SUSTAINABLE FOOD CONSUMPTION: OPPORTUNITIES AND CONSTRAINTS TO
ETHICALLY MOTIVATED CONSUMERISM

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The UN Conference on Environment and Development (UNCED) identified consumption, mainly in industrialized countries, as a primary driver of environmental degradation. Subsequently, Agenda 21 urges countries to promote sustainable consumption among their citizens. The belief is that consumer demand for sustainably produced goods and services will motivate producers to adopt new practices to meet this demand. Thus, creating a sustainable society rests in part upon a growing number of people who incorporate environmental and social values into their daily purchasing decisions.

This dissertation critically examines sustainable consumption, by considering consumer engagement in alternative food provisioning. Three separate studies were carried out to explore some of the drivers and constraints to ethically motivated consumption. In particular, I focus on the discourse of sustainable foods, examining the ways adherents to conventional and alternative agri-food models define and inform the public about sustainability and foods. This is followed by an investigation into the relationship between socio-economic status and attitudinal support for sustainability attributes. Finally, I assess the role of cognitive beliefs about the environment in motivating sustainable food provisioning.

The research was carried out through qualitative and quantitative analysis of textual data and survey responses. Textual data defining sustainability was collected from websites of
organizations associated with conventional and alternative agri-food systems in the United States. Survey data used in these studies was collected in fall 2010 from households residing in Washington State.

Analysis revealed organizations' difficulty in communicating a coherent message about sustainable foods, particularly when informing the public about social equity. This undermines people’s ability to make informed, ethically based consumer choices. The second study shows widespread support for foods produced in a sustainable manner has grown. However, this does not equate to a willingness-to-pay. Affluent consumers may be more effective in determining changes in our agri-food system. Communication problems and potential disparities in “voting” by one's dollar raises concern about the efficacy of consumption driven social change. However, cognitive beliefs about the environment are significant determinants of consumer choice. This suggests opportunities for expanding ethically motivated consumption through the cultivation of empathetic views towards the natural world.
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Dedication

This dissertation is dedicated to my two children, Raven and Gavin Smith.

They are the embodiment of my hope for a beautiful and just future.
CHAPTER ONE

INTRODUCTION

Human civilization is confronting a series of ecological crises that threaten our very survival. Global climate instability, toxification of fresh water, and the loss of arable land are just a few of the problems we face. These threats loom as we continue to grapple with widespread malnutrition, unequal patterns of human development and growing populations that place increasing demand on shrinking natural resources. Previous approaches to solving these problems appear to be amplifying social and ecological imbalances. This has prompted challenges to dominant thinking, calling into question the patterns of production and consumption that characterize the ways modern society transforms nature to meet its needs.

In particular, industrial food production and distribution methods have come under increased scrutiny as governments and civil society seek to strike a balance between the ecological concerns and human needs. Although, the global agri-food system has effectively increased total food production (FAO 2012), the benefits have not been shared equally (Lappe, Collins and Fowler 1977; Lappe 2012), and the environmental costs have been significant. Run-off from pesticides and chemical fertilizers present significant problems for environmental quality. These inputs contaminate streams and lakes (Pimentel et al. 2005), impacting the health and resiliency of aquatic ecosystems. Simultaneously, the cultivation, processing and distribution of food contribute nearly a quarter of total global greenhouse gas (GHG) emissions (IPCC, 2007).

Our modern food system has also incurred significant social costs. Over the past 80 years there has been a rapid loss of family farms, mass migrations to urban centers, and subsequent deterioration of rural communities (Lobao and Meyer 2001; Lyson 2004). The resulting
displacement, loss of traditional livelihoods, and mass migrations to urban areas present serious ethical and practical challenges. Increasing number of people lack the means to ensure personal food security through growing their own food. Global market forces and processes of agricultural modernization are pushing subsistence farmers and small producers out of agriculture altogether (Cronon 1995; Brown, Jepson and Price 2004). And the influx of people into urban centers is putting pressure on planners and city officials to deal with inadequate infrastructure, and provide for social and physical needs of rising populations (Devas and Rakodi 1993; Carley, Jenkins and Smith 2001). Industrialization of production and distribution has also created imbalances by making high calorie processed foods cheaper than fresh foods leading to increased obesity among the poor (FAO 2012).

Creating a sustainable society that reconciles these imbalances requires a transformation of society at multiple levels. While modern systems of production and exchange are significant drivers of social and environmental disequilibrium, we as individuals are essential to solving these problems. Active participation is needed by individuals, civil society, and government for re-visioning the ways we interact with each other, and the environment. This will require appropriate policies from government, creativity from civil society, and changes from individuals willing to rethink their daily consumer lifestyles.

This dissertation investigates some of the efforts aimed at remaking our systems of production and exchange. In particular, this body of research considers the emergence of the reflexive consumer, and the potential for ethically-motivated consumption to facilitate the creation of sustainable agri-food systems. I consider the concept of consumers as agents of social change – 'consumer-citizens' who utilize their individual purchasing power to support products and services that reflect their values, personal identities, and the principles of sustainability.
This research is influenced by recent inquiry into the relationship between reflexive consumption, and the rapid growth of alternative agri-food systems (Goodman and DuPuis 2002; Michaelis, 2003; Spaargen 2003; Gutham 2004; Seyfang 2006; 2007; Adams and Raisborough 2010). The formation of alternative agri-food systems, linked with new forms of consumption points to the role of personal choice to influence changes in the production and distribution of food. Personal reflexivity and the politicization of consumption have significant theoretical and practical importance for understanding the mechanism, extent, and direction of changes in our agri-food systems. These phenomena are also relevant to understanding the potential for ameliorative changes in other areas of social and economic life. The inclusion of ethical principles in daily consumption may also influence the purchases of energy efficient vehicles, decisions to use mass transit, as well as voluntarily reduce personal consumption on a whole.

Despite efforts to establish a more sustainable agri-food system, our understanding of the drivers and potential influence of ethical consumption remains contested, and in an early phase of development. Theorizations in consumption suggest the influence of consumers to act as agents of change (McGregor 2002; Michaelis, 2003; Spaargen 2003; Adams and Raisborough 2010). Reflexivity and ecological modernization see changes in consumer behavior where people are reflecting on their consumption and attempting to align their choices in ways that cohere with their sense of self (Spaargen 2003); this includes incorporating personal values for environmental and social causes in routine consumption (Goodman and DuPuis 2002; Lockie, Lyons, Lawrence, and Mummery 2002; Adams and Raisborough 2010). And producers are responding to these changes. However, traditional perspectives in social theory continue to emphasize larger social and economic institutions that structure overall behavior (Friedland 2008). These perspectives tend to minimize the relative role of consumption as a force for change. The
tendency towards the accumulation of power and capital, systems of provision, and the ‘treadmill of production,’ are considered more powerful forces that attenuate the individual choice, since individual choice is seen as dependent on these factors (Obach 2007). On the other hand, a large number of consumers may not even be motivated by ideological concerns.

From a theoretical perspective, I recognize that some changes are occurring in consumer behavior. Research suggests people may be incorporating values for environmental and social concern that don’t align with traditional economic thinking, and these changes could have significant impact on sustainable development going forward. Following Anthony Giddens’s theory of structuration (1984), I also recognize that individual behavior occurs within, and is motivated and constrained by these structural realities. At the same time, these behaviors reshape those same structures indicating the possibilities for people to shape the future character of modern society.

Using this perspective, my objective for this dissertation is to improve understanding of ethically motivated consumption – focusing specifically on some of the drivers and constraints of sustainable food consumption. One of the important implications is the extent to which consumption can be counted on to encourage changes in our agri-food systems. This is especially relevant in light of ideological clashes that continue to dominate political discourse and stifle governance in the United States.

The dissertation is divided into three separate studies. Each chapter presents a different perspective used to address the overall research objectives. The chapters can be read independently of one another, or considered on the whole. Data for these studies were collected from a household survey of food consumers in Washington State, and textual data from food and farming related business and non-profits operating throughout the U.S. The data for these studies
were collected in the summer and fall of 2010, and the winter of 2012.

The studies follow from a set of initial assumptions that guide the direction and conceptualization of the overall dissertation. I begin with a general view that sees an interrelationship between communication, social and economic structure and physical place. Together these elements shape people's knowledge, motivations and capacity for engaging in sustainable forms of consumption.

The first study investigates communication and discourse surrounding the sustainability of our agri-food systems. I consider discourse as a form of argumentation, designed to inform and promote a particular definition of sustainable food and farming systems. In particular, I consider the ways supporters of alternative and conventionally produced foods in the United States communicate and advance ideas of social equity to the general public. Results reveal a general weakness in linking social equity with broader visions of sustainable food systems. This has implications for consumers looking to purchase sustainably produced foods, by undermining their capacity to choose products that reflect social as well as environmental values. This indicates the need for groups to better address the social dimensions when communicating and working to promote sustainable food consumption. It also suggests limitations in other areas of the economy where consumers are expected to affect producers’ adoption of sustainable practices.

The second study examines socio-economic status and support for local and organic foods. The results show that social equity and environmental health are important factors when considering the foods people purchase, regardless of socio-economic status. This indicates that ethical concern in daily consumption is a growing phenomenon that relates to larger sociological thinking about reflexivity and modern society.
However, there may also be significant limits in our thinking about sustainable consumption as a form of 'political participation.' Issues of access and relative price differentials for low-income households highlight this limitation. Affluent consumers may be more effective in determining the growth and diffusion of access to these foods. The study points to the potential for maintaining social inequity by relying solely on consumer choice to direct changes in our agri-food systems. The findings indicate government still has a role in ensuring opportunities for access and affordability for low-income households. Local, regional and national level civil society will also be important in educating, advocating and launching creative initiatives to improve opportunities for low-income families and increase consumer engagement overall.

In the third study, I explore the connection between demand for locally produced foods and cognitive beliefs about personal connections to the natural world. A clear relationship was identified, indicating the importance of fostering nature awareness to increase consumer engagement in purchasing these foods. Following studies in eco-psychology, this suggests the importance of personal opportunities for nature interactions that develop cognitive beliefs of connectedness to nature to encourage pro-environmental behavior.

These findings indicate an essential role for environmental education. These education programs will not only need to impart knowledge of ecosystem function, but also gives students opportunities to develop a deeper ‘felt’ relationship with the natural world around them. The importance of developing these felt relations also highlight the importance of access to nature, and the way physical space can indirectly influence motivations for engaging sustainable consumption. Although this research doesn't address this potential, it does open up questions for further inquiry, and the role of physical landscapes in determining the extent to which sustainable
livelihoods are enabled or constrained.
REFERENCES


CHAPTER TWO

THE RHETORIC OF SOCIAL EQUITY IN OUR AGRI-FOOD SYSTEMS:
ARE WE PROMOTING SUSTAINABLE FOOD CONSUMPTION?

OVERVIEW

Increasing sustainable food consumption is essential to reducing the environmental and social impacts of our current industrial agri-food system. However, public perceptions of sustainability remains contested, fluid, and in some cases incomplete. Groups locked in the fight over the future of our food systems advocate varying perspectives of sustainability that reflect their interests and ideologies. This may complicate people's ability to make adequately informed purchasing decisions, undermining the efficacy of a sustainable consumerism.

A sustainable agri-food system is often framed with an emphasis on environmental health and economic viability for farmers. Yet, social equity represents the "third pillar" of sustainability, and is an important aspect of sustainable food consumption. This study analyzes the degree to which social equity is included among efforts to shape public understanding of sustainable food and farming systems. In particular, I analyze websites from groups advocating for alternative and conventional agri-food systems in the United States.

This study shows that social equity is a difficult concept to communicate. This difficulty has the potential for minimizing, and obfuscating the role of equity in consumer’s food purchasing decisions. The implication is an environmental and economically sustainable food system that remains inequitable. Results also indicate that advocates of alternative agri-food systems need to be more inclusive of social equity in order to maintain a distinction from conventional actors who are adopting the language of sustainability to capitalize on consumer demand.
INTRODUCTION

The environmental, social, and health impacts of industrial food and farming systems have become popularized in our media. Television programs, film, news articles, and online blogs have been important for communicating about these problems, and raising public awareness about sustainable alternatives. This awareness has in part, helped inform and direct changes in consumer behavior. Many people are increasingly looking to reduce their environmental impacts by changing their food habits, eat more fresh foods, and buy locally produced foods to reduce "food miles" and support family farms (Goodman and DuPuis 2002; Lyson 2004; Bell 2007). As a result, the number of producers and retailers of organic and locally sourced foods have grown dramatically to meet rising demand. Farmers markets have been established in nearly every major city in the US, and organic foods have become a multibillion dollar industry in a relatively short period of time (USDA – National Agricultural Service 2007; 2012).

The co-emergence between ethically motivated consumers and alternative agri-food systems has increased speculation into the role of consumers to transform unsustainable production and distribution practices (Spaargaren 2003; Paterson 2008). This suggests the possible emergence and spread of a sustainable consumerism that can accelerate the changes needed to combat issues of climate change, and the over-exploitation of natural resources.

Sustainable consumption refers to the consumption of goods and services that meet people’s needs while minimizing the environmental impacts for present and future generations (Oslo 1994). It emphasizes personal responsibility, and the role that each individual plays in determining the ecological and social health of our planet. Sustainable consumption also implies a form of passive civicness that underscores the political and moral dimensions of personal
consumption, extending beyond economic self-interest (McCregor 2002). This rests upon a populace that is both cognizant and responsive to the consequences of their consumption (Seyfang 2007; Paterson 2008).

While a vibrant democracy depends on an active and well-informed citizenry, sustainable consumption depends on a well-informed and ethically engaged consumer. Media communication, formal and informal education, as well as interaction within social groups is an important means for the diffusion of knowledge. However, available information can be contradictory, and incomplete, as groups attempt to influence social change and consumer demand. Organizations connected to alternative agri-food movements, and groups linked to conventional food systems are locked in an information war over the direction and character of a sustainable agri-food system. The competing and contradictory claims can limit the effectiveness of values based form of consumption that depends on a knowledgeable public. Furthermore, this indicates the need to consider the ways sustainability and sustainable foods are being framed, and the ways this discourse informs and directs consumer choice.

To date, alternative agri-food movements have been central to shaping the debate on sustainable food and farming systems (Feenstra 2002; Hinrichs 2003; 2004; Goodman and Goodman 2007). Organic Food, Civic Agriculture, and Fair Trade represent several movements attempting to correct the problems associated with an industrial food system. Groups connected with these movements have been effective at framing both the problem and the solutions, advocating for a range methods, including: organic cultivation methods, food system re-localization, community gardens, and more. Organic and fair trade campaigns have successfully established national and international standards for these products. Regional food policy boards are being established across the nation to promote local food systems, and confront the issue of
community food security (Feenstra 2002; Hinrichs 2003; 2004; Story, Kaphingst, Robinson-O'Brien, and Glanz 2008). And, opposition to recombinant bovine growth hormone (rBGH), and genetically modified foods have raised consumer awareness (Buttel 2000).

While food movements have proven effective, there have been some unintended consequences. These accomplishments have created space for actors within the conventional agri-food system to re-brand themselves (Howard 2007). The standardization of organic practices has provided opportunities for mainstream actors to appeal to consumers who have come to value the organic label (Eden 2011). Consequently, mainstream actors are beginning to integrate the ideas and symbols communicated by supporters of alternatives, while advancing their own vision of a sustainable food system.

For example, large retail chains like Safeway and Wal-Mart have dramatically increased their line of organic food offerings (Pollan 2006). These companies are also actively working to provide 'local foods' to its clientele (D'Inocenzio 2013). Wal-mart recently aired a series of commercials that employed the symbology of a farmer's markets to make claims about freshness, and localness to capitalize on consumer's association between farmer's markets and fresh, sustainably grown produce. Genetically engineered crops are also being advanced as a key piece to the puzzle for a 'sustainable agriculture.' Integration of genetically engineered seeds and organic agriculture practices have gained increased attention (Scrini 2007). Ronald and Adamchak, argue that organic farming and agricultural biotechnology are not mutually exclusive, and can be effectively combined to meet the world’s future food needs (Ronald and Adamchak 2009).

These developments point to an ideological tension between alternative and conventional visions for the future of our agri-food systems. Many supporters of alternatives perceive the need
for widespread transformation, leading to a “new moral economy of food” (Morgan et al. 2006) that rejects the dominance of the industrial capitalist production in our food systems (Scrinis 2007; Starr 2010). On the other conventional actors seek to maintain the current system, while adopting the language of sustainability to convey efforts towards improving current practices.

Each of these groups employ the language of sustainability to advance their visions, and each seek to enroll public support. Yet, the differences suggest a multitude of possible trajectories for the future of our agri-food systems. Thus, the ways in which sustainability is articulated and framed by these groups has significant consequences for both consumers, and ultimately, the potential to create a new system for producing and distributing food in modern societies.

This study examines this tension, focusing on the rhetoric used to advocate and influence public opinion. In particular, I look at the ways in which groups define and advance their visions for a sustainable food and farming system, taking special care to consider the role of social equity in these definitions, and in their work. By focusing on the discourse of sustainability, and social equity especially, I hope to reveal the degree to which a holistic vision of sustainability is being advanced, and identify areas for improvement among those seeking to create a 'new moral economy of food.'

To accomplish this, I present an analytical framework, integrating framing theory, and Amossy's (2009) theory of "argumentation in discourse." This aims at providing a foundation for interpreting and measuring the degree to which both alternative and conventional actors are advancing socially transformative agri-food systems. Data for this analysis consisted of text documents gleaned from over 60 websites representing organizations and business groups associated with supporters of alternative and conventional agri-food systems in the United States.
LITERATURE REVIEW

Sustainable Consumption and Sustainable Development

The term ‘sustainable consumption’ was first introduced into the international policy arena at the 1992 Rio Earth Summit. This marked the first time consumption, particularly among developed nations, was implicated as a direct cause of ‘unsustainability.’ It was argued that in order to be more sustainable, society would need to adopt ‘new concepts of wealth and prosperity which allow higher standards of living through changed lifestyles that are less dependent on the Earth’s finite resources and more in harmony with the Earth’s carrying capacity’ (UNCED, 1992: section 4.11). The proposed solutions included promoting eco-efficiency and market-based mechanisms to influence consumer behavior (Spaargaren 2003).

From the standpoint of consumption, sustainable development can be further conceptualized as a process to enable these changes in consumer lifestyles, by adopting ecologically informed production practices while helping poorer communities to meet their needs. Broadly, sustainability is about creating a balance between the environment, economic prosperity, and social equity (Dresner 2008). The definition and intent behind this concept represents a vision for human progress that places ecology, economy and social justice on equal footing.

Indeed, each aspect of the sustainability equation is fundamentally interrelated (Bell and Morse 2003), and it can be argued that solutions that ignore one or more of these dimensions, fail in terms of being sustainable. Thus, when assessing sustainable practices, a balancing of these dimensions as both quantitative and qualitative measures of success is required. However, the social dimension is often the problematic dimension (Zimmerman 1993; O'Riordan 2012), and
the most difficult to ensure, making it an important area of analysis when considering the sustainability of proposed solutions.

The difficulty of addressing the social dimension in sustainable development has perhaps been influential in development efforts focusing more on environmental and economic factors. Certainly, increasing incomes are important, and in 2002, the World Summit on Sustainable Development reaffirmed that poverty eradication was one of the crucial underlying themes of sustainable development (Elliott 2006). However, the social dimension extends beyond economic development – it is about enabling local self-reliance of communities, ensuring basic human needs are met, supporting local participation, self-determination and equity (Bell and Morse 2003).

In theory, a truly sustainable form of consumption would encourage these social outcomes while reducing environmental impacts and balancing the contradictory (economic) needs and demands of producers and consumers. At the very least, this form of consumption would avoid exacerbating social inequities, or undermining individual and collective rights to self-determination. Yet, the practice of sustainable development, and the role of new forms of consumption to bring about ameliorative equitable change in human and environmental relations remains conflictive and uncertain.

**Alternative Agri-Food Systems and Sustainability**

There has been a significant interest in transforming the practices of consumption and production that characterize our food and farming systems. For many, food is an obvious starting point for advancing sustainable consumption to encourage changes in production methods. Food is, and always will be, fundamental to our lives in ways that many of today's modern amenities
are not. Everyone must eat, and thus everyone has an opportunity to adopt more sustainable habits around the consumption of food. Gil Seyfang (2006; 2008) focuses specifically on the relationship between sustainable consumption and the growth of local organic food networks in Europe. Seyfang sees the transformative potential of sustainable consumerism, and the importance of consumer awareness about sustainability to help drive the formation of local organic food systems.

Knowledge of the relationship between food and sustainability is a key component in promoting new forms of consumption that encourages sustainable changes in our agri-food systems. To date, alternative agri-food movements, such as the Organic Food movement, Fair Trade, and the Local Food movements have been central to educating the public about sustainable food and farming systems. Through public outreach, research, and advocacy these groups have helped increase public awareness about the environmental and social impacts of industrial agri-food systems (Feenstra 2002; Hinirichs 2003; Wright and Middendorf 2008), in an effort to motivate widespread social change. At the same time, these groups have worked to offer tangible solutions to these problems by establishing alternative food systems that reduce food miles, increase farmer cooperation and promote ecological farming practices (Norberg-Hodge, Merrifield, Gorelick 2002; Lyson 2004). Similar movements have also formed over the years, including "Slow Food," "Sustainable Agriculture," and "Food Sovereignty" (Feenstra 2002), and each have sought to advocate and establish creative alternatives to mainstream agriculture. Together, these movements have defined a vision for a sustainable food system that fundamentally alters the relationship between food consumers, and food producers.

Each of these movements approach the problems with conventional foods from different perspectives, critiquing different aspects this system. For example, in the U.S. local foods
marketed through Farmer's Markets, or community supported agriculture (CSAs) are often promoted as a means to by-pass global commodity chains, giving power back to farmers, while reducing the 'food miles' associated with global distribution systems (DeLind 2002; Lyson 2004). Additionally, marketing foods directly to consumers captures more of the food dollar for local producers, and less for the firms that control major points along the global commodity chain. Keeping those dollars within the local community via local business is considered critical to maintaining, and improving the vitality of rural communities (Lyson 2004).

There are clear ideological reasons for both consumer and producers to participate in farmers markets, CSAs and other marketing schemes. Supporting local economies, self-determination, cultivating a sense of community, and protecting local farmlands represent some of the reasons, and each relate to a particular world-view of a sustainable food system. Yet, the outcomes can contradict the values that motivate action. This appears especially problematic when marrying social values for inclusion and equity with economic demands. For example, marketing schemes created to promote sustainability can also end up catering to a specific kind of high-end consumer, while excluding opportunities for low income consumers (Guntham 2003). Tensions often exist in direct marketing movements between building equitable social relations on the one hand and market instrumentalism on the other hand (Hinrichs 2000). This points to the inherent difficulties of maintaining the financial viability of these operations while also advancing social values that contradict the structuring tendencies of the contemporary capitalist system. While each agri-food movement develops unique strategies, each movement has a vision for addressing inequities, and each struggle with balancing the need to adopt ecological farming practices while retaining economic viability, and promoting social equity.

Yet, it is clear that participant interest in developing a more equitable system is strong
Thus, the desirability of *food sovereignty* as a concept for addressing food distribution issues over “food security” is that the former encourages a look at the qualitative character of access of the hungry to food, rather than a focus on economic growth, especially at the national level, that is associated with the concept of food security. (Schanbacher 2010).

Advocates of food sovereignty seek to protect and improve upon traditional agri-(cultures), emphasizing self-reliance through farming. For example, the food sovereignty organization, *La Via Campesia* articulates a clear critique of industrial food, opposing the introduction of bio-engineered seed stocks to replace indigenous cultivars, and the converting land for the production of export commodity crops (Altieri 2010). On the production side, of this movement, agroecology has provided social-scientific basis for practicing food sovereignty. Agroecology embraces ecologically integrated farming systems (Altieri 1995) that emphasize the importance of democratic, multiple direction communication structures based on social learning and oriented towards alternative social relations, and not a top-down model of technological development and dissemination (Warner 2007).

While these groups attempt to articulate their vision for a sustainable food system, conventional actors are actively engaged in campaigning for their own vision. For many, this has included transitions towards organic production methods, and promoting no-till cultivation methods while also increasing aggregate productivity. Indeed, organic agriculture has undergone a process of conventionalization, and is now firmly planted in the global commodity chain (Gutham 2002; 2004; Best 2006; Guptill 2009). Conventional agri-business are working with large retailers and processes to offer more organic foods, and adopting marketing strategies to capitalize on consumer interest (Klonsky and Smith 2002). They are also actively involved in technical innovations to increase production through genetics, information technology, and
advocating global trade liberalization. In contrast to alternative agri-food movements, conventional actors see sustainable solutions within current practices. Sustainable change in this context is focused on improving the current system, modernizing based upon new ecological knowledge to increase food availability globally. In fact, the successes of the conventional system cannot be dismissed despite inequities, and supporters routinely refer to productive successes, advances in food storage, and lower prices for consumers.

In each of these examples, supporters of both alternative and conventional food systems embrace unique perspectives in terms of defining the problems associated with the current system, and the solutions for creating a more sustainable one. Using a variety of means to communicate (e.g. social networks, the Internet, television commercials and print media), organizations explicitly and implicitly advocate their definitions of sustainability, and sustainable food systems. This communication is a central feature of the work organizations engage in as they attempt to influence public perceptions, direct changes in behavior, and garner support for their efforts.

While speaking to a broader discourse on sustainability, these groups are also actively engaged in shaping public understanding about sustainability through their communication and actions. Discursive claims about a sustainable food system are often linked with specific actions that organizations adopt in pursuit of their perspectives, e.g. local food groups are often strong advocates, supporting the formation of CSAs and farmers markets in, and around their communities. The relationship between these initiatives, and the ideologies groups advocate become conceptually linked. Thus, shopping at a farmers market or a local CSA can become, for the consumer, an expression of sustainable consumption – motivated by ethical concern, and based in part on a particular ideological perspective.
These associations provide mental heuristics or rules-of-thumb for consumers attempting to distinguish between sustainable and non-sustainable foods, and sources. Fair Trade and organic labels also help serve this purpose. Consumers use these labels to differentiate between other foods, communicating particular attributes that resonate with their subjective values and interpretations of sustainability (Eden 2011). Yet, while the symbology of an organic label, or a farmers market may resonate with consumers' underlying beliefs about sustainability, the relationships between ideology and these symbols as expressions of sustainability may be questionable.

For example, foods bearing the organic label say little about the way labor was treated, highlighting the weakness in the label for communicating attributes regarding social equity. Organic certified farms are often as large as non-organic farms, and follow the same logic of the mainstream industrial system (Gutham, 2004; Best 2006). Further, for some farmers, the organic certification can be perceived as a cost prohibitive hurdle (Klonsky and Smith 2002). This means that farms that meet, or are close to meeting those standards are not allowed to use the organic label, yet this doesn't mean they are producing foods in a less environmentally or socially conscious way. And while farmer's markets tend to be synonymous with locally grown or produced foods, evidence suggests that many farmers markets are becoming venues for non-local, and conventionally produced foods as wholesalers look for new outlets to market excess stock (Gao and Swisher 2012).

Although consumers may believe that they are acting in accordance with their ethical beliefs, their effectiveness is only as good as the knowledge and information they have when evaluating the meaning behind the foods they purchase. Thus, if sustainable consumption is to be successful, or even possible, it is important to critically evaluate the relationships between
ideological claims and the ways groups manifest these claims through specific initiatives. This is important for consumers, but it is also important for groups seeking to distinguish between efforts aimed at a deeper transformation of our agri-food systems, and efforts that represent modest improvements to current modes of operation.

The Challenge of Social Equity

Despite an ideological emphasis on maintaining ecological health, economic security and advancing social equity, alternative agri-food movements still operate within, and contend with, the modern capitalist system. The realities of social and institutional dynamics that structure forms of action around creating alternative food systems may hinder efforts to produce holistic solutions. There are practical difficulties with balancing economic concerns for producers who seek to invest, and adopt more ecologically based practices, while also expanding social equity by increasing affordable access to people across all sectors of society. Indeed the issue of access and inclusivity are essential to the idea of social equity, and to the project of sustainable consumption. Thus, as organizations attempt to advance their principles, some of these groups might be compelled to make concessions with respect to ideology and their initiatives as they seek to remain viable, and grow their movements.

In particular, I suspect the inclusion of social equity is especially problematic for groups advancing alternative food models. While social equity represents a key feature of sustainability and sustainable consumption, it is one of the more difficult dimensions to define, quantify and manage. Social equity remains unclear, politically difficult, and often glossed over in light of economic and environmental indicators that are easier to quantify and track (O'Riordan 2012).

The lack of clarity also suggests that it is harder to implement, and communicate (Campbell
1996). This is problematic considering the role of information in conveying the meaning behind products, and the interpretation of those ideas by people attempting to shop more ethically.

In general, social equity reflects ideas of *fairness* and *justness*; these are normative values rooted in moral thought. Communicating these values in one's ideology, and in their actions can result in contentious disagreement, revealing significant contradictions. Questions arise about, "fairness" and "justness" for whom? Are we talking about producers, migrant farm labor, poor consumers? And what does fairness entail for each of these groups?

Amartya Sen (1999) and Martha Nussbaum (2001) have sought to provide some clarity for defining and measuring social equity by focusing on the capabilities, or opportunities that individuals possess. Unlike social equality, their approach embraces a greater degree of nuance, recognizing that people often have different needs, and obstacles. For example, social equity for a small-scale farmer may be conceptualized in terms of the farmer's ability to make a living, and retain his or her livelihood in the face of a globalizing commodity food system. This may direct attention to institutional policies and economic drivers that favor industrial agricultural practices geared towards global markets. However, considering social equity in this context also suggests that poor, and/or racially diverse groups should have the ability to make more sustainable food choices – the same as more affluent community members. This means ensuring the availability and affordability of these foods within proximity of where people live. In this case social equity isn't the sole domain of farmers. Yet the need to increase equitable opportunities for consumers constrained by income, along with providing new opportunities for farmers struggling to make a living present a difficult dilemma that has yet to be successfully resolved.

Other concerns arise when thinking about the relationship between farms and the communities they operate near, or within. Questions regarding the impacts of alternative versus
conventional agriculture on the broader community are also important. How do these operations shape people's experiences in terms of local culture, and enjoyment of the natural physical landscape? In some cases, urban agriculture has been perceived as a nuisance to community residents where cultivation increase noise and dust pollution (Mougeot 2000). Alternatively, in other areas, these efforts have improved the physical landscape of neighborhoods (Mougeot 2000; 2006; Lovell and Johnston 2009), by cleaning and converting vacant lands to micro-farms and community gardens (Saldivar-Tanaka and Krasny 2004).

Each of these examples show the potential for conflicts between people’s interests and needs at both the individual and community level. These conflicts point to the difficulties associated with articulating social equity, and developing sustainable agri-food systems that adequately address equity from multiple vantage points. In terms of encouraging sustainable consumption, these tensions, again underscore the importance of people possessing the requisite information needed to make effective valuations in their individual consumption. Indeed, equity extends to education and information as well, and sustainable consumption requires opportunities for people to learn about sustainable food options, and the social value of these foods beyond their strict use-values.

Despite attempts to clarify the meaning behind social equity, this review recognizes some of the difficult contradictions that exist in terms of addressing social equity. The analysis that follows takes this difficulty into consideration, assuming that concessions are inevitable in terms of advancing visions of equity. It is further assumed that these concessions are reflected not only in specific projects that groups pursue, but also in the ways each of these movements frame their efforts. The interplay between language and action is key here to better understanding the degree to which both adhere to a principle of equity, what current issues exist, and ways to improve,
both as a means to support the work of alternative agri-food groups, but also to support the evolution of sustainable food consumption.

**The importance of language in shaping action**

The emphasis on framing and discourse follows from the role that language plays in organizing society and motivating certain forms of action (Fairclough 1994; Kaplan 2008). While sustainability looks to change the way society currently operates in terms of our physical relationship to the earth and one another, it is in our capacity to conceptualize problems, and solutions discursively, that enable new behaviors and relationships to be fomented. In one sense, this view follows from the idea of social intelligence (Dewey 1934), or the concept of civic intelligence (Schuler 2008). Both consider language, and our capacity to communicate social, or civic problems, and solutions as being central to actively creating a new world (Schuler 2008). It would follow that the transformative capacity of our actions is related to our capacity to effectively articulate the problems we confront, as well as the corresponding solutions that become the goals that guide purposeful action.

This suggests that looking at the way groups frame problems and solutions is important in considering the direction movements are taking, and providing a critique to support, if need be, a redirection of action and communication towards more transformative ends. Furthermore, looking at the language employed to argue particulars pathways towards a new food future may also reveal potential weak points in the debate. Finally, language is also an important indicator for understanding how groups are attempting to influence the public, and validate, or invalidate claims regarding sustainability. This has significant consequences in how the public conceptualizes problems with conventional foods, and how they come know and value the
alternatives that motivate new forms of consumption.

As much as language can be used to communicate knowledge to ameliorate social and ecological problems, it can also be used to redirect and obfuscate the deeper complexities of issues that affect the common good. For example, New York Times columnist and food critic, Mark Bittman remarked about the competing visions for a sustainable food future, and our role as eaters. On the one hand you have ‘agribusiness’ and the USDA 'food pyramid' presenting a story on what to eat, on the other hand, you have the ‘locavore’ vision of what to eat. He goes on to say, "The first one is at least populist, and the second elitist" (Bittman 2007). Although, Bittman doesn't eschew the value of eating locally, this juxtaposition reveals a significant problem for the way alternatives can be dismissed or marginalized. Similarly, at the 92nd American Farm Bureau Federation meeting, President Bob Stallman remarked at the "elitist" nature of "foodies" who are “hell-bent on misleading consumers.” Terms such as ‘populist’ and ‘elitist’ are evocative, speaking to latent beliefs and ideals in the hearer. These words are often used without specific evidence to back any specific claims, and it is left up to the listener to fill in the rest.

The use of a frame relies on the listener to formulate their own ideas by eliciting an emotional response connected to broader feelings about these words. In this context, the implication is an emotionally based invalidation of the alternatives, based on a sense of elitism. There is lack of rational coherence that disables people’s ability to make informed purchasing decisions. Advocates for alternatives also engage in framing. Language is used to resonate with already established popular belief systems. The phrase, “helping family farms,” is often used by groups to infer that the “other” is not supportive of family farms. Supporters of local food, as well organic and conventional food system have all used “helping family farms,” as a frame.
However, these are all discursive tools that tend to muddle the debate over sustainability, and undermine consumers' ability to act more responsibly. Ironically, this hinders the capacity for consumption driven change to actually help family farms, farm labor, communities and the poor.

The difficulties associated with defining and addressing social equity, as well as the problems with communicating pathways for a sustainable food system highlights several potential problems. First, questions arise as to the degree in which social equity is addressed among various agri-food models. And second, is social equity addressed in a rational and coherent manner that essential to promoting sustainable consumption? Considering these questions, the objectives for this chapter are to:

1. *Assess whether or not social equity is being addressed among competing visions for a 'sustainable food future.'*

2. *Determine whether these perspectives are an extension of prevailing ideology (simply include reference to equity), and those that provide a rationally distinct, and potentially transformative alternative.*

3. *Identify whether organizational efforts, contradict or cohere with their claims surrounding sustainability, and social justice/equity in particular.*

The purpose behind each of these objectives is to develop a better understanding of the direction, and potential of current efforts to encourage sustainable consumption, and promote deeper changes in the character of our agri-food systems.

To accomplish this, I draw from critical discourse analysis, and more specifically from framing and argumentation theory in rhetoric studies. When considering the broader realm of discourse, the focus on frames is just one aspect. It is necessary to extend beyond the explicit or implicit world-view in order to illuminate the ways in which these realities are made coherent in the broader context of discourse, and particularly persuasive discourse (Fairclough, 1992). To
simply frame sustainability in a way that includes social equity without providing more than a premise, or an evocative reference, cannot be considered authentic in the sense of providing an “alternative” to the prevailing paradigm. As Fischer and Forester (1996) note, claims emanating from a given perspective of the world without providing some rational basis for acceptance (ie evidence that can be objectively evaluated), descend into propaganda, thus becoming mere sales talk, and the extension of ideology. It is also does a disservice to the broader arena of the public sphere in terms of supporting rational action towards ameliorating the problems associated with unsustainable forms of production and consumption.

To help provide an effective means of analysis, I adopt Amossy’s (2009) perspective of “argumentation in discourse.” This provides a foundation for an assessing the rational coherence between frames (implied claims), explicit claims, evidence, and actions. The reasoning behind this approach follows from my assumptions regarding the value of rational discourse in a democratic society. The effectiveness in supporting sustainable consumption will be dependent upon the conceptual foundations that motivate and direct new forms of consumer behavior. Thus, the language that both supporters of conventional and alternative agri-food systems use can either motivate significant change in the direction of a socially equitable food system, or simply reify dominant social relations, and structures that perpetuate inequity, and resource drawdown.
METHODS OF ANALYSIS

Research Assumptions

Analysis of discourse in the debates over our food and farming systems can reveal a great deal of important information. The language that groups use can be assessed to determine the ideological perspectives about sustainable foods, and examine the relationship between ideology and action. This can also provide insight into the way groups may be redefining the meaning of sustainability through this process of communication and action.

By investigating the movement discourse, I anticipate that the inclusion of social equity may be difficult for some groups, depending on the focus of their critique of the conventional food system. Further, I anticipate this difficulty will be apparent since these organizations must operate according to the demands of powerful and entrenched social-economic relations. On the other hand, I anticipate that actors associated with conventional food systems will likely be more inclusive in terms of their language around social equity. This assumption is based upon the emergent populist-elitist polarization that has emerged. Although conventional actors maybe using the language of equity, I also anticipate that equity will be framed in terms of access through growth, innovation, and global commodity markets.

Foundations for an Analytical Framework

An analytical framework was developed to orient this analysis, and address the research objectives. This approach draws from frames analysis (Entman 1993) and the theory of "argumentation in discourse" (Amossy 2009). Although these perspectives differ in some respects, they are complimentary. Combining of elements from each perspective provides a strong foundation for systematically analyzing the ideological content and rational coherence in
the debate over the future of our food systems.

The emphasis on framing provides an entry point for critically assessing specific discursive claims that organizations make with respect to sustainability and social equity in food and agriculture. Framing arguments through specific words, phrases and clusters of text help 'scaffold,' or direct people towards an intended view-point. However, these clusters of text can also reveal the underlying assumptions organizations implicitly express. For the purpose of this study, a frame is defined as an active claim regarding some reality about what sustainability is (or should be), and advanced through verbal or written means to an audience. This is taken from the view that framing is selective of certain ( politicized) realities (Gitlin 1980; Entman 1993), which are communicated to either illuminate or obscure, depending upon one’s particular world-view and interests (Lee, McLeod and Shah 2008). For example, using the term ‘elitist’ in connection with the term ‘locavore’ implies that people who purchase locally produced products are affluent, judgmental, and outside of the norm of society. This relationship obscures the political or ideological motives for ‘buying local,’ such as desire for personal connection, or supporting the local economy.

The second feature of the framework relies upon argumentation in discourse and rhetoric. The purpose for adopting an argumentative perspective is that, argumentation as a rule places significant value on the existence of reasoned connections between truth claims, premise (explicit and implied), and the evidence used within discursive exchanges to advocate a particular truth or idea. In the context of agri-food movements, groups are often engaged in discursive acts that are meant to advocate a specific vision of sustainability, and an agenda of action linked to that vision. The connection between claims, premise and evidence forms the basic structure of an argument that can be analyzed. Looking at each of these features provides
the basic framework for collecting data, and analyzing the texts. Examining the claims groups make about their work can reveal the ways sustainability and social equity is included to advance their efforts. These claims follow from an explicit or implicit premise(s) about the problems with current agri-food systems, as well as the solutions. Each element is tied together through evidence that forms the basis of a rational and coherent perspective. This evidence can be identified as specific initiatives, references to scientific research, or studies evaluating their work, as well as anecdotal statements, personal narratives and so forth.

This approach assumes an ethic for argumentation that is fundamentally aimed at increasing our shared understanding (Rehg 2003; Amossy 2009; Malone, 2009), where rational discourse serves as the principled means through which collective wisdom emerges. Thus, rhetoric, which obfuscates rather than illuminates can be considered an extension of ideologies, and a form of propaganda (Fischer et al 1996). Rasmussen and Görtzen (1990) also suggest in their analysis of Habermas, in a discourse ethic based upon rationality would excludes a rhetoric that fails to improve rational understanding. This is not the basis for a just or reasonable society, and only leads to confusion and mistrust in society.

Finally, to better understand the way groups advance principles of sustainability requires an examination of action. These initiatives represent the outward manifestation of the worldviews that direct these groups. These efforts can reinforce, and institutionalize organizational perspectives. At the same time, individuals and groups can contradict, or fail to act in ways that are congruent with their stated values and beliefs. The relationship between discourse and action reveals the presence, or absence of rational coherence in the task of creating sustainable agri-food systems. These contradictions are important areas for critical reflection, and key to identifying areas for improvement, uncovering ideological inconsistencies, and challenging both
conventional and alternative food movements to be more inclusive.

Organizational initiatives are assessed by considering the logical relationship between the claims and premises, together with the actual work that groups are pursuing (Van Eemeren et al. 1992; 2004). This demands a hermeneutic approach that looks at whether a group’s actions correspond with their overall ideals of equity and justice. With these three dimensions I present an integrated framework that looks at claims, evidence and action as a rubric for judging the rationality and authenticity of organizational actors engaged in the sustainable agri-food debate.

**Figure 2.1: Linking Claims, Evidence and Action**

![Diagram showing the relationship between claims, evidence, and actions]

It is here, at the point of convergence between what organizations advocate, and what they actually do that reveals contradictions and potential problems with the direction of their efforts. This point of convergence is where it is possible to assess how well different groups are advancing an equitable vision for a sustainable food system. Finally, by looking into the coherence between claims, evidence and action it is also possible to determine whether groups are providing a rational and instructive perspective, or rather representing an extension of ideology.

**Data Collection**

Text data for this analysis was collected from corporate and organization websites.
Websites were chosen for this study because groups increasingly use electronic texts to disseminate information about their ideals, showcase their work, and solicit support from the public (McCaughey and Ayer 2013). Furthermore, many sites are often geared towards shaping public perception. Thus, these texts can be understood as a form of political rhetoric in which various ideologies are being expressed by different agri-food groups.

A sample of websites was created by conducting keyword Internet searches. The Google search engine was used with location services turned off to avoid geographic bias (see: “Filter Bubble,” Pariser 2011) for collecting web URLs. Search terms included: sustainable agriculture organization, organic food organization, local food organization, slow food, and food sovereignty organizations. These terms were defined based upon common phrases used to identify key agri-food movements depicted in the sociological literature. These phrases were also used to categorize groups and their affiliation with a particular agri-food movement.

For each category and search term, the top 10 websites were chosen for analysis. The basis for choosing high ranking sites is based on the assumption that higher rankings indicate increased visibility among Internet users; most web traffic is driven by search engines, and websites listed on the first two pages of a search are the most commonly viewed pages on the web (Qiu, Liu, and Cho 2005). Furthermore, search rankings are determined by factors such as number of “backlinks” referencing a site indicating importance (Langville, and Meyer 2006), and key word appearance among site content. High visibility is important in this context because this analysis is interested in discourse and action that is relatively high-profile, and central to shaping public views on sustainability and sustainable foods. The process used in identifying alternative agri-food groups did not directly transfer when collecting website data for conventional actors. For instance, search terms, “agribusiness” and “agriculture firm” produced poor results. These
terms returned links primarily to news and information on agriculture in general rather than links to specific firms. Instead, a listing of major agribusiness companies was used to identify the top firms, and their websites. The types of firms used for this study included conventional seed producers, food processing firms, fertilizer firms, and grain marketing firms.

However, not all of the top sites or firms were included in the final sample. Some of these sites were social media sites, discussion forums or personal blogs that were not directly related to a civic or corporate entity. To be included, each site was reviewed to determine if it was linked to an actual organization, and whether there was sufficient content for analysis. Further, suitability for analysis was also determined by the presence of common conventions used among organization websites.

The format for many corporate sites follows a set of patterns that include an “About” page, “Programs or Projects” page, “Resources,” and “Contact Information” for organizational staff and so on.

**Figure 2.2: Example of Website Conventions –**
Sourced: Local Matters ([http://www.local-matters.org](http://www.local-matters.org))

<table>
<thead>
<tr>
<th>Who We Are – (The About Page)</th>
<th>What We Do – (The Projects Page)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Our Mission</strong></td>
<td></td>
</tr>
<tr>
<td>Local Matters is a not-for-profit based in Central Ohio whose mission is to transform the food system to be more secure, prosperous, just and delicious! We do this by promoting healthy food education, by increasing access to wholesome, delicious food and by advocating for fair food policies.</td>
<td></td>
</tr>
<tr>
<td><strong>Secure</strong> - A secure food system is less vulnerable to fluctuations in the price of commodities or the whims of policy makers. It means that more people are involved in food production, have greater access to healthy food and have a greater connection to their food. It’s resilience allows our region to survive a catastrophic event and to recover more quickly when challenged by these events.</td>
<td></td>
</tr>
<tr>
<td><strong>Prosperous</strong> - A prosperous food system ensures fair prices to producers and consumers by accounting for the true cost of building healthy soil and providing nutritious food. It focuses on keeping wealth within the community by supporting local vendors.</td>
<td></td>
</tr>
<tr>
<td><strong>Just</strong> - A just food system allows all people equal access to healthy, affordable, fresh food. It means that people have the necessary information and agency to keep their food system working on behalf of the whole community.</td>
<td></td>
</tr>
<tr>
<td><strong>Delicious</strong> - A delicious food system allows for joy and community to be built around the table. It means that foods are enjoyed at the peak of their flavor and it celebrates abundance with an appreciation for variety and heritage.</td>
<td></td>
</tr>
<tr>
<td><strong>What We Do</strong></td>
<td></td>
</tr>
<tr>
<td>Local Matters envisions local, wholesome and delicious food as a way of life for all. Local Matters is creating a new paradigm that combines better access to and education about the benefits of local food with strategic community partnerships. We are encouraging our community to commit greater resources in a more thoughtful and intentional way to address critical issues in our food system.</td>
<td></td>
</tr>
<tr>
<td>Our programs and partnerships were created to make sure that children and adults know where their food really comes from and what healthy, wholesome food is; to support our communities need for better access to delicious, local food and healthful ways to prepare it; and to entice our local farmers to grow more local food while helping them make a living wage while they do it!</td>
<td></td>
</tr>
<tr>
<td><strong>Our Programs:</strong></td>
<td></td>
</tr>
<tr>
<td>Local Food to School</td>
<td></td>
</tr>
<tr>
<td>Healthful Food Access</td>
<td></td>
</tr>
<tr>
<td>Farm to Fork</td>
<td></td>
</tr>
</tbody>
</table>
The “about” page for an organization website usually contains some sort of information about its founding, world-view and mission. The example above from local-matters.org follows this convention with little deviation. The "programs/projects" page(s) of these sites tend to provide reference to the actual work of the organization, that support, or speak to the way their overall efforts advance, or don’t advance the claims of the mission. In this example, the “what we do” page provides further justification for its projects, and provides links to the projects themselves. The information provides more justification as well as more details about their work.

Overall, between 9 and 11 websites were collected for each respective agri-food model and compiled in a database. This generated a total sample size of 60 websites covering six different categories representing different groups in the sustainable agri-food debate. Each site was broken down into its component parts, focusing upon the organizational mission, programs and projects, and supporting documents. This produced 240 interrelated texts representing the basic structures of six discursive arguments for a sustainable food future.

Analyzing the Text

Following data retrieval and categorization of each website, the texts were analyzed to identify:

1. Whether the organization presents a definition or claim about sustainability;

2. Whether the organization includes reference to social justice/equity within their definition;

3. Who, or what group is included when considering social justice/equity (i.e. justice/equity for whom? farmers, consumers, children, etc.) and are these claims specific or general;

4. Whether the organization elaborates upon their conceptualization of sustainability within the text, through reference to evidence, such as organizational efforts,
empirical study, and so forth, and;

5. Whether organizational actions are coherently linked with the stated claimed goals/vision/mission, etc. of sustainability, and specifically claims of justice/equity.

These dimensions were identified to assess the ways in which groups are actively defining sustainable agri-food systems, and the efforts they are pursuing to materialize their ideas. In particular, by looking at their definitions of sustainability, and their reported efforts, it is possible to analyze the degree to which groups directly deal with issues of social equity. This is critical for identifying areas for improvement and redirecting efforts that or more inclusive of equity issues. Further, it may reveal those groups which are advancing holistic solutions that provide a vision for systemic changes to the current system.

Considering each aspect in this list also provides a basis for looking at the coherence between statements and actions. This can reveal the degree to which groups are advancing equitable alternatives, or engaging in ideological positioning. Those who fail to effectively articulate a rational perspective, hinder people's ability to make informed interpretations about the sustainability of a particular model. This suggests that advocacy efforts may or may not be actively supporting rational engagement among ethically motivated consumers.

**Scoring Rubric**

Each site was evaluated and given a score based upon a series of dimensions laid out in the proceeding framework. This emphasis was on identifying the presence of equity/justice language, inclusivity, supportive evidence, coherence between actions and claims.

Organizations were assessed based on whether they presented a formal definition of sustainability. If there was no clear definition, but only the term, the organization received a
score of 0. If there was an implied definition that was connected within the text, a score of 1 was given. For texts that presented an explicit definition of sustainability, the score was 2. This same scale was applied to organizational texts with respect to the articulation of social justice/equity. Texts that make explicit reference to sustainability, and articulated a definition of social equity were given a score of 3. Those texts that made implied reference to social justice/equity were given a score of 1; for those texts where justice was absent, a score of zero was given. This was determined by assessing the appearance of key words, and declarative statements in each text.

_Inclusivity_ was scored by assigning a value of 1 for each group that was addressed in the speaker's discussion on sustainability in food. For instance, references of equity/justice for farmers was given a value of 1; if additional reference was made to consumers, then the text was given a score of 2, and so on. Additional references to community, low-income, and minorities were also assessed. A rating of 5 was the highest possible score. Again, a content analytical approach was employed, focusing on the presence of key words, and declarative statements that indicated which groups if any were included in their definitions and work.

As a central concern in this study, it was important to consider whether advocates of the agri-food models were simply making claims about equity, or whether they were in fact presenting a conceptually coherent perspective. To determine this, I looked at the integrity between statements of social equity and evidence, as well as coherence between statements and actions.

Using a scale between 0 and 5 each website was analyzed to assess whether organizations elaborated upon their claims of equity and justice. In particular, the use of evidence in support of claims was deemed important, and was used to determine the level of elaboration supporting a claim. Items that were considered as evidence included examples that made use of references to
empirical research articles, newspapers, interviews from authoritative voices, as well as references to common knowledge. In each case, organizations received a score of 4 to 5 if there was a strong, observable linkage to the initial claims, and specific examples of evidence were used to substantiate these claims. In some cases, organizations provided reference to materials from other organizations. Organizations scored between 2 and 3 if they provided some evidence, or if evidence did not directly correspond with stated claims. And, organizations received a 0 or 1 if they lacked evidence altogether, or if there was no corresponding link between the evidence that was provided and their statements on sustainability.

The final component of this analysis focused on the connections between the statements and actions of each organization. Actions were assumed to be represented as projects that spoke specifically to the organization’s core (stated) values and ideals about equity and sustainability. A scale between 0 and 5 was employed again to determine the connections. Organizations received a score between 4 and 5 if there were strong connections between claims/inclusivity, and projects. Organizations scored between 2 and 3 if they presented a connection between their statements and actions, but were lacking in presenting a rationale that was thoroughly connective. And organizations that scored between 0 and 1, provided little to no logical connection between their claims and actions.
DISCUSSION

Scores were applied to each organization representing a particular agri-food category (e.g. local food, agribusiness, slow food). Each organization’s website was reviewed based upon the five dimension outlined in the rubric above. Scores for each dimension were then averaged, and used to rank each agri-food model. The rankings reflect the overall efforts of organizations to articulate a sustainable food future that specifically addresses social equity. The rank for each agri-food model is shown in Table 2.1.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Perspective</th>
<th>Mean Score</th>
<th>Std. Dev.</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Food Sovereignty</td>
<td>0.77</td>
<td>.127</td>
<td>.61</td>
<td>.95</td>
</tr>
<tr>
<td>2.</td>
<td>Sustainable Agriculture</td>
<td>0.60</td>
<td>.112</td>
<td>.47</td>
<td>.79</td>
</tr>
<tr>
<td>3.</td>
<td>Agri-Business</td>
<td>0.58</td>
<td>.163</td>
<td>.32</td>
<td>.79</td>
</tr>
<tr>
<td>4.</td>
<td>Local Food</td>
<td>0.51</td>
<td>.134</td>
<td>.37</td>
<td>.84</td>
</tr>
<tr>
<td>5.</td>
<td>Organic Food</td>
<td>0.51</td>
<td>.09</td>
<td>.32</td>
<td>.63</td>
</tr>
<tr>
<td>5.</td>
<td>Slow Food</td>
<td>0.35</td>
<td>.118</td>
<td>.16</td>
<td>.53</td>
</tr>
</tbody>
</table>

Overall, organizations associated with food sovereignty ranked the highest in terms of including social equity in their definitions of sustainability. Indeed, social equity for farmers, communities, consumers and the poor were addressed by organizations linked to this perspective. Groups associated with sustainable agriculture also ranked high in terms of articulating an inclusive vision of an equitable agri-food-system. Development of policies that preserve farmland, adoption of agro-ecological farming, to reduce environmental impact on communities, and the ability to produce enough food for all community members was central in both their ideology, and their work. Agri-business groups also ranked relatively high in this scoring, based upon their emphasis on food security and increased production for the world's hungry and poorer populations.
However, to better understand these rankings in this analysis its necessary to consider the ways different agri-food organizations scored across the five dimensions used in this assessment. Each dimension was scored in order to assess how each model ranked in comparison.

**Table 2.2: Averages of Each Dimension among Each Agri-Food Model**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Perspective</th>
<th>Sustainability</th>
<th>SJ/Equity</th>
<th>Inclusivity</th>
<th>Evidence</th>
<th>Connectivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Food Sovereignty</td>
<td>0.4</td>
<td>1</td>
<td>0.76</td>
<td>0.78</td>
<td>0.83</td>
</tr>
<tr>
<td>2.</td>
<td>Sustainable Agriculture</td>
<td>0.72</td>
<td>0.44</td>
<td>0.31</td>
<td>0.69</td>
<td>0.8</td>
</tr>
<tr>
<td>3.</td>
<td>Agri-Business</td>
<td>0.81</td>
<td>0.59</td>
<td>0.35</td>
<td>0.67</td>
<td>0.65</td>
</tr>
<tr>
<td>4.</td>
<td>Local Food</td>
<td>0.6</td>
<td>0.4</td>
<td>0.16</td>
<td>0.64</td>
<td>0.72</td>
</tr>
<tr>
<td>5.</td>
<td>Organic Food</td>
<td>0.55</td>
<td>0.45</td>
<td>0.18</td>
<td>0.66</td>
<td>0.68</td>
</tr>
<tr>
<td>6.</td>
<td>Slow Food</td>
<td>0.44</td>
<td>0.5</td>
<td>0.22</td>
<td>0.24</td>
<td>0.47</td>
</tr>
</tbody>
</table>

The mean for each dimension, among different perspectives were computed to help show how each differed when considering all the assessment factors. Case notes were made for each organization in order to present some contextuality to the reasons for each score given. The resulting rankings and scoring reveal some interesting insights into the ways that conventional and alternative agri-food groups articulate their efforts around sustainability.

There are some surprising findings in terms of the conventional actors. This leads me to begin this discussion with agribusiness groups. Analysis reveals that these groups present a rather coherent form of argumentation around sustainability in general, and more specifically social equity. Agribusiness groups are often explicit about their values for increasing social equity. In particular, it is commonly argued on these sites, that their goal is to “increase food access for all,” and they are doing so by, “developing disease resistant crops.” Here, a connection is made to imply that increased food production, will be beneficial for all. Furthermore, many of these companies have created separate units dedicated to “social responsibility.” These units are characterized as being charged with helping spread corporate
social values, donating seed to farmers, information dissemination, and training poor and disadvantaged producers in developing countries. In some cases, companies engaged in other methods to show their commitment to social equity, including philanthropic work by donating money and resources to end disease and hunger in the U.S., and other countries around the world.

However, as critics of conventional systems often cite, there is nothing inherently new or different in the ways these corporations are engaging in business (Pollan 2006). Their primary focus is to expand production world-wide, whether through developing new technologies, opening new markets or donating services. The premise or underlying world-view among supporters of conventional systems is that the primary problem remains a production problem, and that increases in technical capabilities and knowledge transfer, while operating within dominant economic structures will be most effective. The general critique and response from these groups reveal two different visions of the problem, and the solution.

Groups focus on different populations when articulating social equity. Agri-businesses tend to emphasize access to food by increasing production, and availability that lower prices for all consumers. These groups in particular cite the impact that increased production has on food access for lower income households. Conversely, many alternative agri-food groups emphasize the farmer, following a critique of a conventional system that has been detrimental to small-scale family farms over the last 100 years. This highlights the divergence between conventional and alternative agri-food groups where the former argues for consumers, and the latter argues for farmers. Again, this opens up the space for powerful actors to frame differences in terms of an elitist-populist dichotomy.

In this analysis the Slow Food Movement was found to further this differentiation. Most
groups or chapters make little if any direct reference to social equity. Instead, sustainability was discussed in environmental terms, cultural heritage, and the creation (or preservation) of food cultures. Most organizational sites expressed the value of eating locally, taking time to cook with “whole” or “real” ingredients rather than purchase or prepare meals from reassembled packages or processed foods through “fast-food” chains. The cultural aspect of sustainability is one dimension that is often overlooked, and yet is increasingly gaining attention in the realm of community sustainability planning (Morse and Bell 2003).

Nevertheless, a clear definition of sustainability was often absent, and efforts to bring the cultural dimension into the lives of people across all socio-economic backgrounds appeared to be missing. For example, when reviewing the projects that Slow Food groups engage in, there seems to be little room for low-income participation. For instance, many groups sponsor monthly events centered on learning new culinary techniques, and dinning among group participants. Often there is a fee for participation ranging from $20 - $50 per meal. And while some groups may provide scholarships to low-income members, there were no direct references to this on any of their local chapter websites.

The way participants currently characterize the Slow Food movement are suggestive of the reasons conventional food groups invoke the populist-elitist dichotomy. There is significant information discussing the benefits of eating locally, the problems with industrial food, including the loss of traditional food cultures, and the importance of ‘eating fresh’. Yet there is nothing addressing the problems of low-income families having access to these foods. There is little indication that their efforts to advance an alternative food culture and eating habits are inclusive of all social groups. Thus, the way the Slow Food movement is currently advocated opens up a significant weakness in the discourse around sustainability. This is not to say that the seeds of
equity are missing completely, but rather equity is not a central concept in the way Slow Food groups define a sustainable food future.

On the other end of the spectrum, the Food Sovereignty movement articulates a strong orientation to both sustainability and social equity in particular. One of the primary concerns of the movement is the preservation of traditional food cultures for poor and marginalized groups. The focus on maintaining food cultures suggest some overlap with the principles of Slow Food. However, food sovereignty groups directly connect food culture to issues of equity, empowerment and community self-determination.

The community food security perspective in the U.S. is linked to the broader Food Sovereignty movement that emerged in parts of Central and South America (Wittman and Desmarais 2010). Together, these groups have networked, sharing ideas to develop a common perspective that promotes *relocalization* of food production for local consumption. What's also interesting here is that groups appear to adapt their efforts based upon specific social, economic and ecological context of the communities and neighborhoods in which they operate. Thus, food sovereignty groups in Chiapas, Mexico are clearly distinct in both character and focus from community food security groups in Detroit. Yet, they share a similar critique of global commodity agriculture, and vision for more just and sustainable food system.

Although groups emphasize local or community food systems, the Food Sovereignty movement differentiates itself from the Local Food movement through a clear critique of the conventional foods from the perspective of low-income and marginalized groups. Food Sovereignty groups routinely emphasize the impacts of conventional agriculture on the rural/urban poor, indigenous communities and subsistence growers in developing countries. They also focus on the struggle for control over the genetic heritage of the foods, as part of culture, but
also as insurance against what they perceive as capitalist intrusion into the fundamental basis of human survival (Wittman and Desmarais 2010).

Food Sovereignty groups in the U.S. often appear focused on promoting cooperative farming programs for poor community members in urban areas, such as community gardens and markets. These initiatives are primarily intended to provide opportunities for disadvantaged people to work by cultivating fresh foods, and even selling excess produce from their gardens. These efforts also often focus on providing healthy fresh foods in areas known as 'food deserts' while also beautifying blighted neighborhoods, and providing modest income for local residents. For example, Detroit's Black Community Food Security Network (http://detroitblackfoodsecurity.org) was initiated to promote community self-reliance, cultivate fresh foods within local neighborhoods, and increase healthy eating. They are doing this by appropriating vacant lands for community gardens, and working with neighbors in the local community to promote participation in cultivation, education and food distribution.

Although, some groups within the local and organic food movements are active in similar efforts, local and organic food groups did not consistently emphasize these initiatives on their websites. Furthermore, work to promote food security through self-provisioning was not a primary focus, or an area that local and organic groups actively framed. More often, ecological concerns were those most explicitly articulated by organic groups. The organic food movement addressed social issues from an ecological perspective, e.g. reducing pollution, and repairing degraded landscapes for people and nature – implying the social benefits of healthy ecosystems.

Organic food groups also framed the benefits of eating organic in terms of health and taste, health being a central concern for expanding equity. However, groups provided little evidence connecting support for organic agriculture with healthy eating across socio-economic
groups – except in terms of expanding production. This echoed the same language invoked by supporters of conventional systems – where the problem of access is considered a function of production rates.

Local food groups also focused on ecology. However, these groups emphasized equity for farmers, and the rural communities that rely on a vibrant agriculture. Groups are often engaged in public outreach campaigns to support farmers, encouraging consumers to “buy local.” The “Buy Fresh, Buy Local” and the USDA’s “Know Your Farmer” campaigns have been effective programs aimed at increasing consumer interest in locally produced foods. The Know Your Farmer campaign is connected to the Compass tool that allows people to identify farmers selling food within close proximity to shoppers.

Figure 2.3: Branding Local Food and Farm-to-Table

(Source: FoodRoutes Network; USDA KYF Compass Program, 2009). Specific references to these campaigns (including these images) were found on more than half of the websites analyzed. In most cases these campaigns appear to promote local food and buying directly from farmers to improve economic livelihoods of farmer, and other food related entrepreneurs. The primary emphasis is clearly the economic dimension of sustainability.
Analysis suggests these groups generally do not present a clear problematization of social equity issues for the broader community. Many groups fail to coherently link these campaigns to larger issues of food security, equity for consumers, or community development overall. In most cases, there is little in the way of a clear definition, or framing of sustainability that is directly connected with these campaigns. Instead, it appears that groups assume that the public will make the connection between local farms, local food, and sustainability on their own. It possible to speculate that dealing with the larger discourse of sustainability would over-complicate a very simple advertisement push to increase consumer interest. Yet, as large retailers, agribusiness, and trade groups push to articulate their vision of a sustainable food system, these connections may become more pliable in public opinion.

In general, the lower scoring for both organic and local groups was based on an overall lack of coherence in their definitions of sustainability, particularly the absence of representing social equity as a consistent, key dimension of sustainability. In situations where groups do address equity, it is commonly placed in terms of equity for “family farmers,” whereas poor or marginalized community members are usually not included. That is not to say that some of these groups aren't actively involved in supporting local food banks to encourage greater access to fresh foods. However, these efforts are not well publicized or incorporated within the overall framing of the work reviewed. Some might also argue that food redistribution programs are not inherently transformative. Certainly, food distribution is important for disadvantaged groups, and is a necessary reality for many families. These initiatives remain vital to reducing food insecurity for low-income households. However, equipping communities with the ability to produce some of their own food is something different in the context of our modern food system (Patel 2010). This is one of the distinguishing factors between the local food and food sovereignty movements.
Overall, the analysis reveals some interesting results. Different alternative agri-food movements address sustainability and social equity in varying degrees, with some groups avoiding the complexities of the issues altogether. Some groups make reference to sustainability, but emphasize sustainability narrowly in terms of ecology or economic concerns. Agribusiness groups were very effective in presenting a definition of sustainability, and took care to include social equity in their conceptualization. At the same time, this language appears to mask particular themes that continue to dominate thinking among conventional actors.

In terms of the use of discourse and framing around sustainability, only a few of the groups involved are actively engaged in presenting a thoroughly alternative narrative in the formation of sustainable agri-food systems. As anticipated, many groups connected to the Local and Organic food movements seemed bound to the logic and demands of the capitalist system. Although these groups may be offering an alternative paradigm, they have yet to broaden the scope of equity beyond farmers, and economic livelihoods. Furthermore, as these movements enter into the mainstream, their more radical rhetoric may have been diluted as a practical strategy to invite a broader support. Whether or not this is an intentional strategy by these movements, it appears to be a potential weak point among alternative groups. The result is an imbalance in the ways groups are defining a sustainable food system.

Conversely, if one assumes that each of these movements represents a specific feature or focus of a larger, more organized social movement, it is possible to see the whole as potentially transformative as each group confronts a specific shortcoming of the global system. Although there are clear distinctions between these movements, a network graph reveals significant interconnections between various groups. A TouchGraph map provides a visualization of the connections between content and groups. Figure 2.4 shows the relations and clustering of
different groups. While many groups are interspersed, there is a clear separation between agribusiness groups and the array of food advocacy groups.

**Figure 2.4: Network Visualization**

The large cluster in the middle of the map represents alternative food-related organizations addressing issues related to local food, sustainable agriculture, and organic. The relations connect with animal rights groups as well. The network links to groups with a corpus of media and texts.
related to informing the public about conventional food systems. The smaller clusters at the bottom of the map consists of agribusiness groups and are only connected to the larger cluster in reference to arguments that food advocacy groups make. Together, these groups are leveling a broad critique on conventional agri-food systems from multiple angles. However, as this analysis reveals, some groups present a clearer critique of the global commodity system than others.

The diversity of alternative agri-food groups can either be problematic or advantageous. In terms of enrolling a larger group of supporters, this diversity can be effective. The number of different voices enables groups to speak to a wide range of personal values and interests that can help influence consumer engagement. And though, they may appear distinct, together they present a mosaic of approaches that confront and motivate the adoption of alternatives among conventional producers and retailers.
CONCLUSION

This study suggests that reliance upon consumers to make informed, sustainable purchasing decisions remains problematic. In particular, the information and knowledge that is meant to direct consumer behavior is conflictive, and incomplete. This suggests that it may be difficult for consumers to differentiate between foods, and act upon their values. Although there has been significant growth in local and organic foods, consumers are confronted with competing perspectives that define sustainable foods in different ways. These perspectives can either advance or diminish the role of social equity a key dimension of a sustainable food system. Some organizations can intentionally or inadvertently communicate in ways that misdirect, and misinform. In some cases, organizations emphasize equity for one group of people (e.g. farmers, and small business owners), while failing to effectively consider other social groups. This underscores the pliability of sustainability and the potential for sustainability to be redefined over time. There is no assurance that social equity will remain a central dimension of the concept, particularly in the context of actual practice. This also shows the importance for groups to both express, and make social equity a vital part of their initiatives.

To date, the majority of institutional efforts remain inadequate to the task of advancing social equity within sustainability. Labeling schemes can fall short as they often do not reveal enough information to consumers about the way standards promote an equitable food system (Eden 2011). Thus, the ways that agri-food organizations publicly articulate visions for a sustainable food future can direct consumers to shop in ways that may contradict their intentions and values. This means an increasing level of sophistication is required to make decisions that most closely align with people's values. This requires knowledgeable individuals with pro-environmental and social values who are willing to look beyond labels, and consider the
competing discourse among various agri-food claims. It also demands that people make those connections between these different perspectives, and the actual food items people look to purchase. This is not impossible, but it is complex and problematic for many families looking simply make a living and put food on the table.

Complicating matters more, this analysis shows not all organizations are directed toward facilitating rational reflection about the social value of the foods people purchase. This doesn't necessarily mean that groups are attempting to purposefully misdirect people. Rather, it seems organizations operate from an assumption that there is an already established consensus regarding the sustainability of their perspectives that equity is central to their work, and that people will, or have arrived at these conclusions naturally. But, this is not the case, especially as groups look to enroll the broader public in their cause. Perspectives of sustainability and the role of social equity in our food systems is dynamic and open to ongoing revision as different stakeholders seek to shape the debate. The demand placed on consumers to be knowledgeable, willing and able to purchase sustainable foods reveals significant weakness in relying on consumers to drive equitable changes.

While this places a significant responsibility on the average shopper, it also presents a challenge to civil society groups focused on promoting an alternative agri-food system. Moving forward, these organizations must be willing to engage their own perspectives in a critical and self-reflective light. This means considering how inclusive they are in terms of advocating and working to create sustainable food systems, as well as considering whether their actions are directly reflective of their overall ideals. Many of these groups emerged in direct response to a specific failure(s) of conventional agriculture, e.g. the loss of small family farms in rural communities across the U.S. Thus, it makes sense that much of their work is geared towards
promoting social equity for producers, and improving opportunities for a new generation of farmers. At the same time, an equitable and sustainable food system must serve the needs of all community members, not just farmers or food related entrepreneurs.

The need to support efforts that are more inclusive does present some difficulties. The analysis, along with the discussion on social equity recognizes the contradictions groups confront when working primarily from the perspective of one particular group or critique. Slow food organizations rightly point out problems of obesity resulting from a highly processed and fast food culture. But, these organizations would need to articulate a coherent vision of a new food culture that is also accessible to poorer community members. Often, it is the poor who are most affected by the health problems associated with cheap calories. Developing cross-cultural (community) education programs or group sponsored meals that connect farmers, and local residents are important steps for increasing knowledge. Moving forward, this level of understanding will be critical to shaping the future our food systems. Moreover, food is universal and could provide a chance to bridge racial and social divides within fractured communities; what is required, is vision, effort, and resources.

Although many groups are actively pursuing efforts like this, the difficulty of social equity is also expressed in the ways some groups fail to articulate a coherent and inclusive message. Despite so much success, the messaging remains weak when compared to the work that other groups are pursuing. The ability of conventional actors to frame alternative agri-food groups as elitist presents problems, minimizing these efforts. The elitist-populist frame also redirects attention away from previous failures of conventional agriculture to create an equitable food system.

The findings in the study also present an opportunity to re-direct efforts that are cognizant
of the multiple dimensions of an equitable and sustainable agri-food system. Continuing to create
physical community presence, working directly with residents and community leaders, along
with developing media for advocacy will all remain critical. However, formal and informal
networking with other groups within the broader food movement is also critical. In particular,
local and organic food groups, as well as slow food chapters would do well to link up with food
sovereignty organizations to begin sharing ideas, and resources, as well as collaborating on
community and regional food issues. These connections can be inferred through their use of
rhetoric, where there is significant overlap, as well as explicit connections found in Figure 2.4.
However, these connections could be strengthened, and made more explicit to show greater
solidarity among the different groups. While each group operates from a particular strength,
together these groups present a much more coherent critique, and set of solutions to the problems
of an unsustainable food system.

Overall, there is still much work to be done. This study shows both persistent problems
and significant opportunities. Resting faith in an ethically motivated consumer class to transform
our food systems is perhaps inappropriate at this point. However, people are increasingly
engaging, and critically evaluating the rhetoric of different food groups. There is a heightened
awareness among people as the conversation over the impacts of our food system take center
stage in our public discourse. But the direction this conversation takes will have a significant
impact on the direction and shape of our future food and farming systems here in the U.S., and
around the world.

Alternative agri-food groups have a chance to continue to adapt their efforts, and
increasingly engage the public in ways that clarify the distinctions between alternative and
conventional approaches to developing sustainable food systems. This will require effort on
multiple fronts from the active work on the ground, to the ways organizations share resources and continue to shape public discourse in ways that encourage equity for producers, workers, consumers, and local communities. It will also require social and environmentally conscious researchers to continue their efforts to develop insights in the successes and failures – to build on what works, and re-think what does not work.
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CHAPTER THREE

SOCIO-ECONOMIC STATUS AND ATTITUDINAL SUPPORT FOR SUSTAINABLE FOODS

OVERVIEW

Sustainable consumption relies on individual expressions of 'consumer sovereignty' to correct the failures of global industrialization. Proponents suggest that people are increasingly using their purchasing power to express political values, and address environmental and social problems through their consumption. This study questions the ideal of politically motivated forms of sustainable consumption by considering the relationship between support for sustainably produced food, and social class.

I use consumer survey data collected in 2010 from Washington State households. Bivariate correlation and binomial logistic regression methods were used to measure the relationships between income, education, and consumer valuations of sustainable food attributes. The results indicate the highest support for sustainable foods among households with lower levels of income and education. However, willingness, and/or ability to express these values are associated with higher incomes, education levels, and predominately white households. This points to a differentiation between consumers' support for sustainably produced foods, and the ability of consumers to pay higher premiums to express their ethical values.
INTRODUCTION

Human civilization is confronting an ecological crisis. Scientific data indicates we face a number of threats from climate change, ocean acidification, contamination of fresh water supplies, loss of arable lands, and a dwindling supply of accessible fossil fuels. A central cause of these problems is the industrial patterns of production and mass consumption that characterize human-environment interactions. In particular, industrial agriculture, and a global food system have been a significant contributor to this “ecological rift” (Foster, Clark & York 2010). Global food production, storage and distribution contribute nearly a quarter of total global greenhouse gas (GHG) emissions (IPCC, 2007). Agricultural run-off from chemical pesticides and fertilizers contaminate water-ways, leading to eutrophication (dead-zones) in streams and lakes (Pimentel et al. 1997). The social and economic consequences of our industrial food system have also raised serious concerns. Several studies highlight the loss of family farms, mass rural-urban migrations, and subsequent deterioration of rural communities (Lobao and Meyer 2001; Lyson 2004).

Activists, farmers and social critics have responded by advocating a range of alternatives to the conventional methods of food production and distribution (Pollan 2006). Groups have formed across the country, launching information campaigns to increase public awareness, developing coalitions between farmers, policy makers and consumers to promote sustainable cultivation practices, and develop alternative relations between producers and consumers (Hassanein 2003; Lyson 2004). These efforts are considered to be an essential component to the push to change the way in which foods are produced and distributed, including certified organic foods, 'Fair Trade, and locally produced foods. As a result, consumers are now purchasing increasing amounts organic foods (Pollan 2006; Bean 2008). Consumers are also purchasing
increasing amount of local food to reduce “food miles” (LaTrobe and Acott 2000; Pirog et al. 2001), and help support local economies (Baker 2005; Lyson 2004; Seyfang 2006). Today, the organic food sales amount to nearly $60 billion annually in the United States alone (cite); and in 2011, local food sales reached close to $7 billion up from $4.8 billion in 2008 (Low and Vogel 2011).

Steady consumer interest and expanding markets for sustainably produced foods have inspired a vibrant area of scholarship. Social theorists and policy makers have become especially interested in the role that ethical, or reflexive consumerism may be playing in promoting more sustainable production practices (Bean 2007; Seyfang 2007). With respect to food, reflexive consumption is characterized by a broadening of the ways people assign value to the food they buy, extending beyond satisfying basic material needs (DuPuis 2000). Consumers are making purchasing decisions based upon personal ethical values. These values include: social responsibility, environmental health, animal health, and economic fairness for family farms (DuPuis 2000; DuPuis and Goodman 2004; Bean 2007). Thus people are engaging beyond the bounds of traditional economic theory where human action is determined by the maximization of personal utility.

Inclusion of ethical values in personal consumption have led some to consider the possibilities of harnessing a new consumer consciousness to help drive social movements towards sustainability, and institutionalize sustainable consumption at the level of government policies (Spaargaren, 2003; Seyfang 2004; 2007). Sustainable consumption is defined as "the use of services and related products which respond to basic needs and bring a better quality of life while minimizing the use of natural resources and toxic materials as well as emissions of waste and pollutants over the life cycle of the service or product so as not to jeopardize the needs of
future generations” (Norwegian Ministry of the Environment 1994). Sustainable consumption demands that people take increasing amounts of personal responsibility, encouraging people to become “consumer citizens.”

The concept also highlights the impacts that growing consumption is, and will, have on livelihoods. According to a World Economic Forum report, "Each year until 2030, at least 150 million people will be entering the middle class. This will bring almost 60% of the world’s population into a middle income bracket. Over the same period energy demand is projected to increase by 40%, and water demand is expected to outstrip supply by 40%." (WEF 2012). Rising middle class population and growing demand on resources presents serious difficulties for resolving the social and environmental problems we currently face. Changes will require both timely and significant alteration of the relations between people and their environments. Transforming our patterns of consumption is critical to changing these relations, and to facilitating changes in the production and distribution of food and other natural resources.

Despite growing awareness of the social and environmental implications of people's personal food purchases, consumption in the sociological literature remains an area of significant debate. Scholars continue to grapple with the complexities of consumer behavior, and the extent to which individual consumption can bring about widespread social changes (Goodman and DuPuis. 2002; Haanpaa 2007; Friedland 2008). This has arguably limited theorizations on the ways consumers can be agents of change. However, a number of social theorists contend that emergent reflexivity is indicative of broader changes towards an increasingly intelligent and sustainable society (Beck 1994; Giddens 1991). Consumers are conceptualized as political agents capable of exerting influence over powerful actors through the aggregation of daily purchasing decisions (Michaelis 2003; Stolle, Hooghe, & Miceheletti. 2005; Seyfang 2007). Other theorists
reject this, arguing that consumption does not directly challenge the organizing structures of the capitalist system (Katz-Gerro 2004; Buttel 2008; Foster, Clark & York 2010); so while consumers may be able to influence producers, the amount of influence they wield remains limited.

Institutional conceptualizations of sustainable consumption also lack a critical consideration of the complex realities that individuals face in meeting their daily needs. It also obscures the differential capacities that individuals possess to express ethical behavior through individual purchasing choices. Food is not a luxury good, like smart phones, or an energy efficient refrigerator. However applying non-use values to daily food purchases such as provenance, or environmentally responsible production incur price premiums, and producers are capitalizing by accounting for ethical concerns as an added-value (Guntham 2004; Reynolds 2004: Howard 2007). This suggests that some consumers may be unable to use their purchasing power to influence modes of production that correspond to their values. This implies limits to the efficacy of consumer-driven social change and to the potential for ethical consumption to provide a “democratic” means for personal engagement in the trajectory of our food system.

The purpose of this study is to provide some insight into theorization about the possible role of consumption in promoting sustainable development, as well as the opportunities and limitations of sustainable consumption as a force for social change. In terms of agri-food systems, one of the keys to sustainable consumption rests upon significant attitudinal support for sustainably produced foods. This requires critical inquiry into whether ethical concerns are reflective of broader societal change, or features of social privilege, such as race, economic status or educational attainment.

Widespread ethical concern may be prima facie, but it's essential to discerning peoples'
capacity to express their ethical values through consumption. While people may indicate positive attitudes towards sustainably produced foods, it does not necessarily follow that they will have equal means to advance their politics through personal purchasing decisions. The willingness of consumers to express ethical concern is often weighed against household needs and available means. This presents asymmetries in the distribution of political power. If sustainable consumption is contingent upon the freedom of choice, and a normative belief in the opportunity for equal expression of choice in democratic decision-making, then these asymmetries reveal the potential limitation for 'political consumption' as a vehicle for change. The power and influence of consumers remains defined by the logic, and structure of our economic system. That structure is reinforced by the asymmetries that result from the process of accumulation, and the range of daily choice demands that consumers face as they balance their preferences, needs, and means.

The remainder of this article reviews the concept of sustainable consumption, and then applies that concept to sustainable foods to consider the relationship between household socio-economics factors, attitudinal support for sustainably produced foods, and willingness to pay for these foods. This proceeds with a review of data collection, methods and analysis of statistical results, followed by a discussion of the results and implications for current and future research.
LITERATURE REVIEW

Sustainability and Food

The word *sustainability* has captured the attention of business leaders, policy makers and academics around the world. Although the term remains contested, sustainability is primarily defined as a process of development - "that meets the needs of current generations without compromising the ability of future generations to meet their needs and aspirations" (WECD 1987). This often includes a form of development that considers the importance of environmental health as the material basis for economic development, and promotes social equity for current and future generations (Bell and Morse 2008).

The formulation and implementation of policies for sustainability remains politically difficult (Dresner 2008). Disagreements persist with respect to reducing CO2 emissions, and creating policies for waste disposal associated with industrial production. In the US, business leaders argue that environmental regulations already are too strict, undermining their ability to remain competitive in the global market place (Dunlap and McCright 2011). For instance, proposals for an institutional cap on CO2 emissions are projected to incur a cost of 1.8 trillion US$ across the major global economies (US, EU, Japan and BRICs) by 2030 (WEF, 2012). Arguments are also made against wage laws, collective bargaining rights, and worker health (Holmes 2004). Nation-to-nation differences in regulatory policies and wages are often used as political leverage in lobbying against strengthening worker rights (Farrell, and Agrawal 2003; Levy 2005). The influence of powerful interests and competing demands make it difficult to negotiate on trade, sustainability and development issues.
With only modest movement from business and governments, responsibility for achieving sustainability is shifting towards individuals (Jasanoff and Martello, 2004; Seyfang 2007). Both in the US and in Europe, there is a growing focus on the role of individuals to assert a form of personal sovereignty in terms of consumer choice as a means to influence the form and character of current systems of production. In recent years, the consumer has gained increased attention as a key factor for addressing some of the social and environmental problems associated with industrial society.

To avoid further inaction, policy analysts have begun focusing on ways to incentivize 'sustainable consumption' to transform current practices rather than focusing on laws that force changes, which are seen as problematic in today's political climate (Patterson 2008). Furthermore, there is a recognition that people are increasingly internalizing risks in terms of the impacts that their personal choices have upon the world (Giddens 1991; Spaargaren 2003), indicating that economic approaches to changing behavior may be more feasible than outlawing those behaviors. Consumers are already incorporating social and environmental concern into the range of values that inform behaviors from the decision to recycle household waste, to driving more energy efficient vehicles, or purchasing "Fair Trade" coffee (Mainieri, Barnett, Valdero, Unipan, & Oskamp. 1997; Spaargaren 2003). Thus, sustainable consumption is promoted by some as a way to merge pro-growth economic development policies, with business concerns for profit maximization and consumer demand for sustainably produced goods and services (Spaargaren 2003; WEF 2012).

Demand for organic and local foods within the U.S. and Europe provide fertile ground for analyzing opportunities to advance sustainable consumption (Seyfang 2007). The emergence of organic and local foods is connected to a forceful critique of conventional methods of cultivation
and distribution. Alternatives such as organic, fair-trade and locally produced foods have been differentiated from conventional agri-food systems as a being better for the environment, beneficial to local economies, and more equitable for producers and consumers (Beus & Dunlap 1990; Pimentel et. al. 1997; Lyson 2004).

The social benefits of alternatives often include fairer wages for farm workers, support for poor producers operating in less developed nations, safer, healthier foods for consumers, and support for domestic family farmers (Hinrichs 2003; Allen 2004). Lyson (2004) suggests that alternatives, particularly local organic systems, are also effective for re-building communities by bringing producers and consumers together through more direct forms of exchange. Venues such as farmers markets, roadside stands, and community supported agriculture (CSAs) offer ways to promote new social relations and social interactions around food (Hendrickson and Heffernan 2002; Lyson 2004).

The environmental impact associated with alternatives are cited as reducing the use of chemical pesticides and fertilizers, increasing soil health, and reducing energy consumption resulting from the transport and storage of foods (Pimentel et al. 1997; 2006; Jackson & Jackson 2002). In general, smaller farmers that engage in poly-culture as opposed to monoculture production systems rely more heavily upon labor than machinery (Altieri 1983; Rosset and Altieri 1997). In a poly-culture production system, farmers cultivate a range of products rather than a single commodity crop such as corn or soy (Rosset and Altieri 1997; Jackson & Jackson 2002). Cultivations methods can include companion cropping, integrated pest management strategies (IPM), and rotation cropping that can minimize pesticide use, fix nitrogen to maintain soil fertility, and reduce the need for chemical fertilizers (Vandermeer, J. 1995; 2003; Pimentel, Hepperly, Hanson, Douds, and Seidel 2005; Jackson & Jackson 2002). Recent studies also
suggest that proper agricultural practices can help limit greenhouse gas emissions through no-till methods that sequester carbon within the soil (Brown & Higgins 2010).

In terms of the economic benefits, proponents argue that alternatives provide opportunities for small-scale producers to succeed in an era dominated by large farms and globalized commodity agriculture (Lyson & Guptill 2004; Lyson 2004). Farmers are able to receive price premiums for organic products, as well as directly market their goods to conscious local consumers. This also supports local businesses that specialize in local and organic foods, such as restaurants looking for alternative sources of foods for their patrons. In general, studies have shown that local production for local consumption is better for local economies in that the money spent remains within the local community longer as opposed to purchases made at large national retail chains (Brown and Miller 2010).

While conventionally produced foods are generally cheaper and more accessible to consumers than local organic foods, consumers are increasingly seeking out these foods. Consumers are showing their willingness to shop at multiple venues, and pay more for these products in part because of their perceived social, environmental and health benefits (Goodman and DuPuis 2002; Kremen, Greene, and Hanson. 2004). The relationship between consumer demand and the development of alternative food markets points to the influence consumers can have in encouraging more sustainable food production practices (DuPuis 2000; Goodman & DuPuis 2002). This suggests real opportunities exist for sustainable consumption to help transform conventional production systems.

**The Rise of the Reflexivity and the Consumer**

Thinking of consumers as political actors, or agents of change is a relatively recent
phenomenon, and it is a foundational perspective among sustainable consumption advocates. Historically, most economic theorists viewed price and basic material need as determining consumer choice (Dagevos, 2005). In the sociological literature, Marx (1972) conceptualized consumption in terms of the “commodity fetish.” This views consumers as passive, where one's personal material needs are socially determined by the logic of the capitalist system. Ritzer (1996) articulates a similar perspective with his concept of the “McDonaldization of society.” He argues that modern consumption is rationalized by large corporations (1996), and the systems of provision that mediate between and connect “a particular pattern of production with a particular pattern of consumption” (Fine and Leopold, 1993). These perspectives imply that consumers possess little agency in determining the character of systems of production and distribution.

More recent inquiries into consumption begin with Bourdieu (1984). His concept of “cultural capital,” articulates the way people use personal consumption to project social status, and differentiate themselves from others to maintain their social position. While this perspective may suggest that consumption is another way in which people socially differentiate themselves, the 'cultural turn' in Bourdieu's writings opened the door for theorizations that extend beyond Marxist, or class-based perspectives. Social theorists increasingly realize that consumption may also be guided by non-materialistic motives (Dagevos, 2005; Ziehl et. al. 2005). The variety of commodities that consumers acquire represents one of the ways people express identity, and non-material values in post-industrial societies (Katz-Gerro, 2004).

According to Giddens (1991, p. 81), individuals invoke reflexivity in their decision-making in order to deal with the uncertainty of everyday life. This tendency has been stressed by globalization processes which have *distanced* people from the goods they are buying, and reduced the capacity of governments to minimize the social and ecological the risks involved.
(Kirwan, Slee and Vorley, 2003). Therefore, these decisions not only shape personal identities, but also have direct political implications because they challenge the existing interrelationship between society, nature and individual responsibility (Giddens 1991). The reflexive consumer feels responsible towards society and expresses these feelings by means of his or her purchase behavior. Further, this behavior can be modified overtime as part of the overall process of identity formation, as individuals act and reflect upon their own practice.

Dupuis (2000) suggests that food is a particularly important focus for studies on consumer reflexivity, since food consumption is a negotiation about what a person will, and will not, let into his or her body. Reflexive food choices are based on a process of decision making that incorporates one's personal sense of social responsibility (animal welfare, environment, fair trade) while also accounting for individual needs (taste, price, and convenience) (Vermeir & Verbeke 2006; Adams and Raisborough 2008). Mintel (2001) suggests that European consumers appear to be increasingly willing to take positive actions such as becoming vegetarian or paying more for organic products, and less willing to take negative actions such as boycotting products from certain countries. The apparent politicization of personal consumer choice is having a significant impact of the food industry, motivating industry leaders to become more socially and environmentally responsible (Early, 2002; Spaargaren, 2003). Large retail companies are beginning to provide increasing quantities of local and organic foods to satisfy the demands of this growing consumer base (Buck, Getz and Guntham 1997; Goodman & DuPuis 2002; Dimitri and Oberholtzer 2009).

Although, the number of consumers concerned about ethical issues has increased in recent years, some argue that reflexive consumption does not represent true political action. These theorists also question the overall influence that institutionalized forms of sustainable
consumption can have in addressing the unsustainable character of current systems of provision. For instance, Buttel (2008) finds it difficult to reconcile the unorganized character of consumer behavior. He suggests that consumption as a political act does not directly oppose the hegemony of the global capitalist system, and in this case, the global commodity agri-food system. He questions the extent to which consumers as political actors can truly operate as a force for producing systemic shifts in our modern forms of relating through capitalist world-system. Guntham (2000) notes that consumer demand for organic foods in conjunction with institutional standardization, has helped facilitate the process of commodification, and conventionalization of these foods.

Sustainable Consumption – Assumptions and Limitations

None of these arguments suggest that personal consumption is without ethical consequences, or is politically irrelevant. Rather these arguments highlight potential limitations to power of consumption, and to the reliance upon consumption in lieu of more direct forms of collective political engagement. Nevertheless, to ignore the role that individual consumer choice can play in addressing some of the social and ecological imbalances ignores changes that are taking place all over, especially in the ways people are producing and exchanging food. Furthermore, a wholesale rejection of ’sustainable consumption' as a normative goal for society misses an opportunity to address the material realities of growing populations, growing demands, and dwindling resources.

However, institutional visions of sustainable consumption are not without some very real limitations. First, there are persistent issues of uneven development throughout the world. While increasing numbers of people are experiencing rising incomes around the world (WEF 2012),
less developed nations may lack the means, both politically and economically, to institutionalize rapid changes in production and consumption (Painuly, Park, Lee, & Noh 2003). Thus, at this point much of the success will be contingent upon the abilities and demands of consumers living in more developed nations. Although this presents political difficulties it is critical since the largest consumers of global materials, and producers of waste are those people residing among those developed nations. For example, the United States uses about a quarter of the world’s fossil fuel resources—burning up nearly 25% of the coal, 26% of the oil, and 27% of the world’s natural gas, with less than 5% of the global population (World Watch Institute, 2011). This indicates that the U.S. has an opportunity to make a significant impact through changes in consumer – producer relations. Yet, the global recession has shifted political discussions to stabilizing markets, and accelerating growth, while eschewing most issues that deal with climate change, and sustainable resource use. At least at present, this suggests that consumers, and forward thinking producers, will remain largely responsible for setting the course for change.

Second, an additional set of limitations exists with the idea of a sustainable consumerism. This form of consumption is predicated on the expression of values that extend beyond simple self-interest and utility maximization. These additional values are driven by personal ethical and political beliefs in which sustainable consumerism is conceptualized as a new form of democratic participation (McGregor 2002; Stolle, Hooghe, and Miceheletti 2005). Advocates suggest that promoting participation through 'consumer citizenship' is essential to reforming unsustainable systems of production (McGregor 2002). On one hand, consumers are assumed capable of acting upon their ethical, political values through their consumption. On the other, consumers are assumed to possess a significant degree of power in terms of influencing producers and the systems of provision. This perspective implies a rejection of structural forces
that dictate consumption, rather producers seen as passive, and inherently responsive to consumer demand.

Although, there is evidence that producers are adopting more sustainable production practices to meet demand, the pace remains limited. Producer responsiveness is also mediated by cost-benefits between shifting production methods (new costs), relative to consumer demand, particularly in terms of what consumers will pay. Existing infrastructure and resource availability also factor into these costs. So in many cases, the adoption of more sustainable practices together with possible return on investment remains a point of risk and concern for producers. The array of factors that go into making such business decisions limits their responsiveness, thus also limiting the assumed power that consumers possess. The emphasis on consumer demand also ignores the power that producers exert and the logic of capitalist accumulation shapes relations.

Proponents also appear to assume that, if given the opportunity consumers will act in more responsible, or altruistic ways (Spargaaen 2003). However, the concept of sustainability is fluid and subject to a range of definitions. The capacity for consumer choice to affect positive eco-social change is in part, dependent upon the information that people use to formulate personal conceptions of value. As shown in Chapter 2, the ways in which proponents of both conventional and alternative foods frame sustainability can minimize certain aspects while amplifying others. For instance, even among alternative agri-food activists, their rhetoric tends to emphasize the environmental and economic benefit, while outweighing the importance of social equity. When groups do address equity it is incomplete, and tends to emphasize benefits for farmers or the poor, but rarely both.

Yet, even when equipped with adequate information about the ethical value of a product, this knowledge is weighted against a range of other interests. Research conducted by the IGD
(Institute of Grocery Distribution) suggests that consumer decisions about food and shopping are ‘unashamedly selfish’ (IGD, 2002). These decisions are primarily based on costs, health concerns, taste, appearance and convenience, rather than being driven by purely altruistic motivations such as concern for the environment, or fairer wages (IGD, 2002). Bean (2008) suggests that attributes such as local and organic may be secondary concerns, becoming important only after primary material needs have been met.

Material affluence also remains a significant factor determining a person's ability to exercise their views in the market. This would appear to be both a function of consumer purchasing power, as much as it is a function of the systems of provision that cater to high income consumers. For instance, stores specializing in local and organic foods often locate stores in areas where consumers tend to have high levels of education, income, and white collar employment (Horowitz, 2000). Wild Oats has been referred to as the “supermarket of the hip” because its clientele is comprised not only of traditional natural food lovers, but also those with substantial and growing amounts of discretionary purchasing power (Fuller, 2001). All suggest that consumption is still subject to material, spatial and social constraints - implying that those individuals who occupy differing positions across social strata will possess differing degrees of agency when it comes to thinking and practicing their politics through consumption. Ultimately, the more affluent consumer enjoys greater opportunities for employing political power than their less affluent counterparts - a function of having more discretionary income to pursue political values through their consumption choices. This doesn’t imply that lower-income consumers are unable to pay a premium for these goods; rather the relative cost for ethical consumption is greater for low-income families that may attenuate their willingness to act in ways that reflect their values.
The interrelationship between information, systems of provision and consumer agency (as a function of socio-economic position) can be viewed through the evolution of organic food. The organic food movement provides an example where activist engagement helped to bring about growing awareness and change with respect to the way foods are being produced - at the same time, it shows the limitations of individualized consumer choice to radically change our food system. Organic food arose out of a movement of farmers, and activists opposing industrialized form of food production (Wright and Middendorf 2008). It was originally a multifaceted critique of conventional agriculture that had produced negative results for small-scale family farms, environmental health and rural communities (Lyson 2004). However, by the 1980s, organic food was increasingly viewed as a specialty or high end niche product rather than an alternative to the conventional food system (Buck, Getz and Guthman 1997; Guthman, 2003; 2004). Growing demand among more affluent consumers shaped the growth and evolution of organic food production – prompting a rapid industrialization of the organic system itself (Guthman, 2003).

According to Guthman (1998; 2004), the convergence of changing agricultural policy, a shift in consumer tastes to favor quality attributes, and environmental concern created new opportunities for conventional producers and large agribusiness. This process resulted in conventional producers adopting organic production methods in order to capture higher premiums for their products (Milestad 2003; Guthman, 2004; Best 2006). The industrialization of organic production systems as means to satisfy affluent consumers was identified as a form of gentrification (Guthman, 1998), undermining the larger eco-social objectives that both activists and farmers had been advancing over the last 30 years. Consequently, the mainstreaming of organic foods inspired a refinement of the concept of 'alternative' and 'sustainable' food with the
addition of the local among alternative agri-food networks (Goodman and Goodman 2007). This redefinition points to the importance of information and consumer perception. While consumers may believe they are purchasing sustainably produced foods when buying organic it may not be the case, particularly when considering social equity for small-scale farmers, and the livelihoods of agriculture dependent communities. This also highlights the fact that the concept of sustainability, and the strategies to promote sustainability are rather fluid. Although social, environmental and economic dimensions remain foundational to definitions of sustainability, the specific ways these dimensions are conceptualized and materialized continue to be refined and reflected in practice (Jacobs 1999).

While organics once represented what it meant to be sustainable in contrast to conventional agriculture, the 'local' has been used to further differentiate between 'unsustainable' industrial (even organic) food production, and 'sustainable' local organic food production (Norberg-Hodge 2000; Hinirichs 2000). Today, large-scale retailers are also beginning offer locally produced foods, again to respond to a more informed group of consumers who are willing to pay higher price premiums for foods believed to be more sustainable than other conventional foods (Voight 2012), including mainstream organics. So while conventional producers seek to capitalize on growing demand for sustainably produced foods - the consumer is charged with the responsibility of having to seek out increasing amounts of information in order to know what foods correspond with their personal values. Thus, the consumer is only as reflexive as the information they have available to them, and ultimately determined by the importance a consumer affords extrinsic factors, and the material means they have for acting on their values.

Although it would appear that growing reflexivity has not significantly challenged the modern industrial agri-food system, shifting consumer choice, and at times, an adversarial form
of food politics has begun to influence production practices. These phenomena have also resulted in changes in marketing, and have increased access to local and organic foods with major retail outlets. Furthermore, with rising incomes and a growing middle class, a number of researchers suggest that consumer engagement and traditional concepts of social class may not necessarily hold the same weight in high-modernity. According to Holt (1998) society can no longer be delineated based solely on economic position; social groups also emerge according to moral, cultural and lifestyle characteristics. Further, Sweetman (2003) and Katz-Gerro (2004; 1999) note that identity is potentially chosen, and cannot be assumed based on traditional factors such as class, gender, or ethnicity.

Previous research into the growth of reflexive food consumption has yielded mixed results. Some studies indicate that both higher levels of education (i.e. people having graduated from college) and income are positively associated with both local (CSAs, Farmer's Markets, and other direct marketing venues), and organically grown or produced foods (Guntham 2004). On the other hand, other research has produced contrasting results. For example, Bean's 2007 study of Ohio consumers indicates that these factors are not associated, reflecting other past studies, suggesting that class based characteristics appear to be less important than previously thought. Her research focused on comparing consumer's support for both local and organic foods. Although her study focused exclusively on the state of Ohio, the results of her work does provide support to sociological theories dealing with expanding reflexivity among consumers, and patterns of social identity that do not follow traditional class distinctions. Other factors such as environmental concerns with large-scale industrial agriculture (and related energy consumption), desire to protect rural farm culture, and the importance of social equity factors may be more influential than income and education levels in determining consumer food provisioning
behaviors - suggesting the growth of reflexive concerns and the potential for growth of a sustainable agri-food system (Bean 2007).

Contrasting results in previous studies necessitate further analysis in order to better understand the limits and opportunities that exist for advancing consumer citizenship and sustainable consumption. For example, do Bean's results among Ohio consumers hold in Washington? Is there a more widespread consideration of ethical values among consumers independent of socio-economic factors? Or do people's associations, such as church membership or involvement in local environmental groups, determine the inclusion of ethical valuations food shopping? Each of these questions has relevance to considering the growth of reflexivity among consumers, and implications for the possibilities of sustainable consumption.
RESEARCH METHODS

Research Questions

Sustainable consumption implies a form of consumer citizenship, and with this citizenship, each person has a civic responsibility. People are encouraged to take a proactive role for mitigating the impacts that their consumption has on the world around them. This thinking is based upon the implications of growing consumer demand in a world defined by material limits. It also recognizes that consumers in many developed countries are expressing reflexivity through their purchases of sustainable products (Spargen 2003; Seyfang 2007). The ethical imperative is that more consumers recognize the political and ecological ramifications of their consumption, and to use their purchasing power to influence the character of our systems of production and exchange. These prescriptions avoid addressing the potential for inherent asymmetries of power associated with social and economic differentiations in modern society. Social equity is an essential dimension of sustainability. Further institutionalization of class differences through consumer citizenship may only serve to perpetuate patterns of inequity.

Some research suggests that these socio-economic differences may not be as important as some theorists might think. The relationship between support for sustainable foods and variables associated with social or economic status have revealed mixed results, and factors such as income may not be a significant predictor of potential for consumer reflexivity. However, other studies have shown that higher levels of income and education are linked with sustainable food consumption, particularly organic foods (Shepherd, Magnusson & Sjoden 2005). Considering these inconsistencies, this research looks to further analyze these relationships in the context of growing consumer reflexivity and the potential limits of pursuing consumer citizenship. This study is guided by a series of research hypotheses:
1. Higher levels of income and education will be positively associated with high attitudinal support for sustainably grown or produced foods.

2. Respondents with higher levels of income and education will be more likely to state ethical food factors as being very important when purchasing food.

3. Respondents with high income and educational attainment will be more likely to be willing to pay more for local foods.

Assessing the importance of these factors for consumers represents an indicator of ethical concerns among consumers, regardless of class categories. Results that show no association between a respondent's stated importance of ethical foods, and income-education would indicate that these categories are not as important as some scholars might suggest. Such findings would give further evidence to views that consumers may become more inclined to think, and act in broader political terms with respect to their consumption choices. This would have significant implications for considering the growing potential for consumption as a vehicle for conscious social change, and the idea of expanding reflexivity in modern society. On the other hand, confirmation of these hypotheses would indicate persistent problems with current thinking around sustainable consumption and the idea of advancing consumer citizenship.

**Data Collection**

In fall 2010, the Social & Economic Sciences Research Center at Washington State University (Pullman, WA) conducted a statewide random digit dialing (RDD) telephone survey in Washington State. The purpose of the study was to learn more about consumer food buying patterns in conjunction with consumer perspectives on agricultural production and local food systems in Washington. The population for this study consists of all households in Washington. A
random sample of land-line phone numbers was used. In order to ensure the same number of completed interviews were obtained in Eastern Washington compared to Western Washington, the sample design was stratified by counties geographically on the west side of the state versus counties geographically on the east side of the state (See Figure 3.1). The Cascade mountain range which runs north-south across the state serves as the dominant topographic feature that divides the state into two distinct regions.

**Figure 3.1: Map of Washington State**

![Map of Washington State](image)

The differences between these two regions are significant in terms of climate, topography, population densities, industries, politics, and their respective histories of development. The eastern portion of the state is characterized by low population density, dry climate, and more extreme variation in temperature. The region is predominately rural, politically conservative, with low population densities, except for in a few key urban centers that are spread throughout the region. Agricultural production in the eastern region is dominated by large farms that take advantage of major waterways for irrigation, principally the Columbia River that runs through much of the eastern portion of the state, and flows into the Pacific Ocean.

The western portion of the state is significantly wetter, and temperatures are more
moderate in comparison to the region east of the Cascades. This is a result of closer proximity to the Pacific Ocean. The western region also has much greater population density as the major urban centers of the state are located within the Puget Lowlands that follow along the western slopes of the Cascades. In terms of agricultural production, the western region is characterized by smaller farms that are much more diversified in terms of types of foods grown and produced than agriculture in the eastern region, and presents more opportunity for direct marketing practices (Ag Census, 2007).

The survey sample consisted of 6321 randomly generated telephone numbers from the population of telephone numbers in Washington. Of the total, 2750 numbers were from the eastern Washington and 3571 were from western Washington. For this survey, completed interviews were obtained from 1004 respondents out of an estimated 2,512,327 households in Washington (US Census 2005-2009), yielding a margin of error of about ± 3.16% at the 95 percent confidence level.

Survey questions addressed a range of factors that consumers might consider important when buying foods for their household. Questions first addressed those factors that are commonly considered utility maximizing such as price, taste, convenience and freshness. The questions were designed along a three-point Likert scale. Respondents were asked to rate the level of importance with respect to each factor: 1.) Not Important, 2.) Somewhat Important, 3.) Very Important. There were 16 attributes in this question set, beginning with the importance of 'Freshness.' The remaining attributes included: Price, Taste, Brand, Year round availability, Appearance, Ease of Preparation, Shopping Convenience, Organic, Nutritional Value, Safety, Locally Produced, Grown or Produced in an Environmentally Sustainable Manner, Grown or Produced in a Socially Responsible Manner, Grown in Washington State, and Supporting Family
Farms. The questionnaire also asked respondents about shopping venues and their level of participation in the provisioning of local foods and the self-provisioning of foods through community gardens.

Data on household race, income, education, farming history and family size were also collected. The survey collected data on race and ethnic identity, as well as categorical data for household income based upon the 2009 tax year. Data on respondent's highest level of education completed was also recorded. Household size was determined by the number of household residents that were 18 years of age or older, as well as the number of residents who were 18 years of age or younger. In total, the survey consisted of approximately 95 questions, and averaged 19 minutes to complete over the telephone.

Defining the Research Variables

My analysis focused on a series dependent variables used to frame consumer attitudes and behavior towards ethical, and locally grown or produced foods. The first set of variables start with consumer's stated importance of ethically produced foods; these include whether foods were produced in ways that consider social, economic and environmental factors. Data collected from the survey provided three variables for measuring the importance of sustainably produced foods. Surveyed households were asked to rate the level of importance on three specific attributes: \textit{socially responsible production, support for family farms, and environmentally responsible production}. Respondents were able to choose: 1 = 'Not Important,' 2 = 'Somewhat Important,' and 3 = 'Very Important.'
Table 3.1: Importance of Sustainable Food Attributes

<table>
<thead>
<tr>
<th>Variable</th>
<th>Not Important</th>
<th>Somewhat Important</th>
<th>Very Important</th>
</tr>
</thead>
<tbody>
<tr>
<td>Env. Responsibility</td>
<td>11.93 %</td>
<td>40.64 %</td>
<td>47.43 %</td>
</tr>
<tr>
<td>Social Responsibility</td>
<td>9.99 %</td>
<td>34.24 %</td>
<td>55.77 %</td>
</tr>
<tr>
<td>Supporting Family Farms</td>
<td>3.83 %</td>
<td>29.47 %</td>
<td>66.70 %</td>
</tr>
</tbody>
</table>

Social responsibility refers to the concept of social equity, while support for family farms relates to economic livelihoods. Environmental responsibility was also considered, referring to ecological health. It is important to note that the generality of these terms obscures the potential that people may define these concepts in different ways. For instance, research has shown that concepts such as 'local' are difficult to accurately define (Ostrom 2006), and concepts such as socially responsible production might mean a range of things from fair labor wages, to worker rights, and fair-trade. However, this study is concerned with whether these attributes are important for consumers in their own terms.

The decision to use the term of environmentally responsible production rather than use the term organic follows from the problem of personal definitions. Environmental responsibility as a term is considerably more ambiguous than organic, where institutionalized standards are used in defining what is, and isn’t organic. However, interest in organic foods may not be a good indicator of reflexivity in terms of broader ethical concerns. Interest in organic foods have been associated with taste and health attributes that a person would naturally find direct utility in (Shepherd, Magnusson & Sjoden. 2005; Bean 2007). Furthermore, foods might be produced in environmentally responsible ways but lack the organic label (Lyson 2004). What is critical for my purposes is to determine whether people find these factors important in their thinking about
food, and whether reflexive food concerns represents a phenomena of privilege in terms of race and class distinctions.

The third hypothesis is assessed by analyzing consumer responses on 'willingness to pay' for local foods. This variable was included to provide a fuller analysis of ethical concern, particularly with respect to local foods. Increasingly, the concept of 'local' has been invoked by food activists, scholars and social critics as being more sustainable than foods shipped over long distances that is associated with the industrialized food production, including the industrialization of organic foods (Pollan 2001). Locally produced foods are often framed in ways that suggest these foods represent a convergence of factors related to sustainability (Bean 2007; See Chapter 2) – in terms of production methods and alternative forms of exchange that directly link farmers and consumers.

**Figure 3.2: Willingness to Pay for Local Foods**

In addition to focusing on consumer support for local food, willingness to pay (WTP) provides an approximation of the monetary value that consumers place upon ethical concerns (Vermeir and Verbeke 2006). Some economists suggest that WTP may provide a better indicator of potential behavior than approaches that focus on stated preference alone (Bateman, Carson, Day,
Hanemann, Hanley, Hett and Swanson 2002). WTP invites respondents to think more directly about the cost they are willing to bear in acting according to their ethical values. So while data might indicate that respondents are in general “very” concerned about the environmental and social impacts of the ways their foods are produced, it does not necessarily follow that consumer are willing to pay more to as a means to express their concerns (Vermeir and Verbeke 2006). Thus, the addition of WTP for local foods may reveal differences in the data when respondents apply a monetary value to such non-use values as provenance, and sustainability.

The dependent variables were all recoded as binary variables. The recoding was carried out to emphasize those consumers who expressed the highest attitudinal support for each attribute. The first three variables were recoded with 1 representing respondents who rated 'supporting family farms,' 'environmental' or 'socially responsible production' as Very Important. All other responses were coded with a value of 0. The assumption here is that consumers who rated each item as being 'Very Important' are more likely to include sustainability concerns in their purchasing decisions.

In terms of consumers' WTP for local foods, consumers who reported they were willing to pay up to 25% or more were assigned a value of 1, and all other responses were given a value of zero. This assumes that consumers who were willing to pay a significantly higher premium would be more likely to purchase these foods. While local food may not actually be 25% more in terms of direct cost, the effort to obtain these foods can be seen as additional cost to the consumer, especially where food options are often determined by factors such as time, convenience, and availability (Kirwan, Slee and Vorley 2003). Often locally produced foods are more difficult to obtain, requiring consumers to locate alternative venues for purchasing these items (Vermeir and Verbeke 2006), such as attending farmer's markets, CSAs, or food
cooperatives. This assumes that consumers may spend more time obtaining locally produced foods in order to satisfy household dietary needs.

**Independent variables**

Income and education represent the two variables used to delineate socio-economic standing. Income and education are hypothesized to be related to support for local and sustainably produced foods. Further, these attributes also relate to broader concepts of class and social position, which point to individual opportunities, or 'life chances' that people possess. According to Hinrichs and Kremer (2002) life chances are thought of by most American sociologists to be structured by class because they represent power, prestige and wealth. I look specifically at income as a representation of wealth, and the possibility of 'life chances' that enable greater levels of social mobility, as well as expression of personal preference in leisure activities, and consumption.

Education is utilized to describe the amount of “cultural capital” an individual possesses (Bourdieu 1984). It is argued that individuals with high levels of cultural capital have increased critical thinking skills and access to information and these capabilities make them more attuned and better equipped to process or make critical judgments of industrialization (Eckersley 1989). Thus, income and education are all expected to be associated with reflexive concern for sustainable food attributes and support for alternative food systems.

For the purposes of this analysis, income was retained without recoding. Education was coded, 1 = Up to High School Diploma, 2 = 'Some College including a Vocational Degree', 3 = 'Four year College Degree,' and 4 = 'Post graduate work including degree.'
Table 3.2: Frequency Listing for Income and Education

<table>
<thead>
<tr>
<th>Household Income for 2009</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $15,000</td>
<td>7.27</td>
</tr>
<tr>
<td>$15,000 up to $25,000</td>
<td>8.86</td>
</tr>
<tr>
<td>Over $25,000 up to $50,000</td>
<td>22.71</td>
</tr>
<tr>
<td>Over $50,000 up to $100,000</td>
<td>27.29</td>
</tr>
<tr>
<td>Over $100,000 up to $250,000</td>
<td>16.24</td>
</tr>
<tr>
<td>Over $250,000</td>
<td>2.09</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Highest Level of Education</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up To High school degree</td>
<td>19.38</td>
</tr>
<tr>
<td>Some college</td>
<td>31.97</td>
</tr>
<tr>
<td>College degree</td>
<td>31.27</td>
</tr>
<tr>
<td>Postgraduate Work inc. Deg</td>
<td>17.38</td>
</tr>
</tbody>
</table>

Race was also included in this analysis. After coding responses as 'missing' for respondents who declined to disclose their race, only 9% of non-white households were included out of a total of 979 households. Although, this is a small proportion of the sample population, the inclusion of race is substantively important, but may not yield significant statistical results due to the small population. Few studies have directly dealt with race in terms of local and ethical food concerns. Slocum notes the lack of inquiry into race and sustainable consumption, particularly with respect to food (2010). Some research has begun looking at race and class with respect to 'food deserts' that shows an association between race, class, place of residence and the lack of access to supermarkets (Hendrickson, Smith and Eikenberry, 2006). As noted in the previous section, purveyors of alternative foods such as organic and local often locate stores in more affluent neighborhoods, which tend to be homogenous in both economic and ethnic backgrounds. Yet, these studies do not assess whether there is strong attitudinal support for more
sustainably produced foods among non-white populations. Insight into these relationships speaks directly to present day limits in thinking surrounding sustainable consumption and consumer citizenship.

This analysis also includes variables that relate to respondents involvement in civic groups, particularly environmental and political organizations. Respondents who said they were part of either a political or an environmental organization were given a value of 1, whereas no involvement was given a value of 0. Involvement in an environmental group relates both to respondent’s connection to environmental issues and the importance sustainability issues, such as climate change environmental conservation and sustainable food. It also touches upon the concept of social and cultural capital that a respondent might possess within their community and thus increase the more sustainable behavior.

Households with children (under 18 years old) were also included in this list of variables. This variable was recoded as a dichotomous variable with 0 = no children present in the household and 1 = one or more children present. Previous research suggests that children can be important in influencing parents’ food provisioning choices (Story and French 2004). Cost, time it takes to prepare foods and whether children will actually eat certain foods may weigh heavily on whether a consumer is actively purchasing foods through alternative outlets, as well as the level of importance a consumer gives to reflexive concerns beyond taste, price, convenience and nutrition.

Table 3.3: Summary Statistics for Independent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean/</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>53</td>
<td>17.70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Children in Household</td>
<td>32.3%</td>
<td>.468</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Eastern Region</td>
<td>49.4%</td>
<td>.500</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------------------------</td>
<td>---------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Female</td>
<td>71.2%</td>
<td>.452</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Parents Farmed</td>
<td>37.7%</td>
<td>.485</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Political Group</td>
<td>14.0%</td>
<td>.347</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Environmental Group</td>
<td>11.3%</td>
<td>.316</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

I also include the geographic region where the respondent lives, with household residing in the eastern portion of the state receiving a value of 1 and those in the west being given a value of 0. This is based upon the possible differences that exist between households living in either region, and the distinctiveness of these two regions with respect to environment, culture and economics (Jussaume and Kondoh 2008). As mentioned previously, the eastern region is more sparsely populated and dominated by commodity agriculture, whereas the western region is better characterized as urban, and more densely populated. Agriculture does exist throughout the western region but the scale is significantly smaller. Overall, the regions offer residents a different set of opportunities and ways of living that might reveal differences with respect to the way these people connect food and reflexive concerns.

The inclusion of whether respondents currently farm or are from a farming background (defined as whether their parents farmed), also relates to ways consumers may conceptualize the link between food and sustainability. Finally, I also include respondents gender (0 for male and 1 for female), and age as independent variables, that may reveal generational, as well gender differences in the ways consumers are thinking about sustainable food consumption.
ANALYSIS

Bivariate Analysis of Reflexive Concerns

Examination of the bivariate correlations between the independent and dependent variables provides an initial test of the research hypotheses. The correlation matrices presented in Table – 3.4 reports the strength and direction of each of the independent variables with the dependent variables – subjective rating of each ethical attribute, and willingness to pay for locally grown or produced foods. The following paragraphs describe the significant correlations followed by a summary of the results in relationship to the original research hypotheses.

Table 3.4: Bivariate Correlation - Attitudinal Support for Sustainably Produced Foods

<table>
<thead>
<tr>
<th></th>
<th>Social Equity</th>
<th>Environ.</th>
<th>Family Farms</th>
<th>WTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income</td>
<td>-.104**</td>
<td>-.100**</td>
<td>-.095**</td>
<td>.165***</td>
</tr>
<tr>
<td></td>
<td>.003</td>
<td>.004</td>
<td>.006</td>
<td>.000</td>
</tr>
<tr>
<td>Education</td>
<td>-.100**</td>
<td>-.074*</td>
<td>-.105***</td>
<td>.183***</td>
</tr>
<tr>
<td></td>
<td>.002</td>
<td>0.020</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>Non-white</td>
<td>.048</td>
<td>.072*</td>
<td>0.050</td>
<td>-.083*</td>
</tr>
<tr>
<td></td>
<td>.138</td>
<td>0.026</td>
<td>0.123</td>
<td>.010</td>
</tr>
<tr>
<td>Female</td>
<td>.122***</td>
<td>.094*</td>
<td>.124***</td>
<td>.081*</td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td>.003</td>
<td>.000</td>
<td>.012</td>
</tr>
<tr>
<td>Age</td>
<td>.051</td>
<td>-.009</td>
<td>.041</td>
<td>.033</td>
</tr>
<tr>
<td></td>
<td>.107</td>
<td>.788</td>
<td>.198</td>
<td>.306</td>
</tr>
<tr>
<td>Children</td>
<td>-.035</td>
<td>-.006</td>
<td>-.057</td>
<td>-.023</td>
</tr>
<tr>
<td></td>
<td>.279</td>
<td>.856</td>
<td>.071</td>
<td>.4806</td>
</tr>
<tr>
<td>Parents Farmed</td>
<td>.065*</td>
<td>.061</td>
<td>.053</td>
<td>.014</td>
</tr>
<tr>
<td></td>
<td>.043</td>
<td>.057</td>
<td>.092</td>
<td>.652</td>
</tr>
<tr>
<td>Eastern WA</td>
<td>.002</td>
<td>-.025</td>
<td>.091*</td>
<td>-.002</td>
</tr>
<tr>
<td></td>
<td>.955</td>
<td>.424</td>
<td>.003</td>
<td>.942</td>
</tr>
<tr>
<td>Envir. Organization</td>
<td>.108***</td>
<td>.105**</td>
<td>.044</td>
<td>.176***</td>
</tr>
<tr>
<td></td>
<td>.000</td>
<td>.001</td>
<td>.159</td>
<td>.000</td>
</tr>
<tr>
<td>Pol. Organization</td>
<td>-.005</td>
<td>.021</td>
<td>.040</td>
<td>.159***</td>
</tr>
<tr>
<td></td>
<td>.883</td>
<td>.510</td>
<td>.204</td>
<td>.000</td>
</tr>
<tr>
<td>Church Member</td>
<td>-.087*</td>
<td>-.029</td>
<td>.040</td>
<td>-.048</td>
</tr>
<tr>
<td></td>
<td>.006</td>
<td>.371</td>
<td>.202</td>
<td>.133</td>
</tr>
</tbody>
</table>
The bivariate correlation analysis reveals several insights. Results indicate that a statistically significant association exists between income and all four factors related to sustainability. Contrary to the research hypotheses, higher income levels were negatively associated when it came to supporting family farms, importance of environmentally responsible production, and socially responsible production. All three were significant at the level of $p < .01$. This indicates that increased support for sustainability produced foods is linked to households with lower take-home earnings. This is a significant finding, and was not anticipated. However, this inverse relationship doesn't hold when compared to consumers' WTP for local foods. As expected, higher earning households were positively associated, $r = .165$, at $p < .001$ with WTP for locally grown or produced foods. This indicates that high income households may be more likely to spend more money to express reflexive concerns. This association supports the first research hypothesis.

Higher levels of education were also found to be negatively associated with consumers' who gave high importance to sustainably produced foods. The correlation results showed a negative association between support for family farms, $r = -.101$ and $p < .001$. The correlation coefficients for environmentally and socially responsible production were weaker in terms of the $r$-value than for income. These values were still negatively associated and statistically significant, $r = -.074$, $r = -.100$. The results further contradict the first research hypothesis. However, like income, higher educational attainment was found to be positively correlated with WTP for locally produced foods. The analysis produced an $r = .183$ where $p < .001$. This indicates that class related factors may actually still play a significant role in the valuation that consumers give to certain ethical attributes, in this case locally produced foods.

The relationship between race (in this case non-white) and subjective value for
sustainably produced foods was found significantly associated with two of the four attributes. Non-white was positive and weakly associated with subjective importance of environmentally responsible production, \( r = .072 \); the correlation was significant at \( p < .05 \). Non-white was negatively associated with increased WTP for local foods, \( r = -.083 \), at \( p < .05 \). Socially responsible production and support for family farms were both positively associated with non-white, but failed to be statistically significant. In each case higher income, higher educational attainment and Caucasian were negatively associated with farm livelihoods, the environment and social equity. Alternatively, higher income, educational attainment and being Caucasian were positively associated when considering a monetary value for reflexive ideals.

Several other demographic variables were included in the correlation analysis. This included a determination of whether differences in the respondent’s sex resulted in a statistically significant association for the dependent variables. In this case, being female was positively correlated with supporting family farms, \( r = .124 \), \( p < .001 \); environmentally responsible production, \( r = .094 \), \( p < .01 \); and socially responsible production, \( r = .122 \), \( p < .001 \). Sex was also positive and significantly associated with WTP for local foods, although the value for \( r \) indicates a weak relationship, \( r = .081 \), \( p < .05 \). Households residing in Eastern Washington was positive, and significantly correlated with high subjective importance for supporting family farms, \( r = .091 \), \( p < .01 \). However, regional location was not found to be significantly associated with any of the other dependent variables. Households with a farming background were positively associated with support for socially responsible food production. Although the value for \( r \) was very weak, \( r = .065 \), the relationship is statistically significant at \( p < .05 \). The other remaining variables were not statistically associated. Respondents’ age was not significantly associated any of the dependent variables. Households reporting the presence of children under 18 were negatively
correlated with all four of the dependent variables, but were also not statistically significant.

The direction and strength of associations were also assessed for three variables related to civic involvement. Participation in a political organization produced a positive and significant association with WTP for locally produced foods, \( r = .160, p < .001 \). Political involvement was not statistically correlated with any of the other variables. Involvement in an environmental organization was positively correlated with all four dependent variables, and met the threshold for statistical significance for three of them. Social and environmentally responsible production was positively associated with environmental engagement, \( r = .108, \) at \( p < .001 \), and \( r = .105 \) with a significance of \( p < .01 \). Environmental engagement was also positively associated with higher WTP for local foods, \( r = 1.76, p < .001 \). Finally, church membership was assessed, all but one association failed to surpass the threshold for statistical significance. Church membership was found to be negatively correlated with high levels of subjective importance for socially responsible food production, \( r = -.087, r < .01 \).

**Interpreting Correlation Results**

In terms of race and socio-economic indicators, the relationships between three of the four attributes supports theorizations suggesting that reflexivity extends beyond traditional social and economic groups. Consumer concern for environmental and social equity with respect to the way food is grown or produced maybe more widespread. This is further supported by the fact that 61% of survey respondents stated that sustainability factors were important food purchasing considerations. This indicates that, when it comes to food, reflexive consumerism may be a very real, and growing phenomena associated with modern society. Furthermore, this suggests support for current and potential development of sustainable consumption, and consumer citizenship.
On the other hand, it is unclear whether consumers' subjective valuations for these attributes equate to interest, willingness or even an ability to act in accordance with these ethical values. The disconnect between respondents stated subjective value for sustainably produced foods, and willingness to pay for local raises some questions as to whether attitudes regarding sustainable consumption are shifting. Attitudinal support may be present in greater degrees among less affluent households, but may not equate to actual behavior among groups with different socio-economic backgrounds.

The relationship between civic engagement (political and environmental) has been shown in previous studies (Bean 2007); the association suggests that involvement in a group can be important way to reinforce one's ideals. Further this type of relationship makes theoretical sense, particularly where individual consumption is increasingly framed as an act of political agency (Michelleti 2003; Stolle, Hooghe, and Miceheletti 2005). In this context, politically engaged consumer's would be the most likely (regardless of socio-economic status) to express their political and ethical values through their consumptive choices. On the other hand, church membership was not linked to attitudinal support for sustainable food consumption. Although beyond the scope of this study, this raises some interesting questions about role of religious affiliation and alternative food movements, as well as larger issues connected to social justice and environmental sustainability.

**Logistic Regression Analysis**

Binomial logistic regression analysis was conducted to assess the relationship between race, socio-economic status and civic engagement upon increased attitudinal support for sustainable food consumption. The purpose for this analysis is to predict the probability of
attitudinal support for sustainable foods for the given values related to social and economic position. For instance, I want to assess whether high income and educational attainment increase the probability that consumers are willing to pay higher prices for foods that correspond to their ethical concerns. Confirmation of this hypothesis would further suggest that while interest in sustainably produced foods extends across socio-economic status, when using one's purchasing power to express political values, income and education may in fact continue to play an important role. While additional factors may be at play, this would affirm arguments that the use of one's dollar, as analogous to voting, disproportionately favors people who possess the financial means to act according to their own political ideals.

Tables – 3.5 through 3.8 report the logistic regression results for assessing attitudinal support for sustainably produced foods, and consumers' likelihood of willingness to pay more for locally grown foods.

**Table 3.5: Attitudinal Support for Environmental Responsibly Produced Foods**

|                  | B     | Wald | S.E. | DF | P>|z| | Exp(B) |
|------------------|-------|------|------|----|------|--------|
| Income           | -.155*| 4.21 | .0754| 1  | 0.04 | .86    |
| Education        | -.145 | 3.36 | .0792| 1  | 0.067 | .87    |
| Non-white        | .102  | 0.16 | .2563| 1  | 0.692 | 1.11   |
| Female           | .495**| 9.54 | .1612| 1  | 0.002 | 1.64   |
| Age              | -.005 | 0.92 | .0053| 1  | 0.338 | 1.0    |
| Children         | -.091 | 0.26 | .1772| 1  | 0.609 | .91    |
| Parents Farmed   | .265  | 2.99 | .1534| 1  | 0.084 | 1.30   |
| Eastern WA       | -.062 | 0.18 | .1466| 1  | 0.673 | .94    |
| Envir. Organization | .707**| 8.89 | .2398| 1  | 0.003 | 2.03   |
| Pol. Organization| .116  | 0.28 | .2192| 1  | 0.598 | 1.12   |
| Church Member    | -.121 | 0.68 | .1466| 1  | 0.411 | 0.89   |

The results above in Table – 3.5 indicate that income, sex and participation in an
environmental organization were all significant. Examining Exp(B) indicates that for each increase in a household's gross annual income, respondents were 14% less likely to express high attitudinal support for environmentally responsible food production. Women were 1.6 times more likely than men to give high importance to environmentally responsible food production. Respondents who are involved in an environmental organization were 2 times more likely to say environmentally responsible food production was very important in their food purchasing considerations. However, race and educational attainment, along with the rest of the independent variables were not statistically significant.

Table – 3.6 shows the regression results for high attitudinal support for foods that are grown or produced in a socially responsible manner.

Table 3.6: Attitudinal Support for Socially Responsible Food Products

|                  | B    | Wald | S.E. | DF | P>|z| | Exp(B) |
|------------------|------|------|------|----|------|--------|
| Income           | -.129| 2.88 | .076 | 1  | 0.090| 0.88   |
| Education        | -.178*| 5.00 | .087 | 1  | 0.026| 0.84   |
| Non-white        | .086 | 0.11 | .265 | 1  | 0.742| 1.09   |
| Female           | .523**| 10.65| .161 | 1  | 0.001| 1.69   |
| Age              | .001 | 0.06 | .006 | 1  | 0.801| 1.00   |
| Children         | -.160| 0.80 | .179 | 1  | 0.372| 0.85   |
| Parents Farmed   | .255 | 2.67 | .156 | 1  | 0.103| 1.29   |
| Eastern WA       | .106 | 0.51 | .149 | 1  | 0.476| 1.11   |
| Envir. Organization | .922***| 13.93| .256 | 1  | 0.000| 2.51   |
| Pol. Organization| -.080| 0.13 | .224 | 1  | 0.722| 0.92   |
| Church Member    | -.330*| 4.95 | .149 | 1  | 0.026| 0.72   |

The relationship between attitudinal support for socially responsible food production revealed some slight variation in comparison to the results for environmentally responsible production. Again, race was not found to be an important predictor of attitudinal support. Unlike
the previous model, income was also found to be a poor predictor of consumers' subjective valuation of socially responsible food products. However, the Wald statistic confirms that educational attainment is a significant predictor at \( p < .05 \). For each increase in the respondent's educational level, they were 16\% less likely to rate social responsibility as important consideration when purchasing food. Also, women were 1.7 times more likely to give high importance to social responsibility than men. And similar to the previous model, active participation in an environmental group was the most significant predictor with actively involved respondents being 2.5 times more likely to value social responsibility in their food provisioning.

Church membership was also found to be a significant predictor of the likelihood that a consumer values socially responsible food products. Similar to the correlation analysis, the logistic results highlight a negative relationship where respondents who are active members of a church were .72 times, or 28\% less likely to rate social responsibility as an important food purchasing consideration.

The logistic analysis of support for family farms is reported in Table – 3.7. The analysis shows a number of similar results, with some slight difference compared to the results for the previous two models.

|                          | B    | Wald | S.E. | DF | P>|z| | Exp(B) |
|--------------------------|------|------|------|----|------|--------|
| Income                   | -.073| 0.83 | .08  | 1  | 0.362| 0.93   |
| Education                | -.281**| 11.44| .084 | 1  | 0.001| 0.76   |
| Non-white                | .252 | 0.83 | .279 | 1  | 0.366| 1.29   |
| Female                   | .661**| 16.31| .163 | 1  | 0.000| 1.95   |
| Age                      | .005 | 0.71 | .006 | 1  | 0.397| 1.01   |
| Children                 | -.169| 0.83 | .185 | 1  | 0.362| 0.85   |
| Parents Farmed           | .122 | 0.56 | .164 | 1  | 0.454| 1.13   |

Table 3.7: Importance of Supporting Family Farms
In particular, for every increase in a respondents' educational level, they were 25% less likely to indicate that supporting family farms was of high importance when obtaining foods for their household. While higher levels of education were inversely related to support for family farms, women were found to be 1.9 times more likely than men to place a high value on family farms as an important factor for making food choices. The Wald statistic shows that regional location is also a statistically significant predictor of consumers' likelihood to include family farms in their purchasing decisions. Households residing in Eastern Washington were 38% more likely than households in Western Washington to place high importance on supporting family farms when food shopping. However, contrary to the previous two models, none of the factors related to civic involvement were shown to be statistically significant as predictors of support for family farms. Further, the remainder of the independent variables also failed to surpass the threshold for statistical significance of p < .05.

The final analysis looks at the relationship between WTP for local foods, and independent variables. The logistic results reported in Table – 3.8 reveal a very distinct set of difference in terms of the directionality and significance of the relationships between consumer's willingness to pay and the independent variables.

**Table 3.8: Willingness to Pay for Locally Grown or Produced Foods**

|                | B     | Wald | S.E. | DF | P>|z| | Exp(B) |
|----------------|-------|------|------|----|-----|-------|
| Income         | .324*** | 13.26 | .0902 | 1  | 0.000 | 1.38  |
| Education      | .307**  | 10.96 | .0933 | 1  | 0.001 | 1.36  |
Based upon the computed Wald statistic, the most obvious differences in WTP for local foods is the significance of sex, race and socio-economic position as predictors. With respect to WTP, race was statistically significant. Non-white households were 1.7 times less likely to state they were willing to pay more for locally grown or produced foods. For every increase in a household's gross annual income, there was a 38% increase in the likelihood that respondents would be willing to pay significantly more for local foods. Along with income, higher levels of education corresponded to a 36% increase in the odds that consumers reported that they were willing to pay more for local foods. The results indicate a rejection of the null hypothesis, and a confirmation of the research hypothesis – respondents with high income and educational attainment will be more likely to be willing to pay more for local foods. Interestingly, sex was also important, representing a significant predictor of attitudes towards sustainability and food preferences across all the models.

While the relationship between WTP race and socio-economic factors was distinctly different than the previous models, the relationship between civic involvement and WTP was similar to previous models. Participation in either a political or environmental organization resulted in a significant relationship with consumers' likelihood to pay more for locally produced
foods. Respondents who were involved in a political organization were 1.8 times more likely to pay more for locally produced foods than non-politically active respondents. Similarly, people participating in an environmental organization were 2.1 times more likely to pay more than people who are not engaged in an environmental organization.

**Summary of Results**

Starting out I expected to find a positive association between attitudinal support for sustainably produced foods and higher levels of income and education. I also anticipated a positive association between white households and support for sustainable food attributes. Confirmation of the character of these relationships would provide some evidence of the limits to faith in the potential for sustainable consumption as a democratic form of political agency. The correlation analysis revealed a statistically significant relationship between income and education, but in the opposite direction that was hypothesized. Rather, higher support for family farms, and importance of social and environmentally responsible food production was correlated with lower levels of income and education. Further a weak association was found between non-white households and support for sustainably produced foods. Aside from the initial research hypotheses, sex was a surprising. Female respondents were positively correlated across all of the dependent variables.

These findings were subjected to further analysis through a binomial logistic regression analysis to determine the predictive value of each of these factors for subjective importance given to sustainable foods. The results were mixed, but did reveal that households with higher education or income were less likely to incorporate environmental responsibility in their food purchasing decisions. This corresponds with the correlation results. However, income was not a
statistically significant predictor of either support for family farms or socially responsible
production. This ultimately suggests that attitudinal support for incorporating these
considerations into food buying is not bound to income. And, in all three cases, race was also not
a statistically significant predictor of attitudinal support for sustainably produced foods.

Considering support for local foods, sharp differences emerge that contrast previous
results. Although "local" is not necessarily synonymous with "sustainability," the decision to
focus on WTP for local foods is based upon growing support for local, and the framing of local
foods as being more sustainable than either organic or non-organic conventionally produced
(Hinirichs 2002; Lyson 2004; Pollan 2006, also See Chapter 2). The results for the binomial
logistic regression correspond with the correlation analysis showing that race, sex education and
income are all associated with increased willingness to pay for locally grown or produced foods.
Higher levels of income, education, being female, and white households were all more likely to
be willing to pay more for these foods. This confirms that while households with lower education
and income levels are more likely to value ethical attributes. However, it does not follow that
they are as willing, or able to express these values by paying more to purchase local foods.
Trade-offs related to cost and convenience may significantly interfere with people's willingness
to pay more for items that embody ethical values.

The analysis revealed some other interesting insights. Involvement in an environmental
organization (and to some extent political organizations) was shown to be a stronger predictor of
consumers' attitudes and willingness to pay for foods that correspond with personal non-use
values. These results suggest that socio-economic and demographic characteristics may not be as
effective in predicting behavior. This in part, validates Holt’s (1998) general assertion that
society cannot be delineated based solely on economic position, but that social groups also form
according to moral, cultural and lifestyle characteristics. Volunteer associations serve in the formation and maintenance of social capital that strengthen the bonds between people (Putnam 1995), and in the continual remaking of identities. So while socio-economic differences still appear as important factors, there are other drivers that influence peoples' values and expression of those values through volunteer associations and personal consumptive choices. And these drivers may be better predictors of reflexive behavior.

However, this doesn't mean that race or socio-economic differences have become inconsequential in the processes of social change. Further, not all of associations express support for issues that confront social inequity, or ecological degradation; some associations serve to maintain identities, and positions of power relative to other individuals and group (Young 1989; Barker and Cwikowski 1999). It does however point to increasingly complex world that is much more difficult to interpret through theories that oversimplify of complex social phenomena. These findings also point to potential problems with the over-reliance on consumers to use their purchasing power to correct for the unsustainable practices of industrial production. Personal responsibility is part of the larger solution (McCregor 2002), but it must be understood in the context of persistent social, cultural and economic barriers, as well as the spatially ordered systems of provisioning that constrain opportunities for consumers to express ethical concern through everyday consumption.
CONCLUSION

Reflexivity among consumers appears to be a growing phenomenon among many of the Northern industrialized nations. It is certainly the case in Washington State were nearly 50% of households said that environmentally responsible production was a very important consideration when purchasing food. And, 55% of households indicated high support for socially responsible food production. Sociological interpretations of this phenomenon indicate that this awareness is in part the legacy of the new social movements that arose during the 60s, and in particular the environmentalist movement of the 70s (Wright and Middendorf 2008). These movements brought a range of social and environmental issues to the table, and challenged governments, business and ordinary citizens to consider the impacts of both individual and collective behaviors. Climate change, problems of deforestation, and the environmental damages of industrialization have become part of popular culture. Sustainability has become a term that is routinely used in policy debates from the United Nations, to local city councils and neighborhood associations. It's a concept that has diffused into educational institutions, and business, where terms like "green" and "eco-friendly' are commonly used short-hand.

Expanding eco-social awareness has prompted a growing number of people to take personal responsibility for transforming their patterns of consumption. Yet, while needed changes are occurring such as the popularization of organic and local foods, sustainable consumption as a normative goal rooted in the idea of democratic choice and consumer citizenship has largely been left unscrutinized. Recently, scholars have begun looking into some of the barrier and opportunities that exist to advance this goal (Seyfang 2007; WWI 2011), such as the patterns of consumption that are often mediated and shaped through systems of provision (Fine & Leopold 1994; Seyfang 2007). Others, such as Buttel (2000) and Friedland (2008), question the extent to
which politicized consumption and consumer reflexivity in general, can actually have in reshaping systems of production.

Furthermore, the differences between attitudes and willingness to pay suggest possible difficulties with relying on sustainable consumption to transform the systems of production and exchange. Although willingness doesn't equal ability to pay, introducing a monetary value to determine ethical concern forces people to consider the possible trade-offs. Consumers may be able to pay higher premiums, but the willingness to do so is shaped by other demands. Households with higher levels of disposable income appear to be more willing to act upon those ethical concerns, as the relative proportion of food expenditures to income will be less for those higher income families. Thus, for lower income household, the willingly pay 25%, or more for local foods presents a likely barrier to their decision to express ethical concerns. Yet, lower income households appear to be more concerned about sustainable consumption, suggesting the relevance of interjecting an appreciation of class into the mix. And, also suggesting that an excellent way to support consumer power is through equity – i.e. as lower income consumers get more money, they will be “willing to pay.”

Current conversations on consumption as a form of political expression often fail to include problems in the differential capabilities that people possess in order to act according to their political values. It fails to recognize that people's daily lives are marked by a range of competing choices, and the realities of time-space that are implicitly factored into each persons' opportunity costs. Thus, political engagement, or consumer citizenship is mediated by these realities in different ways among people across the spectrum of social, economic and physical locations. And, while ethical concern may be expressed in greater degrees among less affluent citizens, the capacity to act remains the privilege of more affluent citizens who possess the
economic means to make choices that reflect their values. In light of differences shown in Washington State, the expression of a sustainable consumerism may be attenuated, reinforcing inequities in the distribution of political power. This is simply a function of inherent differences among people’s economic capabilities to incorporate altruistic values into the satisfaction of material needs.

An ethically informed consumption requires consumers to possess a deeper understanding of the social, ecological and cultural implications of the products they purchase. It requires them to possess knowledge of the means of production, processes of storage, and exchange. However, it also speaks to the need for possessing a foundational awareness of the range of issues that currently confront modern industrial society. This in of itself assumes that people will possess similar world-views as to the problems we collectively face, suggesting that their valuations of sustainable productions will be differentiated based upon the weight they give to these issues. It also assumes that people will possess the same level of knowledge, be it formal educational opportunities, or as a product of personal social networks. Further, even with all of these factors, it still doesn't change the complex nature of personal choice, and the ways people balance their needs, means, and their ethics.

Although each of these issues is a cause for concern, these are not meant as a full scale argument against more people considering the wider implications of consumption, and the culture of consumerism. My intent is to point to the difficulties associated with the political, social and communicative dimensions associated with the concept. It is my goal to challenge the notion that governments and producers can transfer responsibility solely to consumers, and that producers are merely passive to consumer demands. In order for such ideas to have any substantive value, ongoing critique is essential to the process of change towards more
ameliorative socio-ecological relations. At the same time, our understanding of the drivers of ethical concern and sustainable consumption remains open to deeper interpretation that might reveal insights for addressing some of the shortcomings and issues raised in this study. Understanding the drivers are essential to further theorizations into the possibility for individuals to effect positive social change through individual choices.

For instance, it may be possible that these shifts are the result of a broadening of empathetic values toward nature with and beyond people's community of place. As the impacts of socio-ecological change become more apparent, the importance that people give to place may also be aiding in a greater degree of concern, prompting questions into what can be done. Aldo Leopold suggested in his Land Ethic (1939), that shifts in the way people relate to nature was required as the basis for developing more sustainable relationships with the land. He argued that society requires an expansion of the community concept to incorporate the natural environment. As urban expansion transforms our human living spaces, and global commodity agricultural systems transform our rural landscapes, the lack of natural integration is potentially leading to a scarcity of natural interactions that prompt people to value importance of nature more. Linked to this interaction, is potentially the increased social awareness into the environmental problems that confront our neighborhoods, cities, regions and the planet.

The ability to affect change may seem insurmountable to the individual, food offers a sphere of action in which individuals can in a sense, make their personal values known. For one, unlike potentially more abstract ideas such as climate change - food is an essential characteristic of every human being's daily life. At the same time food and agriculture is fundamentally connected to both nature, and the ways in which society interacts with nature to satisfy the necessities of living (Grigg 1995; Foster, Clark & York 2010). And as previous studies suggest,
food occupies a particularly complex sphere of personal, social, and cultural valuations that touch directly upon peoples livelihoods. It speaks to personal health and the health of one's family in terms of the foods people have access to, and the foods they consume - but the ways we produce food also shapes the quality and health of our environments, as well as the communities that are dependent upon agriculture for their existence.

However, in the end, people will have to confront the very real imbalances between resource consumption and rising demand. Even with more sustainably produced foods, pressures will potentially outstrip the gains we might see. Rather than learning how to do "More with Less," we may need to learn how to do "Less with Less."
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CHAPTER FOUR
NATURE-CONNECTEDNESS AND SUSTAINABLE FOOD CONSUMPTION

OVERVIEW

In The Land Ethic, Aldo Leopold argued that a personal connection or affinity towards nature is essential to bringing about a sustainable society. Recent studies in the field of environmental psychology indicate that Leopold may indeed be correct in his original thesis. Research shows that a significant relationship exists between pro-environmental behavior and nature connectedness. Our understanding of the concept and its relation to pro-environmental behavior still remains in its early phases of development.

This study attempts to advance theory by placing connectedness to nature within the context of sociological perspectives of reflexivity and sustainable food provisioning. Efforts have been made in this area, yet little work has focused on the growth of organic and local food consumption. In particular, I analyze the relationship between personal connections to the natural world and the likelihood that people purchase local and organic food as part of a reflexive project.

I accomplish this through an analysis of data collected from a 2010 survey of households in Washington State. Bivariate correlation and binomial logistic regression analysis are used to analyze the relationship between peoples sense of connection to the natural world, and involvement in sustainable food provisioning, e.g. organic foods, farmer's markets, and backyard gardens.
INTRODUCTION

Terms such as green, eco-friendly, and sustainable have become part of the modern lexicon; and the need for less destructive approaches to production and consumption has become popularized across most industrialized nations. Scholars suggest that increased awareness, together with public demand for new (or alternative) forms of development indicates society is reconsidering the dominant worldview that has guided its relationship to the physical environment (e.g. Milbrath, 1984). Along with expressing support for pro-environmental policies, people are incorporating ethical concern for social and environmental issues into their daily consumer choices (Lyson 2004; Morgan, Marsden & Murdoch 2006; Wright and Middendorf 2009). These new patterns of consumption suggest possibilities for promoting sustainable consumption as a public policy goal (Spaargaren, 2003; Seyfang 2006; 2008; World Economic Forum 2012). For example, growing demand for organic and locally produced foods indicate the influence that consumers can exert to bring about more sustainable patterns of production (Stolle, Hooghe, & Miceheletti 2005; Wright and Middendorf 2009).

Some sociologists conceptualize these shifts in terms of reflexivity, where consumption occupies a special place in the formation and expressions of personal identity (Marsden & Murdoch 2006; Adams and Raisborough 2008; 2010; Long 2009). Consumer choice is seen to reflect a range of possibilities in the construction and re-construction of ‘self” in modern society – some of which may be expressions of ethical values in response to perceived problems (Giddens 1991; Adams and Raisborough 2010).

However, the complexity of consumer choice makes it difficult for researchers to determine the primary drivers influencing decisions to purchase more sustainably produced foods. Some research still suggests that price, convenience, and habit remain central to the
process of personal valuation and consumer choice (Kirwan, Slee, & Vorley 2003; Vermeir and Verbeke 2006). Nevertheless, the inclusion of non-use values in consumer choice is a growing phenomenon among the middle-class in modern society (Gutham 2000; Katz-Gerro 2002).

In terms of improving both theory and practice, it is important to consider specific features of the reflexive project. This includes those features that motivate expressions of personal concern for environmental and social issues. Recognizing the potential role of nature connectedness may also reveal how reflexivity is influencing decision making, and altering ideas about traditional consumer values such as price and product characteristics. Developing a deeper understanding of these factors can help to conceptualize pathways towards promoting policies and campaigns that expand sustainable consumption. Moreover, we may get a better picture of opportunities and limitations of this perspective.

To achieve this aim, I draw upon recent work in the field of eco-psychology, and the concept of nature connectedness. Aldo Leopold (1949) argued that in order to correct the problems associated with industrial society, people would have to extend their personal sense of self and community to include the larger natural world. Leopold suggested that a fundamental shift in the way individuals and society at large view and act toward the natural world was required to achieve a more sustainable society. Thus, for Leopold, the felt relationship that a person had with the natural environment was a key to change.

With Leopold's premise, Mayer and a group of colleagues developed the Connectedness to Nature Scale (CNS) to measure this “felt relationship” to the natural world (Mayer et. al. 2004; 2006). Their work showed that the CNS possessed significant value for analyzing the formation of environmental attitudes, behaviors, as well as factors that help cultivate a personal sense of closeness to the natural world. The CNS has been effective in predicting environmental
attitudes, as well as behavior, such as involvement in an environmental group, or the likelihood of recycling (Gosling, and Williams 2010). These investigations suggest that nature connectedness is an important factor in shaping beliefs, values and action with respect to the environment. Thus a person's felt connection, or affection, toward the natural world may be an important driver in motivating more sustainable behavior among some individuals.

Research analyzing the association between connectedness to nature and behavior, particularly consumption, remains in an early stage of development. Few studies have investigated people's connection to the natural world, and their consumption of local and organic foods. Moreover, there is little to suggest that one's felt connection to nature has been conceptualized in the context of reflexivity, or broader efforts to create a “new moral economy” around sustainable food provisioning.

This study begins to fill this gap by integrating sociological thinking on reflexive consumption and psychological inquiry into the importance of connectedness to nature. Using a modified version of the CNS, I test Leopold's claim that one's affection towards the land has a positive influence on sustainable behavior. In particular, I focus on consumer's engagement in purchasing organic foods, and local food directly from farmers (e.g. farmers markets, food co-ops, and CSAs).

Data for this study was collected through a random digit dialing (RDD) telephone survey of Washington State households. The data was then analyzed using a bivariate correlation analysis to assess the direction and strength of associations between nature connectedness and sustainable food provisioning. A binomial logistic regression analysis was conducted on each of the food provisioning variables, with nature connectedness as the independent variable. Additional variables were also included in the analysis, such as region of residence, gender and
farming background. Each was tested in relation to nature connectedness and sustainable food provisioning.
LITERATURE REVIEW

Environmental Awareness and Social Change

'Fordist' approaches to production and consumption are altering critical ecosystems. The extraction and transformation of nature's resources to make houses, build cities, transport food and so forth are having large-scale consequences on climate, abundance of fresh water, and loss of arable land to produce food for growing populations (Catton 1979; Meadows, Randers & Meadows 2004; Foster, York & Clark 2010). Scientists warn that we are currently in the process of overshooting the earth's capacity to support human societies as they currently operate (Polzin 2000; Meadows, Randers & Meadows 2004; IPCC 2010).

The loss of wildlands and the dramatic alteration of our world have inspired challenges to the consequences of technological modernization and human expansion. From John Muir to Rachel Carson, people have spoken out about the intrinsic value of the natural world. They also made it a point to emphasize the importance of our personal relationship to natural lands, the ability to experience forests, birds, insects, mountains, streams, and so on. The legacy of their work has been central to the evolution of social thought and action with respect to preserving environmental health.

Today, concerns over environmental health have increasingly become part of mainstream discourse, and people are becoming more aware of the environmental and social costs associated with modern forms of living (Dunlap and Van Liere 2000; Spaargaren, 2003). As these realities become more apparent, people are recognizing that human existence depends on a healthy environment (Milbrath 1984; Spaargaren, 2003). People are taking it upon themselves to alter their behavior by adopting new patterns of consumption (Seyfang 2008). They are making conscious decisions to include environmental and social values in their daily consumer choices.
(Mainieri, Barnett, Valero, Unipan, & Oskamp. 1997; Goodman and DuPuis 2004). In particular, some consumers are increasingly engaging in the provisioning of local and organic foods as alternatives to conventionally produced foods.

Foods grown or produced by conventional methods have been critiqued from a number of perspectives, and have been linked to significant environmental and social impacts. Among the central arguments against conventional production are the rate of greenhouse gas emissions, and energy inputs necessary to maintain the global-scale agri-food system (Jackson and Jackson 2002). Moreover, extensive fertilizer and pesticide use from large-scale agriculture have negatively impacted critical ecosystems around the world (Hepperly, Hanson, Douds & Seidel 2007). Nutrients from fertilizer used in conventional agriculture and animal manure coming from industrial feed lots have been associated with the deterioration of some large fisheries in North America (Frankenberger and Turco 2003). Runoff of soil and nitrogen fertilizer from agricultural production in the Corn Belt has also been linked to eutrophication (creating a 'dead zone') of the Mississippi delta that empties into the Gulf of Mexico (Pimentel et al. 2007). The National Research Council (2003) reports that the cost of excessive fertilizer use—that is, fertilizer inputs that exceed the amount crops can use—is $2.5 billion per year. Modern agricultural practices can also contribute to the erosion of soil, with annual costs of public and environmental health losses exceeding $45 billion (Pimentel et. al. 1995; 2007).

In contrast to conventional production, organic systems eliminate the need for synthetic fertilizer and pesticides, instead relying on ecological processes to maintain soil health, water quality, and employ ecological principles to mitigate the impacts from pests and pathogens (Alterei 1999; Jackson and Jackson 2002; Pimentel et al. 2007). Today, organic food production has become a US$60 to US$90B global industry (US$12B in the United States alone).
Alternatives to the ways in which foods are distributed have also become popular (Lyson 2004). Small-scale farms focused on markets for local consumption have risen dramatically. Consumers are increasingly considering the methods of production, the distance food travels between farm-to-plate, and support for local farms. The 2007 Census of Agriculture showed an increase (of 14,631) small farms since 2002—the first reversal in decades of farm consolidation and loss (United States Department of Agriculture [USDA], National Agricultural Statistics Service, 2007). A growing number of relatively young people are taking up farming as both a business and way of life. In 2011, local food sales reached $7 billion in the US. Further, from 1994 through 2012 there has been an exponential growth in the number of farmer's markets across the US (National Agricultural Statistics Service, 2012).

**Figure 4.1: Farmers Market Growth: 1994-2012**

Thomas Lyson (2000; 2004) coined the term 'civic agriculture' to refer to these alternatives, such as farmer’s markets, CSAs, co-ops, as well as community and backyard
gardens. These enterprises are directed in ways that meet the needs of local growers, consumers, and communities of place (Lyson & Guptill 2004). In contrast to the globalized form of conventional agriculture, civic agriculture encompasses more direct and self-reliant approach to food production, distribution, and consumption (DeLind 2001).

The rate of growth and potential for alternatives to transform the modern food system has become an area of intense sociological inquiry. Sociologists interested in understanding these changes often conceptualize this in terms of social movement theory – viewing the emergence of sustainable forms of consumption in terms of new social movements of food (Wright and Middendorf 2009; Starr 2010). Although organized political action plays an important role in creating awareness of organic and local foods (Friedland 2008), it is perhaps too simplistic to suggest consumer demand for these foods is a direct consequence of a large-scale social movement (Friedland 2009; Long 2009). Other theorists suggest that growth in demand and the recent changes in the character of the food system are associated with consumer reflexivity (Goodman and Dupuis 2002; 2004).

Reflexive consumption directs attention to patterns of personal choice that extend beyond traditional perspectives of utility. In addition to price, taste and convenience, consumers are becoming more environmentally and socially aware (Goodman and DuPuis 2004; Marsden et al. 2006; Wright and Middendorf 2008); they are including ethical perspectives in their daily purchasing choices. In this sense consumers are recognizing the political implications of consumption and taking on empowering roles as agents of change. The politicization of routine behavior, like everyday consumption, is a key feature of modernity in today's society (Beck 1984; Spaargaren, G. 2003; Stolle, Hooghe, and Miceheletti 2005). It is also central to the argument among proponents of sustainable consumption (Seyfang 2006; 2008) – that a growing
segment of environmental and socially conscious consumers will, through their aggregate purchasing power, transform the character of conventional systems of production and exchange (McCregor 2002; Goodman and DuPuis 2004; Seyfang 2006).

Although consumption can be viewed as a form of political agency, not all consumers identify themselves as conscious political actors, or as participants within a broader social movement (Friedland 2008). Taste, perceived health benefits, and safety continue to be significant determinants of consumer choice; particularly, among consumers who are regular buyers of organic and local foods (Vermeir and Vebleke 2006). Consumers often cite the taste difference between produce grown organically and produce grown by conventional methods (Gutham 2002). Thus, ethicalvaluations represent only one set of factors that play into an otherwise complex decision-making process. This suggests that conclusions derived about the influence of ethical values in daily purchasing decisions to change systems of production must be put into context of traditional factors of choice.

Despite the importance of utility in consumer choice, Miller suggests, ‘consumer behavior’ – “is likely to be shaped by diverse values of caring for other people and concern for fairness” (Miller 1998; Barnett et al.2005). This means those aspects that motivate reflexive concern remain important areas of research. Moreover, the emergence of alternative foods have been deeply connected to values, and framed in ways that touch upon people’s beliefs and concerns regarding the environment, labor, community, and agrarian sentiment (Lyson 2004; Bell 2007). Food produced and distributed within conventional systems have been routinely framed in terms of Domination of Nature, Specialization, and Competition, while the alternatives have been associated with ideas of Harmony with Nature, Diversity, and Community (Beus and Dunlap 1990; Lyson 2004). Advocates within the various food movements often emphasize a
disconnection between people and their food, calling attention to the relationship between food and spatially distinct landscapes, ecologies, cultures, and social relations (Lappe, Collins, and Fowler 1977; Marsden et al. 2006).

**Measuring Reflexive Values and the Importance of Nature**

In terms of both theory and practice, it is important to consider the features that may motivate reflexive concern, and inspire new patterns of behavior with respect to food provisioning. From a practical standpoint, investigating the thinking and framing around ethically motivated consumption may be useful in promoting a broader adoption of more sustainable forms of consumption. In the context of theory, we can further investigate the role of ordinary people as agents of political change, and the potential broadening of sustainable food consumption as a social phenomenon.

One of the key frames of local and organic foods is the environmental frame that speaks to people’s concerns regarding environmental health, climate change and ecological limits. Numerous studies have been carried out to examine the influence of environmental attitudes and concerns on shaping pro-environmental behavior, like organic food provisioning (Mainieri, et al. 1997; Michaelis 2003; Shepherd, Magnusson, and Sjoden 2005; Davis, Green, and Reed 2009). It has proven a vibrant area for scholarly inquiry, highlighting the importance of personal concern for the environment in modern society.

The New Environmental Paradigm (NEP) (Dunlap and Van Liere 2000) was designed by Dunlap & Van Liere (1978) to measure concern for the environment. This included people’s beliefs about the limits to growth, humanity’s ability to upset the balance of nature, and humanity’s right to rule over nature. Their model assesses an individual’s ‘primitive beliefs’ concerning their relationship to the natural world. It has been argued that these ‘beliefs’ form
core truths about self, the physical world, and social reality (Rokeach 1968). Further, they are thought to impact more specific attitudes and ideas about environmental issues.

The NEP has been important for assessing the relationship between environmental concern and engagement in alternative food provisioning. However, this is not the only way to measure the environmental basis of a person’s involvement in local and organic food purchasing. There are potentially more illuminating methods that may reveal insight into pro-environmental behavior beyond alternative food provisioning. For example, Mayer and Franz (2004) suggest that the NEP may not be an adequate measure of one’s affective, experiential relationship to the natural world. They argue that it is a "measure of cognitive beliefs rather than affective experience." They focus on dimensions of the NEW such as the statement ‘We are approaching the limit of the number of people the earth can support’ taps a cognitive belief about environmental sustainability, not an emotional reaction to nature. Second, statements such as ‘Humans are severely abusing the environment’ are conceptualized as measure of beliefs about humans in the aggregate; this does not consider the individual’s personal relationship to nature. They suggest that a measure of the person's relationship to nature is in fact important, and can yield insight into both environmental values and behaviors. In this light it isn't just about attitudes, but the connection and level of empathy that a person expresses towards that natural world. Alternatively, one may speculate that this is the connection underlies the propensity toward pro-environmental attitudes.

To help conceptualize an individual's "affective experiential relationship" Mayer at al refer an individual's sense of connectedness to nature. Schultz (2002) defines this connection as ‘the extent to which an individual includes nature within his/her cognitive representation of self’. This perspective emphasizes the underlining or implicit relations that people feel towards the
natural world, both around them and beyond (Schultz, Shriver, Tabanico and Khazian 2004). Support for their perspective draw upon the writings of Aldo Leopold, and philosophers aligned with 'deep ecology' which emphasize the importance of people’s sense of connectedness and embeddedness to their natural surroundings (Leopold 1949; Bateson and Bateson 1987; Callicott 1999; 2002).

Leopold suggested that people need to feel they are part of the broader natural world if they are to effectively address environmental issues. His ideas point to our need for understanding the extent to which people experientially view themselves as members of the broader natural community. This includes a sense of kinship with the land, and view that one belongs to the natural world as much as it belongs to them. Finally, this emphasizes the recognition that personal welfare is directly related to the welfare of the natural world. Considering one's place in the natural world is essential to the development of a respectful and balanced relationship between humans and the natural world upon which they depend (Leopold 1949; Wilson 1993; Abram 1996).

This perspective is further supported by research that shows that as relationship closeness increases, so does empathy and willingness to help (Cialdini, Brown, Lewis, Luce, and Neuberg, 1997). Similarly, acts that lead to a greater self–other overlap, such as perspective taking (Davis, Conklin, Smith and Luce 1996; Galinsky and Moskowitz, 2000), also increase willingness to help (Coke, Batson and McDavis, 1978). These studies show that expanding one’s sense of self does lead to more empathic and altruistic behavior; thus, indicating the ameliorative role of expanding one’s sense of self to the natural world.

Focusing on a person's affective sense of connection enables us to test one of Leopold's basic ideas – that the degree to which a person feels a part of the natural world will shape the
degree to which they will act in more sustainable ways. Mayer and Franz focus directly on a set of factors that are thought to constitutive of a person's connection to nature. They emphasize three specific attributes that are used to define their 14-item CNS:

1. *The extent to which a person feels a sense of kinship with nature.*
2. *The extent to which a person views them self as belonging to the natural world, as much as it belongs to them.*
3. *The extent to which a person views their welfare as related to the welfare of the natural world.*

Each of these factors touches upon Leopold's concept of nature connectedness and the idea of seeing the natural world as part one's broader community. Furthermore, the elicitation of these factors offers a framework for assessing the relationship between nature connectedness and ameliorative, environmental behavior. To date, empirical testing of these factors in the context of environmentally conscious behavior, and in particular, sustainable food consumption has been sparse despite the apparent promise. Some recent work has looked at the association between implicit connections to nature and farmer adoption of sustainable agricultural methods (Gosling and Williams 2010; Kaufman 2012). These studies showed a positive association between farmer's implicit connection to the natural world and the adoption of sustainable practices, in particular organic agriculture. Yet, the degree to which nature connectedness influences an individual's incorporation of reflexivity in their consumptive choice has not received much attention.

Thus, measuring one’s affective sense of connectedness to nature is important for empirical progress to be made. It opens the door to further theorizations about the role of nature, and the expansion of empathy to include the natural world as factors in developing ecologically sustainable behaviors. Further, the ability to measure a person’s affective experience toward
nature may also help yield insights into types of experiences that cultivate an individual’s felt connection to the natural world. This might also reveal the value of environmental education and support related work investigating the physical and psychological benefits of being in nature. Finally, to place personal connections to nature within the context of reflexivity provides new opportunities for understanding the formation and expression of environmental sentiments through routine action, and lead to forms of political agency among ordinary individuals.

**Research Hypotheses**

Aldo Leopold (1949), David Abrams (1996; 2010), and others assert that society requires a fundamental shift in the way we view and act towards the natural world. Leopold suggested we adopt a 'land ethic,' extending our concept of community to include the natural world. They believe that a re-orientation towards the human-nature relationship is the foundation upon which society can create a new relationship - a sustainable relationship with the land upon which we all depend. The need to adopt this new land ethic follows from Leopold's belief that our relationship with the natural world is fundamental to the way treat the land. For Leopold, our connection to nature is critical to determining whether we act sustainably or not. This suggests that this connection may be significant to motivating new forms of consumption that include values for sustaining and improving our environment.

Previous research on organic and local food consumption patterns has shown a connection to environmentally conscious thinking. Further, both the organic and civic agriculture movements have employed the rhetoric of sustainability in their discourse as a way to differentiate between 'unsustainable' conventional agri-food systems, and the more 'sustainable' alternative agri-food systems (Lyson and Guptil 2004; Goodman and DuPuis 2002; Lyson 2004). The environmental dimension of the ways food is being framed, suggests that the purchase of
local and/or organic foods are significantly better for the environment than more conventional production methods (Beus and Dunlap 1990; Guntham 2000; Pimentel et al. 2007). Thus, provisioning of local and organic foods is seen in terms of being, at least in part, an environmentally conscious choice among an increasingly reflexive consumer class.

In this study I look to deepen our understanding of this phenomena by considering the affective experience of nature connectedness, and its role in motivating pro-environmental behavior. I use a modified form of CNS (Meyer et al. 2004) model to consider the connection between sustainable food provisioning and nature connectedness. This study tests four specific research hypotheses.

**Table 4.1 Listing of Hypotheses**

1. Higher levels of nature connectedness will be positively associated with high-level consumer interest in sustainably produced foods.

2. Respondents who rank high in terms of their nature connectedness will be more likely to purchase organic foods on a regular basis.

3. Respondents who rank high in terms of their nature connectedness will be more likely to purchase foods at a farmer's market on a regular basis.

4. Respondents who rank high in terms of their nature connectedness will be more likely to grow their food through backyard or community.

If Leopold was right in his beliefs about the power of our relationship with nature to change motivate pro-environmental behavior then, I expect that these hypotheses will be confirmed through observation and analysis of the data. Furthermore, the use of Mayer et al's CNS scale to measure nature connectedness may further validate the importance of cognitive beliefs about nature and self. This has significant implications for theories that seek to explain environmental behavior in the field of eco-psychology, as well as for providing a model of measurement that can successfully predict environmentally consciousness consumption.
METHODS OF ANALYSIS

Data Collection

In fall 2010, the Social & Economic Sciences Research Center at Washington State University conducted a telephone survey of Washington State households. The purpose of the survey was to collect data about consumer food buying patterns in conjunction with consumer perspectives on agricultural production and local food systems in Washington. The population for this study consists of all households in Washington. A random sample of land-line phone numbers was used, and was stratified by counties geographically on the west side of the state versus counties geographically on the east side of the state (See Figure 4.1). The same number of completed interviews was obtained in Eastern Washington as compared to Western Washington.

Figure 4.2: Map of Washington State – Divided by East and West

The survey sample consisted of 6321 randomly generated telephone numbers from the total population of telephone numbers in Washington. Of the total, 2750 numbers were from the eastern Washington and 3571 were from western Washington. Completed interviews were obtained from 1004 respondents out of an estimated 2,512,327 households in Washington (US Census 2005-2009), yielding a margin of error of about ± 3.16% at the 95 percent confidence
level.

**Research Variables**

The dependent variables in this analysis are used to measure consumer behavior with respect to sustainably grown or produced foods. In particular, they will be used to test whether these patterns of behavior can be, at least in part, explained by people's relationship to the natural world. These variables measured the frequency of purchasing foods produced organically or locally. Table-2 provides a list of these variables along with a set of descriptive statistics. Respondents were given the option to choose a value between 1 and 4 based on whether they purchased these foods, 1= 'Never,' 2 = 'Less than Monthly,' 3 = 'Monthly,' or 4= 'Weekly.'

The data collected included the frequency consumer's shopped at farmer's markets, food co-ops and whether they engaged in gardening as a food provisioning strategy. Overall, each item relates in some way to the overall concept of sustainable food consumption, whether it's through home production, reducing food miles by purchasing locally, or buying organic. Co-ops were included in this assessment since these establishments often provide products that are considered 'natural,' as well as foods labeled organic and local.

These data were recoded as dichotomous variables to emphasize patterns of sustainable food provisioning. High frequency of organic purchases was defined by shoppers who reported buying organic foods on a weekly basis. This included roughly 25% of household respondents. Frequent shoppers at farmer's markets were defined in terms of whether they bought foods '2 to 3 times a month,' or more. This resulted in nearly 29% of respondent households. Frequency of food co-op shoppers was defined somewhat more loosely due to the small number of participants. Thus, regular shopping at co-ops was defined by shopping once a month or more.
A reading of theoretical literature on consumption and social change suggests that consumers who purchase these foods are driven more by reflexive – environmental and social concerns, whereas consumers who are less engaged in alternative food provisioning are thought to be driven by other factors, such as cost, and convenience. Together, these data provide a foundation for analyzing sustainable food consumption and the role that nature connectedness plays.

Table 4.2 reports the four individual items used to measure respondents’ felt relationship with the natural world. Each item was borrowed from the original CNS, and a new scale was created from these items.
Table 4.2: Summary Statistics - Connectedness to Nature

<table>
<thead>
<tr>
<th>Statement</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I often feel a sense of oneness with the natural world around me.</td>
<td>3.955</td>
<td>1.031</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2. I think of the natural world as a community to which I belong.</td>
<td>4.201</td>
<td>.955</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>3. I often feel disconnected from nature.</td>
<td>4.378</td>
<td>1.027</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4. My personal welfare is independent of the welfare of the natural world.</td>
<td>3.862</td>
<td>1.406</td>
<td>1</td>
<td>5</td>
</tr>
</tbody>
</table>

The data was recoded into binary form to reflect only responses with 'Strong Agreement,' for each statement. The following table depicts the distribution for the recoding.

Figure 4.4: Connectedness to Nature - Dichotomous Scoring

The purpose is to focus on respondents who measured highest for each item. Before combining
each of the variables, all four attributes were assessed by means of a polychoric correlation analysis. The polychoric correlation method is used for assessing the relationship between binary data (Drasgow 1988). Table—4.3 presents these correlation coefficients between each item. All items were statistically significant at the level of \( p < 0.01 \), and were positively correlated with moderate levels of association between each variable.

### Table 4.3: Polychoric correlation matrix

<table>
<thead>
<tr>
<th></th>
<th>Oneness</th>
<th>Belonging</th>
<th>Welfare</th>
<th>Connected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oneness</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belonging</td>
<td>0.785*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Welfare</td>
<td>0.428*</td>
<td>0.491*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Connected</td>
<td>0.576*</td>
<td>0.504*</td>
<td>0.426*</td>
<td>1</td>
</tr>
</tbody>
</table>

A test of reliability was also conducted using a Cronbach reliability index. Finally, the scale was also subjected to a principal components factor analysis based upon the polychoric correlation results (using an orthogonal rotated varimax solution) to determine the distinctiveness of the scale. Table-4.4 reports the factor loadings for the items in each scale, along with the Cronbach alpha score.

### Table 4.4: Rotated factor loadings (pattern matrix) and unique variances

<table>
<thead>
<tr>
<th>Variable</th>
<th>Factor 1</th>
<th>Uniqueness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oneness</td>
<td>0.849</td>
<td>0.279</td>
</tr>
<tr>
<td>Belonging</td>
<td>0.839</td>
<td>0.296</td>
</tr>
<tr>
<td>Welfare</td>
<td>0.561</td>
<td>0.685</td>
</tr>
<tr>
<td>Connected</td>
<td>0.645</td>
<td>0.584</td>
</tr>
<tr>
<td>Cronbach alpha</td>
<td>0.69</td>
<td></td>
</tr>
</tbody>
</table>

The reliability coefficient .69 suggests the overall reliability of the scale maybe 'questionable’. A value of .7 or higher is usually acceptable (Gilem and Gilem 2003). Scores
below the .7 threshold may be questionable in terms of the reliability. However, the score was only .01 below. This is in contrast to the original 14-item scale in Mayer et al., which was significantly more reliable with coefficient of .81. Clearly, additional factors are needed to increase the reliability of this scale. However, the scale was constructed because additional items were not available from the survey, recognizing the need for further research to verify the results.

Several control variables were also included to consider the potential power of predictability when compared to these additional variables. Households residing in the eastern portion of the state received a value of 1 and those in the west were given a value of 0. This is based upon the possible differences that exist between households living in the western and eastern region, and the distinctiveness of these two regions with respect to environment, culture and economics.

The inclusion of whether respondents are from a farming background (defined as whether their parents farmed), assumes that an agricultural background might shape the way consumers think about food, sustainability and nature. Finally, I also include respondents sex (0 for male and 1 for female), and age as independent variables, that may reveal generation as well gender differences in the ways consumers are thinking about sustainable food consumption.
ANALYSIS

A bivariate correlation analysis was conducted to determine whether an association exists between nature connectedness and the variables used to measure sustainable food provisioning. Table 4.5 below shows the results of the correlation analysis for each of the dependent variables.

Table 4.5: Bivariate Correlation Analysis

<table>
<thead>
<tr>
<th></th>
<th>Buys Organic</th>
<th>Shops Farmers Market</th>
<th>Shops Food Co-op</th>
<th>Garden for Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Connectedness</td>
<td>.161*</td>
<td>.143*</td>
<td>.084</td>
<td>.108*</td>
</tr>
<tr>
<td>East Region</td>
<td>-.194*</td>
<td>.003</td>
<td>-.062</td>
<td>-.002</td>
</tr>
<tr>
<td>Parents Farmed</td>
<td>-.022</td>
<td>.012</td>
<td>.064</td>
<td>.047</td>
</tr>
<tr>
<td>Female</td>
<td>-.001</td>
<td>.092*</td>
<td>-.030</td>
<td>.038</td>
</tr>
<tr>
<td>Age</td>
<td>-.129*</td>
<td>-.009</td>
<td>-.104*</td>
<td>.016</td>
</tr>
<tr>
<td>Fam w/ Children</td>
<td>.064</td>
<td>-.007</td>
<td>.070</td>
<td>.000</td>
</tr>
</tbody>
</table>

Results indicate several statistically significant associations. Nature connectedness was positively correlated with three of the dependent variables at the significance level $p < .01$. However, the relationship was weak, and no significant relationship between shopping at food co-ops and nature connectedness exists. There was a correlation coefficient of $r = .151$ for respondents who regularly purchase organic foods. The relationship between nature connectedness and frequent shopping at farmers markets was also weak, showing a positive association with an $r = .143$. The correlation results for nature connectedness, households that grow a portion of their own food and shop food co-ops were, $r = .108$ (Gardening).

The additional variables reveal some interesting relationships. In particular, a statistically significant association between region and organic food purchases was found ($p < .01$), with a value of $r = -.194$. Region was coded, 0 for Western Washington and 1 for Eastern Washington. The correlation between organic food shoppers, and geographic region shows a negative
association for households living in Eastern Washington. This suggests that consumers living in Eastern Washington are less likely to be regular purchasers of organic foods. Region was not correlated with any of the other variables in the model.

Respondents' age, sex, and whether children under 18 lived in the household were also included. Age was negatively correlated with organic food purchases, and shopping at food co-ops. The relationship between age and organic food produced a coefficient, r = -.129, and was statistically significant at p <.01. The results indicate that as age increases respondents are less likely to be frequent purchasers of organic foods. A similar relationship was found between age and shoppers at food co-ops, resulting in r = -.104, at p < .01. Age was not correlated with any of the other dependent variables.

**Binomial Logistic Regression**

Confirming the strength of the relationship between nature connectedness and sustainable food provisioning would be of significant theoretical importance. This would help in understanding the role that empathetic relations to the natural world have in shaping pro-environmental behavior. The correlation analysis shows a statistically significant relationship between nature connectedness and three of the four dependent variables. It does not reveal the effect that connectedness has on the probability that a consumer will routinely purchase sustainably produced foods when controlling for demographic variables. To determine this effect, each of the dependent variables was subjected to a logistic regression analysis.

Table - 4.6 presents the regression results for organic food purchases. The odds that a consumer regularly purchases organic foods are 2.5 times higher for every unit increase in connectedness to nature.
A negative and significant association was present between consumers living in Eastern Washington, and regularly purchasing organic foods. Households residing in Eastern Washington were .44 times less likely to regularly purchase organic than residents living in Western Washington. Consumers' age was also significantly associated with decreased likelihood of frequently purchasing organic foods, indicating that younger households are more likely to regularly buy foods labeled organic. The analysis shows the odds of more frequently purchasing organic are .974 times lower for every increase in a consumer's age. The remaining variables in the model were not statistically significant.

Connectedness to nature, and gender were positive and significant in predicting more frequent shopping at farmer's markets.
The regression analysis suggests that for every increase in nature connectedness, consumers are 2.1 times more likely to be regular attendees at farmer's markets. This was statistically significant with a p < .01. Respondents who were female were also more likely to shop at farmer's markets. Exp(B) indicates that women are 1.6 times more likely to be regular shoppers, suggesting that women continue to be the primary shoppers for households. All other variables failed the test of significance of at least p < .05.

Only one variable was significantly correlated with frequent food purchases from food co-operatives: parents farming. In this case, nature connectedness was not significantly associated; neither were many of the other included factors related. This indicates that the theory for nature connectedness does not hold in this context. Table – 4.8 reports the regression results, and the likelihood that a person frequently shops at food cooperatives.

Table 4.8: Results - Frequent Shopping at Food Cooperatives

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Wald</th>
<th>Sig.</th>
<th>Df</th>
<th>Exp(B)</th>
<th>S.E</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Connectedness</td>
<td>.421</td>
<td>1.71</td>
<td>.088</td>
<td>1</td>
<td>1.52</td>
<td>.247</td>
</tr>
<tr>
<td>East Region</td>
<td>-.198</td>
<td>1.21</td>
<td>.227</td>
<td>1</td>
<td>.82</td>
<td>.089</td>
</tr>
<tr>
<td>Parents Farmed</td>
<td>.358*</td>
<td>2.11</td>
<td>.035</td>
<td>1</td>
<td>1.43</td>
<td>.164</td>
</tr>
<tr>
<td>Female</td>
<td>-.021</td>
<td>1.20</td>
<td>.904</td>
<td>1</td>
<td>.979</td>
<td>.247</td>
</tr>
<tr>
<td>Age</td>
<td>-.011</td>
<td>1.83</td>
<td>.067</td>
<td>1</td>
<td>.989</td>
<td>.006</td>
</tr>
<tr>
<td>Fam w/ Children</td>
<td>.183</td>
<td>.934</td>
<td>.350</td>
<td>1</td>
<td>1.20</td>
<td>.196</td>
</tr>
<tr>
<td>Cons.</td>
<td>-.999*</td>
<td>2.01</td>
<td>.045</td>
<td>1</td>
<td>.498</td>
<td></td>
</tr>
</tbody>
</table>

Those who had a family history of farming, where the parents were farmers at one point were 1.4 times more likely to shop at coops. Conversely, age was not found to be a significant factor, and although nature connectedness was positively associated with increased likelihood in
food coop shopping, it failed to be statistically significant.

The last test performed in this study looks at home gardening as a sustainable food strategy, and the relationship between gardeners and connectedness to nature. Again, the same set of control variables was included in the model. Table – 4.9 reports the results, indicating that nature connectedness has a positive, significant association with respondents who reportedly grow a portion of their own food in order to be more environmentally sustainable. The test reveals that for every increase in a person's sense of connectedness to nature, they were 4.6 times more likely to engage in home gardening as a sustainable food provisioning strategy.

Table 4.9: Results - Home Food Cultivation for Sustainability

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>Wald</th>
<th>Sig.</th>
<th>Df</th>
<th>Exp(B)</th>
<th>S.E</th>
</tr>
</thead>
<tbody>
<tr>
<td>N. Connectedness</td>
<td>1.52***</td>
<td>5.98</td>
<td>.000</td>
<td>1</td>
<td>4.57</td>
<td>.254</td>
</tr>
<tr>
<td>West Region</td>
<td>.011</td>
<td>.064</td>
<td>.949</td>
<td>1</td>
<td>1.01</td>
<td>.164</td>
</tr>
<tr>
<td>Parents Farmed</td>
<td>.565**</td>
<td>3.36</td>
<td>.001</td>
<td>1</td>
<td>1.76</td>
<td>.168</td>
</tr>
<tr>
<td>Gender</td>
<td>.363*</td>
<td>1.98</td>
<td>.048</td>
<td>1</td>
<td>1.44</td>
<td>.184</td>
</tr>
<tr>
<td>Age</td>
<td>-.001</td>
<td>-.152</td>
<td>.879</td>
<td>1</td>
<td>.999</td>
<td>.006</td>
</tr>
<tr>
<td>Fam w/ Children</td>
<td>.420*</td>
<td>2.10</td>
<td>.035</td>
<td>1</td>
<td>1.52</td>
<td>.200</td>
</tr>
<tr>
<td>Cons.</td>
<td>-1.75</td>
<td>-3.45</td>
<td>.001</td>
<td>1</td>
<td>.506</td>
<td></td>
</tr>
</tbody>
</table>

Households who come from a farming background, and who have children under 18 were also significantly associated with household food cultivation. Examination of Exp(B) indicates that respondents who had parents that farmed were 1.8 times more likely to grow a portion of their own food in order to be more environmentally sustainable. Similarly, households reporting the presence of children were 1.5 times more likely to value their garden as means to be more environmentally sustainable. Gender was also found to be statistically significant, showing that at p < .05, women respondents were more 1.4 times likely to cultivate a portion of their own food as a practice for sustainability.
CONCLUDING REMARKS

The regression diagnostic supports three of the four original research hypotheses. The results of the logistic regression show that a person's felt relation toward the natural world is positively associated with being a regular consumer of organic foods. The direction and significance of this relationship affirms the first hypothesis in the study. Following previous studies into both environmental attitudes and the origins of organic food, it is clear that there is a connection between affective feelings towards the natural world, and environmental attitudes (Schultz, 2001; Mayer et al, 2004; 2006). It has also been shown that environmental attitudes are associated with increased purchase of organic foods (Bean 2007). Considering the results of this study, it appears that one's felt relation is influential in motivating environmentally conscious behavior in terms of organic food consumption. Based upon the results of the logistic regression, this extends to frequent attendance at farmer's markets and households that grow food to be more environmentally sustainable.

The research hypotheses were confirmed for three of the four factors used to define sustainable food consumption; one of the hypotheses failed to meet the test of significance. A person's sense of connection to nature was not found to be statistically associated with the likelihood of regular shopping at food cooperatives. This confirms previous work indicating shoppers at retail food cooperatives tend to show specific concern for issues related to pesticide use, or localness, but do not link with larger environmental ideas (Wilkins and Hillers 1994). However, the bivariate correlation analysis does suggest that a positive relationship exists at $p < .05$, but the relation was weak and not supported when subjected to a hypothesis test in the logistic regression model, and thus controlling for other potential predictors. On the other hand, active involvement in an environmental organization was positively associated with shopping at
food cooperatives. This is supportive of previous studies, and makes logical sense in terms of the role that food cooperatives play in providing a range of environmentally and socially responsible products (Cotterill 1982; Katchova, and Woods 2011). However, there does appear to be a relationship between nature connectedness and involvement in an environmental group. This may indicate that for this group of consumers, the role of nature and environmental concern is a significant factor.

Overall, the study is generally supportive of Mayer et al’s., and Leopold's original claim that the extension a person's felt connection to the natural world is an important determinant in supporting ecologically ameliorative behavior. However, it does not hold across the board, as in the case of shopping at food co-operatives. Other factors may require further consideration, or the model extended to verify if this is truly the case. Yet, the findings were strong and significant, suggesting that there is some validity to Leopold's thinking. However, consumer engagement in sustainable food provisioning may be more complex, and while the importance of nature connectedness is apparent, it may be insufficient to completely transform behaviors when considering other social, regional, or economic factors.

Although a recent study calls into question the sustainability of local foods (Desrochers and Shimizu 2008), the rhetoric supporting both organic and local agri-food systems is based upon an environmental and social critique that appears to resonate with eco-social conscious people looking to engage in more sustainable lifestyles. This discourse frames local and organic food in a positive light, providing one possible avenue for the expression of self-nature overlap through alternative consumption patterns, such as home-scale food cultivation, and thus satisfying a person's felt concern for the natural community.
While this research was focused specifically upon the association between nature connectedness and sustainable food consumption, several of the control variables revealed interesting insights into organic and local food shopping patterns. In particular, class factors such as income and education were shown to be important. This raises questions into the continuation of social structure as a factor influencing the level of participation that consumers are able to express in terms of their food purchases. Further, questions arise as to those factors that aide and inhibit the development of a personal connection to nature, and that which motivates greater degrees of environmentally conscious action. These might include factors related to social structure that influence life experiences, opportunities to experience nature, and regional geographies that are defined by distinct landscapes.

The limitations of the present study also suggest the need for further research. First, this analysis is limited to households in Washington State. This makes it impossible to generalize to populations residing beyond the region. Second, a refinement of the spatial resolution would enable inquiry into the potential influence that natural amenities play in shaping personal feelings towards nature. Environmental psychologists have increasingly been looking at the positive effects of 'being in nature,' in terms of both physical and psychological health (Nisbet, Zelenski, & Murphy 2010). The presence of varying degrees of 'naturalness' may help to further understand the relationship between the physical landscape and personal connections to the land.

The weak reliability of the scale constructed for this study also suggests the need for further research. Reliability was calculated just below .7, the threshold for general acceptability. Again, the work carried out by Mayer and his colleagues is instructive. Additional factors need to be included to increase the reliability of the scale. These additional factors may increase, or
decrease the reported association between connectedness to nature and sustainable consumption.

I would assert that further analysis will show greater strength in the association.

The concept of nature itself is also problematic as people's conceptualization of the natural maybe as diverse to include 'untouched' lands that one might find in a national park, to the presence of woodlands in the middle of a bustling cityscape. This differentiation may in itself be revealing of the types of nature people consider themselves connected to, or disconnected from. Further work could investigate the meanings of nature that people perceive that they are connected to. This could also help illuminate differences in the ways people conceptualize a ‘nature’ worth saving.

Finally, despite the relationship between connection to nature and environmentally conscious consumption, it’s not clear that fundamental shift in individual psychology towards the nature is enough to counter the structural forces that continue to degrade the ecological health of the land. Although there was a statistical association, a large number of respondents who claimed an average to high-level of nature connectedness did not engage in alternative food consumption. As in other studies focused on ethical consumption (See Chapter 3), individual consumption choices are complex and mediated by a range of competing ideas, needs, circumstances and habituated patterns of acting (Shepherd, Magnusson, & Sjoden, 2005; Vemeer and Vebleke 2006), not to mention socio-economic status or broader class position. This suggests that individual decisions are never entirely based upon selfish needs fulfillment any more than individuals act in purely altruistic ways.

Every individual must negotiate their way through a social complex that remains directed towards a particular logic of accumulation, and within the context of structural position. The patterns of production and exchange are so thoroughly embedded in the constitution of modern
society (Foster, Clark & York 2010). These patterns structure social relations, define the ways we shape the physical landscape (Scott 1998), as a means to create continued efficiencies in the accumulation of capital. This landscape directs, enables and constrains further agency. In terms of Actor-Network Theory, all of the relations and interactions in one's environment are informed and stabilized through the social, physical and semiotic structures we are all linked to and embedded within, and that ultimately direct ongoing reconstruction of the social-physical spaces of human-social activity (Latour 2000; Long 2009).

Thus, while nature connectedness can lead to ecologically conscious behavior in terms of environmental activism, support for pro-environmental policies and sustainable food consumption, it doesn't address all of the factors that currently constrain the kind of change required to adequately address the range of eco-social crises that confront modern society today. Thus, while a more conscious form of consumption is necessary, it is not sufficient, to promote a meaningful change to our unsustainable capitalist system. There are clear limits; the influence of an individualized consumerism is constrained, and directed by the daily realities of living within the capitalist system itself. This suggests that change will need to occur at multiple levels of society. For example, governments must also engage in the formation of policies that direct consumption in towards more sustainable and ethically conscious choices. This might include carbon taxes, corporate surcharge on sweatshop labor, or reallocate significant agricultural subsidies towards small and large-scale producers that proactively adopt environmental and socially equitable practices.

Despite the need for both a bottom-up and a top-down approach to addressing some of these issues, a personal link to the natural world maybe one of many factors, that when taken together, help move us closer towards a more sustainable relationship with the earth. With the
rise of alternative agri-food systems, continued movement towards renewable energy, and the importance of sustainability in modern discourse, there is reason to see hope for future opportunities. Our link to the natural world and an embrace of Leopold's 'land ethic' is just one part of an immense and complex puzzle.
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CHAPTER FIVE

CONCLUSIONS

The studies contained in this dissertation reveal some of the constraints, and opportunities associated with consumption as a form of passive political engagement. They also reveal some of the limitations in prevailing thinking about the role of consumption in directing sustainable changes in our society.

Chapter Two shows that discourse around sustainable food and agriculture often fails to communicate a coherent and inclusive vision of social equity. This produces an incomplete and potentially misguided interpretation of sustainable foods among consumers interested in purchasing items that reflect their ethical values. A part of this problem results from difficulties in articulating social equity from multiple perspectives; producers desiring opportunities to maintain and enhance their livelihoods can contradict with poor consumers requiring increased access of both more affordable and healthy foods for their families. Reconciling these contradictions in our discourse and in our efforts to establish sustainable agri-food systems can be difficult, considering the larger socio-economic forces that structure human agency.

Moreover, the difficulties surrounding our ability to communicate a vision of sustainability that engages social equity may limit consumers' ability to make more effective choices. It may also limit the potential of alternative agri-food models to effectively challenge the dominance of conventional systems. These actors are quickly adopting the language of sustainability, and communicating a coherent argument that includes social values that emphasize the poor.

While advocates of conventional approaches are actively communicating a sustainability that includes social equity, they also fall short in terms of addressing the inequities that have
resulted thus far as result from increases in global industrialization. They also confront the same difficulties as alternative groups in terms of reconciling the contrasting interests between farmers, consumers, communities and shareholders.

Chapter three goes further into these contradictions by considering the possibility of reflexive consumption, and the influence of socio-economic forces that structure the possibilities for consumer engagement in purchasing sustainably produced foods. Results indicate that household shoppers in Washington State typically rate social and environmental sustainability as important food attributes. Values for supporting family farms were also significant, with 66% of consumers stating that this was a very important attribute when shopping for food. What was also interesting was that education and income were not significant predictors of stated importance of sustainable food attributes. In the case of social and environmental sustainability, higher levels of education were inversely related to level of importance given to these attributes. These findings suggest most consumers are considering some basic values for sustainability when buying food for their household. This lends empirical evidence to theories that argue that reflexivity is increasing, and part of the process of late modernization.

However, when a monetary value is placed in the context of buying foods that reflect personal values for these attributes, traditional socio-economic factors emerge as important indicators. Consumer’s WTP are connected to education, income, and race factors, despite suggestions of a reflexivity that transcends socio-economic boundaries. Thinking about the money consumers might spend to express their ethical concerns, also highlights the relative differences in the proportion of expenditures to income between low-income and higher-income consumers. Although this doesn't indicate a difference in ability to pay, it does suggest that a greater burden may exist for low-income families wishing to act upon their ethical values. So
while reflexivity may be increasing across society, there is a relative difference in the expression of this reflexivity as a result of differential capabilities.

If we take it as a given, that sustainable consumption and the incorporation of ethical values in our daily purchasing choices has the capacity to transform the ways we produce and distribute goods, then it is possible to conceptualize consumers as agents of change – voting their values through their purchase decisions. However, the principles of a democratic and equitable society demand we consider the ways that inequity in consumer choice and opportunities (as freedoms) persist to recreate and reinforce inequities where those capable of paying more for, learning about and accessing products ultimately shape the character of change in our agri-food systems. In this context, reliance upon ethical or sustainable consumption to 'naturally' create more sustainable food systems may be misplaced, and theoretically untenable.

Critical reflection also offers some insight into the ways that some of these issues may be ameliorated moving forward. Indeed, our collective capacity to identify ways to overcome these limitations is critical to determining the overall extent, and qualitative character of changes brought about through ethical consumption. While considering the limits to ethical consumption may reveal, areas for improvement, looking at the drivers of consumer change may also reveal areas where we can address some of these limitations.

Chapter Four considers some of the possible drivers of growing reflexivity and support for environmentally sustainable consumption. The role of connectedness to nature in motivating new forms of consumption appears to be significant. The cultivation of these self-nature relationships may be an important part of increasing reflexive concern for the environment and motivate sustainable consumption. As Aldo Leopold suggested, our relationship to the land appears to be important to driving sustainable behavior. This speaks to the potential importance
of personal interactions with the natural environment to help develop this relationship.

Cultivating these relationships suggest that the ways we design and develop physical landscapes provide opportunities for people to have physical contact with 'natural' places may be important. Further, the ways we educate people about the environment and nature may also be significant to developing these cognitive belief systems, and people's empathy for the natural community.

Although, connectedness to nature is important to shaping pro-environmental behavior, social and economic factors may still persist as important features. And other research that looks at the relationship between nature connectedness and socio-economic indicators may reveal, yet further inequities in the ways in which connectedness is manifested across society.

Overall, each of these studies touch upon a specific aspect of a larger perspective that considers a dynamic interrelationship between the ways we communicate ideas and knowledge, the structural realities of social and economic forces, and the ways our personal connections with the physical landscape could motivate and direct new forms of action.

The ways we shape the physical character of our landscapes has implications upon the relationship that people have with the natural environment. Although more research is needed to better understand the role of the environment in developing these relations, it is clear that they are important. The relationship with nature is important to motivating new behaviors with respect to consumption, and may be essential to the reflexive project. Similarly, this physical landscape also has implications for accessibility of sustainable foods – access points, and places of cultivation are rooted in physical space, which also shape the qualitative character of that place. This suggests a dynamic relationship.

This relationship is also partly determined by the ways we communicate our goals, beliefs and actions to create sustainable food systems, and the landscapes that support alternative
relations between people and their food. There is of course a tension in terms of the beliefs and ideas about sustainability that is reflected in our discourse and the ways we communicate to one another. This tension of course underscores the difficulties in creating sustainable systems of production and consumption – competing interests, entrenched power relations, and conceptual complexity all add to the difficulties. They also have implications for the ways in which our landscapes come to be, and who the winners and losers will be as ideas are materialized through specific actions.

Differences in socio-economic status that influence a person's place of residence, access to sustainable foods, and their relationship with the natural world still need to be considered. The relationship between language, place, personal psychology and social forces are essential to the processes of social change. However, these relationships are also can constrain people's abilities to act sustainably, perpetuating patterns of social change that re-create inequities. Ongoing reflection will be necessary to consider the ways our actions provide new opportunities that are equitable, and thus sustainable, or whether our actions are simply recreating inequities under the guise of sustainable discourse, and thus leading to unsustainable results.

Further research will be a necessary component to this process of reflection and new work will be needed that considers the dynamic interplay between these forces or tensions that shape direct our efforts to create a more sustainable society. The role of urban agriculture in modern urban society provides one area of inquiry that may help to further consider these relationships. I hope to push forward with this work to better understand the patterns of development that enable urban agriculture, the role of communication in shaping these development and the influence of these initiatives on community well-being. In a way, these efforts represent a microcosm of changes taking place on a global-scale, and may help
understand how local and regional processes that could increase sustainable consumption for urban and low-income households, while also reshaping the physical landscape to provide opportunities to interact with nature among increasingly urbanized environments.
APPENDIX A

Telephone CATI Questionnaire

Q1A
I'd like to begin by asking about your household's food shopping patterns. First, I'd like to ask about the factors that are important to you when buying food. The first factor is freshness. Is this factor: Not important, somewhat important or very important to you when buying food for your household?

Not important ................................................................. 1
Somewhat important .......................................................... 2
Very important .................................................................... 3
Don't know ........................................................................ D
Refuse ................................................................................. R

Q1B
The next factor is price. Is this factor: Not important, somewhat important or very important to you when buying food for your household?

Not important ................................................................. 1
Somewhat important .......................................................... 2
Very important .................................................................... 3
Don't know ........................................................................ D
Refuse ................................................................................. R

Q1C
(The next factor is) Taste. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important ................................................................. 1
Somewhat important .......................................................... 2
Very important .................................................................... 3
Don't know ........................................................................ D
Refuse ................................................................................. R

Q1D
(The next factor is) The availability of name brands. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?) (IWR definition for "name brands": "A commodity or product that has a trademark name or the advertised name of a widely distributed product. For example, Dole pineapple, Foster Farms Chicken, etc.")

Not important...............................................................1
Somewhat important......................................................2
Very important............................................................3
Don't know ......................................................................D
Refuse..............................................................................R

Q1E
(The next factor is) Year round availability. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important ...............................................................1
Somewhat important......................................................2
Very important............................................................3
Don't know ......................................................................D
Refuse..............................................................................R

Q1F
(The next factor is) Appearance. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important ...............................................................1
Somewhat important......................................................2
Very important............................................................3
Don't know ......................................................................D
Refuse..............................................................................R

Q1G
(The next factor is) Easy to prepare. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important ...............................................................1
Somewhat important......................................................2
Very important............................................................3
Don't know ......................................................................D
Refuse..............................................................................R

Q1H
(The next factor is) Available where you usually shop. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important .................................................................1
Somewhat important .........................................................2
Very important......................................................................3
Don't know ........................................................................... D
Refuse................................................................................... R

Q11
(The next factor is) Organically grown. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?) (IWR Definition: "Organically grown foods are foods that have been certified as grown without the use of specific types of pesticides or human-made fertilizers.")

Not important .................................................................1
Somewhat important .........................................................2
Very important......................................................................3
Don't know ........................................................................... D
Refuse................................................................................... R

Q1J
(The next factor is) Nutritional value. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important .................................................................1
Somewhat important .........................................................2
Very important......................................................................3
Don't know ........................................................................... D
Refuse................................................................................... R

Q1K
(The next factor is) Safety. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?) (IWR CLARIFICATION: "Meaning that your food is safe in terms of contamination from chemicals or food borne illness, such as. E. Coli.")

Not important .................................................................1
Somewhat important .........................................................2
Very important......................................................................3
Don't know ........................................................................... D
Refuse................................................................................... R

Q1L
(The next factor is) Grown or produced locally. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important ................................................................. 1
Somewhat important ......................................................... 2
Very important...................................................................... 3
Don't know ............................................................................. D
Refuse.................................................................................. R

Q1M
(The next factor is) Grown or produced in an environmentally friendly manner. (Is this factor: not important, somewhat important or very important to you when buying food for your household?) (IWR Definition for Environmentally friendly manner: "Grown or produced in a way that minimizes harm to the natural environment; for example by using biodegradable ingredients.")

Not important ................................................................. 1
Somewhat important ......................................................... 2
Very important...................................................................... 3
Don't know ............................................................................. D
Refuse.................................................................................. R

Q1N
(The next factor is) Grown or produced in a socially responsible manner. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?) (IWR CLARIFICATION: "For example, farm workers are given living wages, and are provided a safe working environment.")

Not important ................................................................. 1
Somewhat important ......................................................... 2
Very important...................................................................... 3
Don't know ............................................................................. D
Refuse.................................................................................. R

Q1O
(The next factor is) Grown or produced in Washington State. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important ................................................................. 1
Somewhat important ......................................................... 2
Very important...................................................................... 3
Don't know ............................................................................. D
Refuse.................................................................................. R
Q1P
(The next factor is) Helps keep local farmers in business. (Is this factor: Not important, somewhat important or very important to you when buying food for your household?)

Not important .................................................................1
Somewhat important ...........................................................2
Very important ........................................................................3
Don't know ........................................................................... D
Refuse...................................................................................... R

Q2A
Next, I will read a list of places to obtain food for your household. For each one please tell me about how often you obtained food there within the last 6 months. Within the last 6 months how often did you obtain food at a supermarket or grocery store? Would you say: Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?

Never .................................................................................... 1
Once a month or less ...............................................................2
2 to 3 times a month ...............................................................3
Once a week ...............................................................................4
More than once a week ............................................................5
Don't know ........................................................................... D
Refuse...................................................................................... R

Q2B
Within the last 6 months how often did you obtain food at discount stores such as Costco or Wal-Mart? Would you say: Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?

Never .................................................................................... 1
Once a month or less ...............................................................2
2 to 3 times a month ...............................................................3
Once a week ...............................................................................4
More than once a week ............................................................5
Don't know ........................................................................... D
Refuse...................................................................................... R

Q2C
(Within the last 6 months how often did you obtain food at) Convenience stores? (Would you say: Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?)

Never .................................................................................... 1
Once a month or less ................................................................. 2
2 to 3 times a month ............................................................... 3
Once a week ............................................................................ 4
More than once a week .......................................................... 5
Don't know ............................................................................... D
Refuse ...................................................................................... R

Q2D
(Within the last 6 months how often did you obtain food at) Food cooperatives? (Would you say:
Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?)
(IWR definition for food cooperatives: "A food distributor or retail store that is owned and
controlled by the people who obtain or buy food there. The cooperative becomes a vehicle for
obtaining sources of foods or food markets that might be unavailable if members acted alone.")

Never ................................................................. 1
Once a month or less ............................................................. 2
2 to 3 times a month .............................................................. 3
Once a week .......................................................................... 4
More than once a week ......................................................... 5
Don't know ........................................................................... D
Refuse .................................................................................. R

Q2E
(Within the last 6 months how often did you obtain food at) Farmer's markets? (Would you say:
Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?)
(IWR definition for farmers markets: "A public market at which farmers and often other vendors
sell produce directly to consumers.")

Never ................................................................. 1
Once a month or less ............................................................. 2
2 to 3 times a month .............................................................. 3
Once a week .......................................................................... 4
More than once a week ......................................................... 5
Don't know ........................................................................... D
Refuse .................................................................................. R

Q2F
(Within the last 6 months how often did you obtain food through) Community Supported
Agriculture (CSA) or Subscription Agriculture? (Would you say: Never, once a month or less, 2
to 3 times a month, once a week or more than once a week?) (IWR Definition: "A CSA usually
consists of a system of weekly delivery or pick-up of vegetables, fruit and sometimes include
dairy and meat products. The system is set up between the consumer and the farming operation
directly.")

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Q2G
(Within the last 6 months how often did you obtain food at) Roadside stands? (Would you say: Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?)

Never ................................................................. 1
Once a month or less ................................................ 2
2 to 3 times a month ........................................... 3
Once a week ......................................................... 4
More than once a week ....................................... 5
Don't know .......................................................... D
Refuse................................................................. R

Q2H
(Within the last 6 months how often did you obtain food at) U-Pick farms? (Would you say: Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?) (IWR definition for U-Pick farms: "Farms where the public can come and pick their own fruits and vegetables for purchase.")

Never ................................................................. 1
Once a month or less ................................................ 2
2 to 3 times a month ........................................... 3
Once a week ......................................................... 4
More than once a week ....................................... 5
Don't know .......................................................... D
Refuse................................................................. R

Q2I
(Within the last 6 months how often did you obtain food at) A food bank or food pantry? (Would you say: Never, once a month or less, 2 to 3 times a month, once a week or more than once a week?) (IWR definition for "food bank or food pantry": "A place where food is contributed and made available to those in need.")

Never ................................................................. 1
Once a month or less ................................................ 2
2 to 3 times a month ........................................... 3
Once a week ......................................................... 4
More than once a week ....................................... 5
Don't know ................................................................. D
Refuse................................................................................. R

Q3
One of the purposes of this study is to learn more about the level of consumer interest in buying foods directly from farmers in the area including at farmers' markets, roadside stands or U-pick farms. (IWR definition for "U-Pick farms": "Farms where the public can come and pick their own fruits and vegetables for purchase.")

Press Enter to Continue ......................................................... 1 D

Q3A
I will read a list of reasons why you might not shop for food at a farmers' market. Please tell me which one is the main reason you do not shop at a farmers' market.

=> SKIP1
si Q2E= 2 3 4 D R
The food is too expensive ...................................................... 1
The market is not open at convenient times .................................... 2
The parking is inadequate .......................................................... 3
There is no market nearby ......................................................... 4
Some other reason, Please specify: .............................................. 5 O
Don't know ................................................................................ 5 O
Refuse...................................................................................... R

SKIP1
=> Q3B
sinon => Q3C
si Q2G=1 OR Q2H=1

Q3B
What has been your main reason for not buying food directly from roadside stands or U-pick farms?

The food is too expensive ...................................................... 1
They are not open at convenient times ...................................... 2
The parking is inadequate ...................................................... 3
There are none nearby ......................................................... 4
Some other reason (please specify) .......................................... 5 O
Don't know ............................................................................... 5 O
Refuse...................................................................................... R
Q3C
How familiar are you with Community Supported Agriculture (CSAs) or subscription agriculture? Would you say…

=> Q4A
si Q2F= 2 3 4 5 D R
NOT FAMILIAR .................................................................1
SOMewhat FAMILIAR ..........................................................2
VERY FAMILIAR ....................................................................3
Don't know ........................................................................... D
Refuse.................................................................................. R

Q4A
Next, I will read a list of food categories. For each one please tell me if you have purchased this food directly from farmers in your area within the last 6 months. Have you purchased fresh fruits directly from farmers in your area in the last 6 months?

=> FILL
si Q2E=1 AND Q2F=1 AND Q2G=1 AND Q2H=1
Yes ......................................................................................1
No .........................................................................................2
Don't know .............................................................. D
Refuse.................................................................................. R

Q4B
Have you purchased fresh vegetables directly from farmers in your area in the last 6 months?

Yes ......................................................................................1
No .........................................................................................2
Don't know .............................................................. D
Refuse.................................................................................. R

Q4C
(Have you purchased) Poultry (directly from farmers in your area in the last 6 months)?

Yes ......................................................................................1
No .........................................................................................2
Don't know .............................................................. D
Refuse.................................................................................. R

Q4D
(Have you purchased) Beef (directly from farmers in your area in the last 6 months)?
Q4E  
(Have you purchased) Pork (directly from farmers in your area in the last 6 months)?

Yes .................................................................1
No ........................................................................2
Don't know .......................................................... D
Refuse.................................................................. R

Q4F  
(Have you purchased) Lamb (directly from farmers in your area in the last 6 months)?

Yes .................................................................1
No ........................................................................2
Don't know .......................................................... D
Refuse.................................................................. R

Q4G  
(Have you purchased) Eggs (directly from farmers in your area in the last 6 months)?

Yes .................................................................1
No ........................................................................2
Don't know .......................................................... D
Refuse.................................................................. R

Q4H  
(Have you purchased) Dairy products such as cheese or yogurt (directly from farmers in your area in the last 6 months)?

Yes .................................................................1
No ........................................................................2
Don't know .......................................................... D
Refuse.................................................................. R

Q4I  
(Have you purchased) Processed food such as jams or salsa (directly from farmers in your area in the last 6 months)?
Yes ............................................................... 1
No ................................................................. 2
Don't know ...................................................... D
Refuse............................................................ R

Q4J
(Have you purchased) Other foods (directly from farmers in your area in the last 6 months)?

<table>
<thead>
<tr>
<th>Yes (please specify)</th>
<th>O</th>
</tr>
</thead>
</table>

Fill for more

=> *

si (Q2E= 2 3 4 5) OR (Q2F= 2 3 4 5) OR (Q2G= 2 3 4 5) OR (Q2H= 2 3 4 5)

Q5A

Next, I will read a list of food categories. For each one please tell me how interested you are in buying this food directly from farmers in your area. First, how interested are you in buying <FILL> fresh fruits directly from farmers in your area? Would you say: Not interested, somewhat interested, very interested, or you have no opinion?

Not interested ................................................................................. 1
Somewhat interested ........................................................................ 2
Very interested ................................................................................ 3
No opinion ........................................................................................ 4
Don't know ..................................................................................... D
Refuse.............................................................................................. R

Q5B

How interested are you in buying <FILL> fresh vegetables directly from farmers in your area? Would you say: Not interested, somewhat interested, very interested, or you have no opinion?

Not interested ................................................................................... 1
Somewhat interested .......................................................................... 2
Very interested .................................................................................. 3
Q5C
(How interested are you in) Buying <FILL> poultry (directly from farmers in your area? Would you say: Not interested, somewhat interested, very interested, or you have no opinion?)

Not interested..........................................................1
Somewhat interested ..................................................2
Very interested ............................................................3
No opinion..................................................................4
Don't know ............................................................... D
Refuse........................................................................ R

Q5D
(How interested are you in) Buying <FILL> beef (directly from farmers in your area? Would you say: Not interested, somewhat interested, very interested, or you have no opinion?)

Not interested..........................................................1
Somewhat interested ..................................................2
Very interested ............................................................3
No opinion..................................................................4
Don't know ............................................................... D
Refuse........................................................................ R

Q5E
(How interested are you in) Buying <FILL> pork (directly from farmers in your area? Would you say: Not interested, somewhat interested, very interested, or you have no opinion?)

Not interested..........................................................1
Somewhat interested ..................................................2
Very interested ............................................................3
No opinion..................................................................4
Don't know ............................................................... D
Refuse........................................................................ R

Q5F
(How interested are you in) Buying <FILL> other meats (directly from farmers in your area? Would you say not interested, somewhat interested, very interested, or you have no opinion?)

Not interested..........................................................1
Somewhat interested ..................................................2

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Q5G
(How interested are you in) Buying <FILL> eggs (directly from farmers in your area? Would you say not interested, somewhat interested, very interested, or you have no opinion?)

Not interested ..........................................1
Somewhat interested ........................................2
Very interested ..............................................3
No opinion .....................................................4
Don't know ................................................... D
Refuse............................................................. R

Q5H
(How interested are you in) Buying <FILL> dairy products such as cheese or yogurt (directly from farmers in your area? Would you say not interested, somewhat interested, very interested, or you have no opinion?)

Not interested ..........................................1
Somewhat interested ........................................2
Very interested ..............................................3
No opinion .....................................................4
Don't know ................................................... D
Refuse............................................................. R

Q5I
(How interested are you in) Buying <FILL> processed food such as jams or salsa (directly from farmers in your area? Would you say not interested, somewhat interested, very interested, or you have no opinion?)

Not interested ..........................................1
Somewhat interested ........................................2
Very interested ..............................................3
No opinion .....................................................4
Don't know ................................................... D
Refuse............................................................. R

Q6
How often do you buy foods labeled organically grown? Would you say:
NEVER ..............................................................................................................1
LESS THAN ONCE A MONTH ...........................................................................2
MONTHLY ..........................................................................................................3
WEEKLY .............................................................................................................4
Don't know ....................................................................................................... D
Refuse ................................................................................................................. R

Q7
Did you or anyone in your household grow a garden for fruits and/or vegetables this year?

Yes ....................................................................................................................1
No .....................................................................................................................2
Don't know ......................................................................................................... D
Refuse ................................................................................................................. R

Q8
Did you or anyone in your household participate in a community garden program this year?

Yes .....................................................................................................................1 => Q10
No .....................................................................................................................2
Don't know ......................................................................................................... D
Refuse ................................................................................................................. R

Q9
Is there a community garden in or near your community?

Yes .....................................................................................................................1
No .....................................................................................................................2
Don't know ......................................................................................................... D
Refuse ................................................................................................................. R

Q10
Did you have extra vegetables or fruits from your garden that you shared with others?

=> Q12
si (Q7=2 D R ) AND (Q8=2 D R)
Yes .....................................................................................................................1
No .....................................................................................................................2
Don't know ......................................................................................................... D
Refuse ................................................................................................................. R

Q11A
Did you share your extra vegetable or fruit harvests with family members?

=> Q12
si Q10=2 D R
Yes .......................................................................................................1
No .......................................................................................................2
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q11B
(Did you share your extra vegetable or fruit harvests with) neighbors?

Yes .......................................................................................................1
No .......................................................................................................2
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q11C
Did you share your extra vegetable or fruit harvests with friends (other than neighbors)?

Yes .......................................................................................................1
No .......................................................................................................2
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q11D
(Did you share your extra vegetable or fruit harvests with) local area food bank?

Yes .......................................................................................................1
No .......................................................................................................2
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q11E
(Did you share your extra vegetable or fruit harvests with) any others?

<table>
<thead>
<tr>
<th>Yes (please specify)</th>
<th>O</th>
</tr>
</thead>
<tbody>
<tr>
<td>...........................................................................1</td>
<td></td>
</tr>
<tr>
<td>...........................................................................2</td>
<td></td>
</tr>
<tr>
<td>Don't know .................................................................. D</td>
<td></td>
</tr>
<tr>
<td>Refuse ....................................................................... R</td>
<td></td>
</tr>
</tbody>
</table>
Please tell me what is the main reason you do not grow vegetables or fruit for your household? Is it because you have…

=> Q13A
si (Q7=1 D R) OR (Q8=1 D R)
NO GARDEN SPACE.................................................................1
IT TAKES TOO MUCH TIME ......................................................2
IT IS TOO EXPENSIVE ..............................................................3
YOU ARE NOT INTERESTED IN DOING SO .................................4
OR SOME OTHER REASON, Please specify:..............................5 O
Don't know ............................................................................. D
Refuse................................................................................. R

Q13A
Please tell me how important the following benefits of gardening are to you. How important is your garden as a source of recreation? Would you say this benefit is: Very important, somewhat important or not important to you?

=> Q14
si (Q7= 2 D R) AND (Q8=2 D R)
Very Important .................................................................1
Somewhat Important ..............................................................2
Not Important.................................................................3
Don't know ................................................................. D
Refuse................................................................................. R

Q13B
How important is your garden as a way of connecting with people in your community? (Would you say this benefit is: Very important, somewhat important or not important to you?)

Very Important .................................................................1
Somewhat Important ..............................................................2
Not Important.................................................................3
Don't know ................................................................. D
Refuse................................................................................. R

Q13C
(How important is your garden as a way of) Reducing food costs for your household? (Would you say this benefit is: Very important, somewhat important or not important to you?)

Very Important .................................................................1
Somewhat Important ..............................................................2
Not Important.................................................................3
Q13D
(How important is your garden as a way of) Ensuring the safety of your food? (Would you say this benefit is: Very important, somewhat important or not important to you?)

Very Important ......................................................1
Somewhat Important ..................................................2
Not Important .............................................................................3
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q13E
(How important is your garden as a way of) Providing fresh food? (Would you say this benefit is: Very important, somewhat important or not important to you?)

Very Important .................................................................1
Somewhat Important ........................................................................ 2
Not Important .....................................................................................3
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q13F
(How important is your garden as a way of) Being environmentally sustainable? (Would you say this benefit is: Very important, somewhat important or not important to you?)

Very Important .................................................................1
Somewhat Important ........................................................................ 2
Not Important .....................................................................................3
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q14
If locally grown or produced foods are available, how much extra are you willing to pay for them compared to foods grown elsewhere? Would you say…

NOT WILLING TO PAY MORE.........................................................1
WILLING TO PAY 10% MORE THAN OTHER FOODS......................2
WILLING TO PAY 25% MORE THAN OTHER FOODS......................3
WILLING TO PAY 50% OR MORE THAN OTHER FOODS .....................4
Don't know ........................................................................................... D
Refuse.................................................................................................. R
Q15A
Next, we would like to know about your thoughts on farming, the environment, and community. I will read a list of statements about farm policy and the environment. The first statement is: Labeling products as Grown in Washington would benefit Washington farmers. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ..........................................................1
Somewhat agree ..........................................................2
Neither agree nor disagree .............................................3
Somewhat disagree ..........................................................4
Strongly disagree ..........................................................5
Don't know ........................................................................... D
Refuse.................................................................................... R

Q15B
The next statement is: Maintaining family operated farms is important to the future of my country. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ..........................................................1
Somewhat agree ..........................................................2
Neither agree nor disagree .............................................3
Somewhat disagree ..........................................................4
Strongly disagree ..........................................................5
Don't know ........................................................................... D
Refuse.................................................................................... R

Q15C
(The next statement is) Agricultural free trade agreements are beneficial to consumers. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?) (IWR definition for free trade agreements: "A trading arrangement in which goods and services pass without restrictions between or among countries included in the agreement.")

Strongly agree ..........................................................1
Somewhat agree ..........................................................2
Neither agree nor disagree .............................................3
Somewhat disagree ..........................................................4
Strongly disagree ..........................................................5
Don't know ........................................................................... D
Refuse.................................................................................... R
Q15D
(The next statement is) Farmers should be paid for their participation in wildlife programs, including those to protect habitat. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ................................................................. 1
Somewhat agree .............................................................. 2
Neither agree nor disagree ................................................... 3
Somewhat disagree ............................................................ 4
Strongly disagree .............................................................. 5
Don't know ........................................................................ D
Refuse .............................................................................. R

Q15E
(The next statement is) Local government should restrict non-agricultural development in important agricultural areas. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ................................................................. 1
Somewhat agree .............................................................. 2
Neither agree nor disagree ................................................... 3
Somewhat disagree ............................................................ 4
Strongly disagree .............................................................. 5
Don't know ........................................................................ D
Refuse .............................................................................. R

Q15F
(The next statement is) The environmental risks of genetically modified agriculture products are not well understood. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ................................................................. 1
Somewhat agree .............................................................. 2
Neither agree nor disagree ................................................... 3
Somewhat disagree ............................................................ 4
Strongly disagree .............................................................. 5
Don't know ........................................................................ D
Refuse .............................................................................. R

Q15G
(The next statement is) It is better to avoid eating foods that contain genetically modified agricultural products. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)
Q15H
(The next statement is) Foods should carry labels that identify whether or not they contain genetically modified agricultural products. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ................................................................. 1
Somewhat agree ............................................................. 2
Neither agree nor disagree .................................................... 3
Somewhat disagree ........................................................... 4
Strongly disagree .............................................................. 5
Don't know .................................................................. D
Refuse...................................................................... R

Q15I
(The next statement is) Foods should carry labels that identify where they were grown. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ................................................................. 1
Somewhat agree ............................................................. 2
Neither agree nor disagree .................................................... 3
Somewhat disagree ........................................................... 4
Strongly disagree .............................................................. 5
Don't know .................................................................. D
Refuse...................................................................... R

Q16A
Next I will read some statements about you and your community and I would like to know how much you agree or disagree with each one. The first statement is: I feel like I belong in my community. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ................................................................. 1
Somewhat agree ............................................................. 2
Neither agree nor disagree .................................................... 3
Somewhat disagree................................................................................4
Strongly disagree .............................................................................5
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q16B
(The next statement is) Given the opportunity, I would move out of my community. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ....................................................................................1
Somewhat agree ....................................................................................2
Neither agree nor disagree .....................................................................3
Somewhat disagree .............................................................................4
Strongly disagree .............................................................................5
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q16C
(The next statement is) I often feel isolated from the other people in my community. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ....................................................................................1
Somewhat agree ....................................................................................2
Neither agree nor disagree .....................................................................3
Somewhat disagree .............................................................................4
Strongly disagree .............................................................................5
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q16D
(The next statement is) If I need advice about something, there is someone in my community that I can go to. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ....................................................................................1
Somewhat agree ....................................................................................2
Neither agree nor disagree .....................................................................3
Somewhat disagree .............................................................................4
Strongly disagree .............................................................................5
Don't know ........................................................................................... D
Refuse.................................................................................................. R
Q17A
Now, I will read a list of community groups. Please tell me which ones you were involved with last year, either by attending one or more meetings or events, or by holding a membership with that organization. Do you belong to any civic organizations such as Rotary or Lions?

Yes ........................................................................................................... 1
No ........................................................................................................... 2
Don't know ........................................................................................... D
Refuse.................................................................................................... R

Q17B
Do you belong to any school related organizations such as parent action or parent teacher groups?

Yes ........................................................................................................... 1
No ........................................................................................................... 2
Don't know ........................................................................................... D
Refuse.................................................................................................... R

Q17C
(Do you belong to) Any local church, mosque or synagogue?

Yes ........................................................................................................... 1
No ........................................................................................................... 2
Don't know ........................................................................................... D
Refuse.................................................................................................... R

Q17D
(Do you belong to) Any local sports clubs?

Yes ........................................................................................................... 1
No ........................................................................................................... 2
Don't know ........................................................................................... D
Refuse.................................................................................................... R

Q17E
(Do you belong to) Any local environmental organizations?

Yes ........................................................................................................... 1
No ........................................................................................................... 2
Don't know ........................................................................................... D
Refuse.................................................................................................. R

Q17F
(Do you belong to) Any local political organizations?

Yes ....................................................................................................... 1
No ........................................................................................................ 2
Don't know .......................................................................................... D
Refuse.................................................................................................. R

Q18A
Next, I will read a list of statements about your general feelings towards the environment. The first statement is: I often feel a sense of oneness with the natural world around me. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ................................................................. 1
Somewhat agree ................................................................. 2
Neither agree nor disagree .................................................... 3
Somewhat disagree ............................................................... 4
Strongly disagree ................................................................. 5
Don't know ............................................................................... D
Refuse............................................................................................ R

Q18B
The next statement is: I think of the natural world as a community to which I belong. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ................................................................. 1
Somewhat agree ................................................................. 2
Neither agree nor disagree .................................................... 3
Somewhat disagree ............................................................... 4
Strongly disagree ................................................................. 5
Don't know ............................................................................... D
Refuse............................................................................................ R

Q18C
(The next statement is) I often feel disconnected from nature. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

193
Q18D
(The next statement is) My personal welfare is independent of the welfare of the natural world. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree ................................................................. 1
Somewhat agree .................................................................. 2
Neither agree nor disagree ............................................... 3
Somewhat disagree ............................................................ 4
Strongly disagree .................................................................. 5
Don't know ................................................................................ D
Refuse.................................................................................. R

Q19A
Finally, we would like to know about the general status of your health. The first statement is: In general, my physical and mental health is excellent. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ................................................................. 1
Somewhat agree .................................................................. 2
Neither agree nor disagree ............................................... 3
Somewhat disagree ............................................................ 4
Strongly disagree .................................................................. 5
Don't know ................................................................................ D
Refuse.................................................................................. R

Q19B
The next statement is: I exercise on a regular basis. Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?

Strongly agree ................................................................. 1
Somewhat agree .................................................................. 2
Neither agree nor disagree ............................................... 3
Somewhat disagree ............................................................ 4
Strongly disagree .................................................................. 5
Q19C
(The next statement is) I am constantly worrying about something. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree .................................................................1
Somewhat agree ..............................................................2
Neither agree nor disagree ...............................................3
Somewhat disagree .........................................................4
Strongly disagree ............................................................5
Don't know ......................................................................6
Refuse........................................................................... R

Q19D
(The next statement is) I consider myself to be overweight for my height. (Do you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree with this statement?)

Strongly agree .................................................................1
Somewhat agree ..............................................................2
Neither agree nor disagree ...............................................3
Somewhat disagree .........................................................4
Strongly disagree ............................................................5
Don't know ......................................................................6
Refuse........................................................................... R

Q20
Now I have just a few background questions. How many adults, 18 years or older, including yourself lived in your household last year?

$E 1 99
Don't know ................................................................. D
Refuse........................................................................... R

<table>
<thead>
<tr>
<th>How many children, less than 18 years old, lived in your household last year?</th>
<th>Q21</th>
</tr>
</thead>
<tbody>
<tr>
<td>$E 0 99</td>
<td></td>
</tr>
<tr>
<td>Don't know ........................................................................ D</td>
<td></td>
</tr>
<tr>
<td>Refuse................................................................................ R</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q22</th>
</tr>
</thead>
</table>
Have you ever worked on a farm as a worker, manager or owner?

<table>
<thead>
<tr>
<th>Yes .................................................................</th>
<th>1</th>
<th>=&gt; Q24</th>
</tr>
</thead>
<tbody>
<tr>
<td>No .................................................................</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Don't know ...................................................................</td>
<td>D</td>
<td>=&gt; Q24</td>
</tr>
<tr>
<td>Refuse...........................................................................</td>
<td>R</td>
<td>=&gt; Q24</td>
</tr>
</tbody>
</table>

Are you currently farming?

<table>
<thead>
<tr>
<th>Yes .................................................................</th>
<th>1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No ...........................................................................</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Don't know ...................................................................</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>Refuse...........................................................................</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

Did your parents farm during any part of your childhood?

<table>
<thead>
<tr>
<th>Yes .................................................................</th>
<th>1</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No ...........................................................................</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Don't know ...................................................................</td>
<td>D</td>
<td></td>
</tr>
<tr>
<td>Refuse...........................................................................</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

May I have your zip code?

SE 00000 99999

Don't know ........................................................................... | D |        |
| Refuse........................................................................... | R |        |

Q26

What is your current age?

$E 18 99

Don't know ........................................................................... | D |        |
| Refuse........................................................................... | R |        |

Q27

What is the highest level of education you have completed?

Less than high school degree......................................................... | 1 |
High school degree ....................................................................... | 2 |
Some college ................................................................................. | 3 |
Vocational degree .......................................................................... | 4 |
College degree................................................................................ | 5 |
Some postgraduate work.............................................................. | 6 |
Post graduate degree..................................................................... | 7 |
Don't know ................................................................. D
Refuse............................................................................... R

Q28
Please tell me which race or ethnic group or groups describe you. (Are you…)

Spanish, Hispanic, Latino, or Chicano ........................................... 1
Black, African American .............................................................. 2
American Indian ........................................................................... 3
Asian (including Asian Indian)....................................................... 4
White, but not Spanish, Hispanic, Latino, or Chicano ................ 5
Other (please specify) ................................................................. 6
Don't know ........................................................................... D
Refuse............................................................................... R

Q29
(IWR Read if necessary For survey purposes I need to ask are you male or female)

Male.................................................................................... 1
Female .................................................................................... 2
Refuse............................................................................... R

Q30
Please tell me which income category best describes your household income for 2009, before taxes and other deductions. Please stop me when I reach the correct income category.

LESS THAN $15,000 ................................................................. 1
$15,000 UP TO $25,000 ............................................................. 2
OVER $25,000 UP TO $50,000 ................................................. 3
OVER $50,000 UP TO $100,000 .............................................. 4
OVER $100,000 UP TO $250,000 ............................................ 5
OVER $250,000 ................................................................... 6
Don't know ........................................................................... D
Refuse............................................................................... R

THX
That was my last question. Thank you for your time today. We appreciate your time and cooperation. Do you have any additional comments or questions you would like to add?

Yes, comments ................................................................. 1
No comments ....................................................................... 2