An Examination of Social Capital and Participation in Local Foods:

A Focus on Kenyon College and Knox County

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ABSTRACT

While much existing research has explored elements of accessibility in local foods movements and the role of these movements in strengthening communities, few have sought to examine factors that contribute to the success of local food production and influences that make people more likely to consume local. This article aims to address that gap through a case study of Kenyon College employees as members of the Knox County community with a focus on three variables: education level, local ties, and social capital through volunteerism. A total of 79 employees participated by completing either an online or hard copy survey of questions regarding demographics, ties to the community, education, volunteerism, and participation in the Mount Vernon Farmers' Market. Education level (including parents' education levels) was the strongest predictor of local foods participation, be it farmers' market attendance, CSA subscription, or home growing. Most participants who did not attend the farmers' market reported that time was the biggest problem. Others reported buying from other local vendors or growing produce at home. The relationships between "local ties," volunteerism, and farmers' market attendance were not statistically significant, although due to the complexity of these behaviors, a qualitative study may prove more valuable in making significant connections.

Beginning with the end of World War II, the world's agriculture changed dramatically in an attempt to solve global food shortage. Food, like other industries in a rapidly modernizing world, became industrialized, standardized, and streamlined, focusing solely on productivity and profit (Petrini 2007). There was a major push to remove community and family from farming in order to industrialize the process and concentrate, instead, on the economic factors of land, labor, capital, and management (Lyson 2004). Unfortunately, this modernization, which was based on increased use of fossil fuels, water, and chemical pesticides and fertilizers, resulted in an enormous loss of biodiversity. In addition, this process will not be able to sustain itself unless measures are taken to alter the agriculture industry and its use of resources (Petrini 2007). Proponents of this view have initiated a movement for change. Local food networks, i.e. Community-Supported Agriculture (CSAs), farmers' markets, community gardens, roadside produce stands, and U-Pick businesses, are growing rapidly in size and popularity as alternatives to the globalized food industry that reinstate community and family as important elements of farming (Lyson 2004).

In order for localism to grow, it is important to understand what elements of community make these initiatives successful and what changes should be made to the system to increase accessibility, awareness, and desire to participate. Several studies (Macias 2008; Andreatta et al. 2008; Hinrichs and Kremer 2002) have dealt with issues of local foods accessibility for low-income families and/or the tendency of alternative food networks like Community-Supported Agriculture (where members pay subscription fees in return for a share of the farmers' crop during the growing season) to cater to an educated and affluent population, while other studies (Smithers et al. 2008; Tiemann

2008; Zukin 2008) examine local foods' venues and public spaces, as well as consumers' reasons to buy local. **I plan to combine these studies with Robert Putnam's research on communities in order to examine what makes individuals more likely to buy local foods.** I focus on three main factors that may affect participation: education level, social capital (as conceptualized by Robert Putnam, which will be addressed later), and place of birth. As a result, I hope to understand what types of communities are more conducive to alternative food networks, as well as the types of individuals who are more likely to participate, and how the link between these two could be a source of renewal for food systems and communities in the future.

Transformation of Food Industry and American Community

The transformation of the food and agriculture industry, in turn, has transformed food itself in many ways. With the development of efficient methods of transportation, food production shifted from a regional to a global scale in a manner that Brewster Kneen calls "distancing," that is, "increasing the physical distance between the point at which the food is actually grown or raised and the point at which it is consumed" (1989). Today, there is no region in the United States that is even close to being self-sufficient in terms of food, thanks to the consolidation of farms, dependence on imports, and increased specialization (Lyson 2004). As long as this global system continues to sustain itself, this lack of self-sufficiency does not present a problem. However, if we were to experience a resource or transportation crisis that disrupted the global economy, very few regions would be able to survive independently. Additionally, people are losing sight of where

food comes from and how it is produced. This is especially true of the younger generations born into the era of globalization.

In order to fit in with the mechanical system of capitalism and the market economy, food was turned into a commodity and objectified through marketing. Simultaneously, the farmer became a businessman, and farming became an alienated practice, far removed from the consumer (Kneen 1989). Nutritional value, freshness, seasonality, and locality were discarded in favor of profit making, product uniformity, monoculture, and high productivity – these former issues could easily be solved using technology, preservatives, packaging, and high-speed transportation (Kneen 1989).

Proponents of the globalized food industry, as well as of genetically modified foods, tell a different story, one of efficiency, sustainability, health, and solving world hunger. The increased productivity and efficient agriculture of the industrialized food age depicts a positive future for feeding the world in a time of population boom and urbanization (Williams 2009). The biotechnology industry, in particular, argues that genetically modified crops will be less harmful for the environment and more nutritious, supporting endeavors of both sustainability and combating malnutrition. Furthermore, the development of a global food system by transnational corporations has opened up numerous additional markets for food producers, and consumers (especially in developed countries) have access to foods from around the world (Clapp and Fuchs 2009).

According to Robert Putnam, the decrease in connectedness to food production could be linked to a decline of American community. As we have shifted away from the civic-minded generations of World War II and the 1950s and 1960s, American society has become increasingly focused on individual success, rather than collectivity (Putnam

2000). Americans have become more isolated and less involved in formal and informal social or civic organizations, resulting in a deterioration of communities and social networks. According to several surveys taken in the 1990s, many citizens demonstrated concern that communities were falling apart and Americans were less trustworthy and less involved in civic life (Putnam 2000). Not only has agriculture been removed from community life, but Putnam claims that communities themselves are deteriorating as well. In this way, food production and human life have been mechanized and modernized simultaneously as part of the industrial world.

However, recent studies by the Corporation for National and Community Service, a federal program for volunteerism and community engagement, show that Putnam's assertions do not accurately represent current trends. A brief released in December 2006 stated that volunteerism was "at a 30-year high", and even though civic organizations were decreasing in popularity, educational and religious service were increasing rapidly, particularly among youth and adults above 65 (Corporation for National and Community Service Dec. 2006). In addition, the past decade has brought a "culture of college service" as institutions of higher education strive to engage their students in surrounding communities; in 2005, 3.3 million college students were volunteering (Corporation for National and Community Service Oct. 2006). In fact, the most recent study states that volunteerism has remained strong even in the face of recession and high unemployment (Corporation for National and Community Service 2009). This appears to suggest that Americans are just as involved in their communities today as in the past, even though the types of volunteerism and community participation have changed with the times. That being said, the numbers suggest an increase in volunteering activity, but statistics do not

investigate shifts in volunteering mentality or the possibility that current volunteerism is based more on individual rewards.

Civic Agriculture, Community, and the Rise of Localism

Locally based, sustainable initiatives (previously mentioned) seek to rebuild community by increasing the possibility for informal interactions, creating a more personal link between producers and consumers, strengthening agricultural literacy among consumers, and demonstrating a commitment to locality, direct marketing, and food quality (Lyson 2004; Wright and Middendorf 2008). At this point, these alternatives only make up $812 million (Timmons et al. 2008) as a share of total U.S. consumption, which totaled approximately $297 billion in 2007 (United States Department of Agriculture 2007). Therefore, they do not pose a serious threat to powerful transnational corporations at this time, however they have gained much strength in and of themselves and are not showing signs of disappearing in the near future.

The concept of civic agriculture is based in an opposition to profit-driven industrial agriculture that is, in this day and age, far removed from agriculture's original roots – community. Civic agriculture seeks to reconnect farming with the social and economic structures of community in order to combat the highly mechanized nature of modern agriculture (McIlvaine-Newsad 2008). By returning to farming as a way of life, integrating production into the community, agricultural literacy among children and community members is increased, thereby allowing more people to understand where food comes from. This reintegration also boosts local economy, strengthens communities, aids small farmers, and works toward a more sustainable future

(McIlvaine-Newsad 2008). In the pre-industrial age, farming was inseparable from household and community. Equipment was shared, and it was assumed that community members were civically active, mostly through churches and schools (Lyson 2004). The new civic agriculture movement hopes to return to that era of reciprocity, sharing, involvement, and cooperation by moving food production away from transnational corporations and back to small towns where farmers work together, instead of thriving on individual competition (Lyson 2004). The movement has taken hold in recent decades, and farmers' markets have increased from 1,755 in the United States in 1994 to 4,385 in 2006, proving the rising popularity of alternative food networks and a desire for change in food systems (Wright and Middendorf 2008).

Accessibility and Motivations

It is important to acknowledge the trends of local foods participation demographically and the obstacles that some individuals might face when it comes to alternative food networks. Several existing studies (Hinrichs and Kremer 2002; Andreatta et al. 2008; Macias 2008) focus on the promotion of local foods to low-income households and an examination of class dynamics when it comes to local foods participation. Unfortunately, there are unavoidable social inequalities within communities that affect inclusion in civic activities and development projects (Hinrichs and Kremer 2002). In some cases, food serves as a marker of class and a reproducer of inequality as companies market to affluent, trend-setting classes (Wright and Middendorf 2008). Furthermore, the high cost of CSAs and the power dynamics that can exist between CSA farmers and their shareholders can be problematic. Shareholders may tend

to have higher levels of education than the farmers, putting the shareholders in a more affluent class with the disposable income to pay hundreds of dollars in advance. There is also the chance that shareholders don't actually participate in the community aspects of the CSA, or they don't maintain a personal relationship with their farmers; instead they simply fork over the money (which is only a fraction of what said professionals probably earn in comparison to the farmer) and receive produce in return, without the added benefits of community ties or agricultural literacy (Hinrichs and Kremer 2002). CSAs and other alternative food networks have been criticized for higher costs, inherent risk to shareholders, geographical inaccessibility by public transportation, and opening hours that make participation difficult for people who work odd hours or on weekends (Andreatta et al. 2008). CSAs, certain types of farmers' markets, and community gardens thrive in areas with a well-educated (and more socially and politically liberal), affluent population of families with children who have the time, money, and desire to invest in local foods (Macias 2008). Time investment is an inhibiting factor for low-income households where couples may work more than one job each and lack reliable transportation, free time, and flexibility (Macias 2008). Even though some states offer a Farmers' Market Nutrition Program, which provides financial assistance and a nutrition awareness program to WIC (Women, Infants, and Children) recipients to promote farmers' markets, time investment can still be an issue for those households, especially when individuals don't know how to cook fresh food (Andreatta et al. 2008).

People also have different motivations for attending farmers' markets and participating in CSAs based on political and social awareness, socioeconomic status, social background, education level, and geographic location. Accessibility and social

class seems to play a role. According to Hinrichs and Kremer's study, low-income households participated for food availability and affordability, while middle class households were focused on supporting local farmers and political consciousness, and higher income households were concerned with food safety and high quality (2002). Including urban farmers' markets adds another dimension of cultural elitism to the equation. Many of these markets are frequented by tourists, top restaurant chefs, and the media, and part of the experience seems to be connected to the status implications of buying the same fresh, local foods that are used in high class restaurants (Zukin 2008).

More generally, many individuals buy local foods as a way to support local farmers and local agriculture in the region, as well as farming in general (Smithers et al. 2008; McIlvaine-Newsad 2008). These individuals find important social value in supporting local industries instead of a large global corporation (Hinrichs and Kremer 2002). Another determining factor is the perceived superior quality of local foods over grocery store products. Whether or not a farmers' market promotes its food as being superior, many customers believe that fresh, local products are higher quality than the items bought at the neighborhood Kroger (Hinrichs and Kremer 2002). Additionally, other factors such as a desire to eat and live healthily through the purchase of local foods, as well as a concern for food safety play into those decisions (Zukin 2008; Hinrichs and Kremer 2002). Some people are more focused on the social aspects of alternative food networks than the local food itself. The social interactions with other customers and members of the community at a market or during a CSA pickup are very appealing to many patrons of local foods. The opportunity to chat with other customers and local farmers and taking in the experience of the market are valuable (Smithers et al. 2008).

Many people are excited about the chance to participate in the community, build friendships, and interact with neighbors and community members outside their immediate circle of friends and family (Tiemann 2008). Others simply enjoy the atmosphere of community, whether the market exists in a small town among friends or in a big city among strangers and tourists (Zukin 2008). Clearly social capital is a crucial element of alternative food networks. Since community involvement and social networks contribute to the amount of social capital a collection of people have, and said networks and interactions are an important aspect of local foods venues like farmers' markets, the two must be connected in some way.

Public Space

Alternative, local food networks use public spaces regularly to enhance social interactions and community solidarity, in connection with the points made above. Different types of network engage community members more or less than others. For example, community gardening and farmers' markets tend to have high levels of social interaction. Members may work together in community gardens, interacting regularly and using communal tools (Macias 2008). Farmers' markets work in a similar fashion, except instead, community members come together to buy local produce, talk with local farmers, and enjoy the atmosphere of the market (Macias 2008). In an age when informal interactions in public spaces, such as park benches, corner stores, and small town pubs, are decreasing, farmers' markets reintroduce the possibility for informal social interactions with community members and acquaintances (Tiemann 2008). Farmers' markets that sell a variety of products on a regular basis attract a large range of

individuals, including chefs, and "changing topics for informal conversations are readily available" (Tiemann 2008). Equally, some markets can demonstrate elements of social status; if chefs do shop there, usually in the early mornings, customers are offered an elevated social status and a "be-seen" opportunity for shopping in these venues (Tiemann 2004). The pace of farmers' markets also tends to be slower, more leisurely, and more enjoyable. People usually aren't in a hurry to race through the market to find only what they need; instead they stop to talk to the farmers and other customers, stand idly to eat something they've just bought, or watch their children play nearby (Parkins and Craig 2009). While CSAs encourage a degree of social interaction, the nature of the network tends to result in one-on-one relationships between subscribers and farmers, rather than relationships among subscribers in the community (Macias 2008).

The Value of Civic Engagement and Social Capital

Studies (Tolbert et al. 1998; Lyson et al. 2001; Stern and Fullerton 2009) have shown that civic engagement (i.e. membership in community organizations, political participation, involvement in religious organizations, and volunteerism) has a positive effect on a community's welfare, quality of life, and sense of trust. Particular social factors are more effective in promoting volunteerism in a community, which, in turn, makes the community more harmonious. According to Stern and Fullerton, "local ties" to a place are a determining factor in civic participation, as well as having friends who are civically engaged (2009). Dense family networks as a predictor are not as strong, but the link could exist in the presence of additional factors. Their study also shows that education level and income are both positively correlated with propensity to participate in

the community, either through volunteer work or civic organizations (2009). When these increased levels of education are combined with a town that is dominated by small business (versus a few large corporations), civic engagement tends to increase, in turn strengthening community solidarity and independence (Tolbert et al. 1998; Lyson et al. 2001).

For the purposes of this project, I turn to Robert Putnam's concept of social capital, which he defines as "connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them" (Putnam 2000). As opposed to human capital and physical capital, social capital deals with the collective rather than the individual. Therefore, levels of social capital deal with the make-up of communities and networks. Putnam argues that "generalized reciprocity" is a key component of social capital (2000). High levels of social capital, and therefore trust and cooperation, within communities is likely produced by individual involvements in civic organizations and volunteerism (2000). Life in these communities tends to be more economically efficient and generally cooperative. A trend also exists that membership in civic and voluntary organizations, referred to as "associational memberships" by Stolle and Rochon, is the most effective predictor of social capital in a community (Stolle and Rochon 2001; Youniss et al. 2001; Putnam 2000). Participation in these organizations builds a network of cooperation, tolerance, and trust, as well as orienting individuals towards the good of the collective (Stolle and Rochon 2001). Memberships in civic organizations and volunteering are particularly important for young age groups because participation at an early age instills a civically based mindset that young people will carry forward into the future. They learn that human agency is an effective tool for change,

and through extracurricular activities and community service, they build a permanent "civic identity" that may determine how active they are in community organizations as an adult (Youniss et al. 2001). People with such a civic identity are more likely to engage in political contacting, political engagement, and community and social participation, enhancing the social capital of the community (Stolle and Rochon 2001).

C. Wright Mills and Melville Ulmer obtained similar findings in their government report, *Small Business and Civic Welfare*. Additionally, they made connections between social capital, civic engagement, and the scale of businesses. They used the term "civic spirit" to describe active community members who engaged in voluntary improvements to their city for the betterment of society (1946). This spirit would lead to higher civic participation and higher levels of social capital in the community. In turn, this quality would increase the general level of welfare and quality of life (Mills and Ulmer 1946). Their report pointed to several key elements that were more likely to result in elevated social capital and civic engagement. A dominant, financially independent middle class who was willing to take initiative and responsibility with enough free time for volunteer work was crucial. They were the driving force behind civic engagement. The presence of a large corporation versus numerous small, locally run businesses was also important. The power relations brought in by the corporate elite put a huge damper on civic participation in contrast with small businesses. Small business owners were not only able to compete with each other, but the nature of small business improved relations between workers and business owners, encouraging cooperation and civic projects in the community (Mills and Ulmer 1946).

With this theoretical framework in mind, it is logical to make the connections between social capital (measured through volunteerism) and the propensity to participate in local foods, networks that require civic involvement and the bringing together of community members in the same ways as volunteerism or political participation.

METHODOLOGY

Sample

My sample consisted of Kenyon College employees. The individuals invited to participate in the study included faculty, administrative staff, dining hall workers, maintenance workers, and custodial staff. I used each participant's level of education to estimate his or her employment sector within Kenyon College. For example, any participant with a PhD was most likely a faculty member, and a participant with a high school diploma was probably a dining hall worker, a custodial or maintenance employee, or perhaps an administrative assistant. By gauging employment sector, I was able to make sure I was obtaining a relatively even distribution of employees. Out of approximately 450 employees, I obtained 79 responses.

Measures

The study measured three factors in regards to local foods participation: education level, social capital, and place of birth. These three variables were operationalized using closed-ended questions with the addition of one open-ended question. The questions were multiple choice. Education level was measured according to the following choices: grade school (grade 1-8), some high school (grade 9-12), high school (diploma or GED),

some college (1-3 years; associate's degree), college (4 years; bachelor's degree), post-college (more than 4 years; M.A.), or PhD. My measurement of social capital came from Robert Putnam's Bowling Alone and his volunteerism element of social capital. Respondents were asked, "do you volunteer your time at a community organization in Knox County?" paired with the follow-up question, "how often do you volunteer?". I used a scale of four choices: never, occasionally, sometimes, or regularly. Finally, the respondent answered the questions, "did you grow up in Knox County?" and if no, "how long have you lived in Knox County?" to determine place of birth and potential community ties. Other questions determined the respondent's participation in the local foods of Knox County (see Appendix B). I chose to use the Mount Vernon Farmers' Market to measure participation in Knox County's local foods. Because the element of community was important for my study, I wanted to use a public local foods venue that would draw members of the community together. I also used the Farmers' Market because I believed it was the most accessible local foods network in Knox County, mainly in terms of cost and location. Additionally, I included a question about CSA subscription to compare the farmers' market data with another local foods venue. For the full survey, see Appendix A.

Procedure

I administered my questions in an online survey (Survey Monkey) format. The invitation to participate in the survey was distributed by email using the Kenyon employee dis-list. In order to accommodate those employees without regular internet access (namely dining services employees), I worked closely with Damon Remillard,

head of dining services, to invite employees to fill out hard copy versions of the survey. Anonymity and confidentiality were thoroughly maintained throughout the study. I asked for no identifying information in the survey, and there were no names or email addresses attached to the data. The data obtained through the online surveys was automatically stored online. I entered the data obtained from the hard copy surveys using the manual input function on Survey Monkey. From there, I exported the data to SPSS for analysis. I performed various cross tabulations on education level, "local ties", frequency of market attendance, volunteering, and reasons for participation for my preliminary analysis, which indicated possible patterns and connections within the data. Further analysis using correlations provided more detailed relationships among the variables.

RESULTS

Demographically, the participants were divided 75% female and 25% male. Most were raised outside of Knox County (75%), but 25% were originally from the area. That being said, thirty participants from outside Knox County had resided in the area for at least a decade, and another nine for more than five years. Fifty-one of the participants were between forty and sixty years old. Finally, 79% currently resided in Gambier or Mount Vernon. The other 21% of participants lived in surrounding areas (i.e. Howard, Bellville, Fredericktown, Marengo, Danville, Columbus, and Newark).

Table 1 displays the education level distribution among the participants. While the distribution from high school diploma to PhD was relatively equal, 69% of the participants had at least a bachelor's degree. Only one participant did not have a high school diploma or GED.

Table 2 shows how often the participants volunteered their time at a community organization in Knox County. In the first of two questions on volunteering, 51% reported that they volunteered, while 49% reported that they did not. As a result, it appears several participants purported that they didn't volunteer when, in fact, they responded "occasionally" to question two. Otherwise, 49% would have answered "never", which, as the table shows, is not the case. For this reason, I used the results of the frequency question in my cross tabulations and correlations.

Surprisingly, 45% of the participants did not attend the farmers' market once during the 2009 growing season, as shown in Table 3. On the other hand, 10% attended almost every week. The remaining participants responded in such a way that indicated mostly sporadic attendance. Only 15% reported attending the market every week, while a total of 56% went once a month, a few times a month, or occasionally. However, regardless of frequency, the attendees agreed on two main reasons for participation: "local food is better quality than supermarket food" and "to support local farmers," as displayed in Table 4. Those who chose "other" wrote responses that combined many of the given choices. For example, one participant wrote, "it's a combination of many of the top items. I mostly go because the food is fresh, but always go with the local farmer support in mind as well and love seeing my friends down there." Other participants wrote similar responses. Furthermore, an overwhelming 71% of participants reported attending the market for a variety of products, and another 16% went just to browse.

Most participants agreed that the farmers' market products were comparable, in terms of affordability, to similar grocery store products. In addition, Table 5 shows that

33% of participants perceived farmers' market products as cheaper, while 27% perceived them as more expensive.

Appendix C displays the content analysis of the open-ended question concerning reasons for not attending the farmers' market, broken down into the three main themes (growing own food, time inconveniences, and other local sellers) and divided by education level. Despite the low numbers, the table shows that most participants who didn't attend the market because they either grew their own food or purchased local food from another local seller had at least a college degree. A majority of the participants who indicated that time was a factor also had a college degree, but there were larger numbers of participants with a high school education who mentioned time, compared with other reasons. Within the time category, however, a disparity emerged. Many participants with a high school education indicated that work was the source of the time inconvenience. For instance, one participant said, "Saturday mornings I work 6:00AM to 2:00PM." In contrast, participants with a college education or higher who mentioned time issues wrote responses like, "Saturday mornings are never convenient due to our children's athletic obligations."

With a relatively low number of participants, my analysis is based mainly on frequencies and percentages. However, I also calculated a number of correlations to determine the strength of the relationships among the key variables. The most important correlations are presented in Table 6 in terms of the Pearson correlation coefficient. These particular variables lent themselves well to correlation analysis due to the scale or interval nature of the answer choices. As Table 6 shows, the correlation between education level and "local ties," volunteering frequency, market attendance (both

questions), and parents' education levels were relatively strong. SPSS determined that all were significant except for education level and volunteering frequency. The correlation between the number of times participants attended the market and parents' education levels was also quite strong (and significant), especially father's education level.

DISCUSSION

In order to gain a clearer understanding of the growing local foods movement and its future place in the world, we must pinpoint elements that contribute to the success of localism. Previous studies (Smithers, et al. 2008; Tiemann 2008; Zukin 2008; Macias 2008; Andreatta, et al. 2008; Hinrichs and Kremer 2002) have addressed numerous influential factors, such as a community's level of education, income, loyalty to the community, political liberalism, environmental awareness, and desire to be trendy, to name a few. If civic agriculture is to experience continued and more widespread success, it is important to understand how these factors play a role in local foods movements. As a result, I decided to examine two previously studied variables (education level and "local ties"), as well as an additional, experimental element (social capital, as measured by volunteerism).

Based on the literature referenced above, I hypothesized that education level would be positively correlated with propensity to participate in local foods, that is, attend the farmers' market or subscribe to a CSA. While my sample was limited, findings support my hypothesis, keeping in line with existing research. The correlation is not particularly strong, but a significant relationship does exist between education level and market attendance by number of times and by frequency. While the correlation is telling,

the relationship is not surprising. Under the capitalist economic system in place in the United States and pervading social inequalities, education level is often linked to income level, occupation, and cultural capital. Individuals with higher levels of education have more cultural capital and engage in lifestyles with more time for leisure activities. These factors translate well to participation in local foods, an endeavor that usually requires free time (particularly on weekends), a comfortable financial situation, means of access (such as a car), and a knowledge-motivated desire for alternative means to purchase food. Class reproduction, family background, and parental influence also appear to be a factor in terms of education, for market attendance by number of times is even more strongly correlated with father's and mother's levels of education (see Table 6).

My second hypothesis proposed that "local ties" would be positively correlated with participation in local foods. Logic seemed to indicate that individuals with loyalty to their communities would be more likely to buy local, especially if they knew some of the vendors. Considering the rural, agricultural nature of the Knox County area, I suspected this tie would be strong. However, the findings do not support my original prediction, with a Pearson correlation coefficient of 0.173 between market attendance (by number of times) and "local ties". There is no significant relationship between the two variables. Furthermore, the data seems to indicate a negative relationship; the participants who did not grow up in Knox County have a higher rate of market attendance and higher rate of volunteering. That being said, those relationships make sense when considering the strong correlation between "local ties" and education level (Pearson coefficient of 0.682) and the connections made regarding education level in the previous paragraph. Overwhelmingly, those participants raised in Knox County have a lower level

of education than those participants who were not. Due to the nature of my sample (i.e. a collegiate sample), this correlation is understandable. Most of the participants with higher degrees, especially faculty members with PhDs, probably moved to Knox County to take jobs at Kenyon College. For this reason, the "local ties" variable is problematic. Thirty of the sixty participants who were not raised in Knox County have resided in Knox County for more than a decade. Their duration of residence makes them established members of the community, regardless of their place of birth. These findings make it difficult to truly measure "local ties" in the fashion I had originally intended, since the meaning of the variable itself can be interpreted in a variety of fashions. Individuals raised in Knox County may have loyalty to local farmers and the agricultural business of the area, or it may simply be more convenient for them to purchase local foods from their friends and neighbors who produce it. On the other hand, new members of the Knox County community may exhibit just as much loyalty and desire to support local business, especially if it allows them to participate and integrate themselves into the community. While Stern and Fullerton argue that "local ties" (as measured by the strength of connection to local individuals) are positively correlated with individuals' likelihood of community involvement (i.e. volunteering, participating in a club, membership in a religious organization), this sample did not lend itself well to the "local ties" variable, at least in the way I decided to operationalize the variable (2009). This is also true since loyalty to a community and community involvement are very individually motivated behaviors, which are difficult to measure using such a linear tool as a survey.

My third variable, in retrospect, is equally problematic. While I proposed that higher levels of social capital would lead to higher levels of participation in local foods,

my findings do not support that hypothesis (Pearson coefficient between volunteering and market attendance of 0.061). Social capital is a difficult variable to operationalize, and my use of volunteerism as a measure of social capital was not particularly valuable, even though Robert Putnam relies heavily on the measure in his study (2000). In order to truly understand the social capital of my participants, I should have posed more questions related to social networks, trust, and political and religious involvement. Because no existing research addresses the connection between social capital and local foods, the inclusion of the variable was experimental and, in retrospect, not successful. Even though 51% of participants volunteer in Knox County, there is no clear indication that their community involvement translates to local foods participation. Unfortunately, as with "local ties", measuring social capital in a linear fashion misses the important element of intent associated with individual behavior, especially in relation to social structures like communities. While I made the one-dimensional assumption that volunteerism indicates a desire to be socially involved in the community, there are, in reality, numerous reasons why someone may volunteer, and analyzing these on an individual basis would provide more insight as to the connections between social capital and local foods participation.

While some aspects of the survey were problematic, it also produced some surprising results, namely in regards to reasons for lack of farmers' market attendance. The content analysis of the open-ended response question sheds light on the home growers in the sample. Coming in second behind time inconvenience issues, nine participants do not attend the farmers' market because they grow their own produce at home, a possibility I had not previously considered. However, the agricultural nature of

the area fits well with these findings. More interestingly, six of the nine have a bachelor's degree or higher, possibly indicating the importance of time in home food production. While it may make sense to correlate lower education level (and therefore income) with home growing for financial reasons, time is the more crucial element in this case. If individuals with lower education levels do not have time or resources to go to the farmers' market once a week, they probably do not have time to grow their own garden. These findings are important because they show that, while the participants report not attending the farmers' market, their home growing could be considered participation in local foods. However, an important consideration here is the goal of local foods movements. If the aim is environmentally based, that is, to use sustainable techniques, grow organically, and shorten the distance between the producer and consumer, then these home growers are certainly doing their parts. If the aim is to build community and encourage more personal interactions between growers and consumers, then the home growers' participation is questionable.

I suspect the low farmers' market attendance in my sample can be accounted for in similar ways, particularly considering the other local foods sellers that participants mention in their open-ended responses. While the Mount Vernon Farmers' Market is only open on Saturday mornings (described as an inconvenience by several participants), other local foods suppliers in Knox County (and surrounding areas) may have different, more frequent, or more convenient opening hours, drawing the business away from the market. Participants mention frequenting roadside stands, CSAs, independent organic sellers, and food-producing neighbors, even though they do not attend the market. These

participants do purchase local foods, just not at the Mount Vernon Farmers' Market, which certainly impacts my statistical data.

Lastly, my findings call into question the issue of accessibility through the perceived issue of the high cost of local foods. Andreatta et al. criticized alternative local foods networks for high cost, potentially limiting access for low-income households (2008). However, 40% of my participants perceive the farmers' market produce as priced comparably to similar grocery store products and another 23% think the farmers' market products are cheaper. No participant mentions cost as a reason for not attending the market but rather emphasizes the issue of time or location. I suspect accessibility issues are moderately dependent on the region of the country in which local foods networks are located. The Mount Vernon Farmers' Market is located in the heart of a rural, agricultural region with an emphasis on aspects of community farming, sustainability, and connection to the land. Farmers' markets in urban or suburban environments may be different; local foods in those cases may be marketed to a trendy, affluent population looking to make a statement or demonstrate status by purchasing local foods, as addressed by Zukin (2008). Therefore, location and car access are the biggest obstacles in Knox County, but high cost could hold more weight in the center of New York City, where vendors may charge more and consumers shop alongside top-rated chefs (Zukin 2008).

My findings have opened avenues for future research and left many unanswered questions. This study could be improved dramatically by using a combination of a survey and interviews. While the survey findings were valuable in providing an overview and illuminating possible patterns, interviews would allow a more in-depth

understanding of individual intentions and motivations behind local foods participation, community involvement, and elements of social capital, like volunteerism. The information obtained through interviews would be crucial in making solid correlations between education level, "local ties," social capital, and participation in local foods and closing many of the gaps left by my findings. I would also like to conduct a comparative study. For example, a sample of Kenyon College employees with a sample of Mount Vernon Nazarene University employees would help determine the possible uniqueness of the Kenyon employees and obtain a more accurate picture of local foods in Knox County with a larger sample. Further research would also focus more heavily on issues of accessibility to local foods networks, as well as better including participants who live, work, volunteer, or buy local foods in the counties bordering Knox County. These improvements would lead to a more comprehensive understanding of local foods in the area. Moreover, administering this type of study on a statewide or national scale, with the inclusion of varying regions and populations, would provide excellent and valuable data to contribute to the evolution of local foods networks around the country.

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Table 1. Education Level of Survey Participants

Education Level	**Response Percent**
Grade school (grade 1-8)	0
Some high school (grade 9-12)	1
High school (diploma or GED)	17
Some college (1-3 years; Associate's Degree)	13
College (4 years; Bachelor's Degree)	24
Post-college (more than 4 years; M.A.)	21
PhD	24
Total	100%

Table 2. How Often Participants Volunteer Time at Community Organizations in Knox County

Frequency	**Response Percent**
Never	31
Occasionally	29
Sometimes	12
Regularly	28
Total	100%

Table 3. Participants' Farmers' Market Attendance in 2009 Growing Season

Number of Times	**Response Percent**
0 times	45
1-3 times	17
4-7 times	15
8-11 times	13
12-14 times	4
More than 14 times	6
Total	100%

Table 4. Reason for Farmers' Market Attendance

Reason	**Response Percent**
I do not attend	21
To support local farmers	21
Local food is better quality than supermarket food	41
Social interactions	4
Concern for the environment	0
Loyalty to the community	4
Other	9
Total	100%

Table 5. Participants' Perceptions of Farmers' Market Product Affordability in Comparison With Similar Grocery Story Products

Farmers' Market Product Affordability	**Response Percent**
Much cheaper than grocery store products	9
Slightly cheaper	24
Comparable	40
Slightly more expensive	22
Much more expensive	5
Total	100%

Table 6. Correlations of Key Variables Using the Pearson Correlation Coefficient

	"Local ties"	Volunteering Frequency	Market Attendance (# of times)	Market Attendance (Frequency)	Father's Education Level	Mother's Education Level
Education level	0.682**	0.217	0.259*	0.255*	0.546**	0.380**
Market Attendance (# of times)	0.173	0.061	1	0.681**	0.308**	0.268*

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix A. Survey on Participation in Knox County's Local Foods.

1. Gender (please circle):
    a. Male
    b. Female

2. Age: _____

3. Zip code: _____

4. Did you grow up in Knox County?
    a. Yes (Go to #6)
    b. No

5. If you answered "No" to #4, how long have you lived in Knox County? _____

6. Your education level:
    a. Grade school (grade 1-8)
    b. Some high school (grade 9-12)
    c. High school (diploma or GED)
    d. Some college (1-3 years; Associate's Degree)
    e. College (4 years; Bachelor's Degree)
    f. Post-college (more than 4 years; M.A.)
    g. PhD

7. Father's education level:
    a. Grade school (grade 1-8)
    b. Some high school (grade 9-12)
    c. High school (diploma or GED)
    d. Some college (1-3 years; Associate's Degree)
    e. College (4 years; Bachelor's Degree)
    f. Post-college (more than 4 years; M.A.)
    g. PhD

8. Mother's education level:
    a. Grade school (grade 1-8)
    b. Some high school (grade 9-12)
    c. High school (diploma or GED)
    d. Some college (1-3 years; Associate's Degree)
    e. College (4 years; Bachelor's Degree)
    f. Post-college (more than 4 years; M.A.)
    g. PhD

9. Do you volunteer your time at a community organization in Knox County? (Please circle)

a. Yes
b. No

10. How often do you volunteer?

a. never
b. occasionally
c. sometimes
d. regularly

11. How many times did you attend the Mount Vernon Farmers' Market during the 2009 growing season (May – October)?

a. 0 times
b. 1-3 times
c. 4-7 times
d. 8-11 times
e. 12-14 times
f. More than 14 times

12. Typically I go to the Farmers' Market

a. never
b. once a month
c. a few times a month
d. every week
e. other (please specify) _____

13. If you attend, do you go mainly for

a. one specific product (what product? _____)
b. a variety of products
c. just to browse
d. other _____

14. How would you rate the affordability of the Farmers' Market products compared to similar products at a grocery store?
The Farmers' Market products are:

a. much cheaper
b. slightly cheaper
c. comparable
d. slightly more expensive
e. much more expensive

15. What is your most important reason for attending the Farmers' Market?
    a. I do not attend.
    b. To support local farmers
    c. Local food is better quality than supermarket food
    d. Social interactions (with vendors and other customers)
    e. Concern for the environment
    f. Loyalty to the community
    g. Other _____

16. If you do not attend the Farmers' Market, why not? (open-ended response)

    _____

17. Do you usually participate in a CSA (Community-Supported Agriculture)? (Please circle)
    a. Yes
    b. No

Appendix B. Measurement of Participation in Local Foods.

1. *"How many times did you attend the Mount Vernon Farmers' Market during the 2009 growing season (May – October)?"*

This question was used to gain a general sense of participation. I used an interval scale ranging from "0 times" to "more than 14 times" that was divided in such a way as to ascertain whether the participant attended never, approximately once a month, twice a month, relatively regularly, or every week.

2. *"Typically I go to the Farmers' Market:"*

Scale used: never, once a month, a few times a month, every week, other (please specify).

This question, paired with the previous one, provided more detailed information regarding the participant's market-going habits. Knowing how many times the participant attended during the season, as well as general frequency of attendance, was important in understanding whether the participant was a regular at the market or a sporadic attendee.

3. "*If you attend, do you go mainly for:"*

Choices: one specific product, a variety of products, just to browse, other.

I included this question as a supplement to the previous two. I hypothesized that participants going for only one product or one particular vendor perhaps would have different motivations than participants attending for many products or without any product in mind.

4. *"How would you rate the affordability of the Farmers' Market products compared to similar products at a grocery store?"*

Scale: much cheaper, slightly cheaper, comparable, slightly more expensive, much more expensive.

I used this to address my question of accessibility often associated with local foods networks. Several studies (Hinrichs and Kremer 2002; Andreatta et al. 2008; Macias 2008) point to inaccessibility for low-income families due to perceived high cost, an issue I wanted to broach in my survey.

5. *"What is your most important reason for attending the Farmers' Market?"*

Choices: I do not attend, to support local farmers, local food is better quality than supermarket food, social interactions (with vendors and other customers), concern for the environment, loyalty to the community, other.

Previous studies (Smithers et al. 2008; McIlvaine-Newsad 2008; Zukin 2008; Hinrichs and Kremer 2002) point to motivations to participate in local foods, particularly farmers' markets. I compiled these choices based on the findings of the above-mentioned research. When considering the success of local foods

within a community, as well as possibilities for future improvement and increase in local foods accessibility, understanding individuals' motivating factors is important. While a survey cannot provide an in-depth understanding of each participant's behavior, the data can still shed light on the basic patterns of motivation.

6. *"If you do not attend the Farmers' Market, why not?"*
   Just as the motivations to attend the market are important, the reasons for lack of attendance are just as crucial to understanding participation. While I hoped the responses to this open-ended question would explain issues of accessibility, I didn't really know what kinds of responses to expect.

7. *"Do you usually participate in a CSA (Community-Supported Agriculture)?"*
   This question was posed to provide a basis of comparison for the Farmers' Market. CSAs are typically known for limiting participation to affluent members who can afford the expensive subscription fee (Andreatta et al. 2008). I was curious to know whether or not a relationship would exist between participants in the farmers' market and CSA subscribers.

Appendix C. Content Analysis of Reasons for Not Attending Farmers' Market

	Produce own food	**Time inconvenience**	**Other local sellers**
Some high school	0	1	0
High school diploma/GED	2	2	0
Some college	1	2	3
College	3	5	0
Further education (MA and PhD)	3	1	4

Examples:

Produce own food

- "I grow my own garden and can/freeze my own veggies."
- "I also have my own garden."
- "I grow much of my own vegetable in the summer."
- "I grow my own food on my own farm."
- "Grow my own vegetables, and raise my own beef."
- "I would attend weekly if we did not raise our own vegetables and fruits and will do so when unable to garden anymore ourselves."

Time inconvenience

- "Never have time."
- "Saturday mornings I work 6:00am-2:00pm."
- "I am always working, no time."
- "I have another commitment each Saturday morning."
- "Saturday mornings are never convenient due to our children's athletic obligations."
- "I live away from the area & I work the late Friday shift at the library & it's very difficult time-wise to make it back down here from Johnsville early the next day."

Other local sellers

- "I usually get my produce from Tim Patrick of Toad Hill Farm, a local organic, on Friday."
- "I typically get all of my produce from Knox Berry Farm which allows you to pick your own produce…and buy our meat from a local farmer."
- "I like fresh produce by I generally just buy it in the summer when I see someone who has a stand set up near somewhere I happen to be."
- "I participate in a CSA share because it is more convenient."
- "I don't live close to the Mt. Vernon farmers' market, but do go to others in my area."
- "I tend to go to local markets that are open everyday."