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Cooperative extension and food system change: goals, strategies and resources

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Abstract Recent attention to communities "localizing" food systems has increased the need to understand the perspectives of people working to foster collaboration and the eventual transformation of the food system. University Cooperative Extension Educators (EEs) increasingly play a critical role in communities' food systems across the United States, providing various resources to address local needs. A better understanding of EEs' perspectives on food systems is therefore important. Inspired by the work of Stevenson, Ruhf, Lezberg, and Clancy on the social food movement, we conducted national virtual focus groups to examine EEs' attitudes about how food system change should happen, for what reasons, and who has the resources, power, and influence to effect change. The institutions within which EEs are embedded shape their perceptions of available resources in the community, including authority and power (and who holds them). These resources, in turn, structure EEs' goals and strategies for food system change. We find that EEs envision working within the current food system: building market-centric alternatives that address inequity for vulnerable consumers and producers. EEs bring many resources to the table but do not believe they can influence those who have the authority to change policy. While these findings could suggest EEs' limited ability to be transformative change agents, EEs can potentially connect their efforts with new partners that share perceptions of food system problems and solutions. As EEs increasingly engage in food system work and with increasingly diverse stakeholders, they can access alternative, transformational frames within which to set goals and organize their work.

Keywords Food system · Social movement · Cooperative extension · Virtual focus groups

Abbreviations

AFI	Alternative food initiative
EE	Extension educator

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F2S Farm to school
US United States of America
USDA United States Department of Agriculture

Introduction

The increasing interest in local, regional, and sustainable food systems is hard to ignore. Much of the interest stems from concern about the potential impacts of our dominant global food system, such as increasing food insecurity, reduced farmer incomes, greater concentration and consolidation in the food system, increased social inequality, and environmental degradation. Efforts addressing these concerns take shape as alternative food movements challenging the dominant global system and advocating slow-food, local, and regional food systems, fair trade, food sovereignty, community food security, and sustainable agriculture (Friedland 2010). Just as concerns vary about the potential impacts of our dominant global food system and the labels of the change efforts, so do perspectives on how food system change should happen (Allen et al. 2003; Holt-Giménez 2011). For example, change can occur in the form of alternatives to the dominant system, changes within the system to favor marginalized consumers and producers, or total transformation by changing the system's embedded power structures. Developing a collective action agenda to address food system concerns requires understanding different perspectives of potential change agents, their food system change goals, and how change should happen (Tilly and Wood 2009).

One potential agent of change that operates in communities across the United States (US) is the university Cooperative Extension Educator[1] (EE). Embedded in nearly every US county, EEs are key stakeholders, in part because they have historically deep, embedded relationships that bring human, technical, informational, relational, social, and financial resources to local communities. EEs work in program areas that span the food system, from production to eating, from field scouting to Supplemental Nutrition Assistance Program education, from adults to youth to communities, although individual EEs may focus on one area (e.g., consumers and healthy eating). Some argue that Cooperative Extension is uniquely positioned as a key actor for food system change that addresses community goals such as the viability of regional small and midsized farms and agriculturally-related local businesses as well as equitable access to healthy food (Dunning et al. 2012; Thomson et al. 2011).

Although much has been written about EEs' activities and roles in food system work (Perez and Howard 2007; Raison 2010; Thomson et al. 2011, 2006), scant literature exists on the current food system concerns of Extensions, of community members with whom they work, and on perceptions of how to address these concerns through food system change. Given that EEs are increasingly engaged in food system work (Dunning et al. 2012), we can ask how their work aligns with the broader food movement. Their increasing involvement in food system work and their embeddedness in communities across the US means that it is important to understand their attitudes about how food system change should happen and who needs to be involved, in order to collectively mobilize resources.

This research is inspired by the work of Stevenson, Rufh, Lezberg, and Clancy (2007) on social movements and food system change. Following their framework, we ask the following questions: (1) How do EEs align with goals for food system change? (2) How do EEs align with strategic orientations in food system change? Specifically, how do EEs think food system change should happen, and what roles are most needed for change? (3) Who do EEs consider to have the resources (political, financial, etc.) to effect change? Examining EEs' narratives of food system change, we add to the literature by drawing connections among strategic orientations, goals for change, and perceptions of resources given the positioning of the potential change agent.

In the next sections, we briefly outline the work of EEs, addressing recent literature on their engagement in food system issues and corollary work in sustainable agriculture. We then provide the framing of food system change offered by Stevenson et al. (2007). Next, we present our method, virtual focus groups, followed by analysis, discussion, and conclusions. Our work suggests that the bounds of the current socio-political environments within which EEs are embedded shape perceptions of existing resources, which, in turn, structure their goals and strategies, all of which inhibits EEs' ability to engage in transformative food system change. These EEs envision working within the current food system: building market-centric alternatives to address inequity for vulnerable consumers and producers. EEs bring many resources to the table but do not believe they can influence those who have the authority to shape food system change.

Cooperative extension and food movement(s)

Since the formation of Cooperative Extension in 1914, EEs have been deeply embedded in communities across the country, with nearly 3000 currently operating offices in the

[1] Exact titles vary by state. The Extension Educator title is the most widely used, so we adopt it to refer to field staff who are typically supported by campus infrastructure of specialists and faculty. Some systems still use the more traditional title "Extension Agent." The word "agent" is used in this article to refer to the role of effecting social change.

US. The "cooperative" component of Extension stems from a funding partnership involving the USDA, land-grant universities, states, and counties. As part of the land-grant university system, EEs are housed in county or regional offices, "extending" the educational reach of the university with which they are associated. Today, the typical program areas that EEs cover are agriculture and natural resources, family and consumer sciences, and youth and community development.

General perspectives on the role of EEs include that of educator and disseminator of information, while others view their role as facilitators, capacity builders, and change-makers (Peters 2006a). These two historic roles of Extension are rooted in the late 1800s (Peters 2006b). Both are important and should likely be merged to meet communities' needs for information (educator) and sustainability (facilitator) (Dunning et al. 2012; Raison 2010). Raison (2010) and Peters (2006a) suggest that EEs need to "become better partners" and create "two-way" relationships with communities so that both traditions of educating and facilitating are jointly accomplished. This could take the form of coalition building and establishing foundations for collective action.

In many places, Extension has a history of being involved in community change. They are often a mainstay in community political networks and have close relationships with locally elected officials. They understand the networks and the reality of needing to maintain local legitimacy. The nature and longstanding community embeddedness of EEs position Extension for involvement in food system work (Dunning et al. 2012; Perez and Howard 2007). Yet, EEs' daily practice is within the current social and political system, which can lead to inadequate or ineffective change efforts because practice occurs by the same rules that create the system (Hassanein 2003). Extension also has a rich tradition of working towards community change, although being a change agent is often viewed as too politically heavy-handed for an organization that tries to remain politically neutral. This neutrality has, at times, caused Extension to view its role as a one-way conveyor of research-based information (Peters 2006a, b). While EEs have relationships with decision-makers, these relationships are power-laden as the local government often provides financial support for EE positions. Power dynamics and those with interests affect EEs' work (Gray et al. 1997) and could stand in the way of entrepreneurial or innovative efforts if, for example, local government politics or university leadership consider such efforts to be outside of Extension norms.

In the past few decades, larger questions have surfaced about land-grant universities' relevance and ability to fulfill their mission of cultivating citizenship and addressing urgent practical problems. Given this "crisis" in the land-grant system, Colasanti et al. 2009 suggest that EEs can play a role in increasing citizenship through civic engagement in the food system. One way of doing this is to democratize food system knowledge and foster public discourse on food system values. But for EEs to play a meaningful role, a master frame, or consensus on the problems, causes, and solutions, is needed to mobilize Extension and land-grant university resources. The potential role of EEs, from the perspective of Colasanti et al. (2009), and the need for a master frame mirror the findings of previous research on the role of land-grant universities and EEs in the sustainable agriculture movement, which is a foundational component of the food movement (Francis et al. 1988; Minarovic and Mueller 2000; Allen 2004).

Yet, scholars studying sustainable agriculture provide insight into other barriers that land-grant institutions and EEs may face in the multifaceted food movement. Lyson's (1998) work, among others, suggested that playing a significant role in sustainable agriculture would be a fundamental shift for land grants. Land grants' barriers to addressing sustainable agriculture are many, including perspectives on the relationship between humans and nature and the compartmentalization of department and education by discipline (Lacy 1993). For EEs, barriers include their background and education. Francis et al. (1988) write expressly about the need to empower farmers and communities to make value-based decisions, which can be considered a departure from the traditional EE approach of letting science-based technology research set the agenda. Furthermore, EEs would need to shift their focus from the individual to the community (Lyson 2004). These barriers suggest not just a change in the way EEs are trained but a culture shift that mobilizes EEs to do this work (Lacy 1993; Agunga 1995).

Other researchers have studied barriers perceived by EEs themselves, specifically in the area of local food system programming. The top three perceived barriers to local food system programming were lack of resources for programming, local food system work not being within EEs' area of responsibility, and lack of knowledge (Thomson et al. 2006). At the same time, surveyed EEs felt they had the least support from local residents to do local food system programming. This finding points to the absence of alliances and further suggests the need for collaboration and consensus building. Perhaps because of these barriers, while research suggests a clear need and role for Extension in local food system programming (Dunning et al. 2012), EEs have rather low involvement in such programming (Thomson et al. 2011).

Recent research signals a change within the Extension community regarding food system activities, both those in which EEs are engaged and opportunities for engagement. Engaging in food system activities can put EEs in touch

with new partners (Raison 2015), which, in turn, can create new connections resulting in institutional change (Dunning et al. 2012). For example, Benson (2014) found that nearly 40 % of EE survey respondents from eight states are involved with Farm to School (F2S) activities,[2] and 72 % said they were interested in being involved in F2S programming. Those engaged with new, diverse partners in F2S perceived institutional norms as supporting F2S activities. Benson's (2013, 2014) research suggests that F2S can be an entry point for EEs to support the development of community and local food systems, but further training and engagement could advance Extension's organizational reach.

Nonetheless, while many consider F2S, and institutional purchasing in general, to be a central strategy for food system change (Hamilton 2002; Scherb et al. 2012), F2S has also been critiqued as reinforcing the neoliberal governmentality of the very food system it seeks to change (Allen and Guthman 2006). Furthermore, F2S and other alternative food initiatives (AFIs) have been critiqued for being isolated projects not aimed towards correcting the structures that create inequity in the first place (Allen et al. 2003). Drawing from these criticisms, Levkoe (2011) argues that AFIs can be transformative, in part as a result of AFI actors developing a "collective subjectivity." Actors with a collective subjectivity recognize that transformative change is possible as a shared act among AFI actors with common interests and an awareness of the interconnectedness of problems, working towards a common good.

Do EEs have a role in developing a collective subjectivity for transformative food system change? EEs' current position in the food system and prevailing institutions impact their food system goals (including whether they have any), their strategies for achieving those goals, and the resources they bring to bear. So, on one hand, EEs are embedded within the current food system and rely on maintaining relationships with institutions that comprise the current system (both via their positions and their funding streams). On the other hand, EEs have long-standing relationships with communities, work on local priorities, and are becoming more engaged in food system work. Furthermore, land-grant universities are reexamining how they pursue their mission, and food systems are on the docket, all of which suggests potential to introduce EEs to new non-traditional partners that could connect them to alternative framing, resources, and strategies for transformative change.

[2] For more information on Farm to School, visit http://www.farmtoschool.org/ or http://www.fns.usda.gov/farmtoschool/farm-school.

Food system change: the conceptual model

The conceptual model that organizes this examination of goals, strategies, and resources within the context of EEs' position is drawn from Stevenson et al. (2007), with the addition of the concept of resources and power from social movement theory (McCarthy 1996; McCarthy and Zald 1977; Tilly and Wood 2009). Stevenson et al.'s (2007) articulation of food system change incorporates both developmental (within the system) and radical (outside of the system) change, with a focus on resource mobilization through a shared master frame. Change in this context is understood as actions meant to address perceived problems in and impacts of the dominant food system. These authors illustrate three central goal orientations and three strategic orientations, to characterize potential change agents. Stevenson et al.'s (2007) three goal orientations are inclusion, reformation, and transformation. They state that while distinguishing between orientations can be slippery, the focus should be on substantial reformation or transformation, with the long-term objective of transforming the food system.

Inclusion goals are oriented around incorporating marginalized players into the current food system. Examples of inclusion are ensuring that minorities have access to land and capital for farming or that low-income neighborhoods offer a healthy food environment. Also oriented towards the current food system, reformation goals intend to change the rules of the current system to address environmental, economic, and social objectives. Examples include ensuring that food-safety rules do not disadvantage small-scale farmers and that food system workers earn a living wage. Finally, transformative goals are about changing the food system by using a qualitatively different paradigm than the current market model. Examples include non-market trade of food, collective community production, and food sovereignty.

Stevenson et al. (2007) outline three strategic orientations for change that are not conflicting but synergistic. The first is that of the "warrior" challenging the status quo, mostly by operating in the political realm. Warriors use resistance tactics, such as defending gained political ground and mobilizing people for support. Warrior work is often high profile, operating at the national and international levels of the dominant food system. Given the label "warriors," they would presumably work outside system institutions. At the local level is where "builders" typically work, to (re)construct alternatives within (rather than alternatives to) the dominant food system, and they mostly engage economic rather than political aspects. These actors would be similar to those that Allen et al. (2003) describe as working in alternative versus

oppositional spaces (where warriors work). Examples include creating new farmers' markets or developing new food hubs for local or regional food distribution. Builders often do not consider themselves to be resisting the dominant food system but, rather, creating better enterprise models in spaces where the current system does not operate, which is a theme in "alternative" food system work (Hendrickson and Heffernon 2002). Sometimes, warriors need to create these spaces. Stevenson et al. (2007) note that this is often difficult work because builders may lack critical business expertise and/or access to financial resources.

The final role, "weaver," is an integrator or connector of builder and warrior work, creating networks and coalitions. Weavers build capacity by connecting actors that have crossover agendas. EEs are often described as "facilitators," or "weavers," in Stevenson et al.'s (2007) categorization of change agents. Collective action is necessary to make systemic changes (Tilly and Wood 2009), and weavers are most oriented towards movement building. One way that weavers can help to build a movement is to facilitate visions of the future food system to create a master frame, or consensus on the problems, causes, and solutions. The strategy of weaving, indeed all the strategies, do not necessarily work towards transformative change. Rather, a strategy coupled with goals of long-term transformative change can result in a fundamentally new food system.

Understanding how the goals of inclusion, reformation, and transformation and the strategic orientations of warriors, builders, and weavers unfold among EEs is paramount to effective food system collaboration, the development of a common agenda, and agreement on root causes of food system problems. Equally important is assessing EEs' beliefs regarding who provides resources to be used strategically (McCarthy 1996; Canel 1992). The ability to use existing resources to influence decision-makers, or those in power, depends on relationships with those in power and the political opportunity to influence decision-makers (Tilly and Wood 2009). These resources must be controlled, organized and enabled to be used (power) by those that influence those in power (McCarthy and Zald 1977). One critique in social movement research is that resources needed to mobilize change are considered divorced from the underlying goals and motivations of those identifying needed resources (McAdam et al. 1996). Therefore, aside from contributing to the applied literature on the role of EEs, we follow Mueller's (1992) recommendation to address this deficiency by first considering the goal and strategic orientation of Extension and then asking Extension Educators who has existing resources needed for change.

Methods

EEs play a critical role in communities yet few studies have examined Extension's perspectives on methods and resources as agents of change in the food system. To address this gap we asked questions regarding three issues. (1) How do EEs align with goals for food system change? (2) How do EEs align with the strategic orientations in food system change, which includes, how do they think food system change should happen, and what roles are most needed for change? (3) Who do EEs consider to have the resources (political, financial, etc.) to effect change? Our approach was to conduct six virtual focus groups, or web dialogues, in May of 2013 with EEs who are either already engaged in food system practice or consider their community to be ripe for food system change. We recorded the focus-group conversations and conducted polls on targeted questions during the discussions. We used the conceptual framework outlined in "Food system change: the conceptual model" section to guide our work.

We recruited focus-group participants through the Extension community, Local and Regional Extension Community of Practice, the Centers for Rural Development, and the National Association of Ag Educators. The population for this study comprised EEs from universities in 26 states. EEs received an email invitation outlining the nature of the project. The recipients were given eleven possible 1-h time slots in which they could participate. Once respondents had chosen the best available times and dates, groups were formed by program area (Agriculture, Community Development, Family and Consumer Science/Youth) to try to accommodate the majority of the time-slot preferences. Potential attendees were then emailed with information about the time and date of their web dialogue. If they could not make their assigned dialogue, an alternate date was offered. In all, five times and dates were confirmed: two Agriculture groups, one Community Development group, one Family and Consumer Science/Youth group, and one alternate time-slot group comprised of mixed program areas. After the commencement of the web dialogues, several interested parties that could not attend the other time slots were offered a sixth session. Email reminders with call-in and website information were sent the day prior or on the morning of, if the call occurred on a Monday. The final sample comprised 51 EEs.

The design of the virtual focus groups followed the work of Loveridge et al. (2013). Emerging literature on online focus groups finds these advantages: potentially more willingness to share frank opinions due to the relatively anonymous environment, ability to present visual stimuli, increased ability to moderate discussion through one-on-one chat (Brüggen and Willems 2009), and ability to

recruit participants from a wider geography (Oringderff 2008). A disadvantage listed in both articles is lack of visual cues (body language, facial expression). The wide geographic (and program area) distribution of the EEs working on local food system issues was a principal motivator for selecting an online mode of interaction. The mode of interaction during each virtual focus group was synchronous: a 1-h phone conference call, including a simultaneous web-based presentation, or webinar. Participants placed a toll-free phone call to a conference bridge and logged onto an Adobe Connect® meeting room via the internet. Participants were able to remain anonymous. The Adobe Connect® portion of the session was used to present slides, administer consent, and collect information via closed-ended polls. A chat feature allowed participants to contribute during the open, facilitated discussions that followed the polls. The phone-conference portion was also used during the open, facilitated discussion. A copy of the presentation slides was emailed to the participants immediately following the webinar.

Each session was split into four sections: introduction, discussions of food system issues and participants' involvement, food system planning, and who should be at the table. The introduction had two polls: one for informed consent and the other about the community type in which the participants work. The introduction also covered the motivation and purpose of the web dialogue. The second section, food system issues and participants' involvement, is not covered in this manuscript.

The third section, food system planning, was designed to answer the first two research questions: (1) Thinking about the food system, what is most needed to significantly strengthen or enhance connections between producers and community members? and (2) Thinking about the community food system, what should be the primary method for change? This section began with an introduction to food system planning, followed by two polls and open dialogue. The first poll asked participants about what is needed to significantly strengthen or enhance connections between producers and community members, i.e., goal orientation. Six options were offered; they were to select one. Two options represented each of the goal orientations: inclusion, reformation, and transformation. The second poll asked participants about what should be the primary method for change in community food systems. Respondents were offered six potential responses: two that represented weavers, two for warriors, and two for builders. They could select only one. After the polls, a facilitated discussion focused on the polls, perceived ingredients for success, and barriers to change.

The fourth section, who should be at the table, was about power and resources in the community food system. This section opened with an introduction on resources, authority, and influence in local decision-making, followed by three polls and open dialogue. The polls and dialogue were designed to answer research question (3) Who do EEs consider to have the resources (political, financial, etc.) to effect change? The three polls asked participants to identify which group(s) have the most resources (e.g., human, financial, social), most authority, and most influence over authority to significantly shape community food systems. We provided a list of 13 actors and an option for "other." The actors included banking/financial institutions, community planners, consumers, emergency food organizations (e.g., food banks, pantries), faith-based organizations, farmers and farm groups/associations, food retailers, healthcare providers, institutional buyers (schools, universities, hospitals), local business communities, local governments, philanthropic organizations, university Extensions, and others (which participants could enter into the chat box). A facilitated discussion followed, focused on who should be at the table, who has the most power in setting the agenda, and who should facilitate community change.

The poll data and the dialogue were analyzed. The poll data provided closed-ended responses that could be statistically tested. The dialogue further elaborated on the poll data and provided rich descriptions. First, we ran basic descriptive statistics on the poll responses collected during the focus groups and conducted cross-tabs using SPSS. To address our small sample size, we used the Fisher exact test to assess statistical significance. To address the potential programmatic lens that EEs bring to their work, we examined, by programmatic area, all responses to the three focus-area poll questions. Using cross-tabs in SPSS, all poll responses were tested for relationships between the Extension program areas (Agriculture and Natural Resources, Community Development, Family and Consumer Science, or Mixed Appointment) and responses.

Second, the sessions were recorded and transcribed. The transcriptions were entered into NVivo, a computer program that can help to identify and map patterns in qualitative data (Richards 1999). The purpose of analyzing the dialogue was to illustrate the patterns detected in the poll results. The transcriptions were coded following a predetermined scheme that matches the polls and follows the research questions and the conceptual model. Three parent nodes follow the polls and discussion sessions: Goal Orientation, Strategic Orientation, and Resources. Each of the parent nodes had child nodes. The child nodes for the parent code Goal Orientation were Inclusion, Reformation, Transformation. The child nodes for Strategic Orientation were Builder, Weaver, and Warrior. The final parent node of Resources had child nodes of Authority, Influence, and Legitimacy and Power. The transcripts from the focus groups were read line by line by the two coders, who,

working independently, coded for the above concepts. Text from any portion of the transcripts could be coded using the ten different child codes. So, for example, dialogue that occurred early in the session on goal orientations could be coded for resources, and vice versa. One coder is an author of this manuscript who conducted the focus groups, and the other coder is a research assistant who assisted with the focus-group administration and data collection. Disagreements in coding were resolved through dialogue between coders until a consensus was met.

Table 1 presents the participant demographics. About one-third of the participants were from the South US population census region, approximately another one-third was from the Midwest, and the last one-third comprised a mix from the Northeast and the West. This distribution of EEs by region roughly follows the distribution of total counties in each region. Agriculture was the program area with the most representation, followed by Community Development, Mixed, and Family and Consumer Science. No significant differences were found in the following cross tabulations: Community by Program Area, Community by Census Region, and Census Region by Program Area.

Table 1 Demographic variables (N = 51)

Variables	Number	Percentage (%)
US census region		
Northeast	6	11.8
South	18	35.3
West	10	19.6
Mid-West	17	33.3
Program area		
Agriculture and natural resources (AG)	19	37.3
Community development (CD)	13	25.5
Family and consumer science (FCS)	9	17.6
Mixed	10	19.6
Type of community worked in		
Rural	22	43.1
Sub/Ex-Urban	11	21.6
Urban	13	25.5
Unknown	5	9.8
Amount of years w/extension		
0–4 years	10	19.6
5–9 years	12	23.5
10–14	5	9.8
15–19	10	19.6
20+	6	11.8
Unknown	8	15.7
Webinar groups		
Agriculture group (AG) #1	12	23.5
Mixed program areas (Mixed) #1	10	19.6
Family and consumer science (FCS)	10	19.6
Community development (CD)	10	19.6
Agriculture group (AG) #2	5	9.8
Mixed program areas (Mixed) #2	4	7.8

Finally, limitations of this study should be considered. As mentioned, participants in the virtual focus groups are self-selective EEs already engaged in food system work. They do not represent Extension programs as a whole. Other limitations include the way in which the polling and discussion of goal orientations were prefaced: "What is most needed to significantly strengthen or enhance connections between producers and community members?" It is possible that this question biased responses towards weaving and inclusion. Furthermore, the design of the polls and the coding schemes did not allow emergent goals or strategic orientations to be identified beyond the framework provided by Stevenson et al. (2007).

Results

EEs' goal orientations

Our findings suggest that EEs' goal orientations, or their objectives for food system change, focus on inclusion of marginalized groups (inclusion) rather than on changing the rules in the food system (reformation) or on changing the system using a qualitatively different paradigm (transformation). In response to the question, "What is most needed to significantly strengthen or enhance connections between producers and community members?" most respondents identified with goal statements that represent inclusion (28), some chose reformation (19), and only one chose transformation. Table 2 presents the response to this question by Extension program area. Agricultural EEs were equally split between inclusion and reformation as their preferred goal orientation, focusing on including marginalized producers in the current system or changing the rules to provide economic opportunities for local farms and food-related businesses. Community Development EEs were somewhat equally split across the categories of inclusion (focused on producers and consumers) and reformation. Family and Consumer Science EEs are focused squarely on inclusion.

The EEs' participation in a guided discussion aligned with their closed-ended responses, as most focused on inclusion (n = 20) and reformation (n = 19) and very few on transformation (n = 1). Educators' comments on inclusion focused on how particular types of farmers and consumers were excluded from accessing programmatic resources. EEs noted how small-scale, non-conventional

Table 2 Goal orientation of extension educators

Strategy category	What is most needed to significantly strengthen or enhance connections between producers and community members?	AG	CD	FCS	Mixed	Total
Inclusion	Increasing access to the food system for struggling small and mid-size producers	8	3	3	4	18
	Increasing access to healthy food to vulnerable consumers	1	2	5	2	10
Reformation	Developing economic opportunities for local food-related businesses	9	3	0	0	12
	Expanding local food markets	0	2	1	3	6
Transformation	Providing alternative models for production in the food system, such as community gardens	1	0	0	0	1
	Providing alternative markets such as CSAs	0	0	0	0	0
	Fisher's Exact Test = 0.006	19	10	9	9	47

AG agriculture, *CD* community development, *FCS* family and consumer science, *Mixed* mixed programs

farmers do not have access to the same programs as large-scale, conventional farmers. One EE noted,

> I work with the Farm-to-School folks and they were looking at how to get more of the smaller producers in on these bids to get the local produce into the school system, into the school lunches, and the smaller farmers are not able to do that. The bid process is very complicated and we're seeing that only the larger growers are able to compete in that market with, both from a pricing standpoint and just being able to submit the bids because they are so complicated.

Educators also focused on the exclusion of small-scale farmers because of the nature of the regulatory environment:

> …here's the point too: food safety is great, but when the federal government comes in and tries to do a one size fits all, the small producers just throw up their hands and say, "hey, what's the point?"

For EEs working with community residents in rural, suburban, and urban settings, concerns about exclusion focused on limited access to affordable, healthy food and on creating inclusive conditions that allow people to provide for themselves. A key concern is the creation of a food system in which people can have jobs and earn livelihoods that will lead to food security:

> [Where I work] there's a lot of limited access to jobs for people here and so how, how do we strengthen the food system, not just for farmers but also for people who are eating…if they don't have jobs, they don't.

When probed about the possibility of linking small farmers' food supplies to the needs of vulnerable consumers, through food system development, some EEs were skeptical:

> I live and work in an area that is somewhat economically depressed and has been for several decades and a lot of the small growers, in this area that farm in this area, find success by taking their product to different areas of the state that have a higher population with disposable income and so they're growing food, but taking it elsewhere and it's not really developing any kind of local food system where they are actually growing.
>
> When consumers go to the grocery store and they see the cost of fresh fruit and vegetables, especially locally produced ones, and even not just vulnerable populations, but everybody says "well why should I buy locally? It's so much cheaper when I buy these from California or Chile or wherever, you know it helps my pocket book."

Discussion of reformation focused mainly on changing rules of the current food system to better address the needs of small and midsized farmers. This included creation of scale-sensitive safety standards, Good Agricultural Practice certification, and increasing access to land for food production in urban areas. Some comments revolved around marketplaces, such as changing rules for where farmers' markets can locate and addressing problematic local regulations that prevent farmers from selling certain products and confusing federal policy regarding alternative markets. For EEs working with consumers, most of the reformation discussion focused on expanding programs that encourage Women Infants and Children or Supplemental Nutrition Assistance Program-benefit redemption at locations where local foods can be purchased. The rest of the discussion focused on either changing rules of our current system or creating a local or alternative, complementary system. Very few comments focused on oppositional strategies:

> … but what I was thinking there is just showing or advocating for a food system or alternative within our

> food system not just this global food system, but how do we also think about local, and it's not an either/or but it's both/and.

Although EEs' goal orientations, or objectives for change in the food system, vary by their program affiliation, in general they align with inclusion and reformation rather than transformation.

EEs' strategic orientations

As described above, food system stakeholders deploy three broad strategies, or methods, to achieve their goals (Stevenson et al. 2007). The role and method of the warrior is to challenge the status quo, mostly by operating in the political realm. Builders typically work to (re)construct alternatives to the dominant food system, mostly by engaging economic instead of political aspects and creating alternatives but not fundamentally changing the current system. Finally, the weaver is an integrator, or connector, of builder and warrior work, creating networks and coalitions and facilitating change. Weavers build capacity by connecting actors that have crossover agendas. To probe the strategic orientations of EEs, or the roles and methods they considered to be most needed for food system change, we asked in a closed-ended poll, "What should be the primary method for change in community food systems?".

Table 3 presents the results by program area. Agriculture and Natural Resource as well as Community Development EEs consider builders to be most needed, equally to provide resources for infrastructure building and capacity building for local food system actors. Family and Consumer Sciences and Mixed also consider builders to be needed, but these two types of EEs also advocate for a new paradigm through warrior work. These differences between EEs across the four program areas are significant (Fisher's Exact Test = 0.01).

The focus-group discussion that followed was coded for builder, weaver, and warrior themes. Participants made the most comments about strategies pertaining to building (n = 37). They considered builders focused on bringing resources, whether technical, informational, or financial, mostly to build capacity and infrastructure to access markets or scale up production. This task includes the traditional role of bringing technical assistance to the field:

> So, we've trained probably every person in the three or four counties in that area that supply produce to that auction…

> We're planning to convene a group [of] 15 teams next February where we will work with people in AgEcon, community leadership development, horticulture, to try and bring all the resources that we have to bear to the teams and hope that they will be able to take them home to their local communities and establish priorities.

Much of the discussions focused on the need to build capacity and infrastructure that allow small and midsized farmers to have market access:

> The gap for us here is scaling up the small scale producers to be able to serve the institutional markets.

> I can basically echo the same sentiment. [Where I work] the majority of our farmers are small to midsize farmers… So, helping them scale up and basically overcome those systemic bottle necks that [prevent] them from reaching larger markets…

Table 3 Strategic orientations of extension educators

What should be the primary method for change in community food systems?	Program area				
	AG	CD	FCS	Mixed	Total
Builder					
Resources for infrastructure	8	4	2	1	15
Capacity building	8	4	2	1	15
Weaver					
Collaboration/clarity in outcomes	0	1	2	1	4
Comm. support and involvement	1	1	0	2	4
Warrior					
Local policy change	1	0	0	0	1
Advocacy for a new paradigm	0	0	3	3	6
Total	18	10	9	8	45

Builder total = 30, Weaver total = 8, Warrior total = 6, Fisher's exact test p-val = 0.031

AG agriculture, *CD* community development, *FCS* family and consumer science, *Mixed* mixed programs

> We are looking to pilot a food hub and there are a lot of resources available for that, but obviously, there are different models… so we are trying to do the research on production capacity, consumer demand, and doing a whole market analysis to support what type of structure we'll need and what type of services should be offered…

Builders focus on the economics of the process. Five respondents voiced concern over not having the support of agricultural economics faculty members on a university campus, to properly design new food systems:

> One weakness I find…is that we look at projects and what do we do to start something, but the access to good economists and the likes through Extension is kind of limited. People who can be in the community and really make an effort to help people nail down methodologies to prove up their ideas and then also evaluate results that come in, I think that's, for extension, I think we need to maybe focus on having access to better on-the-ground economist to help us plan.

> The same issue came up in our faculty summit we recently had, that it's so hard, so many of these approaches that the small farmers would like to take, there isn't the economic data out there to show whether or not it would be feasible and so we've asked here for our university to bring in more economists to help with that.

On a related note, with regard to building food systems, one participant voiced caution to those actors that move forward on projects without a sound economic or financial analysis. Fellow participants in that web dialogue agreed:

> There's some detractors from this [local food system movement] and because some people are so excited about the concept of localization that we've maybe had some groups not do due diligence and then not financially viable make it and then it kind of almost has the effect of putting a black eye on the 'movement', because there the detractors again will say "see, it's not a viable model"… I just think sometimes there's so much excitement around this movement and so much energy to want it to take hold fast that maybe it's not as carefully developed and scaled up at a level that (inaudible) management and the participating producers are able to handle.

> I've been working with a group of refugees that are trying to do more community gardening farming and I think it's immensely helpful to have the support from faculty at the university. So I think the mobilizing resources for me it has been great to work with people that are on campus connecting them to people in their community that need their help and expertise.

Fewer comments (n = 32) identified weaving as the primary method of change. Perhaps this results from many of the EEs viewing themselves as weavers, and they desire to partner with actors that can fill in gaps. When specifically talking about work that created a long-term impact, facilitation (which is associated with a weaver orientation) dominated the conversation. Participants' comments about facilitation suggested that this is the first step in community work, partly to help develop that master frame. Additional comments included creating collective resources by pulling stakeholders together and the connection between weaving and building:

> I think the idea is once you get the collaboration and those types of things that at some point in time there's a shared vision or shared expectations of what it is that you're trying to do and what it is that are the potential outcomes once that shared vision is in place, as it was pointed out, the people with the passion, the people on the ground, experience and expertise would be able to push that forward.

> We're really in some infant stages here in our whole building a system and one of the things that we have started and that is growing strong is we've pulled together a group of resource providers in the state who have some education background.

> Yeah and I'm kind of trying to figure out […], there are going to be different pipelines, so right now we have a small pipeline to get some of them into a local community garden, but some of them want to be farmers and so we're trying to partner with a land link program and then hopefully one of our partners, a nonprofit in the area, will be starting a farm incubator. So right now we are just sort of in the coalition building mode.

EEs discussed how they mobilize people through facilitation so that resources can be mobilized:

> My colleague across the hall in ag and I convened a community food assessment process that took us really 3 years from start to finish because we really looked. We used the community as a resource to decide which indicators we wanted to look at, held community meetings, held market surveys, interviewed a lot of people and then really wrote, and had some other people do some writing as well and finally

> web published and print published… We didn't just put a bunch of data out, we really engaged our community in a thoughtful way…as part of the project…we started uncovering data about one of the things we also looked at was food deserts and access to food in our rural areas…lots of foothills areas and one of our largest incorporated areas, I think over 3000 people live there, it is also our lowest income and the nearest grocery store is 20 miles away and the bus lines go infrequently. We found that farms stands weren't on bus routes. We only had two or three functioning farmers markets when we first started, now we have about six. We have a lot, our community gardens program, we got a grant from a local foundation and that has really solidified under our leadership. We have farm to bank on, lots of stuff has happened at a result of us just looking at what we had and what we didn't have.

Warriors often work in the political realm, in oppositional space that is often outside of the institutions. Therefore, it is not a surprise that during the discussion, participants made many fewer comments (n = 10) about the need for warriors. Almost all the associated comments were more about the limits to working as a warrior within Extension:

> Facilitating, convening meetings to address food system needs has been a level that we can take some leadership [on] without guiding the process in our region that has pieces of interest. But no other organization [has] emerged in that leadership role, and yet within Extension we have some limitations as far as our advocacy ability, so we have to work within our framework facilitating technical expertise and community education, and so that has been a key role for us.

Interestingly, EEs are quite engaged with local governments. When polled about food system activities, nearly half (23 out of 50) said they "provided guidance to local governments on food system issues":

> Working with food policy councils and providing guidance to local governments on food system issues, were the two that I feel like I've been able to have the largest impact and primarily where we've been able to make policy changes that make a real difference for either access to land or how food is distributed or, but I feel like that's where the largest impact has been, in those two areas that are very connected.

Extension educators' views on who should be at the table

For potential change agents in the food system it is important to understand who is on their radar as a potential partner. To probe who is on EEs' radar, we asked three distinct, if related, questions about who should be at the table to affect change in the food system. Through a close-ended poll, respondents could choose among types of partners in addition to an "other" category (Table 4).

Educators identified nine (of 13) types of actors who could bring resources to affect change in the food system,

Table 4 Who should be at the table?

For community wide food system planning, which group has the [insert text on the right] to significantly shape community food systems?	Most resources	Most authority	Most influence	Totals
Banking/financial institutions	1	2	2	5
Community planners	2	2	3	7
Consumers	7	5	9	21
Emergency food organizations (ex. food pantries)		1		1
Faith-based organizations				0
Farmers and farm groups/associations	6	7	3	16
Food retailers	4	8	11	23
Healthcare providers	3	1		4
Institutional buyers (schools, universities, hospitals)	5		4	9
Local business community	7		12	19
Local government		20		20
Philanthropic organizations			2	2
University extension	6	1	2	9
Others: (enter answer into 'chat' box)	3			3
Total	44	47	48	

with consumers and businesses at the top of the list. When asked about who has authority to bring change, EEs identified local government as a key partner, although they did not believe that local government could bring the most resources or most influence (which would have been negated by the fact that if local government had the most authority, it could not influence itself). Finally, when asked who has the most influence over those with authority (such as the local government), EEs identified the local business community, food retailers, and consumers, in that order (Table 4). No statistically significant differences were found in these responses among EEs affiliated with different program areas.

Comments during the subsequent open-ended, guided discussion reiterated the powerful behind-the-scene roles of consumers, the business community, and local government. In response to a question about who has the power to set the agenda and to influence government, one respondent said,

> It seems very insurmountable, but the consumers. It doesn't seem very feasible, but a lot of the food systems we have today are a response to consumer demand for convenience and low price. And as long as convenience and low price are the drivers then it's harder to get wider acceptance for some of these other local food systems that don't have that same convenience factor.

Another respondent related consumer power to food retailers:

> And that's where I picked food retailers, although they say they are driven by customers, we've certainly seen the demand rising with the local foods movement, but the retailers are still the ones who either buy it from the local farmers or they don't.

Despite identifying food retailers as having resources, authority, and influence, EEs' discussions did not center much on this food sector. Educators did discuss the general business community, although one participant remarked that the local food system community does not always reach out to the general business community:

> I don't know if it's local business community or business community in general, but I think the people with the money, money has influence and in thinking about how to build support and build influence around community food systems you have to have people who can sort of push some of that financial support in your direction.

> I've observed in some cases sort of this sentiment to negatively react towards bringing business or business focused individuals to the table, when really they could be very important partners. And so when we think about how to bring business support, because it's not just local foods, you can also sell this around sort of supporting local or creating a local brand and if we want to support our local community, and yes there's government support, or potential to sort of influence via government, but I think there's other ways that their voice can, in their positional power, might be able to influence support.

When discussing who has the authority to make significant change, EEs focused on local government. The EEs reasoned that local government can direct funds and remove or create barriers that impact change:

> Some of my experience recently, it seems like the local officials are the people that can either get in the way or get out of the way of the food movement happening.

> Once the mayor's office jump[ed] on board, they deployed some resources so we've got people working on behalf of the movement and I think that that helps decrease the barriers faster than anything.

> Local government can be pretty powerful by passing policies and supporting infrastructure that needs to happen in the community to truly have a good community food system.

Discussion

The purpose of this research was to gain insight into EEs' goals for food system change, their views of the necessary strategies to achieve these goals, and who they view as having the resources to support change. In part, mobilizing resources to address food system concerns relies on consensus regarding goals and strategies for change. To achieve consensus, actors need to articulate their goal and strategic orientations, deliberate, negotiate, and collaborate. Yet, this has proved difficult in the "food movement" because it has been associated more with what it opposes or hopes to change, namely the dominant food system, rather than with the strategies or intended outcomes of the change (Allen 1999). To address this issue, we have presented findings from national virtual focus groups and polling of 51 self-selected EEs detailing their perspectives on the why, who, and how of food system change.

Our results suggest that although diversity exists among EEs, their dominant goal for food system change is inclusion of marginalized actors, and their strategy focuses on building—in other words, bringing resources to local

projects meant to address marginalized producers and consumers. While two-thirds of EEs focused on inclusion, about one-third was oriented towards goals to reform the current system. Inclusion and reformation are synergistic: inclusion in the food system focuses on marginalized groups, such as food-insecure community members and struggling small and midsized growers, while reformation of the current system is meant to address the needs of these two marginalized groups. The focus on these groups aligns with EEs' programmatic areas. Among all respondents, only one EE picked transformation of the food system to a new paradigm as most needed. This focus on inclusion and reformation is not surprising given that EEs are embedded and have been socialized to work within existing community systems. Yet, the absence of findings suggesting a master frame of transformation should be flagged.

The political neutrality of Extension may dissuade EEs from adopting the goal orientation of transforming the food system. Furthermore, it is possible that this goal orientation is stymied by the prevalent view of community residents as consumers or producers and by the market being the only forum for food system change. Changing the market paradigm is not part of the EEs' frame.

Most EEs consider builders to be most needed to address concerns and impacts related to the current food system. Builders, as outlined in the conceptual model, focus locally, as do EEs. Given most EEs' goal orientation, building would be conducted in alternative spaces, not oppositional spaces, by creating new food system models through economic practices, not political practices, and by still viewing the marketplace as the forum for change. Stevenson et al. (2007) suggest that food system activists oriented towards building often lack experience in business development, a view corroborated by the discussions among our respondents. EEs reported wanting advice from economists to make the business case for food system change.

It should be noted that while Family and Consumer Science and Mixed program EEs also were slightly more likely to identify building as the change strategy, one-third of these educators also identified the warrior strategy as necessary. Coupled with the goal of inclusion (which most of these EEs selected), change would involve advocacy and policy aimed at benefiting marginalized community members. Few EEs discussed the work of warriors or those that work in the political realm. The question that remains is, what space could warriors open up for EEs to build new and/or alternative food systems and connect resources and actors in the food system? And to what end? Even if new space were opened for builder work, would the goal be transformative change? These findings suggest both a lack of recognition of warrior-oriented work and, perhaps more important, a lack of understanding of a transformative master frame.

Extension is often identified as a weaver, and yet EE participants are focused mostly on the role and strategies of builders. Furthermore, when discussing their own work, EEs went back and forth between building and weaving. For example, they suggested that they would facilitate groups or play the role of weaver, which would lead to building, and then they would identify the technical resources they bring to the table. Consistent with the Extension educational model, they were both acting as expert educators and facilitators. Interestingly, when discussing their most impactful work, EEs did not refer to the immediate satisfaction of serving as expert educators but rather to the significant long-term impact of weaving or facilitation. While weaving is a needed change strategy and, in this case, could facilitate the development of a master frame to mobilize change, EEs are still oriented around non-transformative change.

Given EEs' goal and strategic orientations, it is clear they are focused on building strategies for marginalized producers and consumers, with a marketplace lens. This suggests their work as developmental, not radical or oppositional. Radical *systemic* change, some suggest, cannot happen locally because local is not the scale at which the system operates (Holt-Giménez 2011; Stevenson et al. 2007), but it is the scale of work for most EEs. Yet, as Levkoe (2011) points out, connecting local efforts through recognition of common interests for a common good can contribute to transformative change, and EEs may be uniquely able to develop or cultivate collective subjectivities. Initiatives such as the new community of practice in Extension may be an opportunity for EEs to have a role at the national scale to identify partners that can open up spaces of work.

When asked specifically about which stakeholders have the most resources to bring to the table, EEs considered many groups, including themselves, to have resources that can help to shape the food system. No one group stood out for them. Extension's wide community networks could play a role, as many stakeholder groups were mentioned, suggesting that EEs have relationships with them. This perspective suggests greater community potential, as resources are not stockpiled with one type of stakeholder but rather spread across the community. Effective coalitions are built from complementary strengths of their members, and the greater range of stakeholder relationships that EEs have, the greater the potential (Hassanein 2003). EEs' historic relationships within communities and across food system actors, including the research arm of the academy, create potential access to resources and thus make Extension an attractive ally. The ability to use

resources to influence depends on relationships with power and political opportunity (Mitlin 2008).

The majority of EEs in our focus groups work with local governments on food system issues. They believe local government has the authority to create food system change, but are not comfortable working on local policy change themselves. Instead, they appear to believe change will come through the marketplace, as they identify the local business community, food retailers, and consumers as having the most influence on those with the most power. Only two EEs out of 48 considered Extension to have the most influence. Yet, our findings suggest that EEs have power both in accessing and applying resources. EEs could leverage their roles as advisors to local officials and as community liaisons, to open the door to public policy as a way to address change. EEs could work with local officials and marginalized actors to translate food system objectives into policy and assess the extent to which current policy addresses issues of inclusion and food system building. This would be a form of incremental change, albeit within the current food system.

Respondents in this study are self-selected, active participants in food system change and therefore do not represent all of Extension. Because "food systems" is not a common program area across all U.S. Extension offices, these EEs are creating new Extension norms by focusing on food system work. Their food system work is likely supported by their employer and local government partners, which may be why the EEs do not see the need for transformative change, just incremental or developmental change, as decision-makers may already be amenable. Furthermore, while EEs view the market as the dominant paradigm, it is encouraging that nearly half already provide guidance to local officials on food system issues, and most EEs believe that local officials have the authority to make change.

Conclusion

EEs are key community stakeholders, in part because all across the US they have deep, embedded community relationships, and they bring myriad resources to address local issues. EEs have a history of connecting food system actors, including farmers, families, youth, consumers, local governments, and university researchers, albeit in a sectorial, not systemic, fashion. These factors position EEs uniquely as potential change agents in the food system, yet their perspectives on such change are poorly understood.

Understanding what EEs consider to be the goals of food system change in the first place is most important. For the EEs participating in this study, we found that goals for addressing food system concerns focus mostly on inclusion of marginalized actors into the system, followed by changing the rules to benefit those actors. Our findings suggest that the master frame (including the root problems and potential solutions) to which the EEs adhere is market-based. EEs' strategies to achieve goals focus on building: seeking incremental improvements by creating economic alternatives to the current system. Incremental improvements occur through application of resources, and EEs identify various actors with resources but do not believe they themselves have power or can influence the actors who make change. Weaving, or work done to integrate and connect food system actors for collective action, is done to support the building of economic alternatives.

No EEs identified transformative goals, and few EEs consider strategies that occur in the political realm. EEs are working towards food system change; the changes they seek can be seen as local and incremental. While some would interpret these findings as suggesting EEs' limited ability to be transformative change agents for the food movement, others see the possibility for transformation by connecting EEs' efforts with new partners that share perceptions of food system problems and solutions (Levkoe 2011). Furthermore, EEs' work could contribute to transformative change if strategies were aimed at substantial food system reform, if EEs connected with actors who shared resources in the form of a master frame that included transformative change, and if EEs connected with actors whose work in the political realm could enable them to build in transformative spaces.

The relationship among goal orientation, strategic orientation, and resource availability illustrates how the contexts in which potential change agents are embedded shape perceptions of the resources, including authority and power (and who holds them), in communities. These resources, in turn, structure the goal and strategic orientations of potential change agents. Therefore, would access to alternative resources alter the goal and strategic orientations of EEs?

Recent research suggests that EEs are engaging alternative, non-traditional food system stakeholders (Benson 2013; Dunning et al. 2012; Raison 2015). As EEs collaborate with new partners, they may find advocates that utilize transformative master frames (e.g., food sovereignty, social justice) and work in the political realm, exposing EEs to more diverse resources. If accessed, these resources could then impact the ways in which EEs think about their goals and orientations, broadening their focus to hunger, equity issues, and so forth, perhaps to more transformative master frames. Nonetheless, will EEs see these resources as available to them given their daily practice and context within the current socio-political community structure?

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