) and how people's intersectional identities (Crenshaw, 1989) relate to their power and agency (Raja et al., 2017a). To attain food equity, communities must address structural and systemic factors such as who earns wealth and who controls decision-making (Raja et al., 2014). Food equity requires honoring people as active agents in articulating their "food aspirations" and in designing strategies to achieve those aspirations (Raja et al., 2017a; 2021).

A growing body of philanthropy is focused on collective action. Commensurately, a growing, if small, body of literature explores and critiques the successes, challenges and impacts of collective action in improving food equity and strengthening food systems (for example, Hoey et al., 2017; Raja et al., 2008). However, existing literature offers limited insight on the possibilities and limits of collective action when undertaken by place-based coalitions of community organizations representing varied food system domains. The challenges of collective action within segregated and racialized landscapes also remain underexplored. In this paper we ask specifically how food equity might be promoted or restricted using a collaborative, intersectoral, cohort-based approach in a city with pronounced structural and racial disparities. Applying the community coalition action theory (CCAT) (Butterfoss & Kegler, 2009) to a rustbelt context, this paper contributes to the existing literature through a mixed-methods case study of the Buffalo Community Food System Grant (BCFSG) program, launched in 2017. In the subsequent sections, we describe the inequitable context of Buffalo, followed by a brief literature review of collective efforts in food systems transformation. Then, we provide a description of the research design and methods that inform this paper, as well as the findings. The paper concludes with ideas for future efforts to foster collective, equitable, and systemic food system change.

Context as Foreground

Buffalo, NY, the study area of this paper, has the potential for a robust and equitable food system. There is abundant water, fertile agricultural soils in the surrounding region, and about 8,000 vacant lots (a legacy of its post-industrial history), all of which present opportunities for food production (City of Buffalo, 2020; Metcalf & Widener, 2011; Raja et al., 2014; Raja & Chunyuan, 2016). The city is home to diverse residents, coalitions, and social movements that are engaged in food system change, including New Americans—many of whom bring agrarian expertise to their new homes (Gilbert & Williams, 2020; Judelsohn et al., 2017). Nevertheless, despite the city's many assets and strong social movements, the Buffalo food system faces challenges.

This post-industrial city is home to 276,486 people, less than half of its peak population in 1950 (U.S. Census Bureau, 2022; U.S. Department of Commerce, 1951). The 2022 median household income in Buffalo is US$46,184, with 27.2% of the population living below the poverty line (U.S. Census Bureau, 2022). Nearly 30% of households in Buffalo rely on Supplemental Nutrition Assistance Program (SNAP) benefits, far exceeding statewide (14.6%) and national (11.5%) rates (U.S. Census Bureau, 2022). Limited economic resources hinder the ability of some to grow, procure, prepare, and eat nutritious foods (Judelsohn et al., 2017; Raj et al., 2017; 2008). A significant majority of neighborhoods in Buffalo are without a supermarket or grocery store, making it difficult for people without transportation to procure good food (Delgado et al., 2013; Raj et al., 2017; 2008; 2014). Certain groups in Buffalo are especially disadvantaged: of all households receiving SNAP in Buffalo, 41.0% have a child under the age of 18, 45.1% are Black or African American, and 48.5% include a disabled household member (U.S. Census Bureau, 2022). Buffalo is also one of the most segregated cities of its size, and decades of economic extraction negatively impact Buffalo's communities of color (Blatto, 2018; Taylor et al., 2021). Redlining by supermarkets is especially evident in neighborhoods of color. Ruptures in the food system and food equity were made glaringly clear during COVID-19 (Raja, 2020), and more recently in the

face of the May 14, 2022, massacre in one of the only supermarkets in a predominantly Black neighborhood in Buffalo (The Food Equity Scholars, U.B. Food Lab, 2022). Persistent racial segregation, economic inequities, and gentrification impact Black and brown people and their neighborhoods and constrain food equity (Coley & Adelman, 2021).

Food-related philanthropic initiatives shape and are shaped by this complex historical context. Within Buffalo, several philanthropic food initiatives have emerged locally, and others have roots from outside the city (Raja & Whittaker, 2018b). Some are led by a single organization, while others follow a mutual aid model. Some address symptoms of food inequities (e.g., distributing reduced price fresh fruits and vegetables to low-income consumers), while others attempt to address structural drivers of food inequities (e.g., establishing a neighborhood-led vacant land disposition policy to increase access to land for community gardens in communities of color). Philanthropic efforts increased after the onset of COVID-19, and then accelerated after the tragic events of May 14, 2022, when a white supremacist shot dead 10 people in one of Buffalo's few supermarkets in a Black neighborhood (The Food Equity Scholars, U.B. Food Lab, 2022). Despite the growth of philanthropic food system initiatives in Buffalo, there is a limited body of existing scholarship that teases apart the varied motivations and consequences of such work.

Collaborative and Collective Approaches toward Food Equity: A Review of the Literature

Food equity is an aspiration where people of varied incomes, identities, positionalities, resources, and power have the means and opportunities to control and leverage their desired outcomes and processes within the food system (Klassen & Murphy, 2020; Mui et al., 2021; Raja et al., 2017a; 2018a; 2021). To promote food equity, it is imperative to look upstream at the larger food system (Raja et al., 2014; 2017a). Advancing food equity requires amplifying marginalized communities' agency, control, and capabilities to use, develop, and control resources in the food system—including land and capital—for their own well-being (Raja et al., 2017a). Equally important, food equity demands that processes shaping the food value chain—including public, private, and philanthropic investments and policies—be equitable. Recently, Cabral and Devereux (2022) present food equity as a pluralistic concept, but curiously omit references to pre-existing scholarship on food equity (Clark et al., 2017; Raja et al., 2018a; 2021).

Robust scholarship on food governance provides guidance on factors that matter for equitable food systems transformation. Some suggest that increases in food equity can be measured by increases in food access, good local jobs in the food system, community control of the food system, and diversification of decision-makers in the food system (Alkon & Mares, 2012; Allen, 2008; Allen, 2010; Anderson, 2016; Dhokarh et al., 2011; Friel & Ford, 2015; Guthman, 2011; Hinrichs & Kremer, 2002; Hinrichs & Allen, 2008; Judelsohn et al., 2021; Poulsen, 2017). Relational infrastructure is key to advancing equity in the food system (Irish et al., 2024). Food equity can also be promoted by fostering good, place-based jobs in the food system so that economic gains are retained within communities and food sector workers can earn fair wages (Allen, 2010; Dhokarh et al., 2011; Friel & Ford, 2015; Hinrichs & Allen, 2008; Judelsohn et al., 2021). Mui et al. (2021) use six criteria to evaluate food equity (as addressed in regional plans): nutritional adequacy of food, affordability of food for all people, availability of culturally preferred foods for all, social equity in the food system, spatial equity in the food system, and enhanced agency of people in the food system. These elements are more focused on eaters' experiences of the food system (as opposed to the experiences of farmers, processors, etc.).

Food inequity is a "wicked problem"—a difficult to define, dynamic, interconnected, and difficult to solve challenge— that necessitates collaborative solutions (Grochowska, 2014; Rittel & Webber, 1973). Fortunately, multiple theoretical frameworks—including some from outside the food systems domain—explain why collaborative initiatives emerge, operate, flounder, and/or succeed. For example, Butterfoss and Kegler (2012) theorize how community coalitions succeed in

making change through CCAT. The CCAT framework proposes that mutually reinforcing activities and ongoing communication between partners are critical to the success of collaborative efforts. CCAT asserts that coalescing around shared values, measurements, and goals builds trust between partners, which strengthens relationships and leads to deeper collaboration (Flood et al., 2015). CCAT scholars suggest that a backbone organization, as well as sufficient funding, are needed to facilitate the survival of the coalition (Butterfoss & Kegler, 2012; Kegler et al., 2019). Importantly, the successful application of CCAT necessitates involvement of those directly impacted, making it remarkably useful for exploring efforts to promote food equity. In recent years, scholars empirically illustrate that elements of CCAT hold true in the context of health-related coalitions (Kegler & Swan, 2011).

Other, more narrow frames for understanding collective effort also exist. For example, Kania and Kramer (2011) propose the collective impact (CI) model to guide successful collaboration. More reductive than the CCAT framework, the CI framework advocates five principles for effective collaboration: "a common agenda, shared measurement, mutually reinforcing activities, continuous communication, and [the presence of a] backbone organization" (Flood et al., 2015, p. 655). CI emphasizes "creating an approach instead of adopting an existing approach to a problem" (Flood et al., 2015, p. 657). Within CI, collaborating organizations set the scope and boundary of joint goals, engage in issue clarification, and develop a strategic action framework (Hanleybrown et al., 2012).

Scholars widely criticize the CI framework for its lack of emphasis on policy engagement, top-down goal setting, lack of community input mechanisms, and overburdening of the nonprofit sector (Ennis & Tofa, 2020; Hoey et al., 2017; Kegler et al., 2019; McAfee et al., 2015; Wolff, 2016; Wolff et al., 2016). Hoey et al. (2017) report that the lack of a policy focus was a key challenge to using CI frameworks to create equitable food system change. CI initiatives shift the burden of providing public services to the overworked (and nondemocratic) nonprofit sector, even when public-sector intervention is more appropriate (Macias, 2008; Poppendieck, 1999; Pothukuchi & Kaufman, 1999; Ray et al., 2012). There are currently no community input mechanisms embedded explicitly in the tenets of CI. Scholars note that the success of CI frameworks may be limited unless organizations supplement CI with explicit community engagement (Hoey et al., 2017; McAfee et al., 2015; Wolff et al., 2016). The CI framework, as originally proposed, failed to consider questions of equity (for example, racial inequities), an oversight that the founders recently attempted to address by calling for attention to equity across CI principles (Kegler et al., 2019). Despite these challenges, philanthropies adopt the CI model widely (with little recognition of more nuanced, pre-existing theoretical frameworks such as CCAT). In contrast, CCAT theory, which predates the CI framework, helps explain how collective capacity is augmented by setting goals jointly with community groups and focusing on policy change (Butterfoss & Kegler, 2012; Flood et al., 2015).

We draw on these disparate literatures and on advice from community partners on how they describe equity in the food system to guide our research design, which includes a mixed-methods exploration of collective initiatives in the BCFSG program. Ultimately, we distill, translate and expand the CCAT theory into the food system domain by framing collective action toward food equity as that which (a) strengthens a community value chain; (b) builds equitable relational infrastructure; (c) increases the availability and affordability of nutritious and culturally preferred foods; (d) fosters structural change through job creation, entrepreneurship, and job training; (e) bolsters the local food system; (f) addresses structural racial disparities in the food system; and (g) catalyzes policy changes.

Long-term, systemic solutions to promote food equity necessitate collaboration (Ray et al., 2012). Although philanthropic initiatives recognize the importance of such collaboration, as evidenced by recent funding initiatives, the procedural and distributive outcomes of such programs remain understudied. The degree to which collective action leads to more equitable and stronger value chain networks in a community's food system is not well documented. This paper explores the possibilities

for equity-focused, collaborative, and cohort-based partnerships to address food equity across the value chain using a case study of Buffalo, NY.

Research Design and Methods of Data Collection and Analysis

We use a mixed-methods case study of Buffalo to examine the degree to which a funded cohort of food organizations can collectively advance food equity (Creswell & Creswell, 2017). Using an exploratory sequential research design, we began the case study with qualitative interviews of grantee representatives at baseline in 2018, followed by a quantitative survey of grantee representatives, and a spatial analysis of the food landscape in Buffalo relative to the grantees' work to gauge the spatial reach of the BCFSG program (Creswell & Creswell, 2017). We then conducted follow-up interviews with grantee representatives in 2020 to better understand the impact of the program, including its challenges. Authors were also participant observers, attending events and meetings convened by the BCFSG. The Buffalo case study was approved by the authors' institutional review board (IRB).

Qualitative Data

Two forms of qualitative data are used in this case study: participant observations and interviews with organizational representatives. Two of the five authors participated in and observed meetings and workshops organized for the cohort by the funder of the BCFSG program—United Way of Buffalo and Erie County (UWBEC)—from 2017 onwards. The lead author and one additional author also visited sites while organizations were delivering programming and observed most grantees following the completion of the BCFSG program in 2020. Participant observations provided a grounded view of the planning and execution of the BCFSG program (Creswell & Creswell, 2017).

Additionally, pre- and post-interviews with representatives of grantee organizations were used to gauge the outcomes, successes and challenges of the initiative (Creswell & Creswell, 2017). Preprogram interviews (n = 20) conducted at baseline (summer of 2018) focused on documenting organizational capacity, networks, the readiness of grantee organizations to execute programming to enhance food equity, the goals for the grant program, and anticipated barriers and challenges. Follow-up interviews (n = 10) conducted in the fall and spring of 2020 gauged shifts in organizational readiness, the extent to which goals of the program were achieved, any challenges encountered, and the nature and impact of collaborations with other organizations in the grantee cohort. At follow-up, three organizations were nonresponsive, and ultimately, COVID-19 made it extremely difficult for some organizational representatives to participate in follow-up interviews because many organizations were involved in emergency response. Each interview took approximately 1.5 hours to complete. Baseline interviews were completed in person, while follow-up interviews were completed virtually due to COVID-19. Interviews were deidentified, transcribed, and coded for a priori themes developed from the literature. More than 100 open-ended codes such as food equity, collaborative work, program successes, and program challenges were used. Emergent themes were recorded as the coding process progressed to capture new themes present in the data (e.g., a focus on community development by organizations emerged as a theme). All interviews were coded by two individuals to ensure consistency and quality control. Any difference in coding was discussed and resolved.

Survey of Representatives of Grantee Organizations

We administered a survey at the end of the program to record grantee outputs and outcomes. Results from the qualitative interviews and participant observation at the beginning of the project informed the survey design. Because the cohort's work spanned multiple food system sectors—food production, food wholesale and retail, food service, and food policy—the authors included supplemental survey questions tailored to each organization pertaining to the food system sector they were working in. The survey instrument included questions about the number and types of people served, jobs created, and income generated by grantee organizations during the BCFSG program. Specifically, the survey asked organizations and

Journal of Agriculture, Food Systems, and Community Development
ISSN: 2152-0801 online
https://foodsystemsjournal.org

funders to identify what they might value as positive outcomes of the program. Survey responses were self-reported by a designee of each grantee organization. Representatives of all 13 organizations opened the survey tool. In May 2019, to verify full and accurate responses, authors emailed the grantee representatives to confirm survey responses. Some respondents provided clarifications, adjustments, and missing data during this verification process. Still, not all questions were answered by all 13 organizations.

Spatial Data

The spatial reach of the cohort's work in Buffalo's food environment was analyzed using ArcGIS analysis. Locational (point) data showing grantees' spatial reach was geocoded to illustrate their impact on inequitable food environments. Locational data of organizations' work was obtained from the 13 organizations as well as secondary sources including City of Buffalo OpenData. All maps used the Erie County Census Tract TIGER/Line files and were joined with ACS housing and demographic estimates. All point data were geocoded using address locator and Google Maps KML files. All point- and polygon-based calculations were performed using spatial join, SQL query, and field calculator operations. The spatial reach of grantees was compared to pre-existing food disparity and opportunity maps of the city available through the University at Buffalo Food Systems Planning and Healthy Communities Lab.

Positionality

A note about authors' positionality is warranted. The five authors began work on this paper as members and affiliates of the University at Buffalo Food Systems Planning and Healthy Communities Lab, a university-based research group in the City of Buffalo, NY, which has worked on community-engaged research in Buffalo for more than 20 years. The research group and one author have observed and provided technical assistance during the formation of community-led food projects in Buffalo since 2002, including through a longstanding (over 20 year) action-research community-university project. Due to our research group's collaborative work in Buffalo, the authors previously studied some of the 13 community food organizations in the BCFSG cohort (Raja & Chunyuan, 2016; Raj et al., 2017; Raja et al., 2017b; 2024b; Raja & Whittaker, 2018b). The authors also bring diverse lived experience to this work. Two of the authors were born in Buffalo and another has family roots in Buffalo, while others have chosen to make the city home. We also have varied identities and experiences (authors include two Black women, a brown woman [immigrant], a white woman [disabled], and a white man). The authors' trajectory of research as well as their deep familiarity and lived experience in the context of Buffalo—evidenced in our groups' collective publications—helped filter the data from participant observations and interviews collected for this article.

Because the research group previously published a food system assessment of the city and region, one author was approached by UWBEC program staff prior to the launch of the BCFSG program to learn about existing food system initiatives in Buffalo. Subsequently, this author shared pre-existing reports and maps with the UWBEC team to help tailor their program to Buffalo's context. For example, the authors provided the UWBEC team with a food system assessment of the city and spatial analysis authored by the university-based research group to inform UWBEC's decisions about what geographic areas would benefit the most from equitable investment. Ultimately, our research group was contracted by UWBEC to serve as local Buffalo-based evaluators of the BCFSG program. Authors of this paper were not involved in selecting grantee organizations to participate in the BCFSG program. Neither UWBEC staff nor national funder General Mills were involved in the data collection, analysis, or development of this manuscript.

Findings: Empirical Case Study of the Buffalo Community Food Systems Grant Program

The BCFSG program is part of a larger national program funded by the General Mills Foundation to seed systemic food systems transformation. Funded cities included Buffalo, New York; Minneapolis, Minnesota; and Mississauga, Canada. The program encouraged local initiatives to tailor their

programs while learning from other funded peer cities. In Buffalo, UWBEC received a US$1 million grant from the General Mills Foundation to lead and implement the BCFSG. UWBEC, in turn, developed a grant program to fund organizations engaged in food work in the City of Buffalo.

UWBEC staff rooted the BCFSG in the local context. Key UWBEC staff began the process of developing the BCFSG program by meeting with local, long-time food system actors, advocates, and researchers to learn about work already underway. Prior to the launch of the BCFSG program, UWBEC staff attended the People's Food Policy Summit, organized by a community coalition of food organizations, to learn about the aspirations of Buffalo community leaders. In other words, context was not only background material condition but foregrounded the design of the program. UWBEC staff reviewed prior food-related plans in Buffalo, attended community-led food workshops, and held multiple conversations with food leaders before the design and start of the BCFSG program.

After this preemptory grounding, UWBEC launched the request for proposal (RFP) process for the grant program. In their RFP responses, applicants proposed projects aligned with UWBEC's and General Mills' aims and motivations. Some organizations worked together prior to this grant and submitted proposals for intertwined projects; other organizations proposed more narrow plans. Working with a national jury, UWBEC selected 13 applicants to receive project funding over a 2-year period.[2] In acceptance decisions, those working in empirically identified food opportunity areas informed by authors' spatial analysis were prioritized. UWBEC staff aimed to select a diverse portfolio of awardee organizations. Grantees varied by size, scale, focus of work, and maturity. Grantees received funding and nonmonetary support, including capacity-building and training opportunities, to support the execution of their projects.

The goals of the BCFSG at funding outset were to (1) foster ongoing collaboration within the food security network in the community; (2) improve access to healthy foods such as healthier options in neighborhood stores, new healthy food retail, and/or new healthy delivery options; (3) create food-related job opportunities, for example, through culinary or other food-related instruction leading to job readiness or job placement; (4) promote food entrepreneurship such as business incubators or community kitchens; (5) strengthen food skills such as growing, preparing and preserving healthy foods; and (6) establish food policy that supports the above efforts or similar initiatives. The goals of the BCFSG program were structured to go beyond simply alleviating hunger or food insecurity, and toward mitigating the structural drivers of food system inequity. Of the six goals, four addressed structural drivers of food inequity, including employment and income (goals 3 and 4), policy change (goal 6), and relational infrastructure (goal 1). Goals 2 and 5 did not address food inequity but addressed food access goals common to many efforts tackling food insecurity. Importantly, the premise of the BCFSG program was to converge a cohort of food systems organizations that spanned the food value chain as well as the private, public and quasipublic sectors. The BCFSG program aimed to facilitate network building and systemic transformation across the value chain through funding the collective work of the cohort.

At the program's outset, the existence of a fully shared agenda among grantees was vague. During preprogram interviews, all interviewees referred to their desire to tackle food insecurity, but the extent to which food equity was a cohort goal remained unclear over the course of the program. For example, during workshops led by UWBEC, some Black-led organizations reported an interest in fostering community wealth as a strategy for promoting food sovereignty, while other anti-hunger organizations led by white leadership expressed an interest in reducing hunger (Authors' observation, 2018).

In many ways, the BCFSG program aimed to fit the principles of CI (Kania & Kramer, 2011; 2015). Indeed, UWBEC leadership specifically mentioned CI as a guiding framework in the BCFSG program design. However, the BCFSG's funding of ongoing rather than merely innovative

[2] The authors and their team were not involved in the selection of organizations to fund.

programs, centering of community input and local leaders, and the inclusion of policy goals seem more aligned with tenets of CCAT than CI. The following subsections elaborate on the extent to which the BCFSG program met the following tenets of CCAT as expanded into the food system domain: (a) strengthening a community value chain; (b) building equitable relational infrastructure; (c) increasing the availability and affordability of nutritious and culturally preferred foods; (d) fostering structural change through job creation, entrepreneurship and job training; (e) bolstering the local food system; (f) addressing structural racial disparities in the food system; and (g) catalyzing policy changes.

Strengthening a Community Value Chain

The BCFSG program funded organizations in different sectors of the food value chain in Buffalo (Table 1). A few worked in multiple sectors. Of the 13 grantees, 10 worked directly on food access, seven engaged in food production, seven in food retail or food service, and at least one organization each worked on aggregation, processing, food waste, and/or food policy. Grant awardees included urban and rural growers, a cooperative food retailer, cooperative extension, an incubator for immigrant-owned food businesses, a food policy council, and a seasoned community food system organization whose work spanned the food value chain. This composition of the cohort laid the foundation for organizations to establish a collaborative network of business and entrepreneurial relationships across the value chain. For example, the rural farm incubator, which was also the youngest organization in the cohort, built business partnerships with multiple urban food preparation and vending organizations.

Building Equitable Relational Infrastructure

The local funder, UWBEC, served as the backbone organization for the BCFSG, sharing information, coordinating meetings, and providing capacity-building resources throughout the grant term. Representatives of the grantee organizations noted that UWBEC staff were crucial in convening people across the food system. One respondent noted:

> Seems like [UWBEC is] interested in being a convener and helping to build relationships, even if it's not working together right away, but building relationships and trust with each other so that we can. I think the more we work together when it makes sense, the stronger the food system will be. (Interviewee ID # 13_01, 2018)

Another respondent noted that UWBEC's flexibility and the possibility of adapting their budgets to the work at hand were significantly helpful:

> Sometimes we have funders that [are] like, "This is what you put in the budget, and I don't care if it was three years ago. … This is what you budgeted for, so this is what you're spending the money on." I think it was really helpful to be able to go to [UWBEC] and say, "… this is what's going on right now. This is where we are with the grant. This is the need I have now. Is there a way for us to maybe move this?" [United Way staff person] was great in being like, "You can modify it if you can stay within the budget to meet your current needs as long as you are meeting the overall grant outcomes." [UWBEC staff person] was incredibly helpful and flexible. We don't often get that from a lot of funders. (Interviewee ID # 05_02, 2020)

Overall, grantees reported that the supportive and flexible approach of UWBEC toward the co-

Table 1. Food Sectors of the Buffalo Community Food System Grant (BCFSG) Cohort Organizations

Cohort size	Production	Aggregation	Processing	Food retail and service	Food acquisition, preparation, cooking and eating	Food recovery, waste and management	Food policy
13	7	2	2	7	10	1	1

hort was a departure from relationships with other funders. This flexibility was especially important in navigating the onset of the COVID-19 pandemic.

By convening the grantee organizations, new relationships were forged among organizations that had not previously worked together. For example, one food service organization created a venue and market for a farm organization to sell its produce; the two organizations had no prior relationship. That said, the majority of the 13 grantee organizations had pre-existing relationships of varying strength prior to the BCFSG program. Grantees noted that the cohort-based nature of the BCFSG created opportunities for stronger relationship-building, leading to other collaborative opportunities, as illustrated in quotes below from two different organizations.

> As a result of … the United Way grant, [another grantee] and I have become friends and our organizations are specifically working together. We co-wrote a grant and got it, we just found out last week, for cold storage. … Participating farmers in […] can use it as a place to store stuff to distribute in the city. (Interviewee ID # 02_01, 2020)

> We have formed a relationship and we're working on a project to bridge the urban and the rural farming communities. … I'm not sure what that's going to look like, but that is new since the grant. (Interviewee ID # 04_01, 2020)

Unexpected relationships across the so-called urban-rural divide also surfaced. For example, the leader of a rural farm incubator emerged as a fierce ally for their urban counterparts, frequently advocating for resources for urban organizations in policy and philanthropic spaces.

Importantly, philanthropic initiatives like the BCFSG do not exist in a vacuum. During the grant period, seven BCFSG grantees reported networking with 72 unique organizations both within and outside of their grantee cohort. While the BCFSG was underway, new food-based community coalitions led by Black and brown organizations grew organically and in parallel to the BCFSG program. Some, like the Seeding Resilience coalition, coalesced in response to COVID-19 and included many BCFSG cohort members. The BCFSG and Seeding Resilience mutually reinforced each other. As a result, the outcomes discussed in the paper were not caused exclusively by the implementation of the BCFSG program. Participation in multiple overlapping coalitions did create some fatigue. During interviews, some organizations reported irritation with participation in "yet another coalition."

Increasing Availability and Affordability of Nutritious and Culturally Preferred Foods

The BCFSG program aimed to increase the affordability, availability, and accessibility of nutritious and culturally preferred foods, a more traditional way to improve food security. BCFSG grantees aimed to make food affordable by participating in and offering public safety net programs. For example, over the grant period two organizations received 294 electronic benefit transfer (EBT) transactions valued at US$2,245 and 64 Double Up Bucks or other benefit coupons valued at US$1,051.

Organizations working with New Americans and resettled refugees facilitated the production of culturally relevant crops, as well as the sale of diverse prepared foods. One interviewee reflected on how their organization integrated crops from varied countries of origin such as East African maize and bitter gourd:

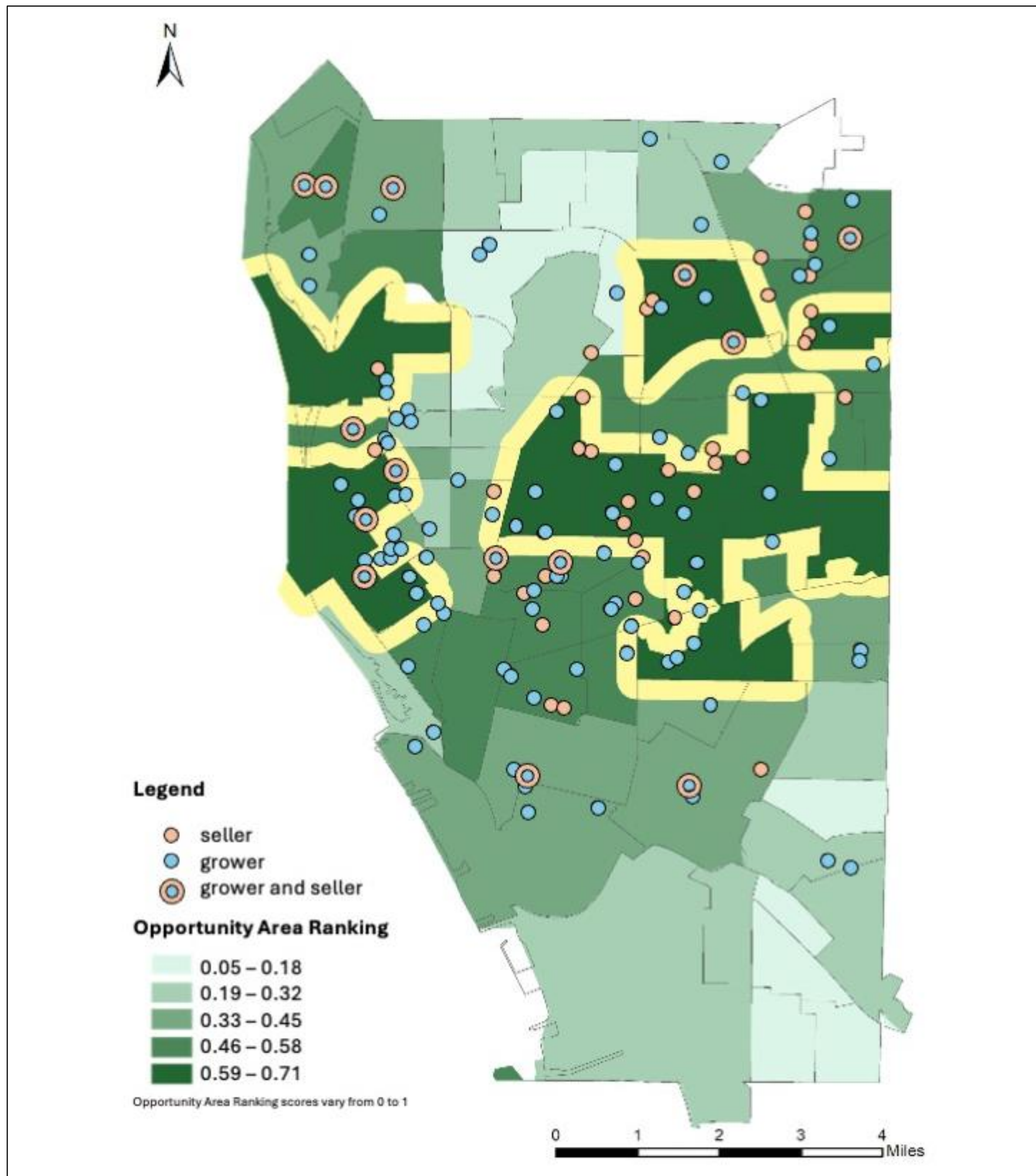
> Some of the refugee populations, there are different types of vegetables that historically you're not going to see people in Buffalo think about growing but that's what [New Americans] are comfortable growing, what they want to grow, what's native to them. If it can grow here, we make sure that we get that so that they have food that is comfortable and accessible, and culturally relevant to them. (Interviewee ID # 05_02, 2018)

The BCFSG was also successful in promoting physical food access because the cohort was able to collectively reach the most marginalized neighborhoods in the city (Figure 1). This spatial reach to

Journal of Agriculture, Food Systems, and Community Development
ISSN: 2152-0801 online
https://foodsystemsjournal.org

address an inequitable food environment was by design. UWBEC leadership identified target areas (represented by the dark green areas bordered in yellow in Figure 1) and privileged organizations with reach in historically marginalized neighborhoods, such as the East Side of Buffalo. Seven of the 13 funded organizations directly engaged in activities growing food in underserved opportunity

Figure 1. Location of the Buffalo Community Food System Grant (BCFSG) Cohort's Work in Opportunity Areas in Buffalo, New York



areas (Table 1 and Figure 1). For example, 59% of community gardens managed by a BCFSG grantee were in neighborhoods with limited walkable food resources (0.5 miles or 0.8 km), thereby increasing equitable food access.

Fostering Structural Change Through Job Creation, Entrepreneurship, and Job Training

The BCFSG cohort supported job creation, entrepreneurship, and job training. Across the cohort, 24 full-time equivalent jobs were created in food aggregation and wholesale, food retail, and food service. Six grantees provided job readiness and workforce development activities spanning food system sectors, including training 65 individuals in food production, 62 in food aggregation and wholesale, 92 in food retail, and 14 in food service. Trainees included adults, youth, New Americans, and formerly incarcerated individuals.

One interviewee noted how job training expanded beyond technical skills to include the soft skills necessary to secure future employment in the food system:

> A lot of what we do is just basic job training, a lot of the kids who come to us, it's their first job when they come to us, so a lot of soft skills training, just being on time, what do you do when you can't show up to work, filling out a timesheet, keeping a schedule, keeping track of a schedule. (Interviewee ID # 13_01, 2018)

Another grantee shared the success of an entrepreneur who launched their food retail business over the course of the grant:

> [The individual came] into the market probably two years ago. [The individual] wanted to start a regular restaurant. We went over what that would entail. And over the year, [the individual], became more knowledgable and [a community commercial kitchen] opened. So now [the individual] is in [the community commercial kitchen] and makes [their] product, … boxes it up, labels it, and takes it to different delis and gas stations. (Interviewee ID # 09_01, 2020)

In addition to providing pre-employment training, the BCFSG program fostered small business incubation by providing funding for commercial kitchen equipment and business development training.

Bolstering the Local Food System

One way to increase community control of the food system is to increase local capacity to grow, process, and distribute food. Seven grantees supported food production in community gardens (including market gardens), farms, and private gardens (Table 1 and Figure 1). The BCFSG program financed seed-starting equipment, equipment for new greenhouses, food production storage space, beekeeping equipment, lumber for raised beds, landscaping fabric to stifle weeds, drip irrigation, and soil amendments. This infusion of funds was crucial. One interviewee noted,

> We were able to modify the remaining money we have this year to essentially act as a deposit on our lumber for next year. We have 13 new gardens coming into the network and the [US]$5,000 we had remaining is going to probably fund half of those gardens. We'll now have six gardens that wouldn't have had raised beds or we would have to take that money from somewhere else. We were able to bring in more gardens this year and not cap it. We were able to bring on everyone that asked because we had funding. (Interviewee ID # 05_02, 2020)

During the grant period, 76 growers affiliated with BCFSG grantees started their own seeds, grantees trained 1,869 participants to grow food, and cohort members grew 14,248 pounds (6,463 kgs) of food.

The BCFSG program also supported community control of food resources through increasing demand for food grown regionally by commercial farmers. Four BCFSG grantees aggregated produce from Western NY farmers for sale or donation to customers in the City of Buffalo. BCFSG funds enabled the purchase of cold storage equipment to support the expansion of food aggregation. Grantees aggregated US$25,200 worth of produce from regional farmers, pumping money into the local

economy. While recognizing these successes, the local food value chain can still be strengthened further. For example, one food service organization that facilitates the sale of prepared ethnic foods reported that they did not procure any produce from local farmers, signaling a missed opportunity as local farmers *do* grow the types of produce prepared by this food service organization.

Beyond supporting local food production, aggregation, and retail, public food systems education is another way to build capacity for community control of the food system. Grantees reached over 20,000 unique individuals through public education activities. Trainings incorporated topics such as saving seeds, growing food, buying healthy food, cooking safe food, and more. Increasing community knowledge of healthy food systems primes a community to gain more community control over their food system (Interviews with grant recipients; Raja et al., 2024b).

Addressing Structural Racial Disparities in the Food System

Perhaps the greatest challenge in the BCFSG program was tackling substantive racial disparities in the food system. While all 13 organizations aimed to serve Black and brown people, very few focused on eradicating the conditions that lead to racial disparities in food insecurity. Although the BCFSG supported Black- and brown-led organizations' efforts to generate jobs and income, these efforts were masked by the prevalent focus on food delivery and nutrition education across the 13 grantees.

Catalyzing Policy Changes

Departing from traditional food security initiatives, the BCFSG aimed to catalyze changes in municipal public policy to foster food equity. Specifically, the initiative funded the creation of a strategic plan for the city-county food policy council. The preparation of the plan was delayed due to challenges with the consultants, but was ultimately completed and adopted after the BCFSG program ended. The completed plan explicitly draws attention to a number of inequities in the food system (including racial inequities), and is, in fact, one of a handful of policy documents in the region that explicitly discusses inequities. The plan has since fostered ongoing action by the county government to strengthen the food system.

Discussion

The BCFSG program launched a cohort-based, cross-sectoral model to extend the idea of CI by linking different sectors of the food system together. Despite the interest in CI among philanthropic leaders (including in Buffalo), the BCFSG model departed from the centrality on innovation in CI approaches (Flood et al., 2015; Hanleybrown et al., 2012) and moved toward a CCAT model by recognizing prior work in the city and focusing on policy. While several BCFSG grantees proposed new solutions to food inequity, others continued to implement existing initiatives with BCFSG funds. Continuing what works in a community is also innovative. Building on existing initiatives allowed organizations to scale up successful projects and develop new partnerships. The program honored and supported ongoing work, as well as created space for new ideas. This flexibility was a key strength of the BCFSG program. In many ways, BCFSG illustrates that philanthropic organizations should look to CCAT, not CI, frameworks as a strategy for addressing the complexity of community-rooted food projects.

Strengths of the BCFSG resulting from implementing a CCAT model included building relationships across an intersectoral food system cohort, leveraging ongoing work, and operationalizing a flexible funding model. Convening relationships was a key strength of the BCFSG program and led several grantees to seek future collaborative funding with one another and engage in joint programming. One of the powerful components of the BCFSG program was that it was intersectoral—it included growers as well as retailers. Seeding and fostering intersectoral relationships could be the most long-term systemic impact of the BCFSG program on Buffalo's food system.

A key factor for success of the BCFSG program was the outstanding staff support from UWBEC, the backbone organization. Having a backbone organization is a key recommendation in both CCAT and CI literature (Butterfoss & Kegler, 2012; Flood et al., 2015; Kegler et al., 2019). UWBEC funded items that are typically difficult to

include in grants (e.g., salary support and vehicular purchases). Grant applications often necessitate submitting and following a strict budget despite changing community needs. In the case of the BCFSG cohort, grantees faced numerous unexpected situations ranging from vandalism on property, to failed contractual arrangements with consultants, to a global pandemic. Through all these unexpected challenges, UWBEC staff were flexible, an approach greatly appreciated by the participants. Unfortunately, at UWBEC, there was staff transition, and the key staff overseeing the food portfolio is no longer with the organization. Such transitions in backbone staff can undermine the mature phases of collective action efforts.

Despite these successes, there were challenges for the cohort. The short-term funding of the BCFSG program, the burden of data collection, sparse staff capacity for continued communication, and an emphasis on separate work plans for each organization posed challenges for the cohort.

All but one grantee/interviewee noted that the limited financial sustainability of initiatives launched through the BCFSG program was a challenge. More specifically, organizations expressed concern over their ability to continue programming while remaining dependent on grant funding. These challenges are not unique to the BCFSG. Although some grantees already secured additional funding to sustain their projects beyond the BCFSG program, respondents from other organizations raised doubts about financial sustainability past the two-year funding cycle of the BCFSG.

As Hoey et al. (2017) find, shared data collection, a key tenet of CCAT work, is often not possible until organizations build capacity. Larger BCFSG grantees were better equipped and better resourced to collect data compared to smaller organizations. While all organizations shaped the metrics that guided the data collection, not all organizations were able to contribute equally to data reporting. These disparities in the organizational capacity of food-related organizations are also tied to larger racial and economic disparities in the City of Buffalo (The Food Equity Scholars, U.B. Food Lab, 2022). Such differences in organizational capacity led to inequities in who could substantially contribute to the program evaluation. Equitable, cohort-based, and collaborative programming must recognize historic, place-based structural disparities, and level the organizational playing field by funding technical assistance support for smaller organizations, including for data collection.

A key pillar of CCAT is continued communication among all partners. One challenge that grantees reported was having insufficient time to develop deep collaborative partnerships. This challenge was especially salient for organizations with fewer staff. As relationship-building takes time, organizations with fewer staff members often had to juggle attending cohort workshops with meeting other, frequently time-sensitive, organizational needs. In fact, the downside of the capacity-building workshops and gatherings was that it took time away from substantive work. Organizations with more staff were able to distribute staff time more broadly, meeting organizational demands while also freeing up time to attend workshops, trainings, and meetings with other grantees.

Among some grantees, self-perceptions shifted due to collaborations across grantees. For example, some organizations were engaged with food work prior to the grant, but did not see themselves as part of the food system or as contributing to food equity until engaging in programming with their BCFSG cohort. While some grantees initiated collaborations, the entire cohort of grantees did not communicate collectively unless initiated by the funder or the evaluator. One of the most successful ways that a few members of the BCFSG cohort continued to communicate beyond the duration of the grant was by establishing new intersectoral partnerships (e.g., buying, selling, and/or donating goods and/or services across the food value chain).

Although some grantees chose to work together and were self-motivated to do so, there was little incentive built into the grant for cross-organizational collaboration. A key lesson learned is that collaborative grants could be more effective if they funded organizations to work together on programming through shared initiatives. While some collaborative work happened organically, and several partners applied for future grants together as a product of having developed stronger partnerships through the BCFSG, such partnership-build-

ing was not directly funded by the grant, and not all grantees worked collaboratively with other cohort partners.

Certainly, some elements of CCAT (Butterfoss & Kegler, 2009, 2012) and CI (Kania & Kramer, 2011) frameworks hold true for the BCFSG program. However, such principles were insufficient in assuring a focus on food equity within funded initiatives, rather than a focus on food security. For example, rebalancing powered relationships in the food system was not the dominant grant outcome. Butterfoss and Kegler (2009; 2012) recommend that affected people be centered in designing and executing coalition work, but adherence to this tenet was uneven across grantee organizations. That said, some grantees were led by community residents deeply impacted by food inequity and were better able to respond to community needs because they were integrated into the neighborhood. For example, two grantee organizations mobilized quickly to deliver produce to shut-in elder residents in Black neighborhoods at the onset of COVID-19. These organizations were primed to do so as they were part of the community, embedded in its fabric, and aware of their own needs.

There are some limitations of this research which are important to note. As discussed above, this research was ongoing at the onset of COVID-19. As organizations within the BCFSG cohort shifted to respond to emergency needs augmented by the pandemic, staff had less time available to participate in data collection. This was especially true for organizations with a small number of staff. Therefore, the first key limitation to this work is that there is an imbalance of data collected across organizations within the cohort. Our findings might inflate the experiences of organizations that participated in more data collection activities. The authors combatted this limitation by triangulating findings across data sources. The second key limitation, which can also be perceived as a strength, is that the authors had preexisting relationships with many of the organizations in the cohort. The authors reduced the impact of our own biases by engaging in strategies that included conducting intercoder reliability assessments during thematic coding, analyzing quantitative data alongside qualitative data, and engaging in discussions of critical reflexivity with other co-authors. While reducing the impact of our own biases was an important aspect of bracketing for this research, being a part of the food equity community in Buffalo also strengthened this work. Having prior knowledge of and relationships with organizations in the cohort increased trust between research participants and the authors. By living and working in Buffalo, the authors of this work more deeply understood the historic and contextual settings of this research, and such knowledge was critical foregrounding for research activities.

Conclusion

Fostering food equity through collaborative, intersectoral initiatives is anything but easy. Designing collective initiatives, launching them, and monitoring their successes are complex endeavors. The experience of the BCFSG program offers some insights into the possibilities of advancing food equity through collective initiatives. Collaborating across partners, honoring ongoing and preceding food system work, and providing flexible funding were key nurturing factors of the BCFSG cohort-based model. Such recognition of prior collaborations is rare and represents a departure from traditional philanthropic work. Collectively, gains of the BCFSG were apparent in increasing the availability and affordability of nutritious and culturally relevant foods. Still, more fundamental questions of addressing equity, especially racial equity, remained a challenge during the BCFSG program.

Multiple crises bring attention to the bottlenecks, inefficiencies, and inequities within Buffalo's food system. Following the onset of COVID-19, on May 14, 2022, a white supremacist massacred 10 people in one of the only food stores in a predominantly Black neighborhood in Buffalo. The massacre drew attention to racial disparities long present in the Buffalo food retail environment. During COVID-19 and after the massacre, local organizations mobilized relatively rapidly, in large part due to the presence of local knowledge and prior working relationships, including many of those funded by the BCFSG. Growers donated extra food, gardeners planted extra beds, local aggregators stored food, bicycle couriers delivered food, all within days or weeks of each crisis (Authors' observations,

2020; Raja, 2020). Local networks are, in fact, key to rapid and equitable response and recovery (The Food Equity Scholars, U.B. Food Lab, 2022; Raja, 2020). Building and sustaining the capacity of localized and resilient networks to respond to multiple crises will be an important strategy for the future of community food systems. But this will not be enough. Dismantling systemic racism within the food system is crucial. Crises like the massacre at a grocery store in Buffalo's majority Black community suggest that discussions about food equity must address deeper issues of power imbalances and systemic disparities.

An important insight from the BCFSG program is that the already overburdened nonprofit sector cannot restructure the food system or combat systemic racism alone. Food equity needs to be on the public policy agenda. Recent national analyses suggest that while food is starting to be incorporated into the public agenda, equity remains an elusive goal (Mui et al., 2021). Community organizations—especially those engaged in collective efforts such as the BCFSG program—have the potential to engage with the public sector to scale up their collective impacts. This is, of course, difficult. Food policy implementation takes considerable time, while grant programs are short-lived.

Moving forward, those interested in collaborative approaches to food systems transformations could consider catalyzing interorganizational and intersectoral cooperation. Long-term funding for collaboration across the food value chain that encourages cooperation, not competition, is necessary to foster long-term change, allow relationships and collaborations to evolve, and build trust between partners. For example, philanthropic organizations committed to systemic change could consider inviting joint, cooperative, intersectoral proposals—from a coalition of new farmers and a coalition of retailers, for example—to foster complementary projects. Developing grant programs that are by design community-based and intersectoral across the food value chain is more likely to accelerate equitable systemic transformation compared with traditional philanthropic models. Within such efforts, prioritizing racial equity is crucial, a fact that is glaringly apparent in the national consciousness following Mr. Floyd's murder (The Civil Eats Editors, 2020), and more locally, the massacre by a white supremacist in Buffalo on May 14, 2022 (The Food Equity Scholars, U.B. Food Lab, 2022). Overall, cohort-based collaborative funding that supports the development of a food value chain is a promising approach to addressing food inequity—but only when such cohorts disrupt racial, economic, and existing power structures in the food system.

Acknowledgments

The authors are deeply grateful for the community food champions we have the joy to link arms with in this work. Thank you for your deep commitment to make Buffalo, New York, a better place for all. It is not easy, but because we stand together, we have the power to create real change. The work presented in this paper is also indebted to Joe Roccisano. Thank you, Joe, for listening, adapting, and learning alongside us. There are many University at Buffalo Food Systems Planning and Healthy Communities Lab members and alumni who supported this work by developing visuals, taking notes, reading drafts, making suggestions, and providing the space within which this work could be conceived and put down on paper. Thank you.

References

Alkon, A. H., & Mares, T. M. (2012). Food sovereignty in US food movements: Radical visions and neoliberal constraints. *Agriculture and Human Values*, *29*, 347–359. https://doi.org/10.1007/s10460-012-9356-z

Allen, P. (2008). Mining for justice in the food system: Perceptions, practices, and possibilities. *Agriculture and Human Values*, *25*, 157–161. https://doi.org/10.1007/s10460-008-9120-6

Allen, P. (2010). Realizing justice in local food systems. *Cambridge Journal of Regions, Economy and Society*, *3*(2), 295–308. https://doi.org/10.1093/cjres/rsq015

Anderson, L. (2016). *Bringing food equity to the table in Toronto*. Wellesley Institute. https://www.wellesleyinstitute.com/wp-content/uploads/2016/05/Bringing-Food-Equity-to-the-Table.pdf

Blatto, A. (2018). *A city divided: A brief history of segregation in Buffalo.* Partnership for the Public Good. https://ppgbuffalo.org/files/documents/data-demographics-history/a_city_divided__a_brief_history_of_segregation_in_the_city_of_buffalo.pdf

Butterfoss, F. D., & Kegler, M. C. (2009). The community coalition action theory. In R. J. DiClemente, R. Crosby, & M. C. Kegler (Eds.), *Emerging theories in health promotion practice and research* (pp. 237–276). Jossey-Bass/Wiley.

Butterfoss, F. D., & Kegler, M. C. (2012). A coalition model for community action. In M. Minkler (Ed.), *Community organizing and community building for health and welfare* (pp. 309–328). Rutgers University Press. https://doi.org/10.36019/9780813553146-019

Cabral, L., & Devereux, S. (2022). *Food equity: A pluralistic framework* (Working Paper No. 581). Institute of Development Studies. https://doi.org/10.19088/IDS.2022.083

City of Buffalo (2020). *2019-2020 Assessment roll.* https://data.buffalony.gov/stories/s/CitiStat-Buffalo-Assessment-and-Taxation-Departmen/js3y-yqs4/

Civil Eats Editors, The. (2020, July 20). Black Lives Matter in the food system. *Civil Eats.* https://civileats.com/2020/07/20/black-lives-matter-in-the-food-system/

Clark, J. K., Freedgood, J., Irish, A., Hodgson, K., & Raja, S. (2017). Fail to include, plan to exclude: Reflections on local governments' readiness for building equitable community food systems. *Built Environment*, *43*(3), 315–327. https://doi.org/10.2148/benv.43.3.315

Coleman-Jensen, A., Rabbitt, M. P., Gregory, C. A., & Singh, A. (2020). *Household food security in the United States in 2019* (Economic Research Report No. ERR-275). U.S. Department of Agriculture Economic Research Service. https://www.ers.usda.gov/publications/pub-details/?pubid=99281

Coley, J., & Adelman, R. M. (2021). Gentrification in the "City of Good Neighbors": Race, class, and neighborhoods in Buffalo. *Sociological Inquiry, 91*(4), 824–848. https://doi.org/10.1111/soin.12387

Cook, J. T., Frank, D. A., Meyers, A. F., Berkowitz, C., Black, M. M., Casey, P. H., Cutts, D. B., Zaldivar, N., Skalicky, A., Levenson, S., Heeren, T., & Nord, M. (2004). Food insecurity is associated with adverse health outcomes among human infants and toddlers. *The Journal of Nutrition*, *134*(6), 1432–1438. https://doi.org/10.1093/jn/134.6.1432

Crenshaw, K. W. (1989). Demarginalizing the intersection of race and sex: A Black feminist critique of antidiscrimination doctrine, feminist theory and antiracist politics. *University of Chicago Legal Forum*, *1989*, Article 8. https://chicagounbound.uchicago.edu/uclf/vol1989/iss1/8

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage.

Delgado, C., Norton, T., & Raja, S. (2013). *Indicators for a healthy food and built environment in the City of Buffalo: Where we are and where we need to go* (Healthy Kids, Healthy Communities Policy Brief #8). Food Systems Planning and Healthy Communities Lab. https://ubwp.buffalo.edu/foodlab/wp-content/uploads/sites/68/2017/06/40_Delgado_Norton_Raja_2013_RajaEd_IndicatorsforaHealthyFoodandBuiltEnvironmentinBuffalo_UB1.pdf

Dhokarh, R., Himmelgreen, D. A., Peng, Y.K., Segura-Pérez, S., Hromi-Fiedler, A., & Pérez-Escamilla, R. (2011). Food insecurity is associated with acculturation and social networks in Puerto Rican households. *Journal of Nutrition Education and Behavior*, *43*(4), 288–294. https://doi.org/10.1016/j.jneb.2009.11.004

Ennis, G., & Tofa, M. (2020). Collective impact: A review of the peer-reviewed research. *Australian Social Work, 73*(1), 32-47. https://doi.org/10.1080/0312407X.2019.1602662

Flood, J., Minkler, M., Hennessey Lavery, S., Estrada, J., & Falbe, J. (2015). The collective impact model and its potential for health promotion: Overview and case study of a healthy retail initiative in San Francisco. *Health Education & Behavior*, *42*(5), 654–668. https://doi.org/10.1177/1090198115577372

Food Equity Scholars, The, U.B. Food Lab. (2022, May 24). Op-ed: East Buffalo needs community-driven structural investments, not fly-in, fly-out charity. *Civil Eats.* https://civileats.com/2022/05/24/op-ed-east-buffalo-needs-community-driven-structural-investments-not-fly-in-fly-out-charity/

Friel, S., & Ford, L. (2015). Systems, food security and human health. *Food Security*, *7*, 437-451. https://doi.org/10.1007/s12571-015-0433-1

Gilbert, J. L., & Williams, R. A. (2020). Pathways to reparations: Land and healing through food justice. *Human Geography*, *13*(3), 228–241. https://doi.org/10.1177/1942778620951936

Grochowska, R. (2014). Specificity of food security concept as a wicked problem. *Journal of Agricultural Science and Technology B*, *4*(10), 823–831. https://www.researchgate.net/profile/Renata-Grochowska/publication/276982491_Specificity_of_Food_Security_Concept_as_a_Wicked_Problem/links/57c0222e08aeda1ec386cf25/Specificity-of-Food-Security-Concept-as-a-Wicked-Problem.pdf

Gundersen, C., & Ziliak, J. P. (2015). Food insecurity and health outcomes. *Health Affairs*, *34*(11), 1830–1839. https://doi.org/10.1377/hlthaff.2015.0645

Guthman, J. (2011). "If they only knew": The unbearable whiteness of alternative food. In A. Hope & J. Agyeman (Eds.), *Cultivating food justice: Race, class, and sustainability* (pp. 263–281). The MIT Press. https://doi.org/10.7551/mitpress/8922.003.0018

Hanleybrown, F., Kania, J., & Kramer, M. (2012, January 26). Channeling change: Making collective impact work. *Stanford Social Innovation Review*. https://doi.org/10.48558/2T4M-ZR69

Hinrichs, C. C., & Allen, P. (2008). Selective patronage and social justice: Local food consumer campaigns in historical context. *Journal of Agricultural and Environmental Ethics*, *21*, 329–352. https://doi.org/10.1007/s10806-008-9089-6

Hinrichs, C., & Kremer, K. S. (2002). Social inclusion in a Midwest local food system project. *Journal of Poverty*, *6*(1), 65–90. https://doi.org/10.1300/J134v06n01_04

Hoey, L., Colasanti, K., Pirog, R., & Fink Shapiro, L. (2017). Implementing collective impact for food systems change: Reflections and adaptations from Michigan. *Journal of Agriculture, Food Systems, and Community Development*, *7*(2), 101–115. https://doi.org/10.5304/jafscd.2017.072.014

Irish, A., Clark, J., Hodgson, K., & Raja, S. (2024). The relational infrastructure of food system policy development. In S. Raja, M. Caton Campbell, A. Judelsohn, B. Born, & A. Morales (Eds.), *Planning for equitable uban agriculture in the United States: Future directions for a new ethic in city building* (pp. 351–357). Springer. https://doi.org/10.1007/978-3-031-32076-7_19

Joyner, L., Yagüe, B., Cachelin, A., & Rose, J. (2022). Farms and gardens everywhere but not a bite to eat? A critical geographic approach to food apartheid in Salt Lake City. *Journal of Agriculture, Food Systems, and Community Development, 11*(2), 67–88. https://doi.org/10.5304/jafscd.2022.112.013

Judelsohn, A., Orom, H., Kim, I., Na Sa, A. B., Khan, H., DeVito, R., Diaz Del Carpio, R. O., & Raja, S. (2017). Planning the city of good (and new) neighbours: Refugees' experiences of the food environment in Buffalo, New York. *Built Environment*, *43*(3), 402–416. https://doi.org/10.2148/benv.43.3.402

Judelsohn, A., Orom, H., Leon, D., & Raja, S. (2021). Refuge in new food environments? The role of urban planning in facilitating food equity for new Americans. *Journal of Urban Affairs*, *43*(6), 872–889. https://doi.org/10.1080/07352166.2019.1705845

Juskaite, G., & Haug, R. (2023). Multiple meanings of "equitable food systems": Food systems and discursive politics of change. *Frontiers in Sustainable Food Systems, 7*, Article 1127562. https://doi.org/10.3389/fsufs.2023.1127562

Kania, J., & Kramer, M. (2011). Collective impact. *Stanford Social Innovation Review, 9*(1), 36–41. https://doi.org/10.48558/5900-KN19

Kania, J., & Kramer, M. (2015, October 6). The equity imperative in collective impact. *Stanford Social Innovation Review*. https://doi.org/10.48558/JAVG-HJ19

Kegler, M. C., & Swan, D. W. (2011). An initial attempt at operationalizing and testing the Community Coalition Action Theory. *Health Education & Behavior*, *38*(3), 261–270. https://doi.org/10.1177/1090198110372875

Kegler, M. C., Wolff, T., Christens, B. D., Butterfoss, F. D., Francisco, V. T., & Orleans, T. (2019). Strengthening our collaborative approaches for advancing equity and justice. *Health Education & Behavior*, *46*(Suppl. 1), 5S–8S. https://doi.org/10.1177/1090198119871887

Klassen, S., & Murphy, S. (2020). Equity as both a means and an end: Lessons for resilient food systems from COVID-19. *World Development, 136*, Article 105104.https://doi.org/10.1016/j.worlddev.2020.105104

Lee, J. S., Gundersen, C., Cook, J., Laraia, B., & Johnson, M. A. (2012). Food insecurity and health across the lifespan. *Advances in Nutrition*, *3*(5), 744–745. https://doi.org/10.3945/an.112.002543

Macias, T. (2008). Working toward a just, equitable, and local food system: The social impact of community-based agriculture. *Social Science Quarterly*, *89*(5), 1086–1101. https://doi.org/10.1111/j.1540-6237.2008.00566.x

McAfee, M., Blackwell, A. G., & Bell, J. (2015). *Equity: The soul of collective impact*. PolicyLink. https://www.policylink.org/sites/default/files/Collective_Impact_10-21-15f_0.pdf

Metcalf, S. S., & Widener M. J. (2011). Growing Buffalo's capacity for local food: A systems framework for sustainable agriculture. *Applied Geography*, *31*(4), 1242–1251. https://doi.org/10.1016/j.apgeog.2011.01.008

Mui, Y., Headrick, G., Raja, S., Palmer, A., Ehsani J., & Pollack Porter, K. (2022). Acquisition, mobility and food insecurity: Integrated food systems opportunities across urbanicity levels highlighted by COVID-19. *Public Health Nutrition*, *25*(1), 114–118. https://doi.org/10.1017/S1368980021002755

Mui, Y., Khojasteh, M., Judelsohn, A., Sirwatka, A., Kelly, S., Gooch, P., & Raja, S. (2021). Planning for regional food equity. *Journal of the American Planning Association*, *87*(3), 354–369. https://doi.org/10.1080/01944363.2020.1845781

Northridge, M. E., & Freeman, L. (2011). Urban planning and health equity. *Journal of Urban Health*, *88*, 582–597. https://doi.org/10.1007/s11524-011-9558-5

Olson, C. M. (1999). Nutrition and health outcomes associated with food insecurity and hunger. *The Journal of Nutrition*, *129*(2), 521S–524S. https://doi.org/10.1093/jn/129.2.521S

Poppendieck, J. (1999). *Sweet charity?: Emergency food and the end of entitlement*. Penguin Books.

Pothukuchi, K., & Kaufman, J. L. (1999). Placing the food system on the urban agenda: The role of municipal institutions in food systems planning. *Agriculture and Human Values*, *16*, 213–224. https://doi.org/10.1023/A:1007558805953

Poulsen, M. N. (2017). Cultivating citizenship, equity, and social inclusion? Putting civic agriculture into practice through urban farming. *Agriculture and Human Values*, *34*, 135–148. https://doi.org/10.1007/s10460-016-9699-y

Rabbitt, M. P., Hales, L. J., Burke, M. P., & Coleman-Jensen, A. (2023). *Household food security in the United States in 2022* (Economic Research Report No. ERR-325). U.S. Department of Agriculture Economic Research Service. https://doi.org/10.32747/2023.8134351.ers

Raj, S., Raja, S., & Dukes, B.-A. (2017). Beneficial but constrained: Role of urban agriculture programs in supporting healthy eating among youth. *Journal of Hunger & Environmental Nutrition*, *12*(3), 406–428. https://doi.org/10.1080/19320248.2015.1128865

Raja, S. (n.d.). *What is food equity?* Community for Global Health Equity, University at Buffalo. https://www.buffalo.edu/globalhealthequity/global-projects/foodequity.html

Raja, S. (2020). Planning and pandemics: COVID 19 illuminates why urban planners should have listened to food advocates all along. *Agriculture and Human Values*, *37*, 553–554. https://doi.org/10.1007/s10460-020-10090-0

Raja, S. (2024). Planning for equitable urban agriculture: Opportunities and quandaries. In S. Raja, M. Caton Campbell, A. Judelsohn, B. Born, & A. Morales (Eds.), *Planning for equitable urban agriculture: Future directions for a new ethic in city building* (pp. 1–15). Springer. https://doi.org/10.1007/978-3-031-32076-7_1

Raja, S., Caton Campbell, M., & Judelsohn, A. (2024a). Planning [for urban agriculture] as public nurturance. In S. Raja, M. Caton Campbell, A. Judelsohn, B. Born, & A. Morales. (Eds.), *Planning for equitable uban agriculture: Future directions for a new ethic in city building* (pp. 541–552). Springer. https://doi.org/10.1007/978-3-031-32076-7_29

Raja, S., Caton Campbell, M., Judelsohn, A., Born, B., & Morales, A. (Eds.). (2024b). *Planning for equitable urban agriculture in the United States: Future directions for a new ethic in city building*. Springer. https://doi.org/10.1007/978-3-031-32076-7

Raja, S., & Chunyuan, D. (2016). Community-led urban agriculture policy making: A view from the United States. *Urban Agriculture Magazine, 31*, 18–20. https://edepot.wur.nl/402064

Raja, S., Clark, J. K., Freedgood, J., & Hodgson, K. (2018a). Reflexive and inclusive: Reimagining local government engagement in food systems. *Journal of Agriculture, Food Systems, and Community Development, 8*(Suppl. 2), 1–10. https://doi.org/10.5304/jafscd.2018.08B.013

Raja, S., Hall, J., Norton, T., Gooch, P., Raj, S., Hawes, T., & Whittaker, J. (2014). *Growing together: Ensuring healthy food, strong farms, and a prosperous Buffalo Niagara*. Food Systems Planning and Healthy Communities Lab & University at Buffalo Regional Institute. https://foodsystemsplanning.ap.buffalo.edu/wp-content/uploads/sites/68/2017/06/Growing-Together-Ensuring-healthy-food-strong-farms-and-a-prosperous-Buffalo-Niagara..pdf

Raja, S., Ma, C., & Yadav, P. (2008). Beyond food deserts: Measuring and mapping racial disparities in neighborhood food environments. *Journal of Planning Education and Research*, *27*(4), 469–482. https://doi.org/10.1177/0739456X08317461

Raja, S., Morgan, K., & Hall, E. (2017a). Planning for equitable urban and regional food systems. *Built Environment*, *43*(3), 309–314. https://doi.org/10.2148/benv.43.3.309

Raja, S., Raj, S., & Roberts, B. (2017b). The US experience in planning for community food systems: An era of advocacy, awareness, and (some) learning. In I. Knezevic, A. Blay-Palmer, C. Levkoe, P. Mount, & E. Nelson (Eds.), *Nourishing communities: From fractured food systems to transformative pathways* (pp. 59–74). Springer. https://doi.org/10.1007/978-3-319-57000-6_4

Raja, S., Sweeney, E., & Sirwatka, A. (2021). Opportunity-innovation-equity food systems planning framework. In S. Raja, E. Sweeney, Y. Mui, & E. Frimpong Boamah (Eds), *Local government planning for community food systems—Opportunity, innovation and equity in low- and middle-income countries* (pp. 113–134). Food and Agriculture Organization of the United Nation (FAO). https://doi.org/10.4060/cb3136en

Raja, S., & Whittaker, J. (2018b). Community food infrastructure: A vital consideration for planning healthy communities. In T. Beatley, C. Jones, & R. Rainey (Eds.), *Healthy environments, healing spaces: Practices and directions in health, planning, and design* (pp. 207–230). University of Virginia Press. https://doi.org/10.2307/j.ctv8d5sgp.14

Ray, D., Galvin, L., Palermo, C., Eklund, E., Auckland, S., Lê, Q., Lindberg, R., & Shields, R. (2012). Case studies on food equity and access. In Q. Farmar-Bowers, V. Higgins, & J. Millar (Eds.), *Food security in Australia: Challenges and prospects for the future* (pp. 153–170). Springer. https://doi.org/10.1007/978-1-4614-4484-8_11

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences*, *4*, 155–169. https://doi.org/10.1007/bf01405730

Taylor, Jr., H.-L., Jung, J.-K., & Dash, E. (2021). *The harder we run: The state of Black Buffalo in 1990 and the present*. University at Buffalo Center for Urban Studies: School of Architecture and Planning & U.B. Community Health Equity Institute. https://ubwp.buffalo.edu/aps-cus/wp-content/uploads/sites/16/2021/10/TaylorHL-The-Harder-We-Run.pdf

U.S. Census Bureau. (2022). ACS 5-Year Estimates. *S2201 Food Stamps/Supplemental Nutrition Assistance Program*. https://data.census.gov/table/ACSST5Y2022.S2201?q=Income%20and%20Earnings&g=310XX00US35620

U.S. Census Bureau. (2023, June 23). *Glossary*. https://www.census.gov/programs-surveys/metro-micro/about/glossary.html#:~:text=Principal%20City,also%20identified%20as%20principal%20cities

U.S. Department of Commerce (1951). *1950 Census of Housing.* U.S. Census Bureau. https://www2.census.gov/library/publications/decennial/1950/housing-volume-1/36965082v1p4ch11.pdf

Weiler, A. M., Hergesheimer, C., Brisbois, B., Wittman, H., Yassi, A., & Spiegel, J. M. (2015). Food sovereignty, food security and health equity: A meta-narrative mapping exercise. *Health Policy and Planning*, *30*(8), 1078–1092. https://doi.org/10.1093/heapol/czu109

Wolff, T. (2016). Ten places where collective impact gets it wrong. *Global Journal of Community Psychology Practice*, *7*(1), 1–11. https://www.gjcpp.org/pdfs/Tom%20Wolff%20Collective%20Impact%20critique-CopyeditFINAL.pdf

Wolff, T., Minkler, M., Wolfe, S. M., Berkowitz, B., Bowen, L., Butterfoss, F. D., Christens, B., Francisco, V. T., Himmelman, A. T., & Lee, K. S. (2016). Collaborating for equity and justice: Moving beyond collective impact. *Nonprofit Quarterly, 9,* 42–53. https://www.researchgate.net/profile/Frances-Butterfoss/publication/314089395_Collaborating_for_Equity_and_Justice_Moving_Beyond_Collective_Impact/links/58b478f045851503bea04ac3/Collaborating-for-Equity-and-Justice-Moving-Beyond-Collective-Impact.pdf