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**SOCIAL, ECONOMIC AND ENVIRONMENTAL JUSTICE:
A NETWORK ANALYSIS OF SUSTAINABLE AGRICULTURE IN
PENNSYLVANIA**

A Thesis in
Geography and Women's Studies

by
Amy K. Trauger

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The thesis of Amy K. Trauger was reviewed and approved* by the following:

Cynthia Brewer
Associate Professor of Geography
Thesis Advisor
Chair of Committee

Carolyn Sachs
Associate Professor of Women's Studies and Rural Sociology

Melissa Wright
Assistant Professor of Women's Studies and Geography

James McCarthy
Assistant Professor of Geography

Roger Downs
Professor of Geography
Head of the Department of Geography

*Signatures are on file in the Graduate School

ABSTRACT

Agriculture and rural communities in the United States are in a period of decline, but sustainability movements in rural communities show promise for revitalizing both rural communities and agriculture as a sector. Sustainable agriculture is committed to the “triple-bottom-line” of social, economic and environmental justice, in which social equality, economic profitability and environmental soundness are emphasized. These discourses of justice, however, are not always translated into the practices of organizations committed to sustainability, according to some critics. This dissertation seeks to investigate how the sustainable agriculture social movement in Pennsylvania articulates these discourses and translates them into practice. The framework I use for this analysis includes a network ontology, which emphasizes social change through connection. I studied three groups (or networks) in Pennsylvania: a marketing cooperative, a women’s group and a farm based education program. The methods for the analysis are primarily qualitative, but include visualizing and analyzing social networks and political agency through the use of geographic visualization technologies.

The research concludes that sustainable agriculture in Pennsylvania is committed to social change and the triple-bottom-line, but these ideals are translated rather imperfectly into the practices of individuals and groups. Organic agriculture as a technical practice of sustainable agriculture is promoted as a way to obtain price premiums for farmers. Organic agriculture supports environmentally friendly practices, and helps farmers stay in business, but reproduces some of the social injustices of conventional agriculture, such as the exploitation of labor. Women in conventional agriculture are traditionally marginalized from spaces of knowledge and power, because they are not seen as “real” farmers. Efforts to provide education and agency to women in sustainable agriculture also fall prey to identity politics based on who qualifies as a farmer. Farm-based education programs designed to spread knowledge about environmentally friendly farming practices also translate well into productivist models when an emphasis is on technical practices, rather than on community and holistic farm management. In summary, the networks facilitate the pursuit of justice, but confront obstacles regarding “who belongs,” the scale of the organization, and the length of the network.

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LIST OF ABBREVIATIONS

DEP	Department of Environmental Protection
CSA	Community Supported Agriculture
FBE	Farm Based Education
NEON	Northeast Organic Network
NOFA	Northeast Organic Farming Association
NRCS	Natural Resources Conservation Service
PACD	Pennsylvania Association of Conservation Districts
PASA	Pennsylvania Association for Sustainable Agriculture
PCO	Pennsylvania Certified Organic
PDA	Pennsylvania Department of Agriculture
PRFMA	Pennsylvania Retail Farm Market Association
PSI	Public Seed Initiative
PSU	Pennsylvania State University
PVGA	Pennsylvania Vegetable Growers Association
SARE	Sustainable Agriculture Research and Education
TOG	Tuscarora Organic Growers
USDA	United States Department of Agriculture
WAgN	Women's Agricultural Network

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Chapter 1

INTRODUCTION

*“We’re so little and broke, networking is the only way we get things done!”
~Lauren Smith, Director of Development and Membership Programs
Pennsylvania Association for Sustainable Agriculture*

The globalization of agriculture in the latter half of the twentieth century has brought about social and economic pressures on rural economies and communities in the United States. Falling prices for food products and the increasing emphasis on large-scale commoditisation of export crops has contributed to the decline of rural communities. This decline is evident in the decreasing number of family farms, outmigration of youth to urban areas, and aging populations. The non-sustainability of the social order in such food systems is manifest to many people living within these communities, as they see their farming livelihoods threatened for their children, their main streets deteriorate, and their drinking water polluted. The response to this many faceted crisis has often been one of localized protest and demands for political solutions, farm subsidies and large “bail out packages” that rarely have lasting effects.

Recently, groups of residents in rural communities have, however, taken a different course. Rather than look to handouts from a government that works with multinational corporations and agricultural science institutions, rural leaders are turning to local resources, including markets, labor and natural resources, to preserve their way of life. This turn toward decentralizing production, strengthening linkages in communities and emphasizing the local environment is characteristic of sustainability movements. Because of the isolated and isolating nature of rural communities, these groups work to

facilitate sustainability through their use of organizations, cooperatives, and network communities.

I. Summary of Dissertation:

This dissertation aims to investigate how community groups develop sustainability projects in rural communities through their use of multi-scale and multi-purpose networks. Rural communities are both far from urban centers and geographically dispersed across space, and these geographic realities contribute to physical and social frictions of distance that hinder many types of political activism. However, many groups are transcending these geographical challenges by creating social relationships through networks. These networks seek social, economic and environmental justice, the “triple-bottom line,” which characterizes sustainability movements for their enrolled constituents.

Three networks in particular are embedded in the sustainable agriculture community in central Pennsylvania and are the case studies for this dissertation. These networks were chosen because each has a particular mission devoted to one aspect of the “triple-bottom line.” The Tuscarora Organic Growers (TOG) is a marketing cooperative dedicated to making agriculture economically sustainable through price premiums and direct marketing (economic justice). The Women’s Agricultural Network (WAgN) is an organization dedicated to raising awareness of women’s contributions and issues in agriculture (social justice). The Farm Based Education program is a series of educational events designed to increase awareness of environmentally sound farming practices within the farming community (environmental justice).

My discussion of economic justice addresses the economic non-sustainability of the current food system for farmers, the rise of organic agriculture, and the production of a “two-class” food system. My treatment of social justice discourses takes up the subject of women in agriculture in terms of labor, family farming and the construction of identity. I address the issue of environmental justice through a review of literature on local knowledge, knowledge exchange and the representation of “nature” in the discourses of the sustainable agriculture community.

There is considerable overlap in the commitment of each network to the “triple-bottom line.” For example, the Women’s Agricultural Network is also concerned with environmental and economic justice, but the particular injustice of conventional agriculture that this group works to rectify, however, is the social marginalization of women. Over the course of the research, these networks were analyzed for how they accomplish their particular goals and visions given the economic, social and geographic marginalization of agriculture in general and sustainable agriculture in particular in Pennsylvania. The research also investigates how this vision of justice plays out in the larger rural community, and answers the question of “justice for whom?”

II. Research Questions, Goals and Benefits:

The research outlined here contributes to a number of literatures and disciplines. The first, and most obvious contribution is a description of the networks developed in and through sustainability projects in rural communities. This description produces an understanding of political agency that is grounded in a vision of economic, social and environmental justice discourses. This research contributes to the literatures of rural geographers, rural sociologists and feminist political ecologists. It also makes

methodological contributions to both visualization technologies and qualitative research by combining both techniques in attempting to model political agency through an analysis of networks.

A. Research Questions

My central research question concerns the constitution of agency within the context of networks in rural communities. In other words, how are sustainability projects mobilized and sustained, given the socio-economic and geographic positioning of rural residents? Networks (social and economic) allow rural residents to transcend material spaces and allow for the production and reproduction of a more efficient and effective spatial form. The kind of networks envisioned by actor-network theory allow for the analysis of agency, as well as the visualization of connections between people, places, and landscapes.

Community leaders, network organizers and participants in the network are identified as knowledgeable sources of information about how social networks are formed, negotiated, and maintained. Following from this information, these networks are characterized by both their form and function. In other words, what do they accomplish, or what do they communicate or transmit, and how are they characterized by the participants? Of additional interest are the horizontal linkages between networks focusing on different aspects of rural development. Likewise the vertical linkages between the local, regional, national and global networks are examined.

A second research question investigates the affects of pursuing the economic, social and environmental justice goals of sustainable agriculture through networks in rural communities. Crucial to this analysis is an understanding of how difference along

the lines of gender, race, and class, as well as other dimensions of difference, influence the role of individuals within the network. In other words, are certain groups within sustainability projects marginalized or are members of these traditionally marginalized groups empowered through the process of network building within the context of progressive social activism? Additionally, the discourses of sustainability movements often speak of “nature” and “culture” as being inextricably intertwined, and the data collection for this research will investigate the articulation of the agency of “nature.”

A third research question poses more of a methodological challenge and contribution. Can agency be visualized or modeled? The research presented here proposes to illustrate how the process of network building produces relationships that otherwise would not exist, and as such the outcomes of such relationships can provide benefits and advantages to the enrolled constituents (or participants) of the network. Alternatively, the creation of networks can also work to marginalize individuals who are enrolled as constituents, but not as actors. I propose to illustrate this through a series of network diagrams that show the connections between actors as they become enrolled in the network, and the outcomes of such networking for other individuals and groups.

B. Research Goals

This research will contribute to understanding how sustainability projects can be facilitated through social networks. Recent work in agro-food and community studies have stressed this approach, but most of the research has been conducted in European communities. Few American geographers have explored the potential of network analysis for understanding social systems, and particularly, rural social systems. This work will contribute to the global literature on sustainability in rural places, and contribute to a

growing rural geography of North America by applying the concepts of actor-network theory to rural communities in Pennsylvania. In addition, this research may provide something of a road map for other states or regions seeking to develop sustainable agriculture communities and networks.

Feminist and geographical social theorists have had difficulty explaining the concepts of subjectivity and agency within the context of space and place. Post-structuralist social theory with its emphasis on hybridity and associations as prerequisites to the capacity to act may allow for the “visualization” and conceptualization of agency as a collective outcome of cooperative activity. Similarly, feminist understandings of agency are problematic when situated within an essentialist vision of the self and subjectivity, whether they are rendered masculine or feminine. Thus, when agency can be conceptualized as embedded in the particular associations between places, as well as human entities, both feminist and geographical understandings of agency can be enriched.

A final aspect of this research is perhaps its most experimental. This research has the potential to integrate qualitative social science research methods with visualization methodologies. Researchers have attempted to bridge the ontological divides between qualitative and quantitative research in geography. They have had little success, due to epistemological constraints in both the design of software and hardware, and also the reluctance of qualitative methodologists to “go back” to quantitative analysis. Perhaps, a combination of geographic visualization tools and actor-network theory, with its emphasis on bridging other epistemological and ontological divisions, may prove to be the answer to such disciplinary divides.

C. Potential Benefits

Benefits to the sustainable agriculture community involve raising awareness of economic, social and environmental issues and understanding the role of networks in accomplishing (or not accomplishing) the work and mission of sustainability in Pennsylvania agriculture. The research was informed by feminist and participatory methodologies, and designed so that the research respondents would benefit from the research outcomes. They gain valuable information about their organization or projects, temporary assistance with organization or farm work and/or maps that can be used in the daily functioning or enhancement of the organization.

Benefits to the larger academic community include contributions to feminist, social movement, geography, rural sociological and visualization literatures. My goal is to incorporate a discussion of race, class and gender into an investigation of the workings of a social movement in a rural community. In addition, this analysis is further contextualized with the incorporation of geographic visualization techniques that not only provide a “visual” for conceptualizing the research project, but also provide insights about space, distance and community. Few research projects have incorporated mixed methodologies such as these, and I hope to provide new templates for integrating these philosophies and approaches to geographic research.

III. Overview of Dissertation

In chapter two, the literature review, I contextualize the concepts of rurality, sustainable agriculture and social networks relevant to the dissertation, as well as provide a review of the economic, social and environmental justice discourses within the sustainable agriculture movement as they relate to particular aspects of the research.

Chapter three is an extension of the literature review, and here I provide a more detailed discussion of the theoretical framework employed in the dissertation. This includes a discussion of actor-network and feminist approaches to the analysis of the environment, food systems and nature/culture ontologies to illustrate both the ethical foundations for social and environmental justice in sustainable agricultures as well as develop a post-structuralist feminist geography of the environment.

Chapter four provides an overview and explanation of the methods and methodology employed in the research. I have used a combination of ethnographic, visualization and feminist methodologies, and my methods have included participant observation, in-depth interviewing, discourse and content analysis and surveys. I have also collected data on the number, location and demographics of farms and individuals involved with each particular network in the study. Chapters five through seven provides an overview and summary of the three social networks examined in the research. I describe their history, the way they work, demographics of individuals and farms involved with them, where they are located and what they hope to accomplish. In chapter eight, I provide an analysis of the effects that the mobilization of these networks have on the socio-economic landscape of sustainable agriculture in central Pennsylvania, as well as discuss the major findings, challenges and contributions of the research, and suggest future directions for research on this subject.

Chapter 2

LITERATURE REVIEW

“A sustainable agriculture is one that equitably balances concerns of environmental soundness, economic viability, and social justice among all sectors of society”

~Patricia Allen, et al., 1991

In this chapter I review the literature on sustainable agriculture, rurality and social networks, and explain how I define, connect and position my research around these concepts. While rurality is difficult to define, the isolating aspects of rural life are crucial to the development of socio-spatial relations that transcend physical or social distance, and these relations can be conceptualized as social networks. In the literature on social networks in agri-food initiatives, rural development and sustainable agriculture, I identify three types of networks: “alternative food networks,” “social change networks” and “knowledge exchange networks.”

In the first half of this chapter I review the literature on rurality, sustainable agriculture and social networks. In the second half of this chapter, I examine how each of the three different networks listed above are related to discourses of economic, social and environmental justice discourses in the sustainable agriculture movement. For each type of discourse and its accompanying network I provide background information on the economic, social and environmental problems in conventional agriculture and the response of the sustainable agriculture community in Pennsylvania to these problems.

The Tuscarora Organic Growers in Central Pennsylvania is an example of an alternative food network that links farmers in a cooperative model and connects urban consumers with rural producers in an attempt to provide economic justice for farmers. As such, I review literature related to economic (in)justice in agriculture, price premiums in

organic agriculture, and alternative food networks that connect producers to consumers. The Pennsylvania Women in Agriculture Network (WAgN) is a social change network dedicated to support, educate and empower women who have been marginalized from spaces of knowledge and remuneration in conventional agriculture. To address the issues of social justice, I review literature relating to women on farms, gendered divisions of labor and women's networks in sustainable agriculture. Knowledge exchange networks facilitate the exchange of information about agricultural practices through learning networks that connect farmers to each other. The Farm-Based Education network facilitated by the Pennsylvania Association for Sustainable Agriculture is a case example of a network dedicated to educating farmers about agricultural practices that are environmentally sound. As such, I review the literature on environmental problems in conventional agriculture, the role of agricultural science in perpetuating practices that cause these problems and the way knowledge exchange between farmers is changing these practices.

I. Sustainable Agriculture, Rurality and Social Networks

In this first section, I speak in general terms about the three main subjects of this dissertation: sustainable agriculture, rurality and social networks. Sustainable agriculture and rurality, in particular resist definition, so rather than define them, I outline their evolution as terms through debates in rural sociology and geography. Social networks are not a new framework of analysis in social science, and are generally seen to be relations between individuals, groups and institutions. Social networks are widely studied in a variety of contexts, including rural development and agri-food initiatives. I connect these three subjects by suggesting that the residents of isolated rural communities with

commitments to sustainable agriculture use networks, a spatial form of organization that transcends the friction of geographical distance, to accomplish the goals of the sustainable agriculture movement.

A. From Sustainable Development to the Sustainable Agriculture Movement

The genealogy of the concept of “sustainability” has been somewhat contested and contradictory. The term sustainable development first surfaced in the 1980 *World Conservation Strategy*, but the widespread usage of the concept occurred after the publication of the Brundtland Report, *Our Common Future*, by the World Commission on Environment and Development in 1987. In this report, sustainable development is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (43). While this sounds promising, many scholars have argued that the vagueness of the term both detracts from its applicability, and justifies “business as usual” while paying lip service to the environment (Willers, 1994; Redclift, 2000; Cocklin et al., 2002). Kloppenburg et al. (2000) further argue that lack of critical deconstruction of the term has allowed for the perpetuation of unsustainable practices in the name of sustainability.

With ‘sustainability’ having achieved canonization as a kind of cultural shorthand for ‘the green and good’ the term is deployed by all sorts of organizations and actors who want to access the word’s discursive potency but whose goals and interests are not necessarily compatible (178).

The contradictions inherent in the term “sustainable development” are patent. The concept presupposes limits to growth (sustainable) in the context of unlimited growth (development). Redclift (2000) argues that the concept also captures tensions inherent in the practice of modern agriculture. “The term...embodies the contradiction between human aspirations for domination over nature, and our ultimate dependence on natural

systems and ecological constraints” (1). Redclift also argues that the ambiguity of the concept does not speak to questions regarding what is sustained and/or developed, for whom and by whom.

Attempts to reclaim, deconstruct, and conceptualize “sustainability” as a process that can be beneficial to communities take the form of investigations into what sustainability means to people, such as writers or farmers, working within sustainable agriculture. These investigations identify economic, social and environmental concerns to be at the heart of sustainability. Beus and Dunlap (1990) deconstruct popular writings on alternative agriculture and argue that writers about alternative agriculture emphasize independence, decentralization, community, harmony with nature and diversity.

Allen and Sachs (1993) argue that this approach, and others like it, only address systems of production and cannot adequately address issues of poverty, race and gender or other aspects of sustainability such as consumption. Chiappe and Flora (1998) redress the Beus and Dunlap (1990) paradigm, by arguing that it provides only a partial view of sustainability, given that all the authors reviewed were men. They illustrate, through interviews with women practicing sustainable agriculture, that quality family life and spirituality were also important aspects of the sustainable agriculture paradigm. In a similar, but more far reaching study, Kloppenburg et al. (2000) investigate what sustainable food systems mean to people in a “broad cross section of the alternative farm/food community” (177). This group identifies the following to be critical descriptors of a sustainable food system: relational, proximate, diverse, ecologically sustainable, economically sustaining, just/ethical, sacred, knowledgeable/communicative,

seasonal/temporal, healthful, participatory, culturally nourishing, and sustainably regulated.

Given the ambiguity of the term sustainability, the variability of its usage, and the subjectivity of its meaning, the perspective of Cocklin et al. (2002) on the concept of sustainability is worth noting.

Thus, that sustainability is a socially constructed concept, and therefore subject to mediation through contest and debate, should be taken as a given and not regarded with surprise...the project then shifts from the fruitless search for universal meaning, to one of understanding how these contests play out in social space...and the many implications of the many and varied sustainability pathways. In short, the focus shifts to process.(6)

For many scholars, sustainability is conceptualized as a process, a goal and a social movement, rather than a fixed set of practices or ideas. Elizabeth Barham (1997) describes sustainable agriculture as a social movement that draws together diverse groups (such as farmers and consumers who protest the multiple social, environmental and economic consequences of the expansion of agriculture within the global economy) and offers an alternative mode of food production and consumption. Neva Hassanein (1999) also characterizes sustainable agriculture as a social movement with broad social, economic, and environmental justice goals.

Transforming the inequitable social, economic and environmental relations produced through conventional agriculture is a priority in these accounts of sustainable agriculture, but environmental soundness is often seen as the most important goal. The use of pesticides, chemical fertilizers and biotechnology and their associated environmental problems are cited by nearly all, and particularly early, activists for sustainable agriculture as reasons to change farming practices from chemical intensive to organic (see Carson, 1962; Berry, 1977; Jackson, 1980; Pretty, 1995). Economic justice

is usually invoked as a criticism of the conventional agricultural commodity system, which leaves agriculture heavily subsidized by tax monies, vertically integrated and in economic “crisis” (Hightower, 1979; Goodman and Redclift, 1991; Morgan and Murdoch, 2000). The logic around economic justice is rather simplistic: an agriculture that is not profitable is not sustainable. Some scholars argue that because of this emphasis on the technical aspects of agriculture and on production practices, the economic and environmental justice goals are being met, but the social justice goals are not (Allen, 1993; Allen and Sachs, 1993; DeLind, 1994; Sachs, 1996).

Social justice typically emphasizes the social provision of quality food and nutrition to all people, but also concerns issues of labor, diversity and education (Allen et al., 1991; Allen and Sachs, 1993; Delind, 1994; Feenstra, 2002). Activists for social justice argue that sustainable agriculture must “challenge, rather than reproduce, the conditions that led to non-sustainable agriculture in the first place” (Allen and Sachs, 1993:140). Laura DeLind (1994) echoes this sentiment by challenging sustainable agriculture to “address the inequities, the exploitative relationships, and the dependencies that conventional agriculture has benefited from but has ignored” (147).

Sustainable agriculture can be seen as a social movement, or a process toward social change, that positions itself in opposition to conventional agriculture, and that incorporates environmental, economic and social justice as goals. Allen et al. (1991) write, “sustainable agriculture is one that equitably balances concerns of environmental soundness, economic viability, and social justice among all sectors of society” (37). This dissertation rests on this particular definition of sustainable agriculture, as it is an investigation into the way in which the discourses of environmental, economic and social

justice discourses are envisioned, practiced and experienced by individual farmers, the sustainable agriculture movement, and the larger rural community.

B. Rurality and Rural Space

Rurality, like sustainability, eludes definition. Various approaches, reflecting various ontologies, have been employed in the name of defining rurality and rural space. It has been well documented by rural geographers, rural sociologists and the like, that what constitutes the rural and the condition of rurality is a matter of some debate, and one which is not likely to be settled (Copp, 1972; Newby, 1986; Hoggart, 1990; Halfacree, 1993; Pratt, 1996). Indeed, Halfacree notes “the quest for any single, all-embracing definition of the rural is neither desirable nor feasible” (34). Operationalizing a research project, however, requires some form of definition, and a few general themes can be detected in the literature.

The first definition of rurality outlined here, and the one most commonly used by policy makers, is a dichotomous division between urban and non-urban, in which rural is a residual of the category urban (Cloke, 1985; Suchan, 1998; Cocklin et al, 2002). This binary split is manifested in official government designations of metropolitan and non-metropolitan counties, which are circulated through digital maps and demographic data by the United States Census Bureau and the United States Department of Agriculture (USDA). Critics of this approach have argued that this distinction is not based on any criteria, rather it is based on pre-conceived notions of what constitutes the rural, and while it makes for a neat delineation between rural and non-rural for agricultural and rural policy, it does little to describe what actually differentiates rural space from urban space (Halfacree, 1993; Boyle and Halfacree, 1998).

Another approach uses variables that can be measured, such as population density, to define rural space (Cloke, 1977; Cloke and Edwards, 1986). Building upon this approach, socio-cultural approaches draw connections between social and spatial attributes, such as population density and human behavior, to define the condition of rurality (Hoggart and Buller, 1987). This approach has been criticized for being socially and environmentally deterministic because it “assume[s] that (low) population density in some way affects behavior and attitudes” (Ilbery, 1998:2).

Halfacree (1995), however, argues that the social representation of rural space, if not the actual material conditions of rural space, influence behavior and decision-making. Ilbery (1998) notes that the features that give rural space “a distinctive social character” are “relatively low population densities, open country and extensive land uses, lack of access to major urban centers, loose networks of infrastructure, and relatively low numbers of workers in secondary and tertiary industries” (3). Suchan (1998), in an investigation of rural as a category in geographic representation, using rural residents as “experts,” found that all respondents invoked some form of population as characteristic of rurality, and many associated this with population density.

This use of residents as experts is characteristic of recent work in rural geography in which rurality is viewed as a socially constructed condition and characterized differently by those who experience it (Halfacree, 1995). This is closely related to the discourse of the rural idyll, which perpetuates a vision of rural life as “orderly, harmonious, healthy, secure, peaceful and a refuge from modernity” (Ilbery, 1998: 3). Little and Austin (1996) argue that rurality is often perceived to be an

uncomplicated, innocent, more genuine society in which ‘traditonal values’ persist and lives are more real. Pastimes, friendships, family

relations and even employment are seen as somehow more honest and authentic, unencumbered with the false and insincere trappings of city life or with their associated dubious values. (102)

They go on to argue that the material realities of rural life are far from idyllic and this particular image is conjured up “by and for the enjoyment of the wealthy” (103). Deconstructing the rural idyll is part of the “cultural turn” in geography, characterized by investigations of how power relations play out in space and place (Murdoch and Pratt, 1993; Philo, 1993; Cloke, 1997). This research agenda has incorporated work on the much “neglected rural others,” or those who do not conform to the white, able-bodied, heterosexual, middle-class male who inhabits the rural idyll (Philo, 1992). Thus, recent work in rural geography has emphasized a social constructivist approach with an imperative to study “difference,” power relations and the dialectic relationship between discourses and materiality of rural space (Jones, 1995; Cloke and Little, 1997; Little, 1999).

Recent work in rural geography has illustrated that no one rurality exists, rather multiple and contested ruralities are produced and reproduced through discourses and material conditions. Rural space is a meaningful category only when positioned within material conditions that are affected by social representations of rurality, and socio-economic relationships in particular places and times (Cocklin et al., 2002). In addition, rural geographers stress that the definition of rurality used in any particular research project “should be informed by theory and the questions being asked” (Cocklin, et al, 2002: 4).

Rural space is often characterized by geographical distance between individuals and communities (low population density) and a prevailing sense of isolation and

remoteness through social and geographical distance. This isolation is not universally viewed as negative by rural residents, and is often part of the distinctive charm of rural life (Suchan, 1998). The friction of geographical (physical) and social distance is critical to the definition of rurality employed in this dissertation as it contributes to the formation of alternative spatial forms used to connect individuals and institutions, or social networks.

C. Social Networks and Agri-food Initiatives

The study of social networks arose within the prevailing social structure tradition in sociology and anthropology (Marsden and Lin, 1982). Researchers investigating social structures found that groups are often composed of “persisting pattern(s) of social relationships among social positions” (Laumann, 1966, quoted in Marsden and Lin, 1982: 9), and as such are characterized as networks. Trotter (1999) defines a social network as “a specific type of relation linking a defined set of people, organizations or communities” (1), and network analyses “allow social scientists to explore cultural differences in the ways that humans organize themselves into groups, communicate about critical life circumstances, and work out the problems they encounter in everyday life” (2).

Changing the emphasis from structure to relation refocuses “attention on relationships between actors rather than on attributes of actors or their group memberships” (Marsden and Lin, 1982:9). Powell and Smith-Doerr (1994) suggest that network analysis

stood in stark contrast to the reigning approaches in the social sciences. In contrast to deterministic cultural (oversocialized) accounts, networks afforded room for human agency, and in contrast to individualist, atomized (undersocialized) approaches, networks emphasized structure and constraint. Indeed, networks offered a middle ground, a third way,

even if no one was quite sure whether networks were a metaphor, a method or a theory (368).

Suggesting that a network epistemology offers both metaphor and theory, Powell and Smith-Doerr, go on to suggest that networks are “bonds of affiliation [that] serve as both a lubricant for getting things done and a glue that provides order and meaning to social life” (369).

As illustrated by the following authors, networks offer “glue” to individuals and institutions isolated socially and geographically on both large and small scales. Khagram et al. (2002), writing in the context of transnational social movements, emphasize that shared values and exchange of information through networks are crucial to the development and success of such movements. “Networks are sets of actors linked across country boundaries, bound together by shared values, dense exchanges of information and services and common discourses” (7). Oberhauser’s (2002) research, on economic strategies of women in rural communities of Appalachia, also stresses the importance of networks to bring together people isolated geographically, albeit at a much smaller scale.

...economic networks in Appalachia are often shaped by culture and social relations that reinforce kinship and community ties. Many of these networks are grounded in rural areas, which tend to isolate families and communities yet strengthen their connection to place and home. (1226)

Oberhauser found that economic networks in the form of machine-knitting collectives allowed women to gain economic independence, remain with their families and communities and enhance economic development through “empowerment of its members and their communities” (1235).

The emphasis on empowerment through collective action across geographic space echoes recent work in post-structuralist social theory, wherein the agency of social actors

is not merely determined by their positions in social and political environments, rather their agency is an outcome of their relationships with others, including non-human others (Latour, 1993). As such, the emphasis turns from analyzing the positions of individuals in social settings to what constitutes the relationships between them (Murdoch, 1995). In addition, enrollment in a network allows participants the possibility of “acting at a distance” by using the network as a vehicle for action and exerting influence through other actors in the network (Law, 1986). These theoretical implications of network ontology are explored in greater detail in the next chapter, and are mentioned here to highlight the importance of agency and geography to network analysis.

Network analysis allows for both the study of human agency in social movements at multiple scales, as well as analysis of the process of (re)production of the apparent “permanence” (Whitehead, 1969; Harvey, 1996) of the network itself through repeated interaction, power relations and performance (Jarosz, 2000; Murdoch, 2000). In the examples cited above, networks are frequently deployed in the process of social change and collective action in communities. Lucy Jarosz’s (2000) analysis illustrates well the good fit between network analysis and activism for social change in the context of sustainable agriculture. Micro-scale network analysis “can yield insights into key areas of cooperation and sites for innovation in enhancing the viability of regional agri-food networks and sustainable agriculture” (279) because networks “...bring industrial and organic, large and small-scale food producers, brokers, retailers, and consumers together *spatially and socially* through their relations and interactions within regional agri-food networks” (281, emphasis added).

Network analysis has become increasingly important to the study of rural sustainable development and agri-food initiatives that emphasize collective action across geographic space, and a large and diverse body of literature in rural sociology and geography is growing on the subject (Murdoch, 1995; Marsden and Murdoch, 1995; Whatmore and Thorne, 1997; Hassanein, 1999; Woods, 1997; Goodman, 1999; Jarosz, 2000; Morgan and Murdoch, 2000; Murdoch, 2000; Sobels et al., 2001; Davies, 2002; Hinrichs and Welsh, 2003; Renting et al., 2003; Sage, 2003; Simpson, et al., 2003).

The literature cited above addresses a diversity of agri-food network types, but they can be distilled to three general types of networks: alternative food networks, knowledge exchange networks and social change networks. While these three types are not necessarily discrete, nor mutually exclusive, each has a specific character and function that will be explored in detail in later sections of this chapter. In summary, the study of networks offer social scientists a particular view on the social world, and it is one that emphasizes relationships, collective action, social change and a spatial form that transcends distance and scale. It is these characteristics that make networks a useful framework for the study of agency in the context of the sustainable agriculture social movement in rural communities.

II. Sustainable Agriculture and Justice Discourses

While it is difficult to dissect a social movement and examine its constituent pieces in isolation, in what follows I attempt to give equal treatment to the social, economic and environmental justice discourses and practices as they relate to a particular aspect of the sustainable agriculture movement. My discussion of economic justice addresses the economic non-sustainability of the current food system for farmers, the rise

of organic agriculture, and the production of a “two-class” food system. My treatment of social justice discourses takes up the subject of women in agriculture in terms of labor, family farming and the construction of identity. Environmental justice enters the discussion through a review of literature on local knowledge, knowledge exchange and the representation of “nature” in the discourses of the sustainable agriculture community.

A. Economic Viability, Alternative Food Networks and Organic Agriculture

The application of technology to food production has contributed to the rationalization of agriculture since World War II. Underlying this industrialization of food production is a state policy making “cheap food” available to suppress the rise of real wages (Goodman and Redclift, 1991). Cheap food requires large volumes, and this imperative on increasing production is illustrated nicely by the order to farmers by Richard Nixon’s Secretary of Agriculture, Earl Butz, to “Get big or get out.” As Boyd and Watts (1997) explain, the “self-exploitative qualities of household enterprises (family farms) could be captured by capital via forms of vertical integration” (206). Family farms would adopt technology, integrate with agri-business, increase production and thus, disperse the risks of large-scale food production, still very much mediated by the whims of nature, throughout millions of semi-proletarianized farms. This policy was designed to “cull” the inefficient and badly managed farms, and leave only those farms that could contribute to this new era of food production (Barlett, 1993).

Markets are difficult to predict however, and while the post-war development of chemical fertilizers, herbicides and pesticides allowed farmers to increase yields, and expand production, this eventually contributed to the over-production of commodities. The drop in prices for commodities due to this surplus required farmers to increase

production to make ends meet, which resulted in spiraling over-production and falling prices (Goodman and Redclift, 1991). The continuously falling prices, rising interest rates, and the boycott of the Soviet market in 1980 (due to the Soviet invasion of Afghanistan) contributed to a widespread farm crisis, with thousands of family farmers declaring bankruptcy (Dudley, 2000). During the “Farm Crisis” of the 1980s, “an estimated 200,000-300,000 commercial farmers were forced to default on their loans...[and] between 1984 and 1988, 10 percent of all outstanding farm loans were in default, and more agricultural banks failed in 1987 than in any year since the Great Depression” (Dudley, 2000: 13). Also, for individual farmers, 1987 saw the “highest annual bankruptcy rate recorded, eclipsing the previous high in 1925” (ERS, 2001).

The farm crisis continues, even as technological innovations continue to increase the vertical integration that caused the crisis in the first place. Biotechnology, in the form of genetic modification of plants, is designed to increase vertical integration, so that one firm can control the genetic information of a seed, the supply of the seed itself, the chemical inputs for growing the seed at its genetically determined productivity; and the facilities for storing, transporting and processing raw food product; as well as the marketing of the finished food product (Grey, 2000; Morgan and Murdoch, 2000). These developments in agricultural technology and the accompanying agricultural policies have had the effect of continuing to increase the size of individual farms, with a corresponding decline in the number of farms.

Early advocates for a sustainable agriculture include many farmers marginalized by the economic system in agriculture outlined above. Many refused to “get big” or “get out,” and instead turned to different systems of food production and distribution (Ilbery

and Bowler, 1998). Economic justice for farmers in this alternative food system is conceptualized in a variety of ways. In most cases, it takes the form of securing a fair price for food for the farmer, not for the agribusiness “middle man.” Direct marketing, Community Supported Agriculture (CSA) and cooperatives were a few of the ways in which farmers skip the “middle man” of food processors and agribusiness and sell directly to customers. In addition, CSA and cooperatives in particular help reduce the risks associated with crop failure (the economic burden of which is almost always assumed by the farmer) by having customers invest in the farm or spreading the risk through a network of farmers (Hinrichs, 2000; Morgan and Murdoch, 2000). Another way to ensure a better price is to cultivate a premium market.

Organic agriculture, while not synonymous with sustainable agriculture, is an important part of the movement, and it initially arose in response to concerns about pesticide (over)use in conventional agriculture. Organic fruits, vegetables, meats and dairy products also can be sold at a premium (DeLind, 1994). While conventional agriculture is in a period of crisis, organic production appears to be enjoying a period of increase. The percentage of land dedicated to organic production doubled during the 1990s, and the number of certified organic farmers increased by 40 percent between 1992 and 1997 (Greene, 2000).

The USDA describes organic farming as a “way to lower input costs, decrease reliance on nonrenewable resources, capture high-value markets and premium prices, and boost farm income” (USDA, 2002). For some, incorporating organics into sustainable agriculture to raise farm income entails a form of economic justice for farmers. However, the process of direct marketing in premium markets involves connecting with consumers

who can and will pay the premium prices. This is identified by farmers as one of the single most difficult challenges to the practice of sustainable agriculture.

Alternative food networks (AFNs) offer a solution to this problem, by altering the commodity chain to benefit producers. Whatmore et al. (2003) describe AFNs as

a multiplicity of food networks from organics and fair trade to regional and artisanal products that represent some of the most rapidly expanding food markets in Europe over the last decade. What they share in common is their constitution as/of food markets that redistribute value through the network against the logic of bulk commodity production; that reconvene ‘trust’ between food producers and consumers; and that articulate new forms of political association and market governance. (389)

Work on AFNs follows Murdoch’s (2000) work on vertical networks in rural development. Vertical networks connect rural communities and farms with “a much broader set of processes which exist beyond rural areas” (408) such as processing, retailing and consumption that usually occur at larger scales, or “higher up” on the commodity chain. A number of researchers have investigated “alternative food networks” (Whatmore, 2002; Sage, 2003; Renting et al., 2003), and have found that they re-order and shorten commodity chains to stimulate local markets, improve availability of quality food, increase “face-to-face” interactions between producers and consumers and generally contribute to rural development.

Critics of organic agriculture argue that the cultivation of premium markets inevitably results in a “two-class” food system in which only middle and upper class consumers can afford the food that most farmers and most consumers could not afford to buy (Allen et al., 1991). While the favored model for sustainable agriculture has been the “family farm,” the rise of corporate organic agriculture has continued the exploitation of farm workers, many of whom are migrant Hispanic workers, and the emphasis on

economic justice often overlooks the importance of social justice (Allen and Sachs, 1993). The Tuscarora Organic Growers Cooperative is an alternative food network formed to add efficiency and scale to the marketing process for small family farms in Central Pennsylvania. The issues of class, race and labor surface in this network around the employment of Hispanic laborers and the cultivation of premium markets, and analysis of this, will be taken up in later chapters.

B. Social Justice, Women in Agriculture and Social Change Networks

In Allen's (1993) conception of social justice, she argues that sustainable agriculture requires "the elimination of patriarchy, racism, and class exploitation—all of which maintain systems of power that reinforce the contradictory social relations on which nonsustainable food and agriculture systems are based" (11). This includes, but is not limited to, the marginalization of women from knowledge exchange and decision-making roles (Leckie, 1996; Sachs, 1996), the exploitation of farm workers (Allen et al., 2003), and the persistence of hunger in the midst of unparalleled levels of food production (Allen and Sachs, 1993). Allen and others (Allen et al., 1991; Allen and Sachs, 1993) have argued that patriarchal relations, racism and class exploitation persist in sustainable agriculture organizations. To be truly sustainable, agriculture must address these injustices, and not focus on the technical fixes of production practices at the expense of the whole food system.

Traditional Marxist approaches to labor emphasize the exploitation of the working class for the purposes of extracting surplus value from commodities. "The excess of the value that labourers embody in commodities relative to the value they require for their own reproduction measures the exploitation of labour in production" (Harvey, 1982: 23).

The role of labor in social organizing, thus, is the resistance of the working class against the capitalist class to demand more social forms of production (O'Connor, 1989). This arrangement presupposes that workers do not own the means of production, and that collectively, as a class they are exploited by another, capitalist, class. Agricultural labor in the context of "family farming" has always confounded traditional Marxist approaches, because "family farmers" own the means of production and are largely "self-exploiting" (Goodman and Watts, 1997; Kautsky, 1988).

The "family farm" is thought to be the idealized form of agricultural production, because it is purported to retain the values of rural communities, civic virtues and the entrepreneurial spirit. This rather worn-out trope, however, belies a system that has a history of exploitation for women as well as hired migrant labor. Women's labor on "family farms" is nearly always non-waged, and is exploited through ideologies of femininity and masculinity that render women "helpers" and men "farmers." Whatmore (1991) argues that the gendered division of labor is the result of patriarchal power relations in agriculture. Whatmore claims "gender acts as a fundamental structuring process in the wider *domestic political economy* of ...farms" (11, original emphasis). Social relations within and between families, in particular patriarchal relations within the family, as well as the farm based productive and reproductive activities on family farms dictate the processes of domestic commodity production on family farms, and "this [gender] regime is exploited and reshaped by capital in the process of commoditisation" (45).

The regulation of this gender identity and division of labor punishes women for identifying as farmers, rather than as helpers. Women who do identify as farmers subvert

the gendered labor hierarchy in the “family farm” structure, and are subsequently ignored, dismissed and ostracized from their community (Sachs, 1983, Leckie, 1993). Through this process of marginalization they are denied access to critical sources of information and support. Recent cross-disciplinary work suggests that women may be engaging in resistance to these dominant ideologies by participating to a greater degree as owner/operators in sustainable agriculture than conventional agriculture (Schmitt, 1994; Liepins, 1995, 1998a, 1998b; Wells, 1998; Bjornhaug, 1999; Delind and Ferguson, 1999; Shiva, 1999; Peter et al., 2000; Sachs et al, 2002, Trauger, 2004).

Liepins (1998a) found that women are challenging these ideologies in newly emerging groups on “alternative notions of farming, rural sustainability and political action” (385). The Women, Food and Agricultural Network (WFAN) in Iowa is one such emerging group of women farmers, activists, educators, and academics in Iowa that seeks “to link and amplify women’s voices on issues of food systems, sustainable communities and environmental integrity” (375). This group was born out of the systematic neglect farming women have suffered in mainstream agricultural institutions, and is committed to organize, educate and agitate to change the food system, protect the environment and preserve the future of agriculture. The organization forges links between producers and consumers, and between urban and rural areas and to alleviate the agricultural crisis in Iowa. This public space of activism has become an important space of “empowerment, organization and social change” for women concerned with food and agricultural issues (371).

Hassanein (1999), in her study of Wisconsin’s sustainable agriculture community, cites networks as a framework to facilitate knowledge exchange about production

practices and to facilitate social change for women. The women in her study found the network model particularly useful because “women demonstrate their own capacities as successful farmers and thus subvert stereotypical perceptions of women’s role in agriculture through slow cultural transformations” (189).

In addition, women in Maine and Vermont have instituted Women’s Agricultural Networks (WAgN) through cooperative extension programs. The WAgNs are dedicated to “enabling women and other underserved people to successfully own and operate and support agriculture-related enterprises” (Maine WAgN, 2002). They accomplish their goals of education and support through monthly on-farm meetings; multi-day tours of women-operated farm enterprises; annual conferences; websites, listserves and membership directories; educational workshops and programs; and information booths at local community events.

While issues of gender work to marginalize women from education and leadership positions, issues of sexuality further marginalize women. The Daughters of Yarrow (DOY) is a support group in Maine for lesbian farmers that has grown into a collective of ten farmers on five farms. In addition to issues of farm practices and safety (such as chainsaw maintenance, use and safety), the DOY actively work to educate each other through sharing experiences about finances, estate planning and gay rights.

In summary, the sustainable agriculture movement attracts women as owners and operators, but the family farm model replicates many of the social injustices of conventional agriculture with regard to women and their “appropriate” roles on farms. Many women farmers, however, have resisted this through forming personal support and public activism networks, which emphasize women’s contributions to agriculture. They

also work in community food initiatives, which integrate public policy, education and access to information for producers and consumers. The Women in Agriculture Network (WAgN) in Pennsylvania is inspired by the Maine and Vermont groups, and has formed to provide support, empowerment and education to women, particularly women who identify as farmers. The struggle over meaning and identity is a crucial part of the process of building networks of women, and this issue will be taken up in future chapters.

C. Environmental Soundness and Knowledge Exchange Networks

As another part of the “triple-bottom line,” environmental justice is also a stated goal of the sustainable agriculture movement. Working to reverse or mitigate the environmental problems associated with conventional agriculture, particularly pesticide use, have been an early driving factor in the push for an alternative agriculture since the 1970s (Sachs, 1996). Knowledge production and exchange about agricultural practices are central to the success of this movement (Hassanein and Kloppenburg, 1995). Knowledge production about agricultural practices has long been the responsibility of farmers, and the generation of “scientific” knowledge about agriculture within the land-grant university system has been a relatively recent development. Advocates for an alternative, sustainable agriculture argue that the “expert” model of information provision, which comes from the agribusiness, government and university triad (Hightower, 1973), produces knowledge that has “given us a conventional, non-sustainable, non-regenerative, high-input, homogenous agriculture” (Kloppenburg, 1991: 522). Alternative agriculture requires an alternative system of knowledge production, particularly about farming practices.

The list of historical, present and hypothesized environmental problems associated with conventional agriculture is long, and I shall only provide a brief summary here. Most recently, food scares, such as Bovine Spongiform Encephalopathy (BSE), brought about by the “rationalization” of protein, cattle fodder and agricultural wastes, have dominated the headlines in 2003. In 2000, “accidental” contamination of genetically engineered corn with corn “safe for human consumption” sparked recalls of potentially allergenic corn in the Starlink corn episode. “Gene flow” from bioengineered plants to non-GMO crops threatens certified organic varieties and native species, biodiversity and future food security. Loss of soil fertility; topsoil erosion; desertification; groundwater contamination from chemical fertilizers, manure and pesticides; pesticide resistance of insects and weeds; loss of species diversity from pesticides such as DDT (which is still legal in many parts of the world, including countries that export food to the United States), and confinement systems that weaken animal health, promote disease and increase dependence on growth hormones and antibiotics are just a few examples of the environmental degradation associated with or attributed to conventional agricultural practices. (See Carson, 1962; Berry, 1977; Jackson, 1980; Pretty, 1995; Sachs, 1996; Shiva, 1999; Whatmore, 2002).

The sustainable agriculture movement has set itself to the task of rectifying and changing these outcomes by changing agricultural practices. Kloppenburg (1991), in an early statement on the role of “expert” knowledge in agriculture, acknowledged that the emphasis on standardizing production practices through agricultural science has contributed to the environmental crises in agriculture.

[A]gricultural science as currently constituted provides neither a complete, nor an adequate, nor even a best possible account of the sphere of

agricultural production. Indeed it is in large measure an historical over-reliance on this partial knowledge—and a failure to recognize how specifically situated that knowledge is—that has brought our agriculture to its presents straits. (520)

Conventional agricultural knowledge, according to Kloppenburg, consists of “immutable mobiles” (Latour, 1986) or generalized information that could be transported and applied to any place in any situation. Knowledge about alternative agriculture, he argues, should be composed of “mutable immobiles,” or adaptable and flexible forms of information that are specific to particular places. He calls for the development of an alternative science, one that includes the experiences and local knowledge of farmers. Research in this direction emphasizes forging new relationships between farmers and the conventional knowledge institutions such as land-grant universities through participatory research projects (Gerber, 1992).

Flora (1992), in a critique of Kloppenburg (1991), argues that conventional agricultural knowledge institutions are not up to the task of rethinking the “expert” model, and can just as easily co-opt technical practices and knowledge that come from farmers and apply them to conventional farms in the name of sustainability. She argues that “an alternative agricultural research agenda...requires that we redefine our ends as well as our means” (94) and centrally place “the farm family and farm workers with the particularities of their time and place, in relation to, but not total dependence on, conventional scientific developments of a much more general nature” (97). Feldman and Welsh (1995), in a more strongly worded critique of Kloppenburg (1991), argue that the social location of farmers, and in particular the “farm family,” is a socially constructed position. As such, the production of local knowledge is a “socially-constructed process that is contradictory in its elaborations” (39). Knowledge emerging from farmers does not

fit the scientific and expert model of universities, and as such, should be exchanged between farmers without the mediating influence of agricultural institutions.

Following from this, Hassanein and Kloppenburg (1995) and Hassanein (1997, 1999) investigated the emergence of knowledge exchange networks as part of a sustainable agriculture community in Wisconsin. Hassanein and Kloppenburg (1995) argue that knowledge exchange is critical to the survival and viability of a social movement such as sustainable agriculture. For those involved with the movement, “local” or “experiential” knowledge always trumps the knowledge available from land-grant universities, “not necessarily because they believe that institutionalized agricultural science *cannot* help them, but simply because it *has not* helped them” (733, original emphasis).

Hassanein (1997) extended this analysis by researching the experience of women farmers involved in a knowledge exchange network established for the purposes of negotiating agriculture from a gendered social location. She found that the kinds of knowledge they exchanged and the way it was exchanged operated differently from the male dominated networks, and as such, constituted an important addition to a more “inclusive” local knowledge production and exchange. Importantly, this research found that the local knowledge developed by farmers on particular farms was easily transmitted and translated to other farmers, who then adapted it for their own purposes. In many ways this constitutes a new form of “mutable mobile” information about practices for a more environmentally sound agriculture.

These mutable mobiles move along what Murdoch (2000) calls “horizontal networks” and characterizes as networks of “innovation and learning” (414). These

horizontal networks facilitate the exchange of “tacit knowledge,” or knowledge that is “personal and context-dependent, and as such, it is difficult...to communicate other than through personal interaction in a context of shared experiences...” (Morgan and Murdoch, 2000: 161). The primary actors in these networks are farmers, who share their experiences with particular production techniques. For example, grass fed cattle, pigs and poultry require a system of intensive pasture management called rotational grazing. This practice requires intimate knowledge of the growing conditions, plant growth and animal behavior in a variety of contexts, and because of the emphasis on local knowledge and experience, farmers have formed networks to facilitate information exchange (Hassanein and Kloppenburg, 1995; Hassanein, 1999; Andrew, 2003; Simpson et al., 2003).

This constitutes a radical departure from the expert model of knowledge exchange perpetuated by land-grant universities and government agencies. The farm-based education program developed by the Pennsylvania Association for Sustainable Agriculture is an example of a “horizontal network” of learning and innovation, as education primarily takes place on farms and between farmers. In echo of early work on participatory research, local universities and government agencies interested in promoting sustainable agriculture also participate in the program through “vertical networks” of sponsorship. The impact of this mediating role on knowledge exchange between farmers will be a subject of analysis in future chapters.

Sustainable agriculture, if it is to truly achieve the economic, social and environmental justice to which it aspires, requires a much wider understanding of justice, one that incorporates the farm, but also moves into a wider social fabric. Social networks facilitate this diffusion of agricultural practices, products and social change, particularly

in isolated (and socially isolating) rural communities. In this chapter I have positioned my research within the literature on rurality, sustainability and social networks. I have also reviewed and positioned my research within previous work on the diffusion of environmentally sound practices, economic viability and social justice in the sustainable agriculture movement. I emphasize the understanding of networks as spatial forms and as an analogue of human connections. In the next chapter I discuss how networks can also serve as both metaphor and ontology for theorizing about sustainable agriculture.

Chapter 3

THEORETICAL FRAMEWORK

*Eating is an agricultural act, and how we eat determines to a considerable extent
how the world is used.
~Wendell Berry, 1990*

Social theory on agency, nature and society often position agency fully within the realm of the “social” (Murdoch, 1997), in part because of the stain of racist environmental determinism on geography’s intellectual history (Goodman, 2001). This positioning of agency in the hands of humans alone reflects a modernist ontological distinction between nature and society (Murdoch, 1995). While a large body of literature and a number of disciplines take up the subject of agency in nature-society relations, the contributions of two frameworks in particular are explored in this chapter: (eco)feminism and (agrarian) political economy.

Recent work by post-structuralist theorists however, has criticized these and other approaches for being structurally deterministic (Murdoch, 1995; Whatmore, 1997), because they have a “tendency to explain social processes by reference to some preexisting account...” (Murdoch, 1995: 732). For feminism, patriarchy is implicated in the oppression of women, and for political economy, capitalism is targeted as the source of class and labor oppression. These theories position women and farmers/laborers as either nurturers of the environment or marginalized victims of capitalist processes, and say very little about individual agency, collective agency in communities or the role of the environment in shaping agency. The dichotomous division of nature/culture lies at the heart of these frameworks, and this chapter is a discussion of how these frameworks can be reworked. But first, a few words about binaries, dualisms and networks.

Dualistic thinking is the comprehension of the world in terms of binary pairs, such that one pole of the pair cannot exist without the other, and one is assumed to be inferior to the other (Haraway, 1991). Binary pairs relevant to this research are male-female, urban-rural, global-local, culture-nature, capital-labor. In these pairs, female, rural, local, nature and labor are seen to be the undervalued pole in the binary. In addition to, and as an outcome of being undervalued, the social locations at the poles of these binaries are often seen to be lacking political agency. Actor-network theory (ANT), arising out of both political economy theories of nature-society and post-structuralist feminist theory, sets out an anti-dualistic ontology, where dualisms are seen to be the construct of scientific Enlightenment thinking (Latour, 1993).

Latour (1993) argues, in reference to the nature-culture dualism, that natural and cultural objects continuously proliferate in the production of “hybrids” or “quasi-objects.” Also, in reference to the local-global binary, Latour argues “the two extremes, the local and global, [are]...much less interesting than the intermediary arrangements that we are calling networks” (122). When nature and culture (or any other dualism) are seen as co-productions in every object, agency can no longer be assigned to only one pole in the binary. “Agency is a relational effect generated by...interacting components whose activity is constituted in the networks of which they form a part” (Whatmore, 1999:28).

Using such social theory to study networks in sustainable agriculture allows agency to be conceived of as something collective and contingent upon relations with others. Networks illustrate the collective activity of multiple individuals, and thus are well suited to examining political agency. In the context of sustainable agriculture, women, the rural, labor and the local are invoked as powerful sources of innovation,

leadership and community. Many versions of social theory, including ecofeminism, simply invert the dualisms and extend agency to the typically marginalized pair (Plumwood, 1993). Actor-network theory offers an ontology that frames the forces of domination, and an understanding of how entities in these marginalized groups can subvert the forces that dominate them through their collective associations.

My objective in this chapter is to articulate a framework that provides both a network ontology that explains the social, economic and environmental justice vision articulated by sustainable agriculturalists, as well as a mode of analysis that emphasizes networks, collective agency and “acting at a distance.” An analytical framework that emphasizes the connections and relationships between individuals, groups and institutions shifts the analysis from “why” to “how” (Murdoch, 1995) and provides a framework for understanding “how” rural communities are accomplishing (or not accomplishing) the goals of the sustainable agriculture movement through networks. This network ontology and network analysis incorporates aspects of eco-feminist, eco-marxism and actor-network theory to position this research in the context of a post-structuralist and materialist feminist geography of the environment.

In what follows, I outline a genealogy of thinking about dualisms and the environment. I begin with ecofeminist theory and argue that a nature/culture dualism inherent in much ecofeminist philosophy poses problems for theorizing about nature-society relationships. Following this, I outline political economy approaches to nature-society interactions, and the problems the nature/culture dualism poses for theorizing about agency and the environment. Ecofeminism and political economy approaches are included here because ANT and subsequent post-structuralist interventions on the issue

of food and agriculture are grounded in these bodies of thought. Next, I discuss post-structuralist interventions in the nature/culture dualism by incorporating recent feminist theorizing, agro-food geography and actor-network theory. Lastly, I discuss Whatmore's conceptualization of a "relational ethics" based on corporeality and hybridity to show how sustainable agriculturalists' relationship to nature illustrates network ontologies. This ontology explains the social and environmental justice vision in sustainable agriculture, and also informs a network analysis of agency in a post-structuralist and materialist feminist geography of the environment.

I. The Place of Nature in Ecofeminist Theory

Literature on agency, nature and society with respect to gender often invoke a feminine land ethic through discourses of care, motherhood and nurturing (Plumwood, 1993, Warren, 1997). Others use frameworks of patriarchy and political economy to argue that women are marginalized from positions of power over nature (Seager, 1993) and/or are placed in positions where environmental conservation is the only option for sustaining their livelihoods (Agarwal, 1992). These perspectives locate women's agency either in a self-effacing and non-instrumentalizing self (the nurturing mother), or in a marginalized and relatively agency-less object of patriarchal and capitalist relations (the helpless victim). While this characterization of the ecofeminist debates is rather simplified, I use it to illustrate the point that neither pole of this debate explain very well what farmers, women in particular, articulate about their attraction to sustainable agriculture. Nor does it explain the environmental ethic of sustainable agriculturalists towards their farm, their family and the community.

Ecofeminists argue that women and nature experience a shared oppression within systems of power in Western patriarchal culture, and particularly those shaped through capitalist processes (Merchant, 1981; Shiva, 1989; Seager, 1993; Plumwood, 1993; Mies and Shiva, 1994). While ecofeminists disagree on whether the connection between women and nature is a result of a natural or socially constructed process, they agree that women and nature have been historically linked and consequently mutually devalued, and that the liberation of women is contingent upon or coincident with the liberation of nature (Daly, 1978; Griffin, 1978; Merchant, 1983). One articulation of this argument largely revolves around the idea that women's ability to reproduce and their social or "natural" responsibilities toward children make them vulnerable to environmental degradation and place them in a unique political position to defend and protect nature (Mies and Shiva, 1993; Mellor, 1997).

Reed (2000) refers to these as "maternal explanations," which she argues are connected to the feminist tendency to "study marginalized groups" and "progressive politics." "The feminist preoccupation with women's marginalization has led to a predetermination of what constitutes progressive politics and women's appropriate place within them" (365). Even ecofeminist work that avoids biologically deterministic models suggests, "women's social location as mothers and caregivers transcends boundaries of race, ethnicity and class to favour environmental protection" (366). All these accounts still articulate "women" as a coherent category with particular, knowable, universal and *gendered* characteristics, which lend themselves to environmentalism (New, 1996).

Complex and contradictory elements in women's lives inform their politics on the environment, and this is illustrated well in Reed's (2000) example of loggers and logger's

wives protesting the “feminist” environmentalists who are seen to threaten forestry jobs by protesting forestry practices. What is overlooked is the way the larger debate is framed in terms of jobs or trees with the normative ecofeminist position (rather absurdly) on the side of the trees. What is also missing is a discussion of a system that creates a jobs-versus-trees binary and pits women against each other. Ecofeminism at times embraces this distinction between good and bad women (not just bad men), left and right politics, jobs and trees (a.k.a: nature and culture), and leaves unexplained the unsustainable systems that separate people from each other and communities from their environments.

The separation between nature and culture, as many ecofeminists have noted, lies at the root of these non-sustainable and patriarchal systems (Merchant, 1981; Seager, 1993; Plumwood, 1993). While I agree with this assessment, I think, however, that the problem for ecofeminist theorizing about nature-society relations lies not so much in the separation of nature and culture in patriarchal cultures, but rather in the separation of nature from culture in ecofeminist theory itself. This separation becomes apparent in the tendency for ecofeminists to be confident that we know what we are talking about when we invoke “nature” or the environment, or when we refer to “women” as a universal category.

This ontological separation of nature from culture in ecofeminism perpetuates two problems for theorizing about nature and society. Both are connected to the use of the environment and women as analytical categories that exist, always already available for eco-feminist theorizing prior to analysis. First, the focus on ‘women,’ or even gender difference, automatically renders ‘women’ as a natural or social constructed category opposite that of men, and this binary opposition becomes based on some essential

properties. Secondly, because of this positioning, what constitutes ecofeminist political action around the environment is often pre-determined as a pro-environment position prior to analysis. The “nature” that is invoked in these accounts is a nature in need of saving, which doesn’t account for the ways in which discourses around the environment vary. More importantly, the argument assumes a nature in need of “culture.” Finally, the analytical strategy that focuses on culture as a knowable category and nature as a knowable object risks reinforcing so many of the dualisms that feminists of all stripes have struggled to undermine, such as nature/culture, men/women, subject/object, self/other. To subvert this process requires that we recognize how nature and culture are socially and *mutually* constructed categories in post-structural and post-colonial feminist theory.

II. Sex/Gender and Nature/Culture in Post-structuralist Theory

By women as a category of analysis, I am referring to the crucial assumption that all of us of the same gender, across classes and cultures, are somehow socially constituted as a homogeneous group identified prior to the process of analysis... (Mohanty, 1991: 59).

The stability of the sex/gender and nature/culture binaries has recently been challenged by post-structuralist, post-colonialist and postmodern social theorists. Denise Riley (1988) enters this debate by arguing that the category of ‘women’ must be considered not as a category that is ontologically pre-given, rather, women as a group should be considered as “...historically, discursively constructed, and always relatively to other categories that change; ‘women’ is a volatile collectivity in which female persons can be very differently positioned...” (Riley, 1988:1-2). Butler (1990) extends this analysis to assert that the categories of both sex and gender, not just ‘women’ as a group, are also socially constructed categories relative to other categories. This approach

opposes previous versions of feminist theory that asserted that gender is the social construction of the biological and anatomical sex characteristics (deBeauvoir, 1949).

One is not born, but rather becomes a woman. No biological, psychological, or economic fate determines the figure that the human female presents in society; it is civilization as a whole that produces this creature, intermediate between male and eunuch, which is described as feminine (267).

In deBeauvoir's (1949) analysis, what cannot be attributed to nature, must be attributed to culture. Butler refutes this position by arguing that gender is a performative process that not only constructs masculinity and femininity, but also is implicated in the production of binary sex differences. In other words, gender makes possible the "difference that makes a difference" between the sexes. She writes,

(g)ender ought not to be conceived merely as the cultural inscription of meaning on a pre-given sex: gender must also designate the very apparatus of production whereby the sexes themselves are established (11).

Thus, for Butler, both sex and gender (and implicitly nature and culture) are discursively constructed, and the apparatus for their production is the "heterosexual matrix," a "regulatory fiction" that requires the existence of two sexes.

Like Butler (1990) with sex and gender, Haraway (1991) argues that both nature and culture are discursively constructed and should not be considered ontologically pre-given categories that can inform the "other" half of the dialectic. She writes,

The political and explanatory power of the 'social' category of gender depends upon historicizing the categories of sex, flesh, body, biology, race and nature in such a way that the binary, universalizing opposition that spawned the concept of the sex/gender system at a particular time and place in feminist theory implodes into articulated, differentiated, accountable, located and consequential theories of embodiment, where nature is no longer imagined and enacted as a resource to culture or sex to gender (148).

Thus, for Haraway, nature when used to define culture, is always already defined as something that culture is not. In the work of these theorists, sex/gender and nature/culture become unstable binaries whose construction depends not on their opposition to some other stable category, but rather, they become imbued with meaning through their co-production. In the context of Haraway's "cyborg" feminism, the boundaries between human/machine are disrupted, as are other dualisms, such as nature/culture.

This approach encourages the comprehension of the world through "the changing, moving, complex *web of our interactions*, in light of the language, power structures, natural environments (internal and external), and beliefs that weave it in time (Hubbard and Lowe, 1979: 116, cited in Haraway, 1991: 76, emphasis added). Ecofeminist philosophy and post-structuralist feminist theory have both taken up the issue of the nature/culture dualism, and these threads will be taken up later. But first, I discuss the political economy approach to the issue of nature and culture.

III. The Place of Nature in Marxism and Agrarian Political Economy

Marxist thinking has not always incorporated the "matter of nature" into analysis, and Marx has been accused of having a "Promethean indifference to nature" (Castree, 2002: 123). However, the increasing visibility in recent decades of environmental degradation and technological advancement which blur the lines between human and non-human have spurred the development of new Marxist analytical tools. Castree argues that the "greening of the geographical left could hardly have come at a better time. In the context of proliferating environmental problems, new interventions in 'non-human'

nature and new issues surrounding our bodily natures, it has offered rich theoretical, empirical and normative resources with which to work..." (112).

However, the philosophical understanding of the importance of nature to society and the dependence of society upon nature has not been a recent, nor uncomplicated revelation. Glacken (1967) writes in reference to Sumerian mythological figures, "these notions of order and purpose, of divine activity in creating habitable places with their fields and canals for man are the mythical antecedents...from which there emerged in historical time rational speculation about the relations of man to his environment" (5). Clearly, the relevance of the environment has been manifest throughout human history, but Williams (1980) also observes that the very "idea of nature contains, though often unnoticed, an extraordinary amount of human history" (67). While "nature" might be a term that carries a lot of freight, Harvey (1996) suggests that the "environment" might not be so clearly defined either. "The 'environmental issue' necessarily means such different things to different people, that in aggregate it encompasses quite literally everything there is" (117).

Social constructivist accounts of nature appeared in political economy theory in the 1980s. Smith (1984) articulates a theory that nature is produced through the relations of capitalist production.

Capitalism inherits a global world market—a system of commodity exchange and circulation—which it digests then regurgitates as the world capitalist system, a system of production. To achieve this, human labor power itself is converted into a commodity, produced like any other commodity according to specifically capitalist social relations. The production of nature at the global scale, not just an increased 'mastery' over nature, is the goal of capital (1984: 61-62).

Understanding the relationship between capital and nature, for Smith, is not to “control nature,” but to understand that humans are at the “centre of nature,” and that the “truly human, social control over production of nature...is the realizable dream of socialism” (65).

O’Connor, writing in 1989, initially critiqued Marxist thinking for ignoring the relevance of environmental degradation to Marxist analysis. He argues that there “may be not one but two paths to socialism in late capitalist society” (11). His argument revolves around the crisis of capitalist “underproduction” brought about by environmental degradation. Capitalists do not pay the full price of reproducing nature, a critical condition of production. As the environment, in terms of natural resources, becomes degraded, the costs of reproducing these resources increase. While not a geographer himself, O’Connor’s work helped set the stage for the incorporation of green Marxism into geography.

Fitzsimmons, also writing in 1989 argued that “most work by geographers in the radical tradition has continued a peculiar silence on the question of social Nature: the geographical and historical dialectic between societies and their material environments” (106). She identifies the ontological separation of nature from culture as endemic to Marxist and geographical thinking, embodied in both disciplinary divisions of labor, and the ontological and epistemological separation of nature from space in an attempt to retain scientific credibility. She argues that geography must have a “social ontology of nature,” for without an understanding of the “social construction of Nature, in its geographical and intellectual manifestations, we restrict ourselves to a partial view of the real geography of capitalism” (117).

Fitzsimmons (1989) and O'Connor (1989) argue that the problem with capitalism and environmental degradation is the ontological separation of nature and society. However, their solution to the problem is most often invoked through a dialectical ontology, rather than an anti-dualistic ontology. While Harvey (1996) in his book *Justice, Nature and the Geography of Difference* argues that “elements, things, structures, and systems do not exist outside of or prior to the processes, flows, and relations that create, sustain or undermine them” (49), he ultimately resorts to giving capitalism explanatory power. “If things seem to have a life of their own, then it is only because those things which are handled in the realm of material practices are considered to internalize discursive effects of political economic power and spatio-temporal relations” (222).

All the eco-Marxists mentioned above tinker with the ontological separation of nature from society, and flirt with granting “nature” some form of agency, but, as Castree argues, “their politics is ultimately anthropocentric in general and class-based in particular, because of their ultimate inability to escape dualistic thinking” (2002: 132). The “modernist ontology” (Murdoch, 1995) that Castree critiques is also what critics of agrarian political economy cite as problematic for contemporary approaches to the study of nature and society in agriculture.

Political economy perspectives have brought a number of valuable contributions to the study of agriculture. Agrarian political economy has been described as the “sociology of agribusiness globalization” (Buttel, 2001:171) which “tends to portray globalization, and the concomitant outflanking of nature, as merely the latest stage in the development of the capitalist space economy” (Murdoch et al., 2000: 111). Murdoch et al. (2000) argue that it has

rendered visible the new connections and relationships that surround and shape food commodities, and it has revealed many of the key motive forces that drive changes in the processes of appropriation and substitution—that is, the means whereby industrial capitals attempt to incorporate natural systems into their own methods of industrial processing (112).

In addition, political economy perspectives introduced the concept of the labor process (Goodman, 2001) as well as questions of politics, production and accumulation (Goodman and Watts, 1997) and substitution and appropriation (Goodman and Redclift, 1991) to agriculture. However well these contributions have been received, critics of political-economic approaches argue that the issues of food safety and consumer demand for high quality foods are

not easily rendered into the vocabulary of political economy, for its overriding concern with corporate power, and the surmounting of (biological) constraints on that power means that it tends to see nature as essentially ‘passive’ in the face of unfolding socio-economic processes...” (Murdoch et al., 2000: 112)

Thus, the issue of nature/culture dualisms surfaces in political economy as well as in ecofeminist approaches to the study of nature-society relations. Goodman (2001) suggests that the marginalization of nature in political economy accounts arises from concerns about appearing biologically deterministic, and that the “materiality” of nature is accounted for in other frameworks, such as the labor process (Goodman, 2001). Regardless, the marginalization of nature from political economic accounts persists, and as argued by Swyngedouw (1999),

[t]he social and natural may have been brought together and made historical and geographical by Marx, but he did so in ways that kept both as *a priori* separate domains. The networks that constitute and the processes that produce socionatural hybrids are left unreconstructed when the social and the natural are seen as two contradictory, yet complementary, poles that construct a reality (446).

Swyngedouw refers to recent work in post-structuralist social theory in his mention of “networks” and “hybrids.” Actor-network theory sets out to disrupt nature-culture dualisms by acknowledging the hybridity of society and nature, and articulating agency as the outcome of networks (Latour, 1993).

IV. Actor-Network Theory and the Nature/Culture Dualism

Latour (1993) writes, “*the very notion of culture is an artifact created by bracketing Nature off*. Cultures--different or universal--do not exist, any more than Nature does. There are only natures-cultures” (104, original emphasis). For Latour, nature and culture are not separate categories, rather together they describe the seamless web of reality, being and knowing the world. Latour argues that this kind of approach is crucial to analysis of social issues because nature, politics and discourse are seen as mutually exclusive categories in contemporary social thought. But the more we continue to allow modern thought to separate these categories (or what Latour refers to as purification) the more they proliferate. The more we deny the interconnection of nature with culture, the more we allow the interconnections to happen (or what Latour refers to as hybridization). For example the assumption that the ozone layer (in the realm of nature) has nothing to do with refrigerators (in the realm of culture) has produced an ecological problem of global proportions.

Thus, the categories of nature and culture are not seen as ontologically separate entities, rather they are seen to be “co-produced” through their associations. The importance of this approach is manifest in “agro-food” studies, where consumption, production, society, and nature are often inextricably intertwined (Goodman, 1999; Whatmore and Thorne, 1997). While a dialectical approach, such as that promoted by

Harvey (1996) would seem to address the “co-production” through association of nature and culture, dialectical thinking presupposes the existence of binary categories. In addition, in many political-economy approaches capitalism is an always, already available explanatory resource, which denies agency to multiple entities, human and non-human.

For example, Harvey (1996) acknowledges the unity of nature and culture only to enlist environmental degradation in his arguments about the problems with capitalism, not to argue that nature has agency within capitalist frameworks (or even that particular groups of people exercise agency).

I hope it would be true that socialists, rather than nature, will know best. Indeed, the only persuasive reason for joining the socialist...cause is precisely that socialists know best how to engage in environmental-ecological transformations in such a way as to realize long-term socialist goals of feeding the hungry, clothing the poor, providing reasonable life-chances for all...(196).

Keeping in mind the problems with knowing how “nature knows best,” agency in ANT is conceptualized not as power exercised by individuals, but rather “in terms of heterogeneous *collective* associations” (Goodman, 1999: 25) and as “an emergent property of networks or collectives” (26). As such, non-human entities, such as nature, have the capacity to act. This is critical in agro-food studies, as “nature” in the form of soil quality, climate, drought, pests, etc., have the capacity to alter the constitution of a food product throughout a commodity chain.

ANT has also been criticized for giving too much agency to nonhuman nature at the expense of people (Vandenberghe, 2002) and for lacking a coherent normative position with regard to social justice (Murdoch, 1997). In addition, Castree questions the assumption that all actor-networks are unique, which limits the theoretical and analytical

power of ANT. “Though actor-networks are unlikely ever to be similar in every detail, what if the process constituted by and constituting otherwise different actor-networks happen to be the same?” (134). Castree argues that bringing in political economy approaches helps to remedy these deficiencies, and develops a “hybrid” theory:

one still able to talk about socionatural relations in our world as pervasively capitalist (but not exclusively so), as structured and enduring (but not in a reductionist or totalizing way) and as disproportionately driven by ‘social’ actions and relations (even as those actions and relations could not persist without ‘natural’ agents and relations) (135).

Swyngedouw’s (1999) work on the Spanish waterscape illustrates the empirical and theoretical advantages of using this hybrid theory. He draws a parallel between Harvey’s “permanences” and Latour’s “hybrids,” or those things that become stabilized through repeated interactions. “The ‘modern’ environment and waterscape in Spain is what Latour (1993) would refer to as a ‘hybrid,’ a thing-like appearance (a ‘permanence’ as Harvey [1996] would call it) that is part natural and part social, and that embodies a multiplicity of historical-geographical relations and processes” (445). Swyngedouw also compares Latour’s “quasi-objects,” or those things that are produced through the translations between nature and society and consequently reconfigure and reinscribe meanings around nature and society to Haraway’s (1991) “cyborg.” Thus, according to Swyngedouw, we have “hybrid, part-social/part natural—yet deeply historical and thus produced—objects/subjects [that] are intermediaries that embody and express nature and society and weave networks...” (445).

However, Swyngedouw (1999) argues that hybrids, quasi-objects, and cyborgs are inadequate heuristic devices if “stripped from the *process* of their historical-geographical production” (447, original emphasis).

We must insist on the need to transcend the binary formations of nature and society and develop a new language that maintains the dialectical unity of the process of change as embodied in the thing itself. ‘Things’ are hybrids or quasi-objects (subjects *and* objects, material *and* discursive, natural *and* social) from the very beginning (447).

For Swyngedouw, ANT is only useful for understanding hybrids when it is grounded in historical materialism and dialectical thinking around economic change and stability. Additionally, ANT has the potential to articulate a new conceptualization of space, one “concerned with tracing points of connection and lines of flow, as opposed to reiterating fixed surfaces and boundaries” (Whatmore and Thorne, 1997: 289). Murdoch (1998) echoes this sentiment: “ANT redefines ‘geography’ for it overthrows the ‘tyranny of distance,’ a beast which tends to impose a single conception of undifferentiated space upon variable landscapes of relations and connections” (358).

The emphasis on hybridity is a crucial concept for actor-network theorists and post-structuralist feminist theorists, but Whatmore (2002) incorporates ecofeminist frameworks towards nature and feminist conceptions of corporeality into this framework to articulate an ethical dimension to theorizing about nature-society hybrids.

V. Beyond the Nature/Culture Divide: Corporeality and Hybridity

Ecofeminism has long recognized the danger of separating nature and culture, and has also been one of few advocates for the extension of agency to non-human nature (Haraway, 1991). The vehicles for the extension of agency beyond human nature are typically either the rubric of “rights,” such as animal rights (Mellor, 1997), or through the feminist “ethic of care” (Plumwood, 1993; Warren, 1997). The framework of rights is problematic because it carries the freight of the “autonomous self” as well as the “masculine conceit” of the “rights bearing citizen” (Whatmore, 2002:149). The “ethic of

care,” while cautiously extending agency to nature, reinforces the nature/culture dualism, and in many ways belies its own ethic by presupposing that nature is the object of care, not a mutual participant. Additionally, as argued by Whatmore, these accounts assume an ontological separation of nature from culture. “Even amidst the talk of intersubjectivity, embodiment and embeddedness, these accounts tend to treat the ‘human’ and ‘non-human’...” as objects in “...separate worlds in need of some kind of remedial re-connection” (Whatmore, 2002: 158).

Whatmore (2002) argues that a different sort of ethics, one that “places corporeality and hybridity at its heart” (162) is necessary “for the elaboration of a more relational understanding of ethical considerability and conduct” (152). This ethic is centered on “...a notion of difference-in-relation, as inter-subjectively constituted in the context of practical or lived configurations of self and community” (153) and a “corporeal immersion of humankind in the biosphere” (157). Feminists have employed the idea of corporeality to illustrate how the “lived experience” in a female body is crucial to understanding women’s physical and social lives (Grosz, 1997). While the emphasis on the body flirts with essentialist notions of women’s experiences, the corporeal experience emphasizes understanding how living in a sexed body is implicated in interpretations of the self and the subject. Hybridity, a term borrowed from genetic science, has been used by feminists, and others, to disrupt dualisms, such as black/white, self/other, human/machine, nature/culture, and to suggest approaches to theory and politics that reflect the multiple and complex sources of identity and relationships (Duncan, 1996; Haraway, 1991)

Whatmore's (2002) use of these terms directs us towards an understanding of the importance of the bodily and non-human natures in the production and consumption of food. Going beyond "you are what you eat", Whatmore suggests that process of growing and consuming food involves a set of experiences that are necessarily both corporeal and hybrid.

The skills and (dis)comforts of growing, provisioning, cooking and eating have long accommodated and intensified the wayward energies of wastes and additives circulating in water, soils and in the flesh; and the bacterial mutations and viral infections that traffic between life and death. The rhythms and motions of these inter-corporeal practices configure spaces of connectivity between more-than-human life worlds...(162).

The acts of growing and eating food (particularly in the context of food scares, such as Bovine Spongiform Encephalopathy), remind us of our vulnerabilities as embodied humans and of our embeddedness in nonhuman nature. This intimacy invokes a critical need to evaluate our ethical practices with regard to non-human nature.

Whatmore suggests a

relational understanding and an ethical considerability and affect...to shift from a discursive to a performative register which emphasizes the importance of corporeality and hybridity as modes of conduct for (re)assembling the spatial praxis of ethics in more than human terms (147).

Whatmore (2002) calls for an environmental ethics that extends "ethical considerability beyond the unified (and always) human subject" (166) through recognition of the hybridity of (human) bodily natures and non-human nature. Extending the ethical community to non-human nature has the effect of "releasing the spatial imaginaries of ethical community from both the geo-metrics of universalism and...they disturb the territorializations of self, kinship, neighbourhood and nation" (167). The practice of such ethical discourse allows for the establishment of new relations between

humans and non-human nature that include extending agency to nature and understanding the world as composed of nature-culture hybrids.

Whatmore (2002) raises the specter of the “Mad Cow,” and the startling disclosures of the industrial agricultural practices that render cows carnivores and cannibals and calves the vampires of slaughtered cattle. While this example is particularly graphic and effective as a rhetorical strategy, the more mundane practices of organic vegetable production and rotational grazing of livestock also can serve as excellent examples of Whatmore’s hybridity and corporeality in a different context. Agriculture exemplifies a hybrid world of nature and society mediated in and through the corporeal process of food production and consumption.

Farmers, by using environmentally sound practices, articulate a way of knowing about the world that takes into consideration the health and longevity of their farmland. Sustainable agriculturalists working for economic justice for farmers articulate a worldview that reflects cooperation rather than competition. Activists for social justice in sustainable agriculture recognize the world as composed of interdependent communities, rather than isolated individuals. In each case the vision for social, economic or environmental justice is embedded in an epistemology that recognizes relationships, collective action and cooperation. In short, these relationships can be identified as social, economic and environmental networks and characterized as part of a “relational ethic.”

Ultimately, the “citizen-eaters” who fuel the sustainable agriculture community through consumption are not just consuming vegetables or meat, they are also consuming “sustainability” in their choice to support farmers of locally grown food produced in an environmentally and socially sustainable manner. They consume not only raw materials

in the form of energy and nutrients, they also consume a way of life that takes seriously issues of justice for human and non-human nature. The allegedly apolitical act of eating (re)creates a bodily existence in the consumer that is composed of both nature and society, and becomes a politically subversive act embedded in relations of social, economic and environmental justice.

VI. Network Ontology and Network Analysis

Allen (1993) writes, “[a]griculture does not exist and cannot function except at the intersection of society and nature” (2). She argues, “it is important to understand that we are working in a situation in which both nature and society have been developed, produced and reproduced by the ideas and activities of human beings” (3). Clearly, agriculture is a product of both social and economic activities that involves the exploitation or cooperation of nature. While Allen suggests that nature and culture exist as ontologically separate categories in dominant agricultural paradigms, I argue that sustainable agriculture can be considered a “quasi-object” arising from both human and non-human agency. (Conventional agriculture can also be seen as a quasi-object, but one where the agency of nature is denied, and thus the proliferation of hybrids in the form of pest-resistance to insecticides, for example, must continually be overcome through technological fixes).

The “co-production” of nature and society within the context of capitalist agricultural practices (sustainable or conventional) and social and economic processes cannot be overlooked in an analysis of social, economic and environmental justice discourses in sustainable agriculture. A combination of ANT, political economy and feminist theory can be used to understand sustainable agriculture as a quasi-object that is

produced through particular historical-geographical practices under capitalism. While ANT approaches have made significant advances with respect to the nature-culture ontology, a hybrid of ANT, political economy and feminist theory offers a normative position with regard to social and economic justice, and ethical reasons for and implications of extending agency to nature.

This dissertation uses networks as a metaphor for understanding the epistemology of sustainable agriculturalists, and as a mode of analysis to study social, economic and environmental initiatives in sustainable agriculture. This approach informs the way I frame the discourses and practices around social, economic and environmental justice within sustainable agriculture. It also informs my approach to the analysis of social and economic activities, and their affects, as they occur through social, economic and environmental networks.

This analytical and ontological framework for studying networks draws upon Whatmore and Thorne's (1999) approach to the fair-trade coffee network.

In this context, alternative geographies of food are located in the political competence and social agency of individuals, institutions, and alliances, enacting a variety of partial knowledges and strategic interests through networks which simultaneously involve a 'lengthening' of spatial and institutional reach, *and* a 'strengthening' of environmental and social embeddedness" (295).

Network analysis in this context then accomplishes a variety of tasks; it allows for the understanding of human agency and collective action, as well as constraints and limits to action in a diffuse, diverse social movement, such as sustainable agriculture. It allows for the comprehension of what flows through networks (discourses, information, money, etc) and following from that it allows for the investigation of the process of network

(de)stabilization, or the repeated interactions between individuals that “strengthen” and “lengthen” the network.

Attempts to understand the place of nature in social theory has long been fraught with imperialist discourses, silences and exclusions and essentialist understandings of individuals and groups. In many cases these difficulties have arisen from the misplacement of nature as a natural or socially constructed entity that exists in pre-determined, uni-dimensional and oppositional relationships to culture. Recent work in post-structuralist theory has illustrated the importance of nature to society without resorting to “cultural” explanations, by understanding the world as both “nature” and “culture.” Whatmore’s (2002) articulation of relational ethics can be applied to both conceptualizing a social and environmental justice vision for sustainable agriculture and a post-structuralist and materialist feminist geographical theory of the environment.

Chapter 4

METHODS AND METHODOLOGY

“What’s the best way to describe what you’re doing?”
~ Chris Fullerton, TOG Cooperative Director

The above question was asked of me during an introduction to the workers on the loading dock of the cooperative headquarters while I was observing their activities. The quote is illustrative of the general feeling about the way I conducted my research as an ethnographer, which involved a lot of hanging around, helping and watching. Farmers, while glad to have an extra pair of hands, were generally skeptical of what I could or would learn about farming from watching, helping and talking to them for a day or a few hours. Ethnographic methods are unique in this respect, as they allow for information to be gathered from research participants through learning what they know, and how they know it.

The research presented in this dissertation is an investigation and analysis of social networks in the sustainable agriculture community in south-central Pennsylvania. Social networks are typically composed of a range of different kinds of relationships between organizations, groups or individuals. Because I am interested in the quality of those relationships, qualitative methodologies seem most appropriate (Schensul et al., 1999). The research also is informed by a feminist methodology, which takes seriously a commitment to social change, by participate in respondents’ lives in a way that is non-exploitative and by destabilizing power relations between researched and researcher (Moss, 2002).

Ethnographic methodology usually involves a narrative analysis and presentation of the results of the research in the respondents' voices to the greatest extent possible (Atkinson et al, 2001). The research presented here involves a narrative analysis based on interviews, but also includes an audio/visual analysis and presentation, as well as visualization techniques to provide a richer picture of research subjects lives. This use of mixed and multiple methods and methodologies not only provides more detail, but also ensures rigor through triangulation of data sources (Hay, 2000).

I. Research Questions

The methods and methodology of a research project must necessarily follow the research questions. This dissertation seeks to answer the following two questions:

- 1) Given the socio-economic and geographic positioning of rural residents, how do they use social and economic networks to mobilize and sustain sustainable agriculture?
- 2) What are the affects of pursuing the social, environmental and economic justice goals of sustainable agriculture through networks in rural communities?

The answers to these questions will be presented in three sections in the analysis chapters. I will first describe what is done in a few rural communities through networks, and how they are accomplishing (or not) the goals of the sustainable agriculture movement. In other words I will describe how the network functions and who is involved. Secondly, I will provide an analysis of "what is said and written" (discourses) and how the network practices and discourses about the network affect the participants.

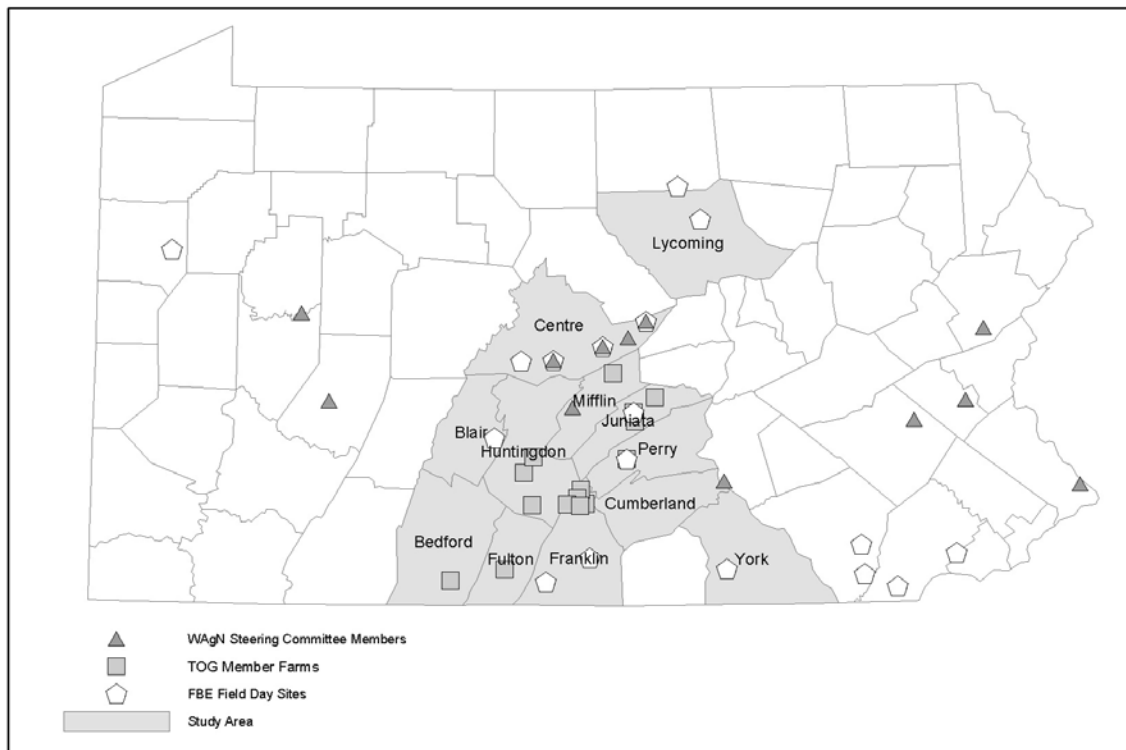
The methods I use to provide these answers involve participant observation; in-depth interviewing; surveys; video, image, text and discourse analysis; and visualization of geographic data. These methods will be investigated in detail in the last section of this chapter. The methodology that informs these methods is qualitative, as I rely on primary sources gathered through observation and discussion with research respondents using ethnographic methods. It is also feminist as I strive to make the research participatory and work towards social change for women and other groups marginalized in conventional agriculture. These topics will also be taken up in further detail below. First, however, I spend some time in the next section “setting the stage” by describing the study area and population.

II. Study Area and Population:

This research is based on fieldwork in the sustainable agriculture community in Central and Southern Pennsylvania. (See Figure 1). This area is characterized by Appalachian ridge and valley topography, with limestone valleys productive for farming. The primary agricultural activity in the area is dairying. Row crop agriculture is primarily corn and soybeans, which are also used as fodder for dairy animals. Twenty-five percent of Pennsylvania’s land is devoted to agriculture (approximately 28 million acres). Dairy products, cattle and calves, mushrooms, greenhouse/nursery crops and chicken eggs are the top five commodities in Pennsylvania. Dairy products constitute thirty-seven percent of total farm receipts, with the remaining commodities only contributing ten percent or less. The average farm size is 158 acres, and 90 percent of farms are family owned and operated (ERS, 2004).

Pennsylvania, with over 2.8 million rural residents, has the largest rural population of any U.S. state (NEMW, 2004), and has a thriving sustainable agriculture community. The Pennsylvania Association for Sustainable Agriculture (PASA) is a regionally significant sustainable agriculture organization with over 3,000 members from across the entire nation. The study area was chosen not only because of the large numbers of rural residents and the high level of interest in sustainable agriculture, but also because my residence in the area allows for the establishment of long-term relationships with respondents that aid the use of ethnographic methods.

Figure 1: Study Area and Location of Research Participants



As mentioned, the population of the study area is largely rural and engaged in agricultural activity. The respondents involved with this study are primarily, but not exclusively members of PASA. Criteria for inclusion in the study are membership or

involvement in any of the three networks included in the study, or attendance at any of the events sponsored by any of the three networks. As described in previous chapters, the three networks are: the Tuscarora Organic Growers (TOG), the Women's Agricultural Network (WAgN) and the Farm-Based Education program (FBE). For example, data were collected from the members of the steering committee of WAgN and also from the women who attend events sponsored by WAgN who are not necessarily members. Generally, all respondents are interested in or supportive of sustainable agriculture to varying degrees, and the majority are farmers. More information about respondents will be provided below in section IV on Methods and Data Sources.

III. Methodology

While methods focus on how the research is conducted, methodology is focused on how the research is "approached" (Moss, 2002). The methodology informing this research comes from four different philosophical traditions: 1) qualitative methodologies, particularly ethnography, 2) feminist methodologies, 3) network analysis methodologies and 4) geographic visualization methodologies. Detailed discussion of these traditions will be presented below, beginning with qualitative and feminist methodologies.

A. Qualitative and Feminist Methodologies

Qualitative methodologies are about collecting data that is non-numerical, and emphasize narratives, discourses, researcher observation and the perceptions of research participants. Creswell (1998) identifies qualitative research as a methodology based on a tradition of inquiry where "the researcher builds a complex holistic picture, analyzes words, reports detailed views of informants, and conducts the study in a natural setting" (15). Creswell also emphasizes that a qualitative methodology "focuses on the meaning

of participants, and describes a process that is expressive and persuasive in language” (14). According to Limb and Dwyer (2001), there is a diversity of philosophical and epistemological approaches to qualitative research, of which ethnography and discourse analysis, of interest here, are just two.

Ethnography, according to Hammersley and Atkinson (1995) is largely a set of methods requiring the “ethnographer to participate, overtly or covertly in people’s lives for an extended period of time” (1). This method is “grounded in a commitment to the first-hand experience and exploration of a particular social or cultural setting on the basis of participant observation” (Atkinson et al., 2001: 4) This participant observation is conducted in order to understand and interpret the behavior of a culture-sharing group, and through these methods, ethnography seeks to understand the “life-world(s)” of an individual or a group of individuals who share a common experience (Creswell, 1998). Wolcott (1999) also suggests that the purpose of describing and analyzing the experiences of a group of individuals is to be able to relate these experiences to issues at a larger scale, or in a different context (Wolcott, 1999).

The strength of ethnography is the opportunity to intensively participate in the lives of respondents. This is advantageous for populations who are officially “invisible” such as women farmers or farm workers, and for whom little quantitative data exist. An ethnographic methodology allows the researcher to gather extensive data over a long period of time, and allows for repeated contacts with respondents. Repeated interactions also help to build trust, which is crucial for developing research relationships that emphasize participant’s observations, feelings and perceptions (Dowler, 2001). The most obvious disadvantage to ethnographic methods is the sacrifice of breadth for depth.

Ethnographic approaches do not allow for researching large samples, but the farming community, which is the subject of this dissertation, is small and, as such the research is served well with an ethnographic approach.

Another methodology under the umbrella of qualitative methodologies is discourse analysis, which is used to investigate “what is said” about a particular subject. Sources of discourses include written texts and spoken communications. Gillian Rose (2001) defines discourse as “a particular knowledge about the world which shapes how the world is understood and how things are done in it” (136). Discourse analysis originates in the work of Foucault, who illustrates how knowledge and power are interrelated through discourse (Foucault, 1977). Foucault argues that discourses discipline subjects into knowing, thinking and behaving in particular ways, but that this process is not merely coercive. Rather, the self, and the subject are produced through the circulation of discourses. The power of discourses lies in their normalization, so that particular ways of being or knowing become accepted as natural and expected. Foucault writes:

[P]ower and knowledge directly imply one another; that there is no power relation without the correlative constitution of a field or knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations (Foucault, 1977: 27).

Thus, discourse analysis investigates not only “what is said,” but what it means in the larger context of social practices, the production of knowledge and the exercise of power.

Schiffrin et al. (2001) identify this as what is “beyond the sentence” and “refers to a broad conglomeration of linguistic and nonlinguistic social practices and ideological assumptions that together construct power” (1). While discourse analysis potentially could study every speech act, Damaris Rose (2001) suggests focusing on how “specific

views or accounts are constructed as real or truthful or natural through particular regimes of truth” (141). She argues that discourse analysis should focus on how people make sense of their world, particularly with respect to difference and authority, and the effects of discourses of power and knowledge on particular subject populations. This emphasis on discourses of power and effects of power on particular groups is also taken up and addressed through the application of feminist methodologies.

Feminist methodologies, while not rigidly defined, focus on activist and participatory methods, and the goal is to provide transformative outcomes of the research process for participants, particularly women. Feminist perspectives are diverse, and as such, methodologies informed by feminism are equally diverse. As Moss (1993) illustrates, “Clearly, there is no *generic* feminist perspective. So how can there be a feminist method?” (48; original emphasis). However, underlying the project of feminist theory and methodology is the “liberation of subjugated knowledges *through* political action” where “links are forged through knowing and doing” and where research is “*for* oppressed, not simply *on* the oppressed” (Moss, 1993:49; original emphasis).

Early work on feminist methodology emphasizes a focus on “the distinctive experience of women—that is, seeing women rather than just men in center stage, as both subject matter and creators of knowledge” (Nielsen, 1990: 19). In addition to seeing women as creators of knowledge, and agents in their own transformative politics, Rose (1993) argues that feminist scholarship and research should be “committed to *changing* oppressive aspects of socially constructed gender differences” (58; original emphasis). Throughout these accounts and others (see McDowell, 1992; Women in Geography Study Group, 1997; Moss, 2002) run several themes, which Pini (2003) has identified as

“a focus on gender, value given to women’s experiences and knowledge, rejection of the separation between subject and object, an emphasis on consciousness-raising and an emphasis on political change” (419).

Thus, feminist methodology sees women as both the subject of a study, and legitimate possessors and producers of knowledge. In addition, feminist methodology involves a commitment to political action, where marginalized knowledge and experience can be given voice, and oppressive power relations decentered. Broadly defined, these methodologies fall under the heading of “participatory action research” (Rose, 2001). Crucial to this type of politicized and participatory methodology is the negotiation of an insider/outside status in the communities under investigation (Merton, 1972). Naples (2003) argues that neither insider nor outsider exist as fixed positions, rather they are constantly negotiated social locations that researchers occupy at particular times and places. Activist feminist methodologies necessarily position researchers as insiders at times and outsiders at other times, and require that they creatively maintain the tension between a community member and researcher. The relevance of this negotiation of research position to this research project will be taken up in detail below.

B. Network Analysis and Geographic Visualization

Network analysis has primarily been quantitative in approach, but focuses on relationships between individuals and social groups. Network analysis in sociology and anthropology has typically not emphasized the visualization of networks, rather the description and statistical analysis of relations between nodes (Leinhardt, 1977; Marsden and Lin, 1982; Freeman et al, 1989; Scott, 1991; Wasserman and Galaskiewicz, 1994). Monge and Contractor (2003) describe nodes and relations thus: “nodes may be

individuals, groups, organizations, or any other well-defined set of entities. The relations can be communication, affect, shared interpretations, or transfer of tangible or symbolic resources...These networks can be represented as matrices or graphs” (37). While Monge and Contractor suggest that “representing networks as matrices or graphs and measuring properties of the network serve useful purposes...explaining the emergence of networks requires an analytical framework that enables inferences to be made on the basis of theories and statistical tests” (45). Thus, for Monge and Contractor, the real work of network analysis can only be done through statistical analysis, such as modified logistic regression.

Social network analysis and qualitative methodologies appear to have little common ground, as the preferred method of analysis for ethnographers has been description, analysis and interpretation through narrative (Wolcott, 1994). However, qualitative data have been related to network analysis through the visualization of data, or what Miles and Huberman (1994) refer to as “data display.” They use networks as a form of data display, or “a visual format that presents information systematically, so the user can draw valid conclusions” (91). They argue that traditional forms of data display, such as transcribed field notes are a “weak and cumbersome form of display” (91). Visualization of data through networks address the issues of traditional forms of qualitative data display, which include being “*dispersed* over several pages...*sequential* rather than simultaneous...*poorly ordered*...and *bulky*” (91). Qualitative methodologies may provide some tools for the study of social networks. These data displays however, are not always geographical, or ‘tied to the real world.’

Geographic visualization (GVIS) methodologies (MacEachren, 1995) are designed to explore and analyze geographic information, primarily for hypothesis generation, but also to present research results. Geographic visualization has not extensively focused on social structures, nor is it necessarily designed to accommodate qualitative data. However, recent work suggests that both these possibilities may be realizable within already existing GVIS technologies. Ruggles and Armstrong (1997), while acknowledging that few conventions exist for the visualization of social structures such as networks, suggest, “there is much that cartographers can learn by examining recent efforts to adapt traditional transportation-map forms to the emerging digital and interactive environments of the Internet, as well as research into how to map less-traditional forms of networks including social structures...” (33-35). In addition, Mei Po Kwan in particular, and others have successfully incorporated qualitative data in to GIS technologies to describe and analyze women’s lives (Kwan, 2002a, b; McLafferty, 2002; Pavlovskaya, 2002).

Despite the paucity of work on qualitative methods and social structure analysis, GVIS is uniquely suited to the communication of geographic information. Bernhardsen (1992) writes that geographic data consists of “information on the qualities of and the relationships between objects which are uniquely georeferenced” (3). In addition to the analysis of spatial information, GVIS allows for the analysis of non-spatial information as well, through a process referred to as “spatialization” (Couclelis, 1998). GVIS technologies are powerful tools for the communication and analysis of geographic information. MacEachren (1995) argues “GVIS represents a substantial change in

emphasis from maps as presentation tools to maps as part of a thinking-knowledge construction process” (460).

GVIS technologies are capable of communicating and analyzing information through two different data structures: vectors and rasters. Vector modes transform geographic data into “points,” “lines” and “areas,” and are thus most relevant to an analysis of networks. Ruggles and Armstrong (1997) define a network as “an organized collection of such cartographic objects, and is often partially defined by co-bounding polygons as well” (37). They identify four characteristics of networks that can be represented through maps: “the degree and kind of organization present in the network, the nature of flow and interaction supported by the network, the nature of the infrastructure that exists independently of actual flow, and the network’s relationship to its environment” (37-38).

IV. Methods and Data Sources

Data collection and methods for each of the network cases varies according to the kinds of data I was interested in, and the opportunities available to me for collecting data. In general, however, my methods involved asking questions and participating in the lives of research respondents as much as possible. These methods are informed by two general questions laid out by Susan Smith (2001). They are summarized as being

- (1) interested in how people see, experience and make particular representations of the world, as it is (and has been); and
- (2) interested in how people ‘do’ things, in how they (which includes we) make sense of the world as it goes along, as it becomes (23).

She notes that these two questions are necessarily dialectical, but that emphasis on one implies a particular set of research strategies.

I am interested in how people participate in the networks, but I am also interested in how they make sense of their participation. These two research aims crystallize around two questions: 1) how does the network function, which includes who is involved, and 2) what are the affects of the network on the participants, which includes the discourses that circulate within them? The research strategy for the former primarily involves survey instruments, evaluations, needs assessments, interviews and participant observation. For the latter, I use textual and discourse analysis of documents, video recordings, audio recordings of workshops, presentations and conferences and participant observation. All field work and data collection were conducted in the year between the February 2003 and February 2004 PASA conferences. In the following I will discuss in detail the methods and data sources used to collect information that answers these questions.

A. Tuscarora Organic Growers Cooperative Network

While nearly all the research was field-based, the research on TOG was the most field intensive. I spent three weeks in the growing season of 2003 on the farms involved with the network; one week in July, one in August and another in October. During the course of these weeks, I stayed with three member farm families and participated in various activities related to the network. These include, but are not limited to seeding flats in the greenhouse, transplanting seedlings in the field, picking, washing and packing produce (tomatoes, squash, beets, potatoes, lettuce mix), delivering produce to the cooperative headquarters, delivering packed produce to restaurants and grocery stores, and selling produce at the market.

During these three weeks I lived with the member farmers, cooked and ate meals with them and participated in their family life. Working and living with a family for even

a short period of time is extremely productive, as every waking moment (at least it seems!) yields potential research data. For me, this was instrumental in breaking down the insider-outsider dichotomy discussed above. I was able to communicate with groups, such as Hispanic migrant workers, Amish women, customers at market, and chefs in the restaurants because I became what felt like “part of the scenery.” If I had remained outside the sphere of informal life, and only visited the farms for a single interview, I would not have had the opportunity to access these “hidden groups.”

Access to these groups is crucial, as a central question I am investigating through this network is how economic justice is facilitated through the network, and the affects of economic decisions on the individuals involved with the network. The groups I mention are primarily the laborers and workers “behind the scenes” in the marketing cooperative. As many of them represent groups invisible to the majority of consumers of organic food, access to them is crucial to understanding whether the network provides economic justice to them.

During my three weeks of field work, I visited the remaining ten farms in the network for only one visit of a few hours. Given the number of farms involved (13) and my limited time for intensive field work, I could only spend long periods of time at a few farms. The three farms I stayed at were identified as important hubs in the network by TOG personnel. The farm where I spent the most time was the home of the founder of the TOG co-op, and also the headquarters for the co-op. I also spent several days with the largest farm in the co-operative, and spent a week at the home of another founding member who was an employee of the co-op.

Intensive time on the farm and with the family does provide difficulties for reflection and note taking, because these were times when I had to step out of my “insider” status and assume a more objective and analytical frame. As much as I could, I videotaped the activities that I participated in, so that I could have a record of not only what was happening, but also a reminder of my thoughts and augmentation of evidence collected in my field notebook. In addition, my presence in the intimacy of the family life presented problems when I intruded on personal interactions, or when I became involved with conversations that were not appropriate to include as data. As all ethnographers at some point must do, I put aside my notebook, camera and as much of my researchers motivations as I could and participated in the conversation as another human being, a friend and confidant.

The data sources for the research on TOG included a variety of materials. I conducted two tape-recorded and transcribed interviews (See Appendix A for interview protocol) with the founders of the co-op and the current director. I also used one tape-recorded and transcribed conference presentation on TOG’s “indirect” marketing strategies. I conducted a survey on each farm (Appendix B) and conducted numerous informal interviews with farmers, farm workers and customers. I used the website and other documents to provide context and background information. The bulk of my data was gathered through about 300 hours of participant observation, and includes a transcribed field notebook, nine hours of video recordings and digital photographs.

B. Women’s Agricultural Network

The research undertaken for this dissertation was designed to be participatory, so that the individuals, groups and organizations involved in the research would benefit

from the research process. The research on the Women's Agricultural Network (WAgN), however, became an especially rich source of participatory and activist-based research, because I volunteer as a coordinator dedicated to developing and maintaining the growth of this organization. My role in WAgN has been to contact interested women in Pennsylvania and coordinate the activities of a twenty-member steering committee. I also serve as the contact person for women who wish to join WAgN, compile meeting minutes and membership databases, coordinate programs with other interested partner organizations, coordinate workshops and meetings, and facilitate the growth of regional WAgN chapters.

The format of this case study requires a different approach to field work, as WAgN is still in a planning and organizing phase. As of this writing we have held only one event that I could attend to observe as a researcher. Complicating matters, this event was also primarily planned and facilitated by myself, and as such, would not have existed for me to attend had I not organized it! In addition to this event, which was an all day conference for women in sustainable agriculture in partnership with PASA, we have held seven steering committee meetings since May 2003, one of which was a retreat for steering committee members to learn about the Maine and Vermont WAgN programs and to develop a strategic plan for the Pennsylvania WAgN. We have numerous events planned, some in partnership with PASA, which include a scheduled field day on rotational grazing at a WAgN member's farm, and other on-farm education events with potential topics that include farming with horse power, chainsaw safety, small engine repair, green building design and business planning.

As presented above, my position as an integral part of the formation of the organization and my work to perpetuate its existence pose particular issues for objectivity and analysis. However, the aim of feminist research and an overriding goal of feminist methodology is to provide emancipatory opportunities for the research subjects. While I feel that my role in the organization challenges my objectivity, the gains made to improve the lives of women outweighs the costs of this particular ethical issue. The steering committee has been aware of and supportive of my research interest, and all data collected from members has been done so with their knowledge and consent to my dual role as activist and researcher.

The research question being explored here deals with social justice, in particular social justice for women farmers who have been traditionally marginalized from spaces of knowledge and authority in agriculture. I am not so interested in whether WAgN provides social justice for women farmers, though I truly hope that it does. I am more interested in how women come together to facilitate their own versions of social justice and the struggles over identity and belonging that ensue in such projects. Thus, I focus on the discourses and practices cited by women that drive them to build networks for their own social justice ends. I examine what they do to provide that justice for themselves and what affect this has on the evolution of the group.

My position as facilitator of this process in many ways allows me a very intimate view of this process, and I am careful to emphasize my role as someone who provides the “glue” for the group. I send reminders about meetings, gather ideas for meeting agendas, make contacts with women interested in joining, plan and facilitate workshops and programs, and provide venues for the women to meet. In many ways this is a similar

sort of intervention in research subject's lives to qualitative research that uses a focus group methodology. However, as someone connected to the group in this integral way, I have access to more information and interact with research subjects far more often than a researcher who observes the group from the outside. I feel that my position as an activist and researcher enhances the research because I have greater access to information and am in a position to facilitate the trusting relationships that are crucial to ethnography.

The data sources for research on this group include two taped and transcribed interviews with founding members of the steering committee (See Appendix A for interview protocol), thirty-eight needs assessment surveys collected at the conference mentioned above (See Appendix C for survey) and tape-recorded and transcribed conference presentations on Women in Agriculture programs at the 2003 and 2004 PASA conferences. I use steering committee meeting minutes; documents from the strategic planning retreat; and flyers, brochures, web sites and newsletters from the Maine and Vermont WAgN program. I have notes transcribed from participant observation at steering committee meetings, conferences on Women in Agriculture and work on the farms of steering committee members.

C. Farm-Based Education Network

If research on WAgN required an unorthodox approach to research methods, work on the Farm-Based Education network (FBE) was as straightforward a case of participant observation as it gets. Each growing season, PASA provides a number of "field days" which provide farm-based education for farmers and other interested parties. These field days are designed to facilitate farmer-to-farmer learning on a host farm, so that learning can be hands-on and participatory. I attended about half of the offered field days in the

2003 season. Some were repeated workshops, or scheduled on the same day, so I could not attend all of them, but I made a particular effort to attend the field days that were in the study area. The field days I attended focused on a variety of topics, including rotational grazing, seed saving, cover cropping, developing Community Supported Agriculture, organic vegetable production on a variety of scales, and building and using high tunnels to extend the growing season.

The research methods for this network rely heavily on participant observation, as the bulk of my data comes from attendance as a participant in the farm-based education, and is based on learning what farmers learn and how they learn it. The research is also participatory in its methodology in that I cooperate with PASA, the coordinating institution for the farm-based education, and I share data and results of analyses with them. My intention is to help PASA provide a better educational service for farmers by providing a systematic analysis of the program. I am interested in how information about farming practices is transmitted between farmers and other “experts” through the education network, whether and how the discourse of environmental justice informs this transfer of information, and how the dynamics of power/knowledge are played out in the network.

The FBE model actively works to subvert the “expert” model of information transfer in agricultural communities, yet the identity and social location of the individual in the position of educator has an affect on how the information is received and used by the recipients. I am interested in how who is speaking influences what is being spoken about, and the influence that sponsoring institutions—such as Cornell University, Penn

State University, PASA and the County Soil Conservation Districts—have on the discourses and practices that are the subject of the field day.

This research methodology is highly subjective as it relies primarily on my own impressions of the educational experiences, but this is balanced by analysis of evaluations of several field days and informal interviews with attendees. The strength of this method is that I learn “what farmers know, and how they know it” at the same time that they are learning. Of particular interest are the discourses that inform the farmer-to-farmer educational model and the discourses about environmental justice and “nature” as a partner in the learning process. This information can only be gathered through observing and conversing with farmers who are participating in the discourses and putting them into practice in their own farming operations.

Data sources for analysis of FBE come primarily from transcribed field notes. I attended nine field days during the summer and fall of 2003 for a total of seventy hours of observation. In addition to the field notes, I collected literature from presenters and from PASA from each field day, and I videotaped the presentations. I conducted informal interviews with field day attendees, and recorded these conversations in my field notebook. I taped and transcribed two interviews with past and present field day coordinators (See Appendix A). In cooperation with PASA, I have also transcribed and analyzed evaluations (See Appendix D) from three of the field days.

V. Summary

In summary, the methodologies that inform this research project emphasize qualitative, participatory and visualization methods. My position as an “insider” in the community I study presents challenges to my objectivity as a researcher. As feminist

theorists have pointed out, all knowledge is value-laden (Harding, 1986), and my position as a “partial” insider and activist enhances my access to information and allows my research to have emancipatory consequences. The multiple methodologies provide rigor and coherence to the research project. The combination of these mixed methods also provide sources of innovation for qualitative methods, social network analysis and visualization methodologies.

Finally, while this research is informed by feminist politics and participatory action research, the imperative to enact social change does not only apply to women. The marginalization of members of the sustainable agriculture community is inflected on multiple axes of difference in this research, and includes the dimensions of race, class, gender and sexuality. Sensitivity to these differences and a commitment to justice in sustainable agriculture are informed by feminist politics, but go beyond an emphasis on women’s experiences. The following chapters provide an analysis of each of the networks, beginning with the Tuscarora Organic Growers Cooperative.

Chapter 5

ANALYSIS I

Tuscarora Organic Growers and Economic Justice

*“I’m about to reveal to you the seedy underworld of organic agriculture”
~ John, truck driver for TOG*

The growing season of 2003 was the worst season ever for most vegetable farmers, as there were record levels of rainfall throughout the state. More than a few remarked to me, as Ryan¹ did, “you can always irrigate in a drought, but you can’t even get into the fields with this much rain.” The problems growers experienced with the overabundant rainfall included soil compaction, fungal diseases that hit tomato plants (an important crop in Pennsylvania) particularly hard, hail and high winds that removed blossoms and snapped young plants in half, and soil saturation so high that root crops literally drowned. A number of farmers had total crop failures, and the risks of farming were at the forefront of many of my conversations with them. As Ed told me, however, the cooperative was a source of security and a buffer for risks in times like these, “Smaller growers benefit from the other growers in the co-op in a year like this. The bigger growers can fill in some of the gaps and so the co-op can still make a profit, which benefits us all.”

The discussion and analysis in this chapter are based on three weeks of participant observation and work with organic farmers in the Tuscarora Organic Growers Cooperative during the summer of 2003. I hope to illustrate how the cooperative, which I contextualize as a network, provides a particular set of benefits to its members, through their collective action. As illustrated by Ed in the quote above, the positive outcomes from the cooperative can only be realized as an effect of working together. In addition to

the positive outcomes that accrue to members of the cooperative, other effects of cooperation are also realized in the cooperative, the sustainable agriculture movement and the surrounding rural and urban communities. These outcomes are inflected on multiple axes of difference, including class, race and gender, and involve issues of power and decision-making within the cooperative, as well as the cooperative's relationship to larger scale socio-economic processes. This will be discussed in detail in the following, but first I want to provide some history and background on the cooperative.

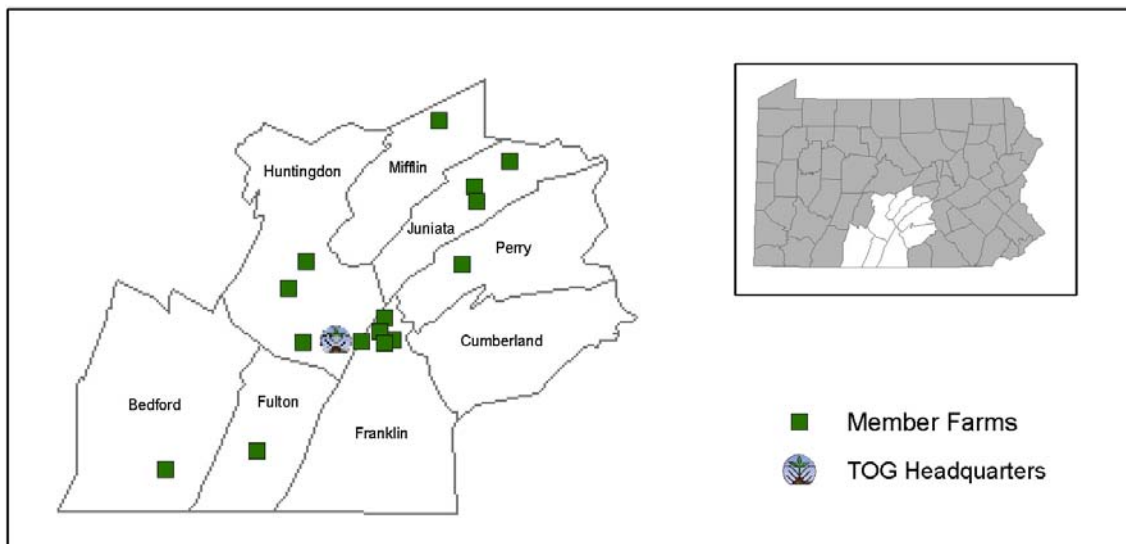
I. History and Background of the Cooperative

The Tuscarora Organic Growers (TOG) cooperative was formed in 1988 by Jim and Moie Crawford of New Morning Farm and five other growers in south-central Pennsylvania. The central motivation for starting the cooperative was a need to expand and diversify the market for organic produce through wholesaling. At the time of the cooperative's founding, few wholesale markets existed for organic products, and the primary vehicle for marketing organic produce was through retail sales. Retail sales were limiting in terms of volume, predictability and profitability, and the founding members felt that by acting cooperatively, they could capitalize on efficiencies of scale through shared resources.

In 2003, TOG has 17 active member farms (See Figure 2). The years of farming experience among the members ranges from 8-50 years, with the average about 23 years. All the farms are family owned and operated and include seven Mennonite or Amish farms. The farm sizes range from 1 to 80 acres, and 16 acres is the average farm size. All of the farms use some kind of family labor, three farms use apprentice labor², seven farms employ local wage laborers, and two farms currently employ migrant laborers.

Four farms sell 100% of their produce to TOG, while the rest employ a diversity of marketing strategies including wholesale, retail and CSA³. All of the farms must be certified organic⁴ to sell to TOG. The years of certification range between 6-15 years, with the average around 10 years.

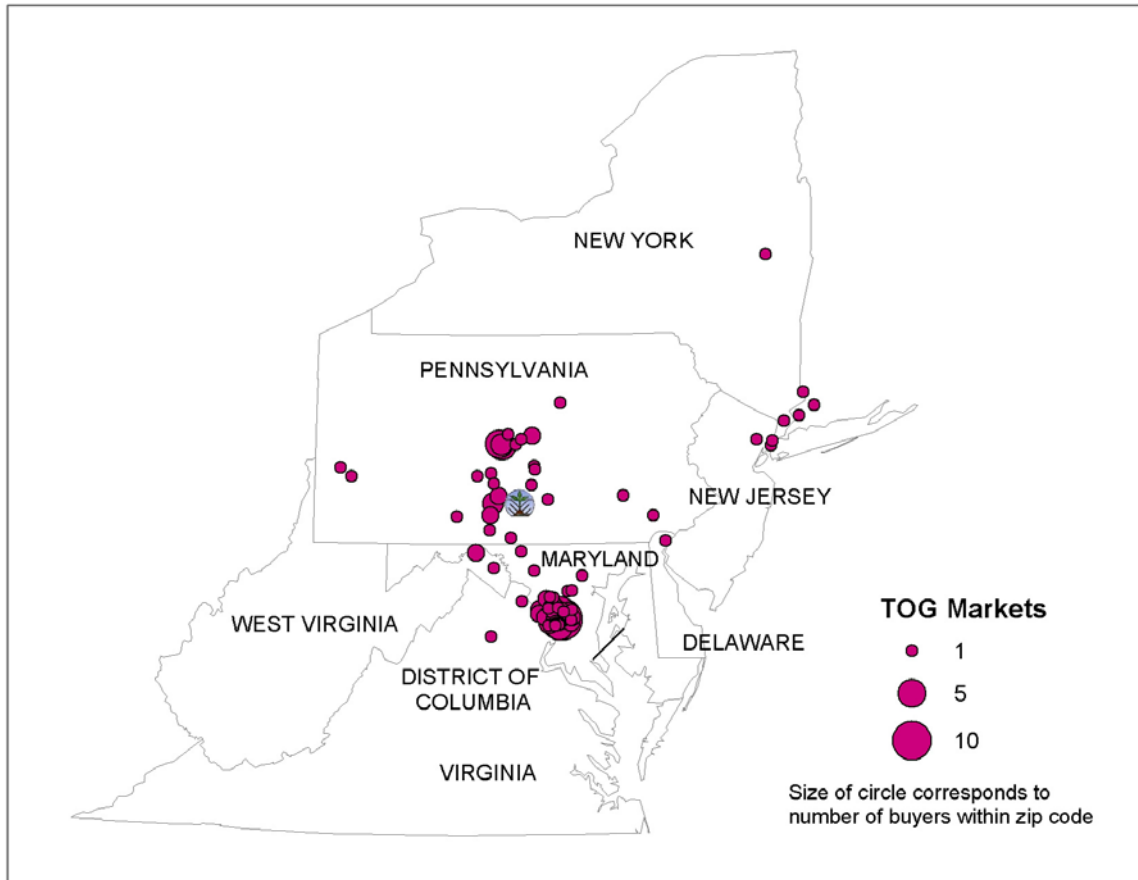
Figure 2: TOG Member Farms



The primary market for TOG is in the Washington D.C. area, but also includes some Maryland and Pennsylvania cities (Figure 3). The Crawfords and their colleagues had extensively developed this market throughout the 1970s through informal sales of produce in neighborhood markets. As “back-to-the-landers” who had previously lived in Washington D.C. neighborhoods, they came back to the city to sell produce to their former neighbors. These neighborhoods included Cleveland Park, Fox Hall, Tenleytown, Adams Morgan, Burleith and Earlstown (Figure 4). As the cooperative developed, informal sales in these neighborhoods expanded to include sales to grocers, food co-ops and restaurants. The Crawfords and several other members of TOG still sell produce in

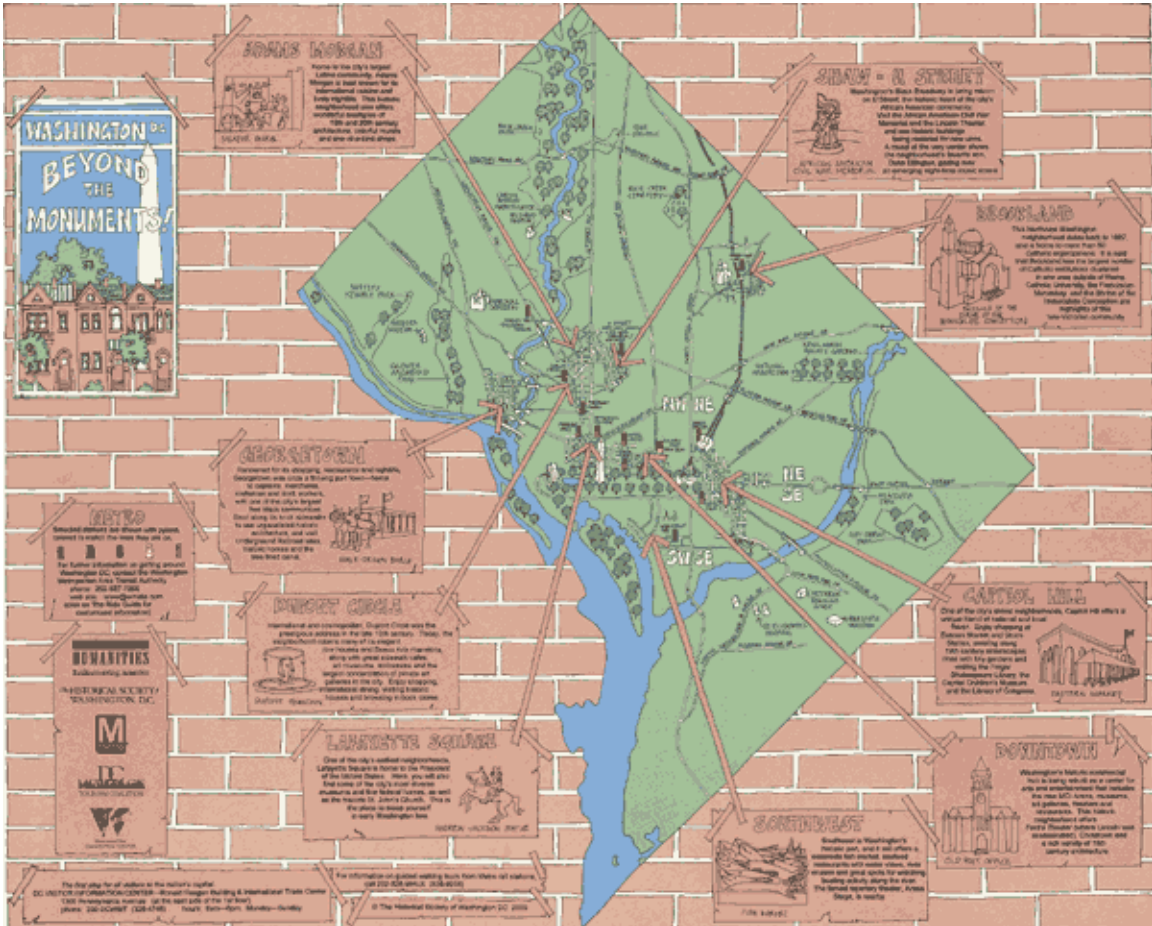
these neighborhoods through farmers markets, and usually a portion of the produce they sell is bought from TOG.

Figure 3: TOG Markets



The cooperative sells to 30 to 40 restaurants and 15 to 20 stores in the Washington D.C. metro region, and a few stores and restaurants in the State College, Pennsylvania area. During the height of the produce season, which runs from May to November, the cooperative runs 3 to 5 truckloads⁵ of produce per week to these markets. Over the course of the year they may sell between 50-60,000 cases of produce and in the peak season, they may move 2,000 cases each week. About 40% of sales are to retail businesses, 40% to restaurants, 15% to member farmers who resell in their own markets and the remaining 5% is sold to volume buyers (Figure 5). Deliveries are made year

Figure 4: Historic Neighborhoods of Washington D.C. (Source: City Museum of Washington D.C.)

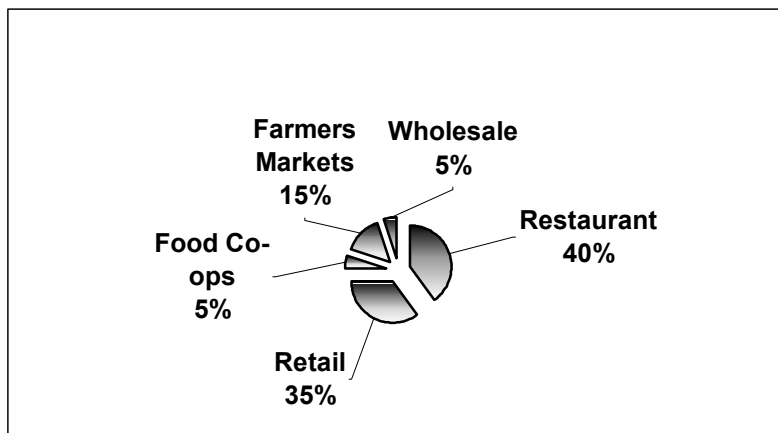


round and while business slows considerably in the winter, root and storage crops, and greenhouse crops such as salad mix and greens are typically available. All the produce, with a few exceptions with respect to fruit⁶, is grown in Pennsylvania by the member farms and is certified organic by Pennsylvania Certified Organic (PCO), Ohio Ecological Food and Farm Association (OEFFA) or Northeast Organic Farming Association-New Jersey (NOFA-NJ).

Each member farm makes a commitment to growing a particular set of crops for TOG at the beginning of the growing season. So, for instance, one farm may commit to growing peppers, eggplants and radishes, while another may grow shiitake mushrooms,

fingerling potatoes and winter greens. Produce is delivered twice weekly (Tuesday and Friday) to the buyers in the Washington D.C. area, and is typically sold, picked and packed on the day before the delivery to buyers (Monday and Thursday). Growers project about a week in advance what they think they might have available. Based on those projections, the cooperative sends a list of products to the potential buyers who fax or phone back their orders. The cooperative then negotiates with the grower to sell a certain quantity of produce, which is then picked, packed and delivered to TOG headquarters. The following morning (3:00 am) drivers load the trucks and begin the delivery.

Figure 4: Washington D.C. Markets



A. Why Wholesale and Cooperative?

As mentioned above, wholesale markets were few and far between at the time of TOG's founding, and retail sales were less than adequate for full-time farmers attempting to make a living on the farm. Wholesale markets could diversify the market base for the farm, allow the expansion of production and provide a more predictable, stable and year-round market than farmer's markets. Retail sales for organic produce are most frequently facilitated through farmer's markets and according to the Crawfords, and other farmers in

the cooperative, these venues, particularly producer-only markets⁷ are not necessarily profitable for farmers.

I was just in Pittsburgh yesterday and there was a farmer's market going on and...I just look at these farmers and thought how are you making a living at this market? I mean there were people shopping but there were not a lot of people shopping and it was right near the end of the day and they still had so much stuff. And the last few markets that I've seen have been like that (Moie).

It is obvious to Moie, a 20 year veteran of the farmer's market scene, that shipping produce to a market and back home again is not profitable. Jim, however, does the math.

We've been to markets where you go there and you do \$500 or \$800...You realize that \$500 for going to a market, especially if it's, even if it's 50 or 80 miles away, it's still \$500, but what went into it? You probably put \$1,000 into it so you're losing your shirt going to a market like that (Jim).

For the Crawfords and their organic farming colleagues, selling in a retail market wasn't profitable, but selling organic produce in a conventional wholesale market wasn't a good option either.

But I mean if you go in [conventional] wholesale you just didn't have the option of getting a premium price for being organic. So that was kind of like our sort of main theme when we started TOG was we wanted to create a market that will give us a premium price for organic, for being organic (Jim).

The farmers involved with the founding of the TOG developed their own market for the organic produce they wanted to sell in wholesale markets, but they also formed it to distribute these benefits to all members. The original mission of the cooperative is to "provide services for the mutual benefit of its member patrons on a cooperative service and cost basis," but this mission has since been reinterpreted by the employees of the cooperative.

Our employees got together and created their own mission...It's...a place to build a stable company based on cooperative principles and personal

relationships, that delivers quality to our customers and provides security for our members (Chris).

Quality produce to customers and economic security for farmers are at the heart of the cooperative, and this is accomplished through transportation and marketing efficiencies, and shared access to skills and resources.

B. Farmers, Economic Justice and Organic Farming

All of the member farms are within about one hour of driving from the cooperative headquarters, with the majority within one half hour. A number of the farmers pool transportation resources by delivering their produce together to TOG headquarters, and all of the Amish farmers hire a truck driver to deliver their produce for them. One farmer also sends herbs, which are relatively light, through UPS to TOG to save on transportation costs. The motivations cited by the member farms to be involved with TOG are four-fold, and primarily deal with economic issues. They are: a fair price for produce, efficiencies in marketing, a local market and shared economic and social resources. TOG also supports farmers who choose to farm organically, and the reasons for this choice are varied.

Many farmers, but not all, cite social, moral or philosophical reasons for farming organically. Sarah says, “We’ve been organic ever since we knew what it meant. We were green in our hearts.” Some farmers identify themselves as “environmentalists”, others find it to be a more “natural way to farm,” “less harmful to the environment,” “safer for family and community.” Others cite religious beliefs: “We believe this is the way God wants us to farm” (Martin).

Along with a social responsibility ethic, many identify organic production as the default option or in utilitarian terms.

There are two kinds of guys who are organic. There's the old farmer who has always done it this way, and guys like me. I'd misrepresent myself if I called myself an environmentalist. I just farm this way, cause I'm too lazy to learn how to do it with chemicals (Ed).

Well I've always said it was easier for us to choose it then for people who are already farming to decide to become organic. We didn't know the other ways you know. So if we had to learn one way it was much more attractive to be learning the organic way (Moie).

While organic farmers form the basis of TOG and are supported financially by TOG, the cooperative itself also supports organic farming. Six farmers cite TOG as a reason they farm organically. "I wasn't able to sell anything until I got hooked up with TOG. I had to get certified, but it's been worth it" (Pete).

TOG allows farmers to charge a premium for organic produce and provides a volume of sales that can sustain a farm. All the farmers indicated some attraction to the competitiveness of TOG as a market, and four farmers are supported completely by TOG. David, an Amish farmer who sells only to TOG, remarks with a certain amount of irony, "I can't complain about the price TOG pays us for the produce. I would have a hard time asking that prices myself, but it's fair." Other farmers identified the "higher-end market," the "fair price" and the "very good prices" as reasons they sold to TOG. The issue of price is also related to the volume of produce that farmers can sell. Ryan argues that selling to TOG "gives me an outlet for selling greater quantities than I could market myself." TOG also allows farmers to sell their surplus inventory and to diversify their markets.

An additional motivation is the opportunity to leave the marketing to someone else. Mike comments, "Marketing is not my best talent; I prefer to farm. TOG makes it easy to market at a distance and easier to stay in business." Bill, who sells directly to

restaurant chefs in addition to selling to TOG, also sees the value in having his time freed from marketing. “The main benefit of selling to TOG is I don’t have to peddle the stuff myself.” Martin, who has a medium sized operation respective to other farms in the cooperative, finds it difficult to compete when he participates in a market as a single farmer. “Selling through TOG helps me compete with other big farms in wholesale markets.” Tied to this division of labor between production and marketing is the feeling that TOG supports farms that otherwise would not be financially sustainable. Aaron says, “TOG is the only market I have, I probably wouldn’t be able to farm here at this scale without it.”

Another attraction is the “local” aspect of TOG. More than half the farmers involved with TOG identified selling locally as one of the benefits associated with the cooperative. The farmers who are members of TOG have a deeper appreciation for selling their product locally, than merely economic motivations would suggest. Sarah, who with her husband, sell to a variety of large-scale markets identifies TOG as “a great local customer.” This interest in a local market arises from a social value placed on efficiency, shortening the commodity chain and building relationships with customers. Jim Crawford contextualizes the value placed on the local:

We've always been there at the bridge...the bridge from this rural production to urban consumption...I mean it's a philosophical thing...but also it's really been our economic identity...the philosophical and economic part of it are just totally intertwined all the time. And we're definitely not just doing it from altruism by any means, you know. I mean it's, it's a way to make a living. But it's been satisfying 'cause it is consistent with our values.

Tied to the social value on community and relationships between producers and consumers is the social value on farming organically.

TOG also offers members benefits that go beyond the purely economic. While members can pool their resources to buy supplies, such as boxes and seeds, they also pool their knowledge in what are called “crop improvement meetings.” These are off-season meetings of all the growers where they formally and informally discuss the successes and failures of their respective seasons. In addition, some growers cite the informal meetings at the cooperative when they deliver produce as helpful.

Informal networking happens when we all arrive at the co-op at the same time with our deliveries. We can roll down the window when we pass each other on the road. It’s hard to formalize that kind of interaction, but it’s invaluable information about what’s going on (Ryan).

Ryan also notes that there “aren’t any other people like us out here,” and that the cooperative has the effect of bringing together people who would otherwise be isolated from each other.

The cooperative also has social and economic effects that spill over in the surrounding rural community. The major employers in the area around TOG are brick are typically service and manufacturing industries as well as a declining and limited agriculture. The availability of local work is decreasing as the manufacturing sector declines and locals are increasingly relying on public assistance and unemployment. TOG employs ten local employees in the height of the season and New Morning Farm also employs five local men and women.

We employ a lot of people both with TOG and with our own farm that live around us, and that, I mean it's a depressed area. You know there's not much business here and there's not many jobs. And that we have people who are baking for us or making applesauce or packing vegetables. There are lots of different jobs that we're able to offer people and sustain the community economically. That to me is really important (Moie).

These social benefits to the farmers and the surrounding rural community, however limited, are examples of how the effects of the TOG collective spill over from the economic justice mission, and produce other unintended effects.

II. Organic Farming and Economic Justice: Race, Class and Gender

Organic agriculture is a farming methodology that is committed to a less environmentally destructive farming practice than conventional agriculture. As discussed in previous chapters, organic farming focuses on the “technical” aspects of farming and has been accused of neglecting the social dimensions of non-sustainability. There is a schism in the sustainable agriculture movement around the issue of organic versus sustainable. A number of farming organizations in the North East that are committed to sustainable agriculture identify themselves as “organic” and not as “sustainable”.

The founding members of PASA also debated the merits of choosing one or the other and ended up choosing sustainable because it was more inclusive. Carolyn Sachs, a founding member articulated it this way:

...at the beginning we had a debate when we were first starting whether we should be organic, an organic organization or sustainable and we chose to use...sustainable because there were farmers who were there who weren't completely organic who felt like they were trying to change things too.

This seemingly semantic difference has repercussions that reverberate throughout the sustainable agriculture movement and the alternative food systems that it works to promote. The emphasis on farming practices, price premiums and economic justice for farmers leads to an ontological framework that tends to neglect issues of social justice. These effects are largely felt along the axes of difference in contemporary society that include class, race and gender and are largely felt around the issues of labor and

consumption. These effects are interdependent, and I separate them here only for the purposes of analysis.

A. Class and Consumption

While organic as a set of farming practices can provide a price premium for farmers, it provides few frameworks for rectifying economic inequality in other sectors of the food system, and has little to say about the social dimensions of inequality. It has been argued that the price premium on organic fruits and vegetables, and other organic products produces a two-class food system, where the farmers and laborers who produce the food would not be able to purchase it. In addition, upper-class and middle-upper-class consumers are typically the only consuming classes willing and able to pay the price premium for organic produce.

A number of individuals involved with the cooperative identified that the cooperative does implicitly encourage this class bifurcation, and that this was problematic for their values, and for the goals of the sustainable agriculture movement. John, who is employed by the cooperative as a truck-driver told me, “The fact that we sell to these wealthy suburban consumers is my least favorite part of the whole movement.” Chris, as director of the cooperative, finds that his priority is to find a good market for farmers and ensure a fair price for their products, despite the obvious conflict that it presents for him and his views on economic and social justice in the food system:

...my job is to focus on the farming end of things you know and um that means we have to find higher market for the food and so sometimes it's distresses me that the main markets that we find are the higher end markets...(Chris).

Others involved with the cooperative cite the two-class food system as both a source of economic instability, and a source of non-sustainability. “I wonder how sustainable the

D.C. market is, because the customers have a lot of options and can go anywhere” (Ryan). Annie says, “I don’t like that I can grow this fresh healthy food and not everyone can buy it. It makes me wonder how long it can really last.”

While they recognize these problems, others identify factors such as market organization or farm size as implicated in perpetuating a two-class food system. The Crawfords identify the “producer-only market” as a high-end market that requires them to sell at a higher price to compete. “...the producer only market concept works fine only in very, and I know from personal experience it only works in very specific contexts, number one, great affluence, high prices and good volume” (Jim). Moie adds that the consumer often drives the development of the producer-only farmer’s market, but that this is a particular kind of consumer.

Sometimes I think that the producer-only thing is...for the consumer and I think you know, that the people like to know that the farmer...grew that crop that they’re selling to them. But I think that...it has to be a particular neighborhood that is affluent and willing to pay for it... (Moie)

A non-producer-only farmer’s market allows vendors to sell other farmers’ produce, and can result in the ubiquitous Pennsylvania style “flea-market”, which many farmer’s market purists see as “sleazy.” However a number of farmers in the network have been successful buying produce from the co-op and reselling it in other markets, without corrupting the spirit of the producer-only market.

I think that if you know where it came from and you know that it was organically grown and you can see for yourself what it looks like and that it's good stuff, and it's supporting somebody who lives in the same place that you live, I mean the same kind of situation that you live in needs the money as well as you do I don't have any problem with it (Moie).

The non-producer-only market allows farmers to market their produce, when they do not have access to the affluent producer-only markets referred to by Jim and Moie.

Ryan makes more than half of his farm income reselling produce grown by other members of the cooperative. He says, “It’s probably impossible to make the producer-only market profitable, because you have to split each consumer’s money between 10-12 growers.” Ryan sells in a non-producer-only market in the Adams Morgan neighborhood of Washington D.C., and is able to make a profit while keeping his prices for organically grown produce low. This suggests that “organic” doesn’t necessarily demand the price premium; rather it is the organization of the market that requires a price premium to compete and to see a profit. Related to market organization is the issue of scale, and how the size of the farm influences the price of produce.

The average farm size in the cooperative is 16 acres and while the largest farm has 80 acres in cultivation, only four farms cultivate over 20 acres. By agricultural standards, these farms are extremely small, and some may not even be considered farms by the USDA. Chris Fullerton argues that one reason why small farmers might participate in an organic market is not necessarily philosophical, rather the “organic market is going to return a price that will allow you to run a farm on this scale.”

Farm size is directly related to the balance between volume and price. If farmers can produce a particularly high volume, they can sell a larger amount of produce at a lower price and still have the same income as a farmer selling a small amount at a higher price. This relationship drives farm expansion, as farmers seek to capture a larger share of the market, and thus increase their profits. Farm expansion requires capital investment, so the costs of production increase, but economies of scale are also available to a larger farmer. Thus, a larger farm will decrease the diversity of products to sell at a high volume

in wholesale markets, while smaller farmers will have a larger variety of products to sell in smaller volumes in specialty markets, which command a higher price.

These relationships are illustrated well in the TOG cooperative. While there are exceptions, the smallest farms sell specialty crops, such as “baby” vegetables, heirloom tomatoes and exotic greens while the largest farms sell primarily staple crops such as field tomatoes and summer squash. The cooperative enables this kind of diversity to exist, as it seeks out a diversity of markets. As such it supports both a specialty market and allows some very small-scale farms to exist, but it also allows the largest farms to expand production into higher volume markets. This expansion and specialization of farm production requires a reduction in costs associated with production.

The largest cost of production for growers in the cooperative is labor. One farmer says “labor is the biggest cost by far. It's like way big, it's like 4 or 5 times bigger than the next biggest cost category” (Jerry). While all farmers must cut costs and/or raise profits to realize a profit, farm expansion requires a greater demand for labor, but the increased costs of labor cannot outweigh the profits that might be realized through expanded production. Thus, large farms rely to a greater degree on “cheaper” labor than smaller farms usually employ, and this most often involves the employment of migrant labor.

B. Race and Agricultural Labor

While all of the farms in the cooperative rely on family labor, three farms currently use migrant Mexican labor or have used migrant labor in the past⁸. Another large organic vegetable farm in Pennsylvania that uses migrant labor was partnered with a TOG farm and will also be discussed here. These farms all have more than 15 acres in production, and due to the labor intensiveness of organic production, they must employ

large numbers of people. Two other farms in the network also cultivate more than 15 acres, but one family has eight children, and the other employs a diversity of inexpensive labor including young apprentices, temporary local workers and family labor. The majority of the migrant laborers work as “field crews,” and their primary work is picking produce in the field, but they also participate in transplanting, weeding, preparing fields for cultivation, or other kinds of labor-intensive field work.

Migrant laborers, primarily from Mexico, are seen as valuable workers because “they’re just way more productive [than local labor],” “they want to work,” and most importantly “nobody wants to do this work.” Every person I talked to, which included farmers, apprentice farmers, local farm laborers, truck drivers and customers, justified the use of migrant labor in organic agriculture with some derivative of “Americans just don’t want to work this hard.” Agricultural labor, from first-hand experience, is “back-breaking,” monotonous and working conditions can range from hazardous to merely uncomfortable. On a number of farms, I observed field crews picking tomatoes in the heat of mid-day. They carried baskets, which hold about 50-60 pounds of tomatoes, from the field to the tractor, stopping only to fill a new basket. Wages for these laborers range from \$6.50 to \$10 per hour, depending on how many seasons they returned. After a full day of this work, each laborer may have carried up to 1 ton of tomatoes for only \$60-\$80.

All of the farms that I worked on with migrant laborers, the hardest work, usually picking, was reserved for the migrants, who were almost exclusively young men. Local wage laborers also did this work, but the management and supervision of a particular project was overseen by the farm owner, or by an apprentice farmer. On farms where apprentice farmers performed the majority of the labor (as opposed to just supervision of

labor), the day was divided between picking in the cool of the day, and packing the produce in the packing shed during the heat of the day. Apprentice farmers were also able to negotiate favorable working conditions for themselves as they were often “in charge.”

Smaller farms that rely on family labor, or have one or two wage employees, usually did the hardest work in the early morning or late evening, during the coolest hours of the day. The largest farms had a division of labor not based on time of day, but on the spaces of the farm. These farms had a “field crew” that primarily picked produce all day, sometimes for 14 hours/day in the height of the season, and a “packing shed” crew that packed the produce. On one farm this was divided by race and gender, with the field crew primarily male Mexican migrant laborers, while the packing shed crew was primarily local white female wage laborers. On another farm this was divided by gender only, with the field crew primarily male migrant laborers, while the packing shed crew was primarily female migrant laborers. On the other farms where migrant laborers were employed, one or two workers supplemented the regular crew of local wage laborers and/or apprentice farmers in work done by all farm employees.

The dominant paradigm is that Mexican migrant workers are willing to work hard in working conditions that most American’s won’t tolerate. It is felt that they are willing to work this hard because they

...know they're supposed to work with their hands, that they're there to work and that what they're there for and they just keep working. And that they're supposed to work fast, they just know that because they were raised with it that whole mentality of the pace and all that stuff (Jerry).

...have an amazing work ethic just because they have always worked on the land. If these guys had a chance to work in an air-conditioned office they probably would lose their work ethic in a generation or two (Todd).

Traci, a local woman employed as a truck driver by the cooperative, said “I don’t want to say that people are lazy, but local people think that farm work like that is beneath them or something” (Traci). Because the migrant workers are perceived to be willing to work “this hard,” and are there to fill a labor demand that local people are not willing to fill, there is no need to change the working conditions, that “Americans” find intolerable.

While it cannot be denied that migrant workers have a good work ethic, it should not be surprising to find out that Mexican migrant laborers do not *want* to work this hard either. Their reasons for working hard and putting up with the working conditions perhaps have more to do with their marginalized position in a white middle-class society than any “work ethic” supposedly not known to “Americans.” One migrant worker told me they came to America to work not because they could make more money, but because the demand for their relatively low-skilled and low-waged labor was higher. “The pay isn’t much better here in the U.S., but there is more work” (Mario). Thus, Americans create the demand for this labor, by not being willing to work “this hard”. The reality is that no one *wants* to work “this hard,” not even those that are willing to do it. The migrant laborers I spoke to told me that they felt they worked too hard, because “we work so late every night, 6 days a week. We don’t have time to have fun, go to the beach, relax” (Antonio). Additionally, the reality of the labor situation in TOG belied the “work this hard” discourse as migrant laborers are actually outnumbered by local wage laborers in the network. The largest category of labor on farms in the network is family labor (36), followed by local waged labor (21). Migrant laborers (14) and apprentices (13) are actually the smallest categories of labor in the network. Apparently, Americans are willing to work this hard, even for little or no pay.

While some aspects of their work may not be ideal, migrant workers felt that working on an organic farm was better because they could work for a longer period of time. On conventional vegetable farms, the longest period of time they could work is 2–3 months, while at their current farm they worked from May to November. They also half-jokingly told me they liked organic farms “because we get to take breaks.” While it is disturbing to think that people work 14 hour days without breaks, farm labor laws are notoriously lax, and the relative improvements on organic farms are not done because the law requires it, or because workers can leverage the improvements, as most migrant farm laborers in Pennsylvania are not unionized. Most cannot speak English, some are not literate, and an untold number are not even documented¹⁰.

C. Gender, Labor and Management

The most common image of farmers held by most people, and frequently invoked by the media is a man. At the same time, the “family farm” gets a lot of mileage in both federal agricultural policy and grass-roots activism around food systems. The coincidence of these two frameworks implies that women are present on the farm (as wives, mothers and daughters), but they are not immediately thought of as farmers or farm managers. TOG refers to its members as “family farms” in both casual conversation and in formal advertising and public relations. The family farm evokes images of a “mom and pop” operation that can make a living and employ only family labor, but very few farms actually can fit this stereotypical model, as Chris Fullerton argues:

...people have this kind of notion that you have one family one couple and you know some kids and they can make it work, economically. I think on very rare occasions can that happen. That's never been the model, there's always...been a crew of people who help with the planting and picking that goes ages back to when slaves were doing it...

But he also suggests that the cooperative can help provide a framework to support family farm operations that might not otherwise make it: “but when you look our agriculture, our co-op we're supporting...family farmers...”

All of the farms in the cooperative use some form of family labor, and the primary source of family labor was the managers/owners of the farm and their sons and daughters. On most farms these managers/owners were all men, two of which were single men. There were no farms in the cooperative run by single women. Only on two out of the thirteen farms that I worked with were women farm owners actively and regularly involved with the farm operation with their husbands. On these farms, one woman called herself a “dispatcher,” and worked the phones all day, handled crises and managed the bookkeeping. Another women heavily involved with the farm operation basically ran her own parallel farm operation, complete with her own crew, her own fields and her own markets separate (but not completely) from her husband. On only two farms were the male farm managers typically working without family labor: one was not married, and both had young children.

On seven out of thirteen farms, daughters were involved with the farm operation as laborers, and I observed only one daughter in a decision-making role. Of the six farms that employed wage laborers, four employed local women, and on these farms the majority of the employees were women. Most women wage laborers are retired, still in high school, or unmarried and twenty-something. These women and the daughters of the farm owners primarily worked in the greenhouses on larger farms, picked produce in the field on smaller farms and on all farms helped pack produce for transportation to the cooperative headquarters. Women also work on the farms as apprentices. Three farms

employed apprentice laborers and about half (6/13) of all apprentices were young women. The majority of apprentices, both male and female, are twenty-something, and only two apprentices were supporting a family. Apprentices are typically in charge of some decision-making regarding the farm operation, but this widely varies and some, such as apprentice managers (the majority of which are men), have more responsibilities.

While the division of labor varies according to the family dynamics and the particular scale of the farm operation, in general women are not responsible for management or decision-making about the farm operation. Their roles are typically characterized by labor-intensive unskilled tasks if they are wage laborers, or traditionally women's tasks such as bookkeeping and domestic work if they are the farm owner. While there are some obvious and important exceptions to these generalizations, such as women farm owners who work in every aspect of the farm operation or women apprentice managers, women are generally considered to be another inexpensive labor source.

The majority of wage laborers and apprentices do not support a family and are usually looking for part-time work to supplement other income or for spending money. Jerry says "...people are just looking for a job as a way to...make some extra money...They just aren't...particularly interested in farming they're just looking to make six bucks an hour" (Jerry). Labor, as mentioned above is the largest source of costs associated with organic farming, and farming in general. Single women who are not supporting a family are a relatively inexpensive source of local labor, and most farms tend to avoid seasonally employing women with families, because they usually try to draw unemployment in the off-season.

The work performed by women is usually un-skilled and labor-intensive. The majority of mechanized field work (with some exceptions) is performed by the male owner/manager, male managers and male wage laborers, but not male migrant workers. Women find it difficult to break into these skilled positions because they often do not come to the farm with those skills, and farm owners or managers do not take the time to teach them. Amy, an apprentice farmer, suggests that her lack of on-farm training by her employer has more to do with appropriate roles for women on the farm:

I feel...there's like a gender kind of thing and like a woman kind of thing going on but it's very subtle, you know it's very like, Sure you can, you can do the tillage and everything, oh if we have time for you to do it or you know if there's no one else around then maybe we can teach you. But that's never going to happen, like on the farm you're never gonna just like have time to do something...I feel like he doesn't have the belief in me...that I can become a farmer so he doesn't want to, you know so he's not committed to teaching me.

While paid female workers on the farm are relegated to relatively low-waged and unskilled work, women perform the highly skilled work of management on two farms.

Female farm owners/partners are not involved with the farm operation on 11 farms: two farm owners were not married, two were retired, three were Amish/Mennonite, and the remaining four farms were supported by women who worked off the farm. The management work that female farm owner/partners perform is often unwaged, as the owners are paid for their work through the profits from the farm. Because these profits are often not sufficient, if they exist at all, to support the farm operation and the farm family, some female farm owners/partners are required to work off the farm. In many cases, the farms that are not making it financially are just breaking even, and the work of the female farm owner/partner is required to financially support the farm family, and most importantly to provide health insurance for the family members.

III. Summary

While the Tuscarora Organic Growers are providing some real, tangible benefits in terms of economic justice for farmers, they are also replicating some of the same patterns of economies of scale and labor exploitation that occur in conventional agricultural systems. The network brings farmers together who are isolated from each, both socially and geographically, but in the process of developing the materiality of the network, discourses of economic justice, difference and power are also produced through the network activity. While the network provides economic benefits to the enrolled actors, which are primarily the farm managers, some unintended effects of the collective spill out into the wider rural and urban communities connected to the network. This includes issues of labor and economics, and how categories around class, gender and race are used and shaped in the process of the production and consumption of food.

While I have argued that the TOG network uses and perpetuates racialized and gendered labor systems to provide food for an urban elite, the issue is not so much about the exploitation of particular groups of workers or catering to a particular class of consumers. Rather, I would argue that what is important is the driving force behind the need to participate in these systems. It is not an individual profit motive or the desire to exploit workers on the part of organic farmers, because a lot of farmers are struggling financially themselves. Chris Fullerton worries about the economic bottom line for some of the co-op members.

The economic is always a big question mark for me too, whether or not you know some of these growers are making good money, and I know some of them aren't making good money and I think a big portion aren't sure, you know.

Jerry says of his own business, “We’re not getting rich though but a lot of people say you must be getting rich. No way, no way we’re getting rich.” Other farmers confided in me that they weren’t sure how long they could stay in farming. “We had a couple of good years, so we expanded this year, bought a truck and some equipment, but this year is so bad I might have to take a job off the farm too” (Ryan).

The reality of these farm operations is that they provide jobs for local workers and migrant workers in a depressed economy and barely make it themselves, while providing relatively inexpensive fresh, high-quality and locally grown produce for an elite class of urban consumers. Looked at in this way, TOG does not seem to be accomplishing many of the economic and social justice goals of the sustainable agriculture movement. Chris Fullerton argues however, that the problem lies not so much with individual farmers or TOG itself, but with a flawed system of food production and consumption. “It’s just that...we can’t focus on all the problems...you can’t ask farmers to fix what’s really a fundamental flaw in our whole system which is distribution of wealth in this country.”

The cheap food policies that drive most of the agricultural policy in the United States put small organic farmers in an impossible situation. To compete for a share of the fresh fruits and vegetables market, small farmers, who do not have economies of scale and are not subsidized by government support, must obtain a price premium from an upper class of consumers. While consumers are willing to pay more for organic, they are not willing to pay very much more, and so farmers are forced to cut costs elsewhere to manage the expenses associated with organic practices.

We knew we could get a premium price and we knew we needed every economic advantage we could get. And as it turns out I mean it probably, the premium price is just completely canceled out by the additional costs (Jim).

One place where costs are cut is with respect to labor, and the classes of workers, women and migrants, whose wages are lowest, are often recruited and exploited in this system.

Thus, the TOG network itself is enrolled in larger scale networks of policy and economics. In some instances TOG replicates the social and economic patterns of conventional agriculture and exploits the same constituents: women and minorities. But in other points of contact TOG subverts these patterns and works to invent new modes of ordering within the food system, such as bringing farmers together cooperatively to mitigate the risks of farming. Conventional food systems would increase the scale of food production to combat risk, but TOG allows some farms to increase in size and allows others to stay small because the diversity in size, scope and produce benefits the entire network. Through collective and cooperative action, the network members benefit from each other and build positive outcomes as a result. However, not all network members participate and benefit equally, and one wonders what the network benefits would look like if women wage laborers and migrant workers had the same stake in the network as the farm owners/managers.

Chapter 6

ANALYSIS II

Women's Agricultural Network and Social Justice

*“If you're not a dairy princess you have to be some kind of radical communist bitch”
~ Liz*

The story of the Pennsylvania Women's Agricultural Network (WAgN) begins in Las Cruces, New Mexico at the 2003 Rural Women's Studies conference. At this meeting Dr. Carolyn Sachs and I met Vivianne Holmes of the WAgN chapter in Maine. We immediately recognized the possibilities of such an organization for Pennsylvania farm women, and began planning to start a WAgN chapter in Pennsylvania. This chapter is a discussion of the development of WAgN in Pennsylvania, what WAgN hopes to provide women in agriculture, and what conceptualizing the organization as a network means. The analysis presented here is based on my research on and involvement with the development of the WAgN chapter in Pennsylvania in the year between May 2003 and May 2004.

WAgN has existed in a very informal state in Pennsylvania since May of 2003, and is largely led and organized by a core group of women farmers and agricultural professionals. Since our first meeting we have had overwhelming interest and support for our activities, which include a day-long conference in partnership with the Pennsylvania Association for Sustainable Agriculture (PASA). A conference attendee wrote the following comment on her evaluation, and I think it illustrates well the mission and vision of Pennsylvania WagN:

It's so important to have workshops where women farmers define the topics, lead the lectures, and ask the questions. Then we can hear some things that we never hear like-“take a backseat, be quiet, and listen to your

intuition” and “make connections within your community”. These are key points to a sustainable and just society.

While issues of social justice are addressed in so many words by many in the sustainable agriculture movement, there are those who feel that it is underdeveloped as a concept and a practical objective of the movement. Critics of the sustainable agriculture movement argue that women are still marginalized from spaces of knowledge in sustainable agriculture (Allen and Sachs, 1993). Thus, many of the injustices towards women in the conventional agriculture paradigm are replicated in the sustainable agriculture social movement.

Third-wave feminist theorizing has called into question the coherency of “women” as a category of analysis, because of the racial, class and sexual differences that divide women from each other (Riley, 1991). Actor-network theorists have taken up this theme and urge social theorists to view the world as a series of connections and relationships which bind us together, and out of which agency can be realized (Latour, 1993). Networks provide vehicles for transcending social and geographical isolation that separates farmers and women from each other, and they also provide frameworks for the exercise of agency for individuals working for social justice in sustainable agriculture.

In this chapter I describe and analyze WAgN as a network that works to rectify some of the injustices of the modern food system that are reproduced in sustainable agriculture. I provide a history of WAgN in Vermont and Maine, as well as background on WAgN in Pennsylvania, and the results of a needs assessment. In the second half of the chapter I provide analysis on the framework, ontology and constituency of the network. Data for this analysis come from interviews, needs assessment surveys, participant observation and conference evaluations. In what follows I will provide some

background on traditional farm organizations, both women's and general farm organizations, and argue that they envision a particular farm woman which does not reflect the diversity of women in agriculture.

I. Women in Agricultural Organizations

According to the 2001 National Farm Women Survey¹¹, only 5 percent of the farm women in the survey belong to women's groups associated with general farm or commodity organizations¹². These groups includes the "Cowbelles," which was started by "16 ranch wives in 1939" and one of their notable accomplishments was the creation of the "Cooking with the Cowbelles Cookbook." Other auxiliary organizations include the "Farm Bureau Women," which is the women's branch of the Farm Bureau and works within the overall objectives of the Farm Bureau to improve the financial well-being of farmers and ranchers. The Farm Bureau Women also oversee the Farm Bureau Queen contest and other similarly gendered activities within the Farm Bureau.

According to this same survey, a little over 2 percent of all farm women belong to any women's farm organizations. These include American Agri-Women, which is a national non-partisan organization dedicated to "promote agriculture for the benefit of the American people and the world". (<http://americanagriwomen.org/whoweare.htm>) and Women Involved with Farm Economics (WIFE), which is an organization dedicated to "improving profitability in production agriculture through educational, legislative, communicative and cooperative efforts" (<http://www.wifeline.com/WifeIs.htm>).

A common thread in both of these organizations is the explicit or implicit emphasis on family farming and women's roles as wives in these enterprises, and their roles as promoters rather than practitioners of agriculture. Unlike many women-centered

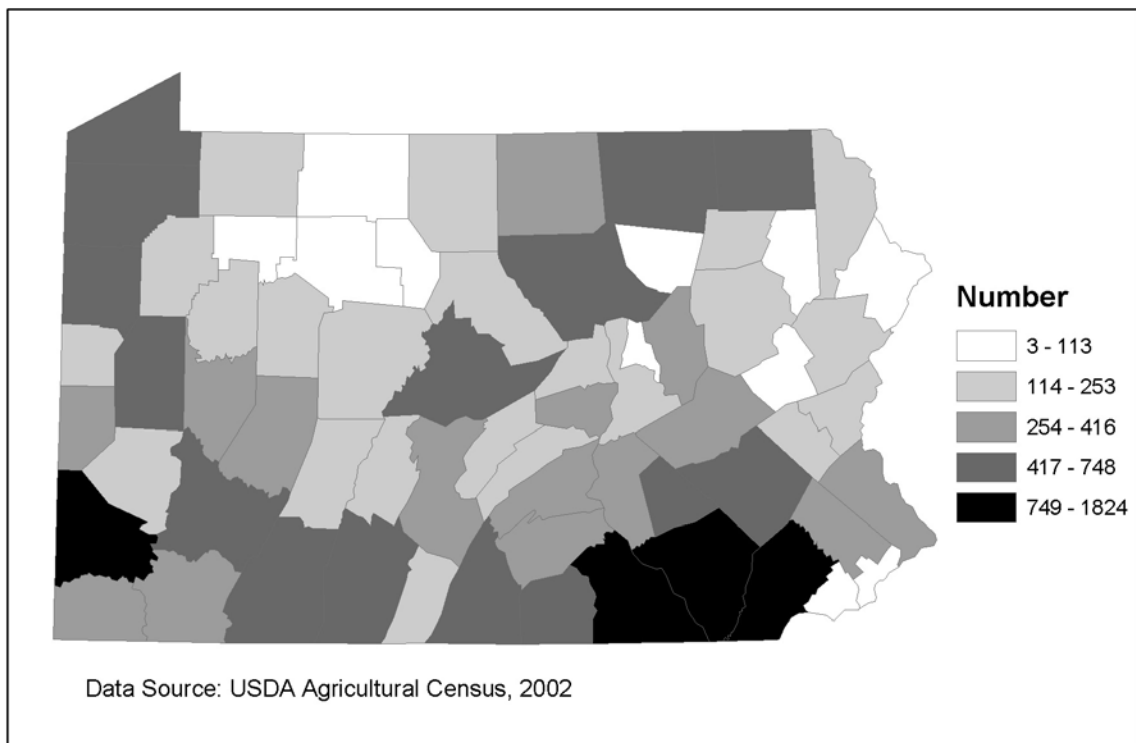
organizations, these groups do not invoke particularly feminine values or identities around which to organize, rather they are devoted to the perpetuation of agriculture primarily because they are invested in agriculture as a way of life for their families.

A large percentage of farm women, but still a minority (22%), are involved with Cooperative Extension activities, which is the outreach and educational arm of the land-grant university system. Cooperative Extension has long promoted a particular vision of farm women as wives and mothers on farm operations (Jellison, 1993; Neth, 1995), and is still heavily invested in this particular vision of women in agriculture. According to the survey, however, women are much more likely to belong to general farm organizations (35%) or commodity producer's associations (12%), than women's organizations or auxiliaries which implies that women may more comfortably identify with farming occupations than stereotypes about farm women might suggest. The face of farming is rapidly changing, however, and agricultural organizations are faced with attempting to keep up with the social and demographic changes in their constituencies.

The most recent agricultural census data show that while agriculture in general is in decline in the United States, women as a subgroup of farmers are continuing to increase in number at fairly substantial rates. In the United States as a whole, the number of farms declined by over 86,000 between 1997 and 2002, a 4 percent decrease, and reflects a trend that has continued since the 1950s (ERS, 2004). Of the total number of remaining farm operators, 27 percent are women.¹³ Of second and third operators, 63 percent are women. Of all principal operators, 11 percent are women, which is an increase of 13 percent since 1997. In Pennsylvania, 23,574 operators are women, which is approximately 27 percent of the total, and matches the national average. A little over

10 percent of all principal operators are women, which is below the national average, but there has been increase in principal operators of over 20 percent since 1997. Pennsylvania lost 2000 farms between the years of 1997 and 2002, but gained 1000 farms operated by women (ERS, 2004) (see Figure 7). This is a trend nation-wide that has continued since 1978, when the agricultural census began distinguishing operators on the basis of sex.

Figure 6: Female Farm Operators in Pennsylvania



II. WAgN Beginnings: Vermont and Maine

WAgN (pronounced “wagon”) is a trademarked acronym for a program begun by Mary Peabody, Extension Specialist in Community Resources and Economic Development for the University of Vermont. Peabody and others received a planning grant from the USDA through the Socially Disadvantaged Farmers program in the 1994 Farm Bill.¹⁴ They conducted 32 interviews to evaluate the need for a women’s agricultural program in Vermont. The results of this research revealed that women in

agriculture needed to have programs that provided education and information to better evaluate whether agriculture was right for them as a potential business opportunity. They also needed information about sustainable (environmentally and economically) farming practices as well as information on business management. The model most feasible for facilitating this outreach was articulated as a network of state, local and federal partnerships.

The vision of the organization is to “increase the number of women owning and operating profitable farms and related businesses while, at the same time, increasing the profile of women in leadership positions throughout the agricultural sectors of business, government and community.” The mission is to: “provide top quality education and technical assistance to individuals starting or enhancing farm and ag-related businesses” (VT-WAgN, 2004). WAgN is a collaborative effort between the University of Vermont Extension, Women’s Small Business Program, Trinity College of Vermont, University of Vermont Center for Sustainable Agriculture and USDA Office of Outreach.

The Vermont WAgN currently has over 1000 members and facilitates its educational and outreach objectives through business planning workshops, on-line courses, discussion groups, technical assistance, a quarterly newsletter and a state-wide conference. WAgN’s central objective is to facilitate informed decision-making by women thinking about entering agriculture as an occupation or for women thinking about changing their agricultural business strategies. The target audience for WAgN is both women farmers and service providers such as the Department of Agriculture, the Soil Conservation Service and other agriculture related businesses, organizations and government agencies. In addition to providing technical and educational support to these

audiences, the Vermont WAgN is also active in providing a replicable model and spreading WAgN chapters throughout the United States.

Maine also has a WAgN chapter founded by Vivianne Holmes of Maine Cooperative Extension, who was inspired to begin a Maine chapter in 1997 after hearing Mary Peabody speak about the Vermont WAgN program. Maine's program serves about 700 farmers and has developed out of the unique talents of the women involved. The program offerings include farm tours, on-farm education, work days on member farms, monthly on-farm network meetings, regional leadership councils, annual conferences and discussion groups. The mission of the Maine WAgN is "to enable women and other underserved people to successfully own, operate and support agriculture-related enterprises." The Maine WAgN has also generated a number of affinity groups, such as the "Daughters of Yarrow," which is a group of eight lesbian farmers who barter work and share resources cooperatively, and other groups based around farm production practices, such as herb production or other value-added products, such as home-spun wool.

The strength of WAgN as an organization is its emphasis on women as successful farmers, producers and stakeholders in agriculture, regardless of their marital status or sexuality, or whether they have a family owned operation, a small on-farm business, a large-scale operation, or where their political commitments lie. WAgN recognizes the growing need to support and educate women who are choosing agriculture as an occupation, and works within the framework that women are farmers and stakeholders in agriculture as producers of food. The organizations currently available to women are clearly not serving the diversity of their potential audience, and the successes of WAgN

chapters in Vermont and Maine are testament to the need for an organization that respects the diversity of farm women's identities, and provides resources for networking, education and inspiration. Pennsylvania WAgN is still in its infancy, but has experienced both the thrill of providing a service to a very interested and underserved population, the difficulties of grappling with identity politics within the community of women, and obtaining support from the larger agricultural community.

A. "Jump on the WAgN" in Pennsylvania

The Pennsylvania WAgN is currently composed of an informal steering committee and about 116 women and a few men who have expressed interest either in helping to organize WAgN in Pennsylvania or in receiving information about WAgN activities. The steering committee is composed of about 20 women farmers and agricultural professionals who have a history of or interest in working with women in agriculture in Pennsylvania. As mentioned above, the first meeting of the WAgN steering committee was in May 2003. Previous to this first meeting, Dr. Carolyn Sachs and I made a list of women who we thought would be interested in helping to launch WAgN in Pennsylvania, and we contacted them to let them know about our first planning meeting. As of this first contact, the network began to build itself, as two of the seven attendees of the first meeting were unknown to us, and had heard of the meeting through their own informal networks. Another six women I did not know contacted me and were interested in more information, but were unable to make the meeting.

Subsequent meetings of the steering committee were held in June, July, September, October and November of 2003 to plan activities such as a strategic planning retreat with the directors of the Maine and Vermont WAgN chapters, a state-wide day

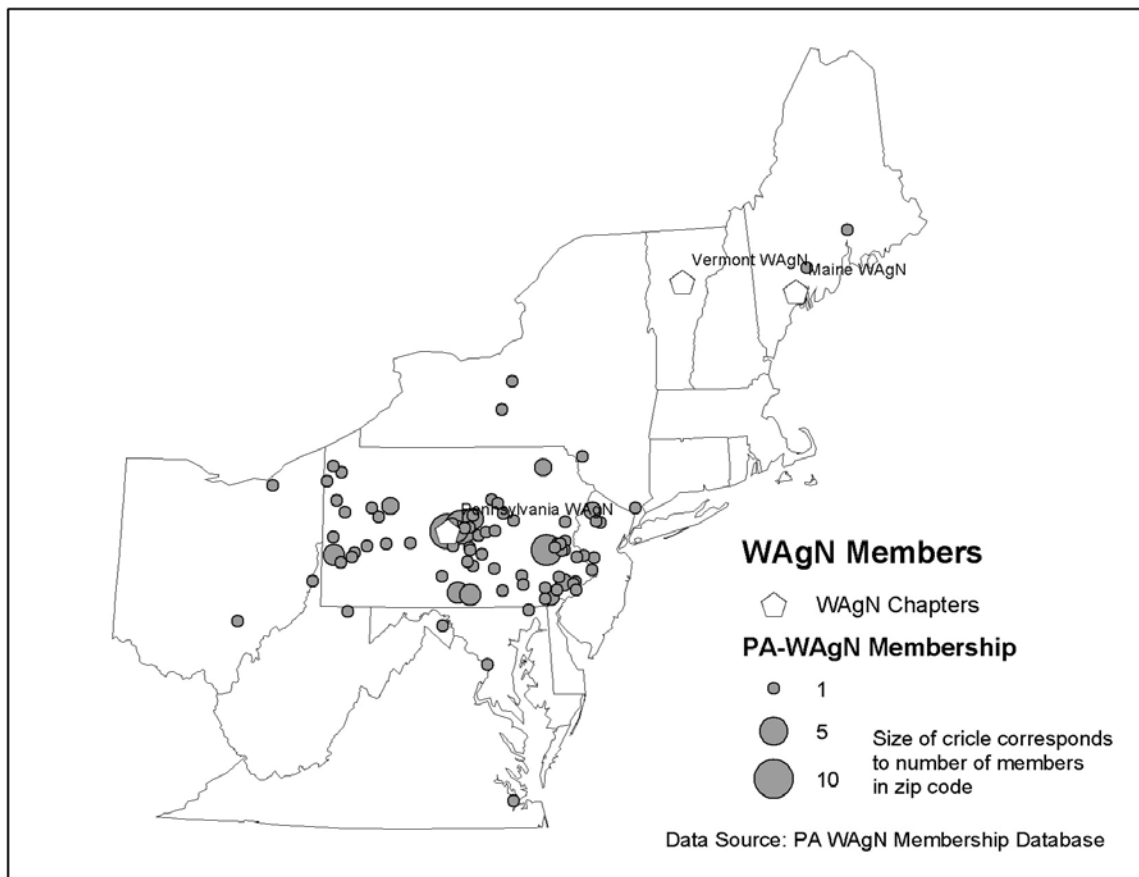
long conference, field days for summer 2004 and strategies for funding and building the network. The strategic planning retreat was largely a holistic management session designed to help us visualize our values, resources and stakeholders and to draft a mission statement. The resulting mission was articulated as “Supporting women in agriculture today and in the future by providing a positive learning environment, networking and empowerment.”

Currently the constituency of WAgN is composed of 32 farmers or farm managers; 23 staff of various non-profit organizations related to agriculture (PASA, PCO, Rodale); 10 students, apprentice, aspiring farmers; and 9 extension personnel, university faculty and or staffers of government agencies. There are also 41 “others” in the database who have either not identified their occupations to me, or are not associated with any of the above organizations, but are involved with various aspects of healthcare, teaching, environmental organizations and the media. There is also some overlap between these categories, as some individuals are both farmers and faculty or staff. The membership is primarily from Pennsylvania, but includes members from nine states. See Figure 7.

The steering committee has been rather fluid and the average attendance at meetings has been around eight, but the number of women who have attended at least one meeting is 18. Steering committee members include 8 farmers, 6 faculty, staff or students at land-grant universities (includes 4 in Cooperative Extension appointments at The Pennsylvania State University and West Virginia University), 5 staff of non-profit environmental organizations and government agencies including PASA, The Rodale Institute, Opportunities Industrialization Center International, Natural Resources

Conservation Service, Pennsylvania Department of Environmental Protection, and 1 staff person at a regional newspaper. The farmers have either a primarily livestock, or a primarily fruits and vegetables operation, and are at various stages of their farming careers. Some have been farming for many years, while others are just beginning. (See Figure 8).

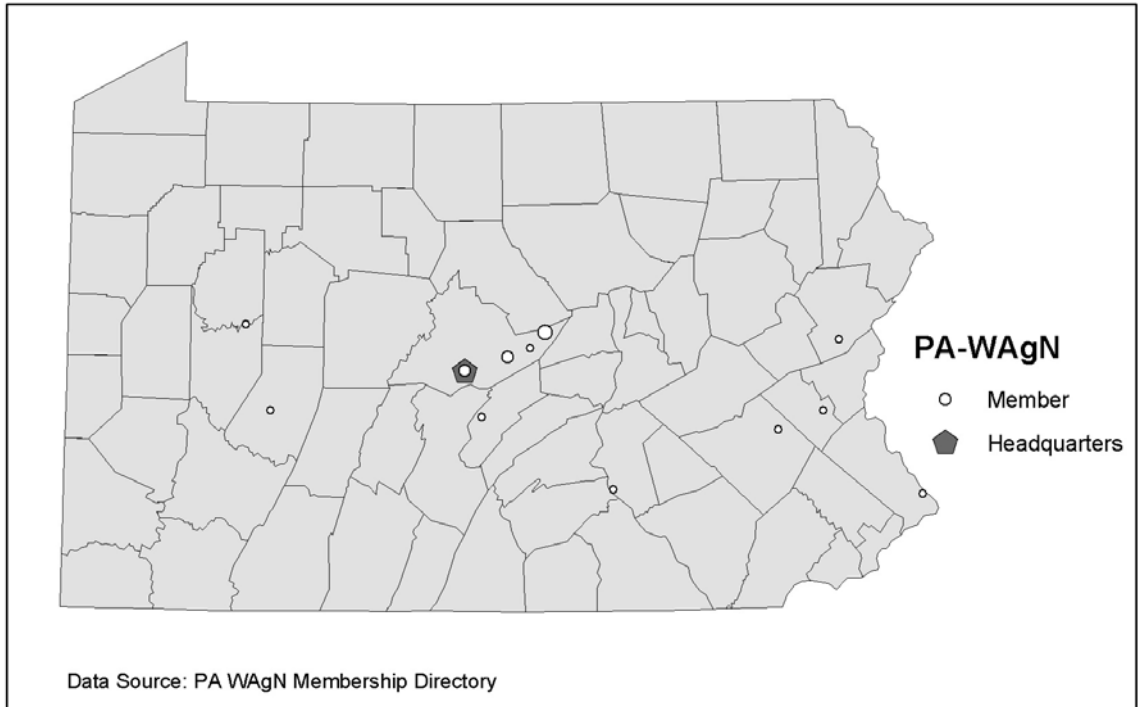
Figure 7. Pennsylvania WAgN Membership



Thus far, WAgN has been fueled by volunteer energies and in-kind support from the various organizations associated with steering committee members, such as photocopying, conference space, staff time, etc. We have approached the Pennsylvania State University Cooperative Extension for support for a half-time coordinator and an activities budget. We have also written and submitted proposals for funding to Sustainable

Agriculture Research and Education (SARE), and organization devoted to providing support for work in sustainable agriculture. As of this writing, we have received funding from two sources and plan to expand WAgN in Pennsylvania substantially, while retaining our volunteer base of support in the form of advisory and steering committees.

Figure 8: PA-WAgN Steering Committee Members



WAgN activities thus far have primarily been press releases and newspaper articles about the formation of the organization, steering committee/planning meetings and one day-long conference sponsored by the Pennsylvania Association for Sustainable Agriculture (PASA). This day included workshops on business planning, purchasing a tractor, niche marketing, growing medicinal herbs for market, personal health and an inspirational keynote speech on balancing values, goals and making a living at farming. Planned WAgN events for 2004 include farm-based education programs on rotational grazing, medicinal herb cultivation and basic tractor maintenance and operation. Also

planned for the winter is an advanced business-planning workshop. Other activities include on-farm potlucks and visioning, work days and farm tours.

B. What do women in agriculture need?

We were instructed by the directors of the Vermont and Maine WAgNs to conduct a needs assessment survey of the potential constituency of the Pennsylvania WAgN. Lacking the resources to accomplish a state-wide mail survey, a preliminary needs assessment was conducted at the Women in Agriculture conference. Thirty-seven surveys were returned, and the results reveal that the women who attended the conference almost unanimously desire an educational program designed for their needs, and they want it to be a hands-on, farm-based program led by and organized by women. The women responding to the survey also do not currently use Cooperative Extension programs for their education needs.

Eighteen of thirty-seven survey respondents are currently farming, or were farming in the last year. Thirteen of these respondents operate primarily livestock farms, while thirteen operated fruit, vegetable or crop operations. Seventeen direct market their products through retail outlets or farmer's markets, four run CSAs and seven have wholesale outlets.¹⁵ Two farmers indicated other marketing strategies, including pick-your-own operations and an on-farm camp. Of the 18 farming respondents, 16 indicated that they were aware of other women farmers in their county.

Of the 19 that indicated they were not farming, six were "wanna-be" farmers, or those who were wanting to get into farming as an occupation, or were apprenticing with farmers. Seven identified themselves as researchers or educators, five as agricultural business people, four as working for environmental organizations and one working in

healthcare. All but one of the survey respondents indicated they had access to email or internet, but only two thirds indicated they were “very much” interested in receiving emails/updates about the women in agriculture network. The majority (three fourths) were “maybe” or “not very” interested in either internet based courses or email-based discussion listserves. A little more than half are “very much” interested in on-farm discussion or network meetings. Sixty-five percent, however, were “very much” interested in farm-based education programs. A similar percentage used Cooperative Extension courses “not at all” or “not very often” for their educational needs.

Over 80 percent (30) of the survey respondents indicated there was a need for an educational program designed specifically for the needs of women in agriculture. (There were six illegible or blank answers and one “not sure”.) The reasons they gave for this followed a surprisingly coherent thread. Most women who responded identified feeling different from men, either socially or physically. One woman wrote, “women have to deal with all the same issues as men, [but we have to be] more ingenious to compensate for [our] strength,” and another wrote, “women approach their lives and their endeavors differently than men.”

Many wrote that women also do not have the respect and skills that most men seem to have automatically in agricultural communities. One woman wrote, “Many women have not had education in traditional male skills,” and another wrote: “women have to work harder to gain the respect of the agricultural community.” Other women concluded that these differences were the basis for their marginalization in the agricultural community, “women make connections and visualize things in a way that can be dismissed by traditional male views of farming.”

As an antidote to this marginalization, women want to meet with other women in supportive, empowering spaces. One woman wrote, “there are advantages to a room full of women. Men don't listen to a women’s voice not offering food or sex.” Another wrote, “it's really helpful to discuss issues associated with farming in a roomful of people who are looking at things differently from conventional, male dominated agriculture.” Another added that it was important to “share experiences in unthreatening atmosphere. Not only do they want the space to be filled with women as co-learners, they want the education to be organized by and led by women, particularly skills that are traditionally “men’s work”. One woman wrote, “I'd much rather learn from a woman especially ‘male kinds of stuff’ like tractor ‘stuff’,” and another wrote, “It's very nice to have programs intentionally designed for women, by women.”

Subjects that women in agriculture want to learn about fall under three broad headings: farm management, production practices and inspirational/emotional support.¹⁶ Under the management heading fall issues of time, labor and money. Of critical importance for women are issues surrounding “farming from scratch.” Women typically have less access to capital, and are not usually in line to inherit the family farm. Other women come to farming from other professions, and do not have a farm in the family, or many of the skills farm kids might pick up. Business planning is also a critically important piece for women in all stages of farming, and is high on the list of a majority of respondents.

Production and marketing practices are important subjects for most women, particularly around labor-saving, value-added and creative marketing practices that increase the profitability of the farm. Examples of these include rotational grazing,

cheese-making and equipment operation. Other suggested workshops include overtly environmental initiatives such as soil conservation, green building design and organic wine production.

Topics that fall under the heading of inspiration and emotional support include workshops on yoga and meditation, time and stress management and work-family issues. Women who elaborated a bit on these topics articulated them as discussion forums where they could talk about “what is unique about being a woman farmer, what challenges we meet, and our inherent benefits,” “what qualities of female leadership define our management style” and “defining motivation and still fitting in a man’s world.” They also want to hear inspiring stories of women who are farming, and to visit their farms for ideas on how to improve their own operations.

The clear majority of most topics are not necessarily gender-specific, and this suggests that the change that women would like to see in educational programs is not in the subject matter. They want to change the social environment of learning, and they also want to change the approach and methods of the educator, including but not always, the gender of the educator.

II. Social Networks, Agency and Identity Politics

The planning committee in Vermont observed a similar situation and needs among women in agriculture and chose to provide these services to their constituents through the vehicle of a network. Mary Peabody articulated their reasoning for this as follows:

The women we interviewed were clear that they wanted a program where communication was multi-directional and where they could participate in their own learning and contribute to the learning of others. The original

language we used was a 'learning web' but for simplicity (and for easier understanding by a broad group of people) we went with network.

Maine WAgN has interpreted the network paradigm similarly, but also a bit differently, and includes a non-hierarchical structure that emphasizes shared leadership. Vivianne Holmes is a coordinator, but there is no “president,” and no centralized hierarchy, so that women can participate on an equal footing with everyone else in the organization. This is also evidenced in the “affinity groups” who take responsibility for their own cooperatively organized educational opportunities. Viviane Holmes connects this to both women’s identities, and feminist politics.

It is so ingrained in us as women -- to share thoughts, ideas, empathy, understanding, knowledge, support. It's the strength of our feminist model where everyone is equal and what they bring to the table is heard and honored. It makes us responsible for our own learning and responsible for helping other people gain the knowledge they need, too.

According to Heather Thomson, who completed an honor’s thesis at Bates College on the Maine WAgN, staff at the Maine WAgN articulate the organization as a “fungus.”

The network is constantly readjusting to meet the needs of its members while providing the foundation for them to support a viable agriculturally related enterprise. Additionally, the Network adapts to respond to members’ requests. Thus, the Network is always helping the overall growth of its members through the healthy support it gives, as fungi helps organisms in the forest to thrive. (Thomson, 2002: 77)

The function of the network is created through the activities of the individual constituents, their needs and interests, and the fungus analogy illustrates how the network can function as both a materiality, an ontology and a metaphor.

The Pennsylvania WAgN network constitutes a materiality (as an association or organization) or as a way of organizing people and a way of providing a service for individuals dispersed across space. This is important in a large state such as

Pennsylvania, and especially when funding is low or non-existent because an informal network facilitated through technology is relatively inexpensive to maintain.

Secondly, the network reflects an ontology of its members and represents a way of thinking and knowing about what exists in the world that emphasizes relationships. This contrasts with other organizational epistemologies that privilege hierarchies and rigid positions within the organization. Thinking of the organization as a network has the potential to lead to an emphasis on shared responsibility, where individual actors in the network can assume leadership positions that are not based on rigid positions within the organization.

Thirdly, the issue of "who belongs" that confronts any organization is at the forefront of issues facing the steering committee members. Third wave feminist theorists debate the existence of women as a category of analysis, but WAgN is confronted by this very issue when determining who WAgN serves, whether the category is women farmers, farm women or women in agriculture. While the issue is largely unresolved, but the notion that hybridity allows for multiple subject positionings within the network can inform WAgN's future strategies. Members of the steering committee provided their thoughts on these issues, and based on their responses, I will discuss each of these different contextualizations of the network in the following, beginning with the network as a materiality.

A. Network Materiality

All respondents indicated that improving the climate for women in agriculture, supporting women farmers and helping women begin farming as an occupation were reasons for developing a WAgN chapter in Pennsylvania. From the perspective of both

farmers and agricultural professionals, women's interests are underserved in agriculture. Emmy, an apprentice farmer, described what many women find the most daunting aspect of agriculture: social isolation and lack of access to education.

Farming can often be a lonely, isolated job, especially for a single woman such as myself...I hope WAgN will provide a mentoring relationship for young woman who want to farm. I have struggled through the past 6 years of my farming career to learn all the necessary skills to successfully farm. Especially as an apprentice it was tough to get any experience at "boy" skills (tractor driving, mechanical repair) because they always went to the boys. I want to see this become easier for women!

Marta, an extension educator observes, however, that women do not use the traditional sources of information available to farmers through Extension services.

I have long been interested in women/gender in science. I quickly recognized that in PA, because of my extension appointment, that women farmers were largely absent from most extension field days. This is a clientele (women farmers) that should be promoted and served.

Providing an organization that can respond to women's needs, both socially and educationally, is the priority of WAgN. As indicated by the directors of the Vermont and Maine WAgN chapters, and the Pennsylvania needs assessment, however, women involved with agriculture want and need an organization that is flexible enough to respond to their needs, but also will provide an alternative learning environment from the traditional sources of education available to them.

As illustrated above by Viviane Holmes and Mary Peabody, a network is both flexible and provides a context for learning that is multi-directional. Members of the Pennsylvania WAgN steering committee stressed the value of having an organization that allows for learning to occur within and between the membership. Liz, a farmer and agricultural professional, articulates this as a way of communicating about information as well as a process of social exchange.

Establishing communication links of various kinds allows exchanges in multiple directions on information of all kinds; technical, strategic, financial etc. As a participant, I can both contribute and take away information. It also means I have a support network of women also engaged in agriculture in an active way.

Emmy, who is also farming, articulates a similar interest in reciprocal relationships that are facilitated through exchange:

Contributing what skills I have, and giving my time, physical labor, and any other kind of help when I can- and expecting the same from other members. Keeping an eye out for situations that could benefit the needs of others in the group, and hoping they're doing the same for me.

Angela, an agricultural professional for a non-profit sustainable agricultural organization, invokes the common concern in the sustainable agricultural community about the “expert model” of education, where farmers receive information from an agricultural professional or researcher, and are not able to share their own experiences.

Networking allows for linking people who are questioning with people who have answers. A two-way (or multi-way) interaction that shares information and resources, building on what all parties know and increasing the total volume of knowledge rather than a one-way stream of information from WAgN to the participants.

Women interested in WAgN appear to be especially sensitive to the “expert model,” and are interested in working to create new models of education for themselves that emphasize shared learning, cooperative arrangements and multi-directional education experiences.

WAgN steering committee members are divided on whether thinking of the organization as a “network” is critical to WAgN’s mission. While all respondents said that network worked well as a conceptual device for the organization, half said that “group” or “alliance” would work just as well. The other half however, articulated very

strongly that the kind of organization we are attempting to build must be thought of as a network.

PA WAgN *must* be a network to reach its fullest potential and usefulness. A network is alive and constantly working. It isn't static. It isn't just about WAgN providing information to the participants, but about the participants providing information to each other. Take the people who know what they do best and let them talk to each other. (Angela)

Network is more expressive of an informal but conscious affiliation with one another, of the diversity of directions information might flow, of the interrelatedness of our enterprises/concerns and seems to have a function built in to the name. "Group" is too loose of a term (I mean, hey, there is a "group" of students standing on the street corner - so what?). "Association" feels too formal to me; like something put over the outside of a group to hold it in - and says nothing about the actual function of the entity. Neither "group" nor "association" convey the impression of dynamism I associate with "network." (Liz)

Thus, WAgN as a materiality is an organization that serves women in agriculture in ways that they have not been served in the past and present, through a fluid, dynamic connection that values the contributions women can make to facilitate their own education. What makes WAgN a materiality is the emphasis on reciprocity, connection and exchange, and these values are predicated on an ontology of relationship.

B. Network Ontology

Relationships of all kinds are critical to the women interested in WAgN. Kim Tait, a well-known woman farmer and businesswoman in Centre county, Pennsylvania articulated her sense of relationships well at a women in agriculture workshop at the 2003 PASA conference.

Maybe about three years ago it occurred to me that business wasn't sort of this elusive thing but actually it was really about a whole series of relationships...I have actively sought to create relationships with people in my community and create a, I don't want to say a support system but at least a network of people I respect on all levels. And we sort of mutually

support one another in our endeavor and particularly in this community is to make it a better place. (Kim)

Kim's comments, while not in reference to WAgN specifically, envisions a kind of community that both provides material and emotional support for women in isolated places, and in isolating social positions. Chris Wise, another farmer, also speaking in this session, made a point to discuss relationships.

I want to talk a bit about building relationships. You need to seek out other people, don't wait for them to come to you. It's awful lonely if you do. Look for other women to be mentors and friends and advisors. Don't limit yourself to women though because half the world is men and they know a lot. Try to develop relationships with farmers and business people and people that you admire and remember, they're all your future customers.

Both of these women stressed the importance of relationships both to their businesses and to their emotional lives. Indirectly, both refer to the social and geographical isolation that becomes a part of farming for women without a social support network. Angela, who frequently works with both male and female farmers as an agricultural professional, observed similar patterns.

I heard some of the same complaints coming up over and over again in talking with and listening to female farmers. Banks are a challenge. Women are still considered farmers wives and not farmers. If they weren't raised on a farm, it is hard for women to access training on certain machinery and hard for them to use tools made for larger folks (also a problem for small men involved in agriculture). It can be solitary work. If you're selling at market or doing CSA, you see customers, but linking up with other female farmers just to chat, share, gripe, celebrate, is difficult.

All of these accounts stress the importance of good relationships between customers, other farmer and the larger agricultural community as critical to the success of women farmers.

WAgN seeks to be a network that connects isolated farmers to each other and can function both as a support system and a source of information and shared resources. What

is important to the WAgN steering committee is not only to relieve the isolation of farming and provide information to constituents, but also that these benefits are provided in a way that honors the importance of relationships to women. In general, the three most important things WAgN can provide, according to the steering committee, are: 1) access to resources and opportunities to share experiences, exchange information and learn; 2) a safe place to meet and learn, and an emotional and social support community; and 3) a political voice and activist platform for changing the social environment for women in agriculture. The emphasis is on shared experiences and resources through equal exchange, relationships and coming together as a community. Some steering committee members elaborated more on this point.

Liz expressed an interest in connecting with other women in agriculture as a motivation for participating in the network, and she finds that there is a dialectical relationship between connecting with other farmers and forming communities through networking.

Participating in a network is its own reward. To me it means working with others to create a connection between women with different needs and interests; and yet by actually doing this work, the network is created de facto.

Emmy, also a farmer, looking to find a community of like-minded people for professional and emotional relationships, finds that thinking about the organization as a set of relationships allows her to enter and exit at will. “I like the network. It is as committed or uncommitted as you can be. It places the stress on relationships.” Marta, an agricultural professional, also emphasizes the importance of coming together as equals within the organization, as well as between other agricultural organizations.

Participating in the network means forming interdependent relationships within the network and between the network and other groups, as equals...I think it is important that first women see themselves as their own best support.

Relationships are inherently social, and the issues facing women in agriculture are also primarily social. Joy, a professional working in an environmental government agency, conveyed her feelings about working with the network.

In my professional experience, I have determined that working through a network is the best way of developing a project, solving a problem, or addressing a concern that is social in nature.

Joy articulates the feelings of many women involved with WAgN, that by addressing their challenges and issues at their social source and coming together as a community, they work to change the political and social situation for women in agriculture. This emphasis on community and shared responsibilities is also reflected in the organizational structure.

The network structure allows for leaders to emerge throughout the network at particular places and times. Even though the actors in the WAgN network are dispersed geographically, they are able to articulate their own sense of agency. This is demonstrated well by two recent developments in the Pennsylvania WAgN chapter. Two WAgN steering committee members who live in western Pennsylvania recently held a planning meeting to develop a regional chapter in their part of the state. Also, two members who work closely with funding agencies through the university recently put together two proposals for funding for the organization.

Members of the steering committee, and constituents of WAgN articulate an ontology and epistemology about their world and social lives that is predicated on relationships. This ontology is reflected in the services that WAgN can provide as well as

the way the organization is structured. The goal of the organization is to provide settings for participants to share experiences and information with one another, and the onus is on the participants to facilitate their own education. The structure of the organization, including the leadership also reflect the premium on relationships and taking advantage of the opportunities afforded to individuals in particular places and times, rather than enforcing a rigid hierarchical system of leadership.

C. Network Hybridity and Identity

Both the leadership and the constituents of WAgN have been largely self-selected up to this point, mostly because the network is growing via word-of-mouth, and we have conducted very little outreach. Women tend to find out there is a WAgN chapter forming from their friends and associates, and they choose to be involved or not. As the organization grows and becomes formalized, as a government agency or a non-profit, the importance of defining our audience and who we serve becomes ever more important. The steering committee has grappled constantly with this question, and it reflects a larger issue around the social justice goals within the sustainable agriculture community: social justice for whom?

In October of 2003, members of the steering committee met at a member's farm with the directors of the Vermont and Maine WAgN chapters for a weekend retreat. During this retreat we worked on defining our mission statement. Crucial to the process of drafting a mission statement was defining for whom our mission existed. The debate around who we serve was never completely resolved in that retreat, and it has re-appeared in almost every steering committee meeting since. While not acrimonious, the discussion is certainly heated, and to move forward we settled on the broadest possible language:

“women in agriculture.” Both Vermont and Maine specifically address women farm operators as their primary constituents.

Members of the Pennsylvania WAgN also specifically identify women farm operators as the primary audience, but not all. Liz, who is a farmer, and like other members has strong opinions on this issue, identifies the audience as “Women who self-identify as ‘directly involved in agricultural enterprises,’ and women who want to become actively involved in farming of some kind.” Angela, who is not a farmer, nevertheless also articulates a strong position on this issue.

The primary audience should be farmers, because what is the point of ag educators or ag researchers without farmers? Farmers ARE agriculture and should be the primary focus for a women in agriculture group.

Emmy, an apprentice farmer, who looks to WAgN as a source of mentors echoes

Angela’s opinion about the role of agricultural academics.

I would like to see some more full time women farmers. It's disheartening to want to be a farmer and not see any examples of people doing it as a full time job. I do think having other ag related people (academic, hobbyists, nursery business, extension....) is very valuable too. It should be all inclusive. But I think the dire need is in serving farmers- without them we wouldn't need agricultural academics.

While the majority identify women farmers as the primary audience, a number of steering committee members also identify secondary audiences, such as “women ag professionals, women interested in supporting agriculture” (Marta), and “women who hold positions of responsibility in education, service providing, ag businesses or other entities germane to the participation of women in agriculture” (Liz). Other members also name other actors more explicitly, for their role in women farmers’ lives.

Secondary constituencies include a variety of groups that have both a direct and ancillary connection to this primary group: Bankers/lenders;

Equipment sales/maintenance companies; Government regulators; Educators; Wholesale/retail markets; and Individual consumers (Joy)

Angela identifies a similar secondary audience, but stresses that these actors would have a role in learning about the contribution of women farmers.

The secondary audience would be ag educators, ag researchers; these players are essential to the proper knowledge base. They have an awful lot to teach and an awful lot to learn from farmers and each other.

While the former steering committee members articulate the audience as farmers first and others second, another strongly and widely held opinion is that “it should be all inclusive” (Emmy). Linda, in a strategy similar to our initial mission statement, identifies as wide a membership as possible.

The population we should serve is females involved in agriculture. This will be farmers/producers (livestock, food, and fiber), farm managers, agri-business owners/employees, ag educators, and hobby farmers. I wouldn't want to exclude any female that has some tie to or involvement with agriculture. Start with a large population with varying interests. As time goes by, member numbers will tailor to the activities and programs presented and perceived mission.

There are both a wide diversity of potential constituents that WAgN steering committees would like to serve, but there is also a diversity of priorities for how and when they should be served.

While not mentioned by the steering committee as a potential audience explicitly, a number of members and non-members of WAgN have articulated a concern about excluding men from the organization. In evaluation comments on the Women in Agriculture conference, a number of women said that excluding men was the thing they liked least about the conference. One woman wrote “Separating from the men (for the most part) made me sad they didn't hear these wonderful speakers.” Another wrote:

This is an important workshop for men to go to too—so they learn the softer more communal way of farming. Is there a way of inviting more

men without having them dominate the discussion? Maybe advertise “women in ag workshop—men invited too.”

The suggestion to invite men has been made by a number of people working in organizations providing support for WAgN, and we were encouraged to advertise our activities with a “men welcome” caveat. This is truly ironic given that other activities supported by these same organizations regularly support programs that do not attempt to represent women at all. Steering committee members agree that both men and women can provide the kind of support that women need, and in fact the sooner they provide the right kind of support, the sooner things might improve for women in agriculture. As Mary Peabody stated at the planning retreat, “If a man is attending a Women in Agriculture Network activity then he is already half way to salvation!”

The struggles over identity and inclusivity discussed here reflect a broader struggle in the women’s movement over identity politics within women’s groups. Identity politics tend to divide women along the lines of membership in racial, class or sexual identities. Within the community of women in agriculture, women identify themselves as “farm women,” “farm wives,” “farm partners,” “women farmers,” and so on. As illustrated above in the discussion on women farm organizations, identity politics divides women who identify primarily as farmers from women who identify primarily as wives. While WAgN seeks to serve the widest constituency possible, the concern of many members is to serve the least well represented group, which they identify as women farmers. Other members identify farm wives as underserved and invisible, and who they feel also need to be recognized and supported, and should not be tacitly or overtly excluded.

While this issue is largely unresolved, and the debate continues among the steering committee members, the strategy of defining the membership as widely as possible has both costs and benefits. While the costs may be associated with having too vague a mission, in which no one is really represented, the benefit might be women can identify themselves wherever they like within this representation. In addition, the reality of many women's lives is that they occupy multiple subject positions at particular places and times in their lives and even throughout their days. This is illustrated well by the membership of the steering committee, which is composed of women who are farmers and non-farmers, professionals, researchers and educators, single women, partners and wives. All steering committee members occupy one or more of these subject positions at all times, and perhaps identifying a single constituency is not a productive exercise. Maybe understanding and emphasizing the truly hybrid identities of women in agriculture can overcome the struggles over identity that muddy the WAgN waters.

Women are generally seen as an underserved population in all kinds of agriculture, especially so in conventional agricultural communities, but also in the sustainable agriculture community. WAgN is an organization that seeks to rectify this marginalization by providing the support and resources that agricultural organizations are not providing from them. Equally important as "what" WAgN provides, is how it provides these services. Thus, the network provides a material structure that is fluid and accessible to most and provides information and educational resources. The network structure also reflects the emphasis on relationship that many WAgN members articulate. Relationships that emphasize shared leadership, multi-directional learning and cooperation are at the heart of WAgN's ontological framework. Despite the open and

sharing environment of WAgN, differences exist within the organization, and divide the steering committee on the issue of who WAgN should serve. Hybridity is an aspect of a network ontology that can inform the strategies of WAgN leadership, as women occupy more than one subject position at one time, and an organization that reflects their diversity is necessarily hybrid.

The agency of women involved with WAgN is felt throughout community, as WAgN is recognized as an important and viable organization. However, WAgN is both supported and not supported at different nodes in the network. For instance, while Cooperative Extension has articulated the importance of supporting WAgN, few resources have been committed by the university.¹⁷ Other organizations have provided resources at crucial times, but at other times have objected to the exclusion of men. Questions of who is to be the recipient of the empowerment and networking opportunities through WAgN remain. As of this time, membership is largely self-selecting, so in a sense, WAgN provides social justice for those who take the opportunity.

Those who control the discourse are primarily the steering committee members, and those who we appeal to for funding. An important constituency not included in this discourse is female farm workers, who are primarily migrant Mexican workers in Pennsylvania. Not only is this group overlooked by the majority of the steering committee because they are not visible as part of the small-scale organic farm landscape, they are also not considered “farmers” by the various agencies funding programs for women in agriculture. This again reflects how the political debate around who qualifies as a woman farmer opens along the same fault lines as traditional farm organizations.

Farm wives are not seen as legitimate farmers, and as such are not seen as underrepresented.

IV. Summary

This debate recalls the political conflicts articulated by second wave feminists, who argued that building movements based on shared identities are not the way to build emancipatory frameworks for women. The movements that emphasize a particular identity, lesbian or black women, for instance, fracture the movement and reinscribe the differences that continue to justify the domination of particular groups of women. In the case of WAgN, a certain amount of sensitivity to identity politics drove some steering committee members to argue for a more open definition of women in agriculture. However, building a social movement that is not based in a politicized identity, has the potential for dulling the emancipatory edge of the political sword.

A crucial result of the research on WAgN has been the realization of how to most effectively engage with social change in agriculture. WAgN is a social change network devoted to changing the environment for women to farm in and to learn in. What has arisen from this research is the finding that women are disenfranchised from the traditional spaces of knowledge in agriculture, not because of the content of the education, but because of the context. Women cite the intimidating, male dominated and rigid atmosphere of much of traditional agricultural training, as reasons they do not participate in this training. They want and need to learn about all aspects of agriculture, but they want to learn about it in a hands-on learning environment that is safe and that is envisioned as reciprocal and cooperative for the group of women who call it into being. WAgN, with its overt emphasis on shared learning, safe learning environments and

empowerment, reflects the needs and consequently the agency of those who participate in the discourse.

Chapter 7:

Analysis III

Farm Based Education and Environmental Justice

“Farm field days are important, because if we’re not able to share lessons it doesn’t mean much to have learned them”~ Mark, organic farmer

Many farmers, beginning farmers, transitioning farmers and “wanna-be” farmers are interested in various aspects of sustainable agriculture, but lack practical information or skills to make it work with their own operation. The Pennsylvania Association for Sustainable Agriculture (PASA) promotes a Farm-Based Education (FBE) Program to communicate about and demonstrate sustainable and organic farming methods. The FBE Program provides funding, technical support, event coordination, and publicity to farmers and other cooperators who wish to demonstrate sustainable farming practices that have educational value for other farmers. This farmer-driven approach has been highly successful in implementing ecologically sound farming methods across the state.

The FBE program is premised on overturning the “expert model” of agricultural education, and stresses farmer-to-farmer learning and interaction. In this way the FBE Program functions as a knowledge exchange network that connects farmers to each other. The network facilitates farmer agency by providing the venues for education, but the process is inherently political, as sponsors are involved in most programs. The overarching emphasis is on environmentally sound farming techniques, but the way the relationship between the farmer and the environment is interpreted and communicated is highly influenced by the sponsor of the field day. While it may be taken for granted who or what “environmental justice” is for, analysis of the FBE network illustrates the diverse

audience for environmentally sound farming practices, and the varying degrees to which nature is granted agency in the discourse of environmental justice.

In this chapter I will provide some background and history on the FBE program in Pennsylvania, followed by the structure and organization of the “field days,” which are at the heart of the program. The data for this chapter were collected in the summer of 2003, during which I attended a variety of different kinds of field days across the state. I will provide an outline of the 2003 season, and describe a typology of field days that I observed. Lastly I will discuss the role of sponsors in the program and analyze who attends, who speaks and the way nature is discussed and conceptualized.

I. History and Purpose of the Farm Based Education Program

The Farm Based Education program arose out of a set of mandates from the attendees of the first annual PASA conference. In 1992, PASA as an organization did not exist, but several farmers and members of local farm and environmental organizations and university faculty developed a conference on sustainable agriculture. Several hundred people, mostly farmers, attended this conference much to the surprise of the organizers, and they were encouraged to found an organization to channel the energy and interest of the conference attendees. Carolyn Sachs, a founding member of PASA, said this about the groundswell of interest that launched PASA.

I would say that PASA really began in an effort to fill a void, I mean to fill a void that was coming from say the University and other places around the issue of organic and sustainable agriculture. And it came, it came out of...both academics and farmers feeling like they wanted more information, more connection with people to work and talk about this issue.

Tim Bowser, another founding member, and former Executive Director of PASA also observed frustration on the part of farmers with the lack of information coming from traditional sources of agricultural information and training.

You know farmer-to-farmer education was part and parcel of the outcry. The information that farmers wanted they couldn't get from Penn State, Soil Conservation Service. It rested with other farmers and it wasn't coming from anywhere else.

The organizers conducted a town meeting at the conference to assess the needs of the farmers who were present. They found that the conference attendees wanted 1) farmer-to-farmer education, 2) a quarterly newsletter and 3) an organization to do it all.

Originally, the funding for the educational programs came from the American Farmland Trust. The money this organization provided was used to do on-farm research and demonstrations of farming techniques. Over time this mission has changed to include farm tours, pasture walks and other holistic farm based education programs. The changes in the program have come about through a combination of farmer input, the involvement of sponsors, partnerships with already existing educational programs and changes in PASA's funding for farm-based education, but the purpose has remained the same. Tim Bowser summarizes the purpose of the field days:

They were supposed to provide information that was useful, not to tell people how to do it, but rather here's what working for me. It was supposed to get dialog going between farmers so they could learn from each other.

PASA provided the organizational infrastructure to coordinate with interested farmers, schedule the event, publicize the program and the rest was up to the farmers who host and attend the event.

A. Structure and Organization of the FBE

Currently the FBE Program is facilitated by a PASA staff member who contacts interested or potential farmers to organize a field day on their farm or other farm-based

operation, such as a cheese-making plant on the farm. Originally, the field days were loosely organized, as Kate Gatsky, field day organizer of the 2003 season describes:

I'd say PASA's been doing Farm Based Education events for probably about 10 years or so but they've sort of gotten more and more organized over the years. But they've come from a history of just farmer's casually getting together to talk about what they're doing and what has happened that season in terms of challenges or successes or whatever...It was real casual even, like bring your own lunch, kind of just come, or it was just a morning or an afternoon or maybe even an evening. Come and we'll chat a little bit kind of thing. It was really relaxed and loosely organized.

She also illustrates, in a similar statement to Tim Bowser above, PASA's role in facilitating these interactions.

What we wanted to do originally was kind of be one of the farmers so to speak and not be too obtrusive but help these people get together kind of thing. Because we were never an organization that spoke for these people. We were never an organization that would come and...say this is how you should be doing it. I don't think we were ever that.

While PASA has always tried to remain in the background, some other things have changed as PASA has grown.

Rather than casual get-togethers between farmers, now farmers are either recommended by a neighbor or friend, or they recommend themselves to PASA, and demonstrate their willingness to host an event, which is no small undertaking, particularly in the middle of the growing season. The field day organizers use a variety of ways to determine topics for each season, such as staying current on innovations in sustainable agriculture, and canvassing the membership, but typically the ideas come from the farmers themselves.

I think it's the farmers who always have the new ideas because they're the ones who are out there in the fields everyday and have the questions that want answers and we just kind of try and channel that into some sort of event (Kate).

A key part of the field day organization is to allow for farmers to meet each other and discuss their operations.

We like to do a 10 to 3 format ourselves because if they're coming together in the morning they don't know each other, it gives them some time over lunch to start to get to know each other and have some time to meet each other and network and talk to each other. Usually in the morning or well kind of throughout the day it's the farmer telling everybody else about what they're doing and so people don't have necessarily a really good chance to meet one another so lunch kind of provides that.

The emphasis on interaction between farmers has had the affect of changing the format of the field days over time. In the early years, 10-20 people would come together for a morning or afternoon to hear about a farm operation. The small size facilitated exchange quickly between farmers, but as PASA's reputation has grown, the number of people attending field days has gone up as well. Some events may have 150-200 people attending, and Kate Gatsky illustrates, the event becomes much more complex.

But when you have 150 or 200 people and you're like feeding them lunch and you have these people for the whole day it kind of creates a whole other layer of organization. We need porta-johns, we need tents, we need chairs, we need tables, we need all these kinds of things, so suddenly it becomes a little bit more than that. And then expenses go up...

The increase in expenses has also brought about other changes in the structure and organization which include registration fees and the involvement of sponsors.

B. Sponsors

PASA typically hosts or sponsors approximately 20 field days per season. To maintain this level of service to the membership while costs rise, involves charging registration fees and seeking out sponsors. Sponsorship of a field day typically takes one of three forms. For some field days, PASA will partner with an organization that is already hosting a farm-based education event. For these kinds of events, PASA only

publicizes the event to its membership for the partner organization. On the field day calendar, the partner organization is listed as a sponsor, as is PASA. For other events, an organization or government agency will have funding to facilitate a particular kind of educational event, such as a pasture walk, and both the partner organization and PASA will participate in planning and publicity. Another form of sponsorship is partnering with an organization, such as a college or university that has a program they wish to share with farmers. The partner organization will provide the planning and some publicity for the event, and PASA will provide the funding, as well as publicity. The remaining field days are typically only sponsored by PASA, and are usually only advertised to the PASA membership.

Partnering with sponsors in cooperative arrangements to provide farm-based education to farmers involves the creation and maintenance of a variety of different relationships. Some sponsors of field days have long-standing relationships and frequently partner with PASA. Other sponsors appear when they have funding or grants and they need to find an audience for their project. For PASA, the opportunity to partner with other organizations provides a number of benefits.

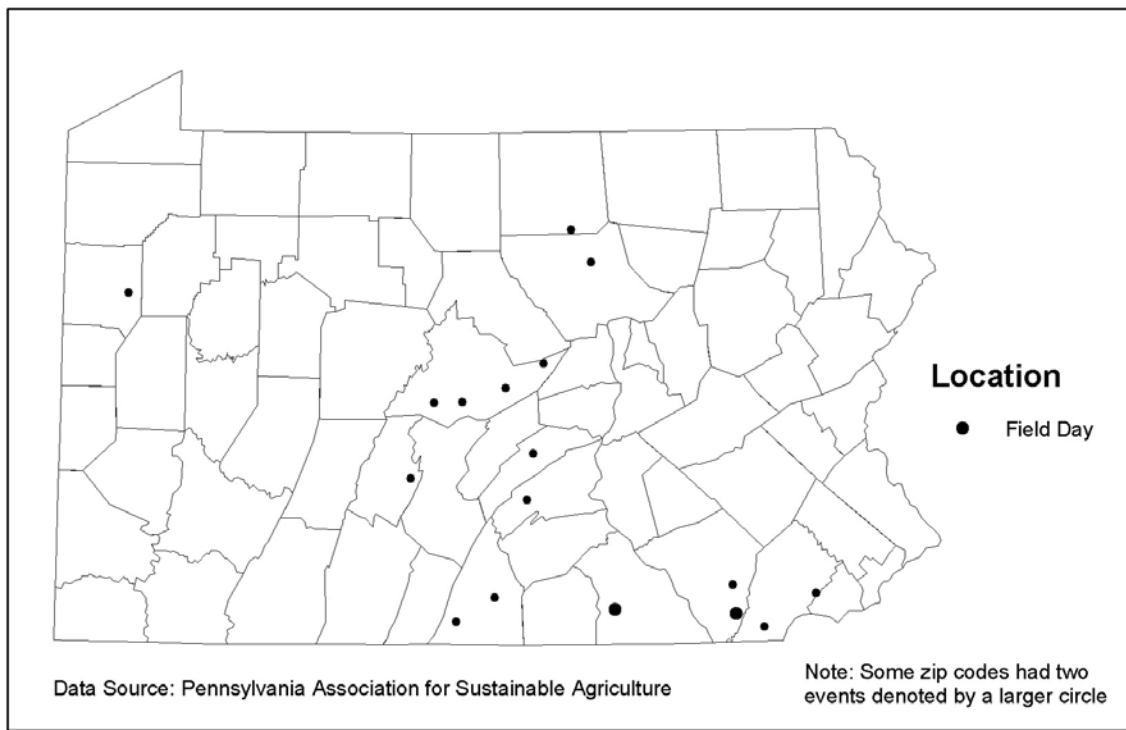
For PASA it's just, for us it's always been more giving our members and anybody else more opportunities to learn and certainly, a certain amount of publicity for the organization itself. And just getting our name out there is always a positive thing and just a chance for an audience too (Kate).

Sponsorship is an important aspect of facilitating the field days, and is a lasting change for the FBE program that influences the content and context of the program for each field day. I will discuss this in further detail in upcoming sections, but first I want to describe the 2003 Field Day Season.

C. 2003 Field Day Schedule

In 2003 PASA hosted or co-sponsored 21 field day events throughout the state of Pennsylvania (see Figure 10). The field days can be broken down into four general types: 1) farm tours, 2) pasture walks, 3) farm demonstrations, and 4) on-farm research. Some field days combined a farm tour with a demonstration, so dividing them neatly is not entirely possible. However, most field days were advertised or affiliated with a particular kind of event, so I will use that as a classification metric in cases of overlap. I will describe each of these in detail, starting with farm tours.

Figure 9: Location of Field Days



Seven of the farm field days can be classified as farm tours. These events tend to be a holistic approach to the farm, with the host(s) sharing everything about the operation from the greenhouses to the composting toilet in the house. These events were also characterized by a conversational tone, extensive question and answer periods, interaction

between attendees, and the size of the group was not large. The average attendance at these field days was 33. The size of the group facilitated a lot of the interaction between participants, and was generally viewed by participants as a positive part of the experience. Topics covered during these field days varied, but often focused on particularly successful aspects of the operation, such as the CSA membership, on-farm research trials, or innovative approaches to marketing. Most of these farms are primarily producing fruits and vegetables, or have mixed general operations. Most of the farm tours were sponsored only by the host farm and by PASA.

Seven of the farm field days can be classified as pasture walks. These field days were sponsored in large part by the Pennsylvania Association for Conservation Districts (PACD) and the Natural Resources Conversation Service (NRCS). PASA provided some publicity, but very little infrastructure or programming, as the NRCS provided the funding for these events. Attendance at these field days was also relatively low with an average attendance of 26 people. Pasture walks are an important part of learning about the practice of rotational grazing of livestock, typically dairy cows, but also can include hogs and beef cattle. Rotational grazing emphasizes intensive management of pastures, improving forage quality and protecting riparian zones through fencing. Traditionally, these events involve an introduction to the farm operation in a barn or shed, after which the group walks through the farmers' pastures and discusses his or her style of management. About half of the pasture walks were hosted by Amish farmers. Coordinators for the NRCS and other grazing experts usually provide some instruction and interpretation during the walk, but for the most part, learning is facilitated through

conversation between participants. The majority (5) was sponsored by PASA, the host farm, PACD and NRCS.

Five of the field day events have been classified as demonstrations of farming techniques. These events occur both on and off farm and cover various topics, including high tunnel design and construction, cheesemaking, and seed saving. These field days are classified as demonstrations because of the emphasis on using a particular piece of equipment or a farming technique that is best facilitated through example. The on-farm demonstrations did not include a holistic farm presentation or tour and any travel on the farm was largely focused on different aspects of the topic at hand. For example, participants visited the greenhouses on one farm, but for the purpose of seeing the results of plant breeding, not how the greenhouse was designed, built or used, which would have been a feature of a farm tour. Attendance at these events is also relatively low (29), but in one case, the day was broken up into concurrent workshops so that even smaller groups could watch and learn together. Penn State sponsored the high tunnel workshops, and Public Seed Initiative (a collaborative project hosted by Cornell University) sponsored the seed saving workshops.

Two of the field days can be described as on-farm research demonstrations. Both of these events were sponsored by the NorthEast Organic Network (NEON) headquartered at Cornell University in New York. NEON is funded by the United States Department of Agriculture to conduct research and education programs on organic agriculture in the North East United States. As part of its program NEON identified 11 “focal farms” which are used as case studies for the management systems of successful organic farms. Two of these focal farms in Pennsylvania, Spiral Path and Beech Grove,

agreed to open their farms to the public for a combined day of farm tour with presentation of the results of NEON's research. These two farms are large, successful and hugely popular with PASA members, and average attendance was 137. NEON presented the results of their research on crop rotations, pest management and farm budgeting, while the host farmers presented similar material based on their own experiences. I attended "An Organic Success Story: Spiral Path Farm Field Day" and "Beech Grove Farm Field Day." These field days were sponsored by NEON, PASA and the host farm.

In the 2003 Field Day Season, I attended two of each of the different kinds of field days. Data collected at these field days include: video recordings of the event, field notes, informal interviews, attendance lists and evaluations of the field days conducted by PASA. The following is an analysis of attendance, interaction and sponsorship, as well as a discussion of how the terms of the relationship between farmers and nature was articulated by the speakers at each kind of event. Environmental justice is a theme that permeates all of the field day events, but it is a theme that is constantly reinterpreted depending upon the speaker, the sponsor, the subject and the audience.

II. Knowledge Exchange Networks and Discourses of Nature

The following discussion is a summary of the field day events that I attended, grouped by the typology outlined above. I provide an analysis based on who speaks from a position of authority at each field day, the details of sponsorship, what sort of knowledge is exchanged between attendees, and general information about who attends the field day. The majority of attendees is usually farmers, but in some cases, other groups are present in larger numbers as well, as described by Kate Gatsky:

[I]t just depends on the event too because some events are really technical, very specific events like the High Tunnel event. That was probably 70 or 80%

farmers. Whereas an event maybe like at Friends Farm Field Day which is a farm tour with the element of timber-framing so you get maybe 30 to 50% farmers or something like that. So it definitely depends on the event. But then there's people who are just working at home like homemakers or students and people in academics in general and other agencies and organizations. Sometimes when, say we partner with a couple conservation districts or natural resources conservation services, those people, they often have their family or co-workers that come along so it sometimes can end up being like 60% people from agencies or other organizations.

While some specific topic or technical information is at the focus of the event, the conversations about farm management and agriculture reveal some underlying themes about nature-society relationships. There are two general discourses detectable in the conversations at field days that emphasize either partnership with the environment or intensive management of resources. The record high rainfall during the growing seasons of 2003 was usually a topic of conversation at most field days, and many of the conversations around nature-culture relations revolved around this topic. I begin this section with a discussion of the farm tours field days.

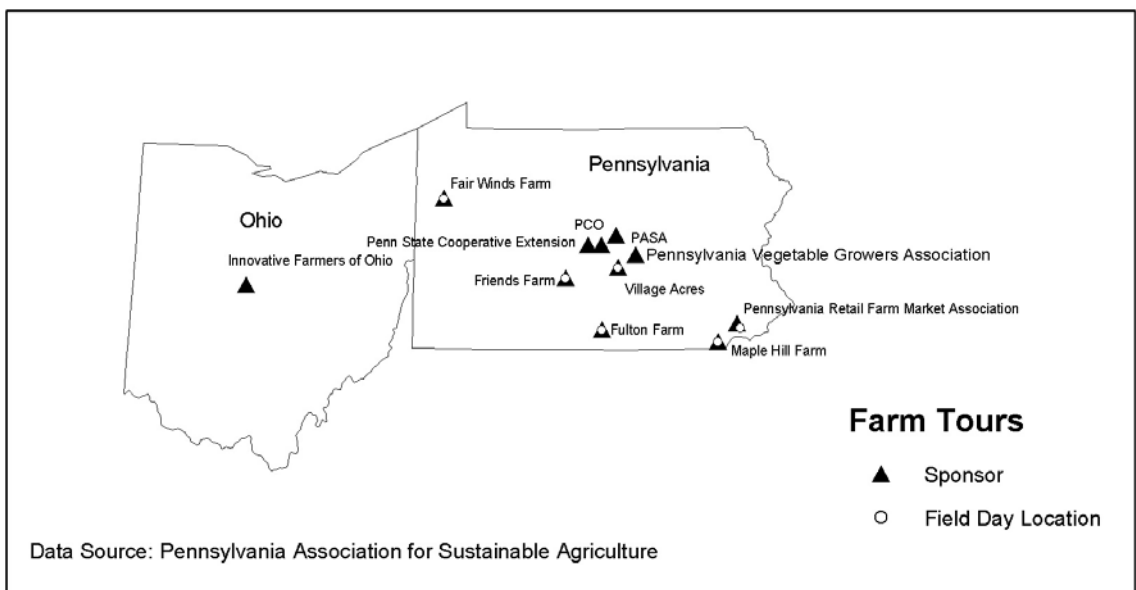
A. Farm Tours

The two field days I attended that I have classified as farm tours are “Friends Farm Field Day” and “Late Harvest Planting at Village Acres Farm.” Both field days have a specific topic that was explored in depth, but the event also included a tour of the farm and general discussions about operations and management. The topic advertised for the field day at Friends Farm was timber framing,¹⁸ and the topic for Village Acres was the winter CSA share they offer to their members. At both events, the owners/operators of the farms introduced the farm and shared their history at this particular site. In one case this was a husband and wife couple, and in another it was a father and daughter who spoke. After this introduction to the farm, attendees introduced themselves. Other people

also spoke about specific topics at both field days. In one case it was the men who were building a barn using timber-framing techniques, and in another it was a researcher from the University who spoke about his research on the farm. At Village Acres a farm manager and an intern (both male) also spoke about their involvement in particular projects on the farm.

Sponsorship of the farm tours is typically only the host farm and PASA. Pennsylvania Certified Organic (PCO) also sponsored the field day at Village Acres, because of the involvement of the farm in the Tuscarora Organic Growers, but it was in name only, as PCO provided no financial or programming content. In most cases, the farmers volunteer themselves to PASA for farm tours, and provide all the programming content, and outside sponsors are typically not necessary. Tents, lunch, port-a-johns, etc, if needed are usually provided by PASA, but in most cases, the farmers themselves provide facilities and PASA arranges for a lunch-time meal if the field day falls in the middle of the day.

Figure 10: Sponsors and Locations of Farm Tours



As mentioned above, the kinds of knowledge exchanged during field days include many topics germane to the functioning of the farm showcased in the tour. For the two field days discussed here, this includes the following topics: the history of the farm, CSA membership, community involvement in the farm, plant propagation and harvest, fertilization and irrigation, grazing of animals and markets. Both farms are CSAs, and as such have needs and interests in common around this subject in particular. Village Acres provided additional information about offering winter shares to CSA members and some on-farm research trials involving fungal diseases in tomatoes. The major topic at Friends Farm in addition to the farm discussion was the timber frame techniques builders were using to raise a barn.

Attendees at both these field days were primarily farmers, but included some other groups as well. Thirteen men and 10 women attended the Friends Farm field day. There were a number of attendees at this field day who identified themselves as “market gardeners” or “urban gardeners” rather than farmers, because they were not gardening “on the scale of a farm.” Two educators from a Pennsylvania college with a program in sustainable agriculture were also present, as well as interns from local farms.

A similar number attended the Village Acres field day (27), with 10 men and 17 women attending. At this field day, nearly all (24) of attendees identified themselves as farmers, but a large subset (13) of this group was farm apprentices. Village Acres employed five apprentices in the 2003 season, and interns from farms related to Village Acres through the TOG network also attended the field day. Village Acres also presented results of an on-farm research trial, and two researchers from the University attended the field day to obtain information about the results.

Generally the exchange of knowledge flowed easily between all attendees at both field days. Both men and women spoke with authority and asked questions. The University researcher who spoke at Village Acres, took on the role of the “expert,” but shared this role with a farm intern who had helped him with the experiment. The research was practical and farm-based, and particularly relevant to the growing conditions of that season, and as such, attendees engaged with the research and discussed the results at length. The focus of other discussions was on farming practices and community involvement in the farm. The community was referred to as neighbors, customers and fellow farmers, and speakers at both farms stressed the importance of building a base of support with these groups.

The discourse of nature-culture relationships common to both these field days was one of cooperation. In spite of the record high rainfall, farmers on these farms stressed working with the constraints their land offered them through partnership with both growing conditions and plants and animals. Both saw nature as a constraining and an enabling force, and as such there is a need to respect and work with it. In a discussion about the on-farm experiment using various applications, including copper¹⁹ on fungal diseases with tomatoes, a farm owner/operator from Village Acres, said the following:

From the wagon if you look out through these rows, these tomatoes here were treated with a spray program of copper. But you can see that out on the rise, the defoliation is much less than at this end. So, in addition to copper, another factor is soil drainage. Proper growing conditions, is probably more significant than spray programs. Another factor is choosing a plant that is resistant to disease.

This statement reflects an ethic of cooperation that is grown from experience and working with the land and the plants themselves, rather than an ethic of domination that would stress spraying and varieties that are vulnerable to disease. In an earlier part of the

tour this same farmer, in a conversation about the blueberry varieties, said “the Spartan variety doesn’t like our farm. They keep dying.” Despite his preference for that particular variety taste-wise, he realizes that there is no point in attempting to grow a variety that does not “like” the farm. Part of the reason for this “dislike” is the poor drainage in some fields. The owner/operators of this farm say they “constantly pray for drought. We do our best in drought years.” Clearly, this year was a frustrating one for them, but rather than draining their fields or amending the soil with gravel or other outside material to improve drainage, they plant crops and varieties that like (or do not dislike) poorly drained soils in those particular fields.

Friends Farm has the opposite problem of not having enough water on the farm, and well-drained soils, so that water usually has to be trucked in from a nearby source. In a year such as this, irrigation was virtually unnecessary, but rather than implementing a system of regular irrigation, these farmers irrigate “only when it hasn’t rained for a few days.” Their farm is on a small enough scale that they walk the entire farm each week and personally observe each of the small details of what the farm “needs” in terms of irrigation and fertility. A similar ethic was discussed with regard to organic certification. They “are responsible to their customers,” and as such do not feel the need to be responsible to a certifying agency. They have close enough personal relationships with their small number of CSA customers to have trust built in as business practice. They cooperate in a similar way with the land and organisms on their farm as well. In a discussion about pest control in the greenhouse, a farmer described the use of praying mantis to control aphids.

The bug control thing that we do in here, everyone says we should use sticky cards and all that and I believe I should do that, but I never got around to

doing it. So, I collect praying mantis cases from all over the farm. Well yeah, you see. These praying mantis stayed in here last summer...They really do a lot of work on the aphids for us....It's been about 7 years we've been bringing praying mantis into the greenhouse....It really helps a lot.

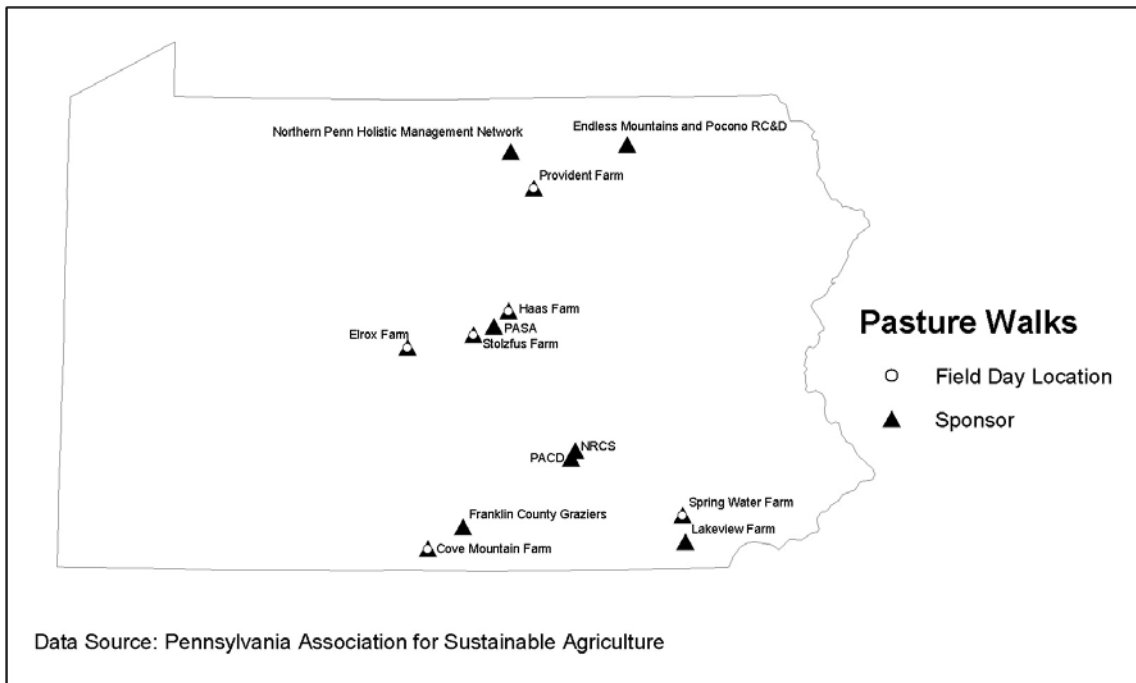
For these farmers, aphids are the constraining aspect of the natural environment, but praying mantis, their natural predator, are the enabling aspect, as they provide built-in pest-control. They allow the farmers to use what is available on the farm for very little labor and no purchased inputs. These kinds of cooperation are employed for both environmental and economic reasons, but are clear examples of nature-culture relations that stress cooperation over domination.

B. Pasture Walks

Of the field days I attended, I have classified two as “pasture walks.” They were titled, “Haas Farm Pasture Walk” and “Stolfus Farm Pasture Walk.” These are farms that are generally well known in both the sustainable and conventional farming community as exemplary for their conservation practices concerning grazing of livestock. Both field days were intended to explore some aspect of rotational grazing, but each had a specific topic to be explored in detail. For one it was the installation of high traffic feeding areas and for the other it was pest management and herd health in a grazing system. At both events representatives of the Centre County Conservation District, NRCS and Penn State Cooperative Extension (men and women) introduced the topic, the farm and the purpose of holding the pasture walks. The owner/operators of the farms then discussed their farm and grazing practices for a short time in a shed or barn, and then continued the discussion on an hour-long hike of the farm. For both field days this was men; partners, wives and daughters, if present, were largely invisible. Introductions of the attendees were not held at either pasture walk.

Sponsorship of both pasture walks comes from PASA, the host farm, NRCS and the Pennsylvania Association of Conservation Districts. The conservation districts are committed to conserving natural resources, and particularly water quality. The grazing of livestock improves water quality by decreasing the amount of manure that is produced in confinement systems. This is accomplished through both method and scale, as most grazing herds are much smaller than confined herds. The purpose of holding the field days was to develop a farmer-based grazing network in the Centre County region. The field days were a way to gauge interest and identify potential leaders within the grazing community. Building a community of farmer experts can facilitate the education of farmers and increase the usage of such practices. The sponsoring agencies and the farmers provided all of the programming content of the field day.

Figure 11: Sponsors and Locations of Pasture Walks



The kinds of knowledge exchanged at a typical pasture walk can be specific to a field day, such as pest management or feeding systems, but generally the knowledge most often exchanged is germane to the functioning of a grazing system. When to rotate pastures, kinds of fencing, watering systems, livestock breeds best suited to grazing and forage kind and quality were all discussed formally and informally at both field days. At the Stolfus farm an expert from the USDA formally spoke about managing herd health, but this was not a topic of conversation among graziers as we walked about the pastures. Of more concern to graziers at the Stolfus farm was the care of pastured animals in a hurricane, as Isabel was imminent. Likewise, at the Haas Farm “best management practices”²⁰ employed on the farm were specifically addressed at the beginning of the day, but this was not a topic of conversation between graziers as such during the day. There was discussion of BMP as good farming practices that were economically efficient and practical, rather than as a method of conserving natural resources.

Attendance at both field days was a mix of agency people and farmers. Of the 29 attendees at the Stolfus Farm pasture walk, 11 were farmers (includes host farmers) and the remainder were from the sponsoring organizations. At the Haas farm a larger proportion of the 43 attendees were farmers (approximately half) and the remainder was agency people and PASA staff. The pasture walk attendees were older than at the farm tours, several had brought children with them and no farm apprentices were present. At both pasture walks a number of the farmers were conventional farmers interested in grazing systems and were recruited to the field day by the conservation districts. Approximately half of registered participants at both pasture walks were non-members. Between one-quarter and one-third of the attendees at both pasture walks were women.

Interaction at these field days was primarily between the farmer(s) and the agency experts, but during lunches and in parts of the hikes around the farm, informal conversations developed between attendees.

The discourses of nature-culture relationships that emerged in the pasture walks were very different from the discourses of the farm tours. The overriding emphasis was on management of natural resources and farm land. This does not necessarily imply a dominating framework, but nature was not articulated as an equal partner in the pasture systems. One farmer said “Everything you need for grazing is already here, you just have to manage it.” While one farm was pasturing Black Angus beef cattle “for show, not for dough,” the other farm, an Amish farm, pastured a small dairy herd, which provided the household income. These farms had very different motivations for practicing rotational grazing, but both articulated an ethic of stewardship around caring for the animals.

The advantages to rotational grazing, versus confinement systems, come in both saving labor and the costs from purchased inputs. This lends itself to a much less regulated system of management, as cattle are simply moved from pasture to pasture every few days, and what they eat is largely up to them. Management practices associated with systems discussed at these field days, however, did stress soil testing, nutrient management in forages and testing of milk for sugar content. The Amish farmers expressed frustration at not seeing a high sugar content in their milk, and guessed that this was a result of the cattle not choosing the most nutritious forage. The response from the grazing experts at this field day was to have the pasture tested and to apply soil amendments to rectify nutritional problems in the forage.

The challenges with rotational grazing were acknowledged by the agency people, but their primary solution was to take a scientific and management approach to the forage available to the cows. This suggests a tighter control on the part of the farmer over the production process. While what the cattle choose to eat cannot be controlled, the quality of what they eat can be controlled through management. Thus, while rotational grazing is seen to be a much more “natural” system of raising livestock, in many ways the production of a quality product (whether meat or milk) is highly regulated and managed through scientific practices and the application of outside inputs. This perspective, however, was largely promoted by the agency people providing feedback and information to the farmers.

On both farms the farmers took pride in their intelligent use of what was already available to them in terms of natural resources, and expressed a willingness to work with what was already there. One farmer recognized that the slopes on his farm were too steep for cultivation, but were gentle enough for large animals to graze without damaging the soils. He also acknowledged that he had never seeded his pastures, and the forage most nutritious to the cattle continued to flourish with his management. The Amish farmers also took pride in their use of rotating their work horses with the dairy cows to eliminate parasites. The horses would consume but not be affected by parasites that would infest the cattle, and vice versa. By using this natural rotation, the farmers were disrupting the pest cycle in both their horses and cows.

The discourses articulated by these farmers in many ways parallel the partnership discourses of the farm tours, but also include elements of intervention and a willingness to add outside amendments to enhance management or solve problems. The influence of

the NRCS and Conservation Districts, with their emphasis on scientific management cannot be overlooked in these field days. The conservation agencies have a vested interest in having farmers prevent rather than produce natural resource problems, and as such are willing to work hard with farmers to produce favorable conservation conditions. However, their training is heavily imbued with scientific management practices, and as such these discourses influence the practices of rotational graziers to a greater extent than farmers who have no contact with these agencies.

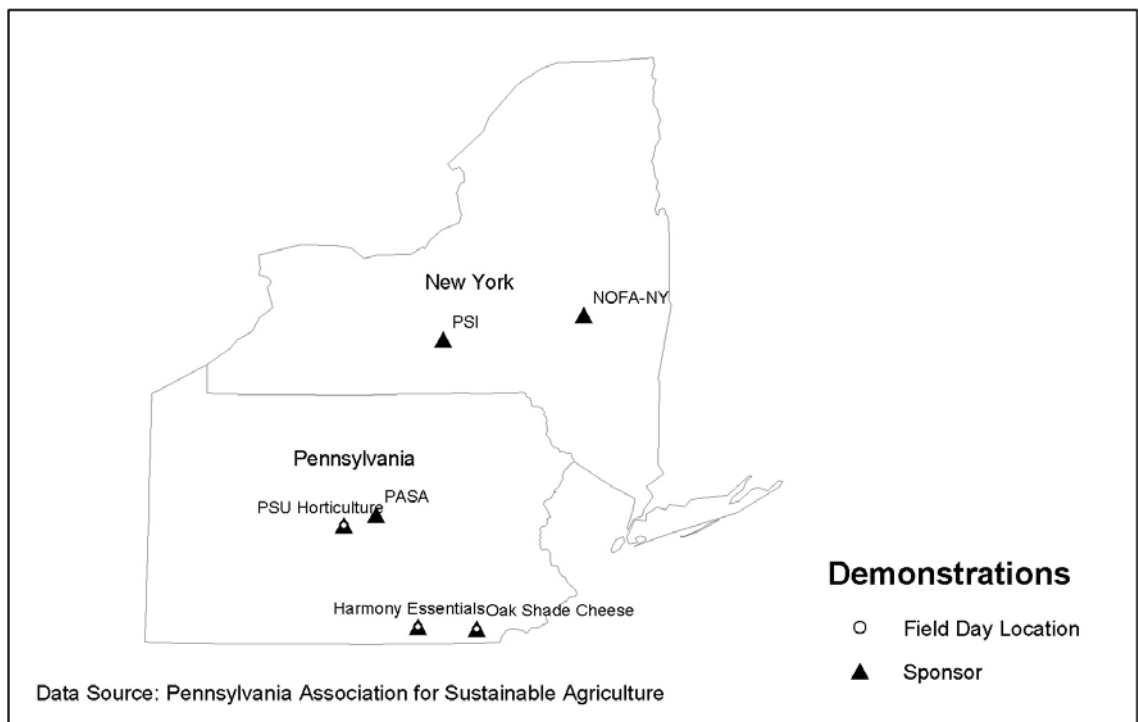
C. Demonstrations

I attended two field days that I have classified as demonstrations. These field days were titled: “On-Farm Crop Improvement through Seed Saving and Selection” and “High Tunnel Field Day-Fall Event.” One field day was on a PASA member farm and the other took place at the Agricultural Research Lands owned by the Pennsylvania State University (PSU). Both field days were devoted solely to different aspects of the advertised topics. At the seed saving field day, the representatives of the co-sponsor Public Seed Initiative (both male) and the farm owner/operator spoke (male), and at the High Tunnel field day, PSU faculty and staff researchers (4 male, 2 female), industry people (1 male, 1 female) and 1 farmer (male) spoke. Women related to the farmers (wives and daughters) were present only at the seed saving event, but did not speak with authority about the advertised subject. At the high tunnel event, one “expert” also spoke repeatedly about the “farmer he,” despite the presence of several women in the audience.

Sponsorship of demonstrations varies because the only common theme between them is the demonstration of a particular technique or product. In the case of the seed saving field day, the event was sponsored by PASA; the host farm; Northeast Organic

Farming Association; New York Chapter (NOFA-NY); and the Public Seed Initiative, (PSI), which is a collaborative project between Cornell University and the USDA. In the case of the high tunnel field day, the event was sponsored by PASA and the Department of Horticulture at PSU. There were two instances of high tunnel field days during the 2003 season, and the other demonstration during the 2003 season was sponsored only by PASA and the host farm. The high tunnel events were the only field days to be held at a site not privately owned by a farm owner/operator. This event was also highly commercialized, as sellers of high tunnels and high tunnel equipment were present and spoke about their products.

Figure 12: Sponsors and Locations for Demonstrations



The kinds of knowledge exchanged at the demonstration field days were specific to the advertised topics. At the high tunnel event, a local farmer spoke directly to how he used his high tunnels for flower and vegetable production. Other people, typically

“experts” (university researchers and industry people) spoke about different aspects of using high tunnels, such as irrigation, layering beds, growing cut flowers, disease control and building a high tunnel. At the seed saving field day, “experts” from Public Seed Initiative spoke about “regionally developed varieties,” plant genetics, hybridization, plant breeding and pollination techniques. The host farmer demonstrated breeding methods in a tour of his greenhouses. The day included a lecture about genetics in the morning with the whole group and then later in the day, small groups attended pollination and breeding methods demonstrations.

At both field days, the majority of attendees were small-scale growers who were interested in trying a new farming practice and wanted more information. At the high tunnel field day (36 attendees) there were conventional farmers in attendance who were interested in organics and government agency people interested in supporting sustainable agriculture. Also in attendance was a unique group of farmers from Serbia hosted by the USDA to learn about growing raspberries. At the seed saving field day (54 attendees), the audience was primarily sustainable agriculturalists. About one third (20) of the attendees at this field day were interns from local organic/sustainable farms. They were attending this field day as part of a series of field days organized by SAITA (Sustainable Agriculture Internship Training Alliance) to enhance apprentice farmer education. About one third (12 at the high tunnel event and 16 at the seed-saving event) of attendees at both field days were women. There were no introductions at the seed saving demonstration, but there were introductions at the high tunnel event.

The discourses around nature/culture relations at these field days were also very different from other kinds of field days. There are echoes of both a partner discourse and

a management discourse in both field days, and the topics themselves underscore the tension between partnering with natural systems and managing profitable, efficient and sustainable farm operations. High tunnels are primarily designed to extend the growing season, and/or cultivate varieties that are not so well adapted to northern climates. As such this illustrates the imperfect fit between what the market demands in Central Pennsylvania, and what the local climate/soil/weather conditions will permit a farmer to grow profitably. Likewise, the emphasis on plant breeding and seed saving is to develop varieties of plants that are “naturally” adapted through plant breeding to a Northern climate (or other set of criteria). These two approaches to production reveal mirror images of a central issue: the construction of “nature” in profitable sustainable agricultural systems.

The emphasis in the seed saving workshop was to teach farmers how to make existing plant varieties “fit into our systems.” By this, the speakers from the Public Seed Initiative mean to help farmers take commercially available seed that may be adapted to growing (because they are bred there) in places like New Mexico or northern Maine. Farmers at the workshop listed a number of things they would like to see in what they grow on their farms: winter hardiness, pest resistance, heat tolerance, flavor, nutrition, adaptation to soil type, aesthetics, and storage. The PSI researchers added “yield” to this list, which none of the farmers mentioned. This privileging of quality over quantity reflects a certain nature-culture discourse in itself, but the more crucial discourse is the emphasis is on understanding plant systems in a technical way to make plants “work for the farm.”

In an opposite approach to production, the high tunnel methods change the growing conditions available to a farmer on the farm. All speakers at the high tunnel day emphasized expanding the market options for consumers, through growing varieties unable to “naturally” grow in Pennsylvania, artificial irrigation systems, disease management and scientific experiments with plant varieties. The farmer, who introduced the field day, spoke about selling his greenhouse products at the farmer’s market. “People don’t just come for the food, they come for entertainment. They buy with their eyes and pay with their wallets.” He also mentioned that consumers do not believe that his greenhouse products are organically grown because they “look too nice too not be sprayed”. (He also mentioned that his high tunnels allow him to grow blue and white gladiolas in the fall, which are big sellers on football game weekends in State College!)

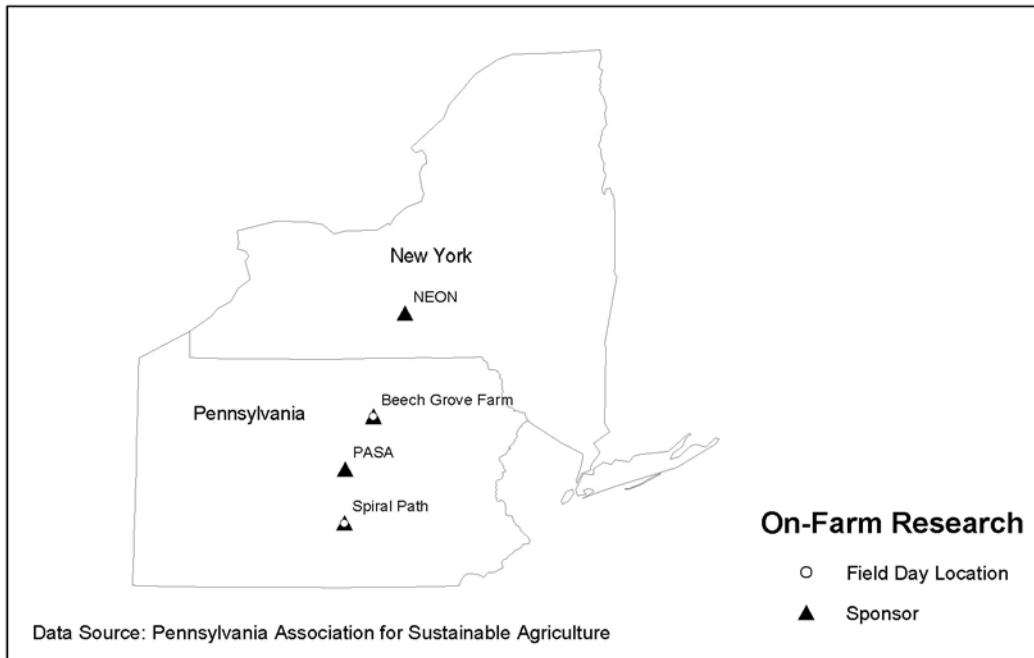
In many ways both plant breeding and the use of high tunnels allow farmers to grow farm products in a more environmentally sensitive way (despite the intensive use of plastics in the high tunnels). The optimal growing conditions in the high tunnels and breeding pest resistance, etc., into plants, require fewer inputs in the form of petrochemicals. These systems are exemplary of the co-production of nature-culture relations, because they involve developing plants and production systems on the farm in a dialectical relationship with the existing resources, and the market. Both approaches involved artificially changing natural systems, in one case changing the plant varieties; in the other case, changing the growing conditions. In both cases, innovations are market driven, as they are expected to expand the growing season and/or to expand the options (and quality of options regarding taste, nutrition, etc.) available to consumers.

D. On-Farm Research

I attended both of the on-farm research field days in the 2003 field day season. These events were titled “An Organic Success Story: Spiral Path Farm Field Day” and “Beech Grove Farm Field Day.” Both field days were sponsored by the Northeast Organic Network, as described above, and the material covered on both days included their research on the “focal farms,” as well as information provided by the farmers about their farm operation. In both cases, researchers from Cornell University spoke about their research projects (2-3 men, 1 woman), and the host farmers spoke about their farm. In one case, both male and female farm owner/operators spoke in the introduction, but the woman was largely absent for the majority of the field day. In the other case, the female farm operator was in the crowd, but only apparent to me because I knew who she was. At the Beech Grove Field Day another focal farm was represented by the male owner/operator and he spoke about his farm operation in a general way.

NEON, PASA and the host farm sponsored both of these field days. NEON provided the majority of programming with the host farmers discussing their farm operations. PASA provided publicity, event coordination and infrastructure. NEON also provided publicity through its networks and, at the Beech Grove field day a number of attendees came from New York state. As mentioned above, NEON chose these farms and nine others as case studies for in-depth research on organic farming systems. Research was conducted on these farms with the farmers, and was presented at these field days.

Figure 13: Sponsors and Locations of On-farm Research



While a general overview of each farm was given at each field day, the emphasis was on the research trials conducted on the farms. In the case of Spiral Path, the focus was on crop rotations and pest management. This included a tour of the tomato fields and greenhouses and a demonstration of a cultivation technique developed on the farm. At the Beech Grove field day the emphasis was on cover cropping and alternative tillage techniques. A presentation of farm budgeting was also given by a NEON researcher, but due to confidentiality reasons, much of the information was presented in the abstract. The primary interaction on the farm was between the farmers/NEON researchers and the audience in a lecture-style format. The purpose of the field days was to bring farmers together to learn and, in the introduction to Spiral Path, a NEON researcher said: “organic farmers have always done their own research. Organic agriculture is self-developing and there is a need to share information between farms.” Ironically, very little time aside from lunch was set aside for farmer-to-farmer interaction, and disappointment with this

aspect was communicated by several attendees to me personally, and in the evaluations of the field day. One woman said to me, “these kinds of presentations by researchers just tend to prove to farmers what they already know. I really learn the most when I talk to other farmers.”

Attendance at these field days was primarily farmers, but was more mixed than at other field days. Attendees included farmers, gardeners, customers, interns, researchers, and agency people. Attendance at Spiral Path was 108, and attendance at Beech Grove was 167. About one third of attendees at both were women. Although neither of these farms employ apprentices, large numbers of interns (approximately 30) were present at both field days, presumably because of the high profile and popularity of these farms and their embeddedness in other networks (TOG, SAITA, NOFA). Because of the large size of the groups, introductions were not done at either day, but a NEON researcher conducted an informal survey of the audience.

The discourses of nature-culture relationships in these field days reflect both the scientific approach of the Cornell researchers, and the scale and method of operation. There was a general discourse of “waging a war with nature,” and one researcher said “organic farmers have no big guns”, in reference to not being able to use chemicals. On these farms the emphasis was on encouraging beneficial insects and preventing harmful ones through crop rotations and cover cropping in both the fields and in the greenhouse. The scale and method of operation, however, also influenced these discourses. On one farm, over 60 acres were in organic cultivation, and on such a large farm intensive management is necessary to maintain the farm operation. On the other farm, only 6 acres were in cultivation, but all mechanical work was performed with horse power. This lack

of mechanization also requires intensive management because of the high cost of labor in terms of time.

The farms highlighted in these field days were dramatically different in a number of ways-including scale, labor, market, infrastructure-but the researchers working with these farms stressed the importance of pre-emptive strategies such as preventing pest buildup with resistant varieties, crop rotation, building healthy soil, changing planting dates, row covers, encouraging habitat for beneficial insects, isolation of crops and “spray interventions.” One farmer echoed this philosophy by saying, “the more weeds we have between rows, the more insects we have. When my guys (migrant labor crew) are planting and harvesting, I’m happy. If my guys are weeding, I’ve done something wrong.” He went on to say that, “using herbicides is old-fashioned: that was last century! With a little bit of common sense we can prevent weeds.”

This discourse of prevention and staying one step ahead of nature was consistently employed by the NEON researchers, but the farmers at the Beech Grove field day also practice this philosophy. They refer to themselves as “cover-crop farmers” because they have developed a system of production that includes growing cover crops along side and in the same field as their vegetable crops. This strategy has essentially removed all weed pressure from their fields, and as such they are able to experiment with alternative tillage techniques. They have removed the pressure from weeds by leaving no bare ground for weeds to find a home. They also use the labor of animals on their farm in the farming practices, including chickens who keep the slug population at bay.

Both farms and the NEON researchers encourage and employ a strategy of prevention, that ranges between a discourse of “war” with nature and an intimate

knowledge of natural systems in an effort to prevent the “harmful” aspects of natural systems from reducing the productivity of the farm. Nature is not necessarily seen as a partner or entity to be stewarded or controlled, it is an adversary to understand and control through systematic intensive management systems. The discourse of prevention and adversarial conflict was not couched in terms of violence or domination, but rather in terms of intelligent and creative systems that prevent the need to use chemicals and other less environmentally sensitive methods.

III. Summary

Access to and exchange of knowledge about farming practices is a crucial part of the process of achieving the environmental justice goals of the sustainable agriculture movement. The Farm Based Education Program promoted by PASA provides information both about farming practices, but also brings together farmers in the community so that they can learn from each other. In this way, the FBE program functions as an organized, but also self-perpetuating, network of farmers that provides information and educational resources. The network structure also reflects the emphasis on farmer-to-farmer education that many PASA member farmers need and want. The desire for farmer-to-farmer interaction arises out of the lack of information available to farmers about sustainable agriculture from traditional sources (land-grant universities, government agencies) and a rejection of the “expert” model of education, in which information only flows one way.

The FBE model allows for “knowledge” exchange to occur where information flows among farmers. As illustrated at a number of field days, information also flows between farmers and “experts” in both directions, and as such provides the context for farmers to

exercise agency in knowledge exchange processes. In addition, farmers are further empowered through the FBE network to continue the knowledge exchange process, either through networking with farmers at the field days or through the connections that are established by PASA with other agencies, such as NRCS or the USDA. This agency is mediated, however, by the presence of sponsors who dictate to some degree the programming content of the event and the kinds of information that are provided. In addition, the sponsors heavily influence the promotion of particular nature-culture relationships so important to the environmental justice goals of the sustainable agriculture social movement.

Several different discourses around nature/culture relations were evident in the field days and are especially interesting to examine in light of the sponsorship. Field days that were sponsored only by PASA tended to emphasize a partnership with nature, where the environment both enables and constrains choices, and farmers work within these choices. Other discourses emphasize the negative influence of nature on farmers choices and as such illustrated how farmers can respond to these constraints. One approach promoted by Conservation Agencies is to take a stewardship approach to natural resources, and nurture what already exists. Another approach, promoted by research institutions is to understand nature in a detailed and technical way and change the elements that are constraining, such as plant genetics or growing conditions. A final approach, promoted by NEON combines these approaches and stresses the importance of both technical understanding and intensive (pre-emptive) management of the environment.

Information about farming practices that is shared through the field days carries with it unspoken assumptions that are as important as the factual information that is exchanged

and that have implications for achieving environmental justice goals. While all of these approaches are geared towards environmentally sensitive practices, some approaches emphasize a more holistic farm management approach and practices that reflect the embeddedness and interconnectedness of nature and culture in the farm operation. Other approaches take a more atomistic and technical approach that reflects a nature-culture split in farm management epistemologies. This latter approach seems to be carrying a conventional agricultural model over into sustainable farming and does not seem to be advancing a different farming ontology, rather it is simply promoting farming systems with a different set of practices.

Chapter 8:

CONCLUSIONS

“Hybrid networking involves an important shift in tense from relational ‘being’ to relational becoming” ~Sarah Whatmore, 2003

This dissertation brings three diverse social and economic networks into one space of analysis under the major theme of how networks work to bring geographically dispersed people and institutions together into a virtual or imagined space. The goal of building these multi-scale, multi-purpose network communities is to transcend the frictions of distance and to enable actors to engage in social or economic processes from which they would otherwise be marginalized. In what follows I hope to illustrate how these networks work to accomplish their goals, as well as how they reproduce many of the injustices they set out to undermine. The analysis laid out here seeks to answer the questions of “justice for whom,” who exercises agency within the network, and what is the process that is developed in seeking this justice?

The chapter proceeds as follows: In the first section I will describe the “before” picture for those involved in seeking to build community and the “after” picture of what connections have been made for each network. This discussion will involve descriptions of actors and the kinds of connections made between them. Next, I will discuss how each network functions to give individual actors, institutions and/or inanimate objects agency through connections. Then, I will discuss how each individual network accomplishes (or does not accomplish) its goals within the context of theory laid out in chapter three. Finally, I conclude with suggestions for future research.

I. Tuscarora Organic Growers: Agency, Economy and Hybridity

The TOG network seeks to bring together rural producers with urban consumers in an effort to provide economic justice for farmers. Farmers in conventional agriculture typically do not see as much profit from their labor as the large agricultural corporations who control the commodity chains in the agricultural economy. TOG was formed to shorten the commodity chain and bring the profits of agricultural production closer to the farmer. This has also had the affect of strengthening the relationships and building networks of trust between producers and consumers.

Before the TOG network was established, farmers were marketing their produce individually to local and regional customers at relatively high levels of cost and inefficiency. Actors enrolled in the network were a handful of farmers and a small number of spatially dispersed consumers, and relationships between actors in the network were primarily economic in the form of wages with local and family labor and prices with consumers. A few organizations, PASA and PCO were involved on a discursive level to promote a particular ethic of consumption and farming practices. At the local scale, sales at farmers markets were symbolic, as well as economic, as they were not seen to be profitable, but important for establishing a consumer base and a relatively easy market to access. The owners of New Morning Farm were embedded in the urban community of Washington D.C. and were a key actor in the development of existing markets and the organization of TOG. See Figure 14.

After TOG was developed the number of enrolled actors grew substantially. The markets available to TOG increased in number and expanded into several sectors: retail, wholesale, restaurant, etc. These sectors mediate the relationships between farmers and

producers, as does the centralization of produce marketing at TOG headquarters. The commodity chain (or network) becomes lengthened in this process, and while the produce is still produced and marketed as “local” and “family grown,” the distance between producer and consumer has increased. However, a greater volume of sales and TOG as an intermediary increases the efficiency (marketing and distribution of produce) of production and the viability of small-scale organic farming, which is the stated goal of TOG.

There is a cascading effect, however, in the labor market from this increase in sales. When farmers expand production and increase the amount of land they farm, labor costs rise exponentially. Thus, to sustain the increased level of production, farmers must seek out lower wage sources of labor: in this case, migrant Mexican laborers and apprentices. The character of relationships between individuals and organizations remain essentially the same, and are primarily defined in economic terms. The spatial extent of the network changes, as the USDA becomes enrolled in the network through new regulations, and labor is attracted from locations throughout the U.S. and North America. See Figure 15.

These findings raise some important questions: First, who are the main beneficiaries of building the network community, or put another way, do particular actors have more control over the functioning of the network than others? Secondly, does the network allow TOG to change or subvert the relationships between producers and consumers that characterize agricultural production? As suggested in chapter five, the actors with the most agency in the network are still the producers themselves, and the

Figure 14: Produce Growers Markets Before TOG

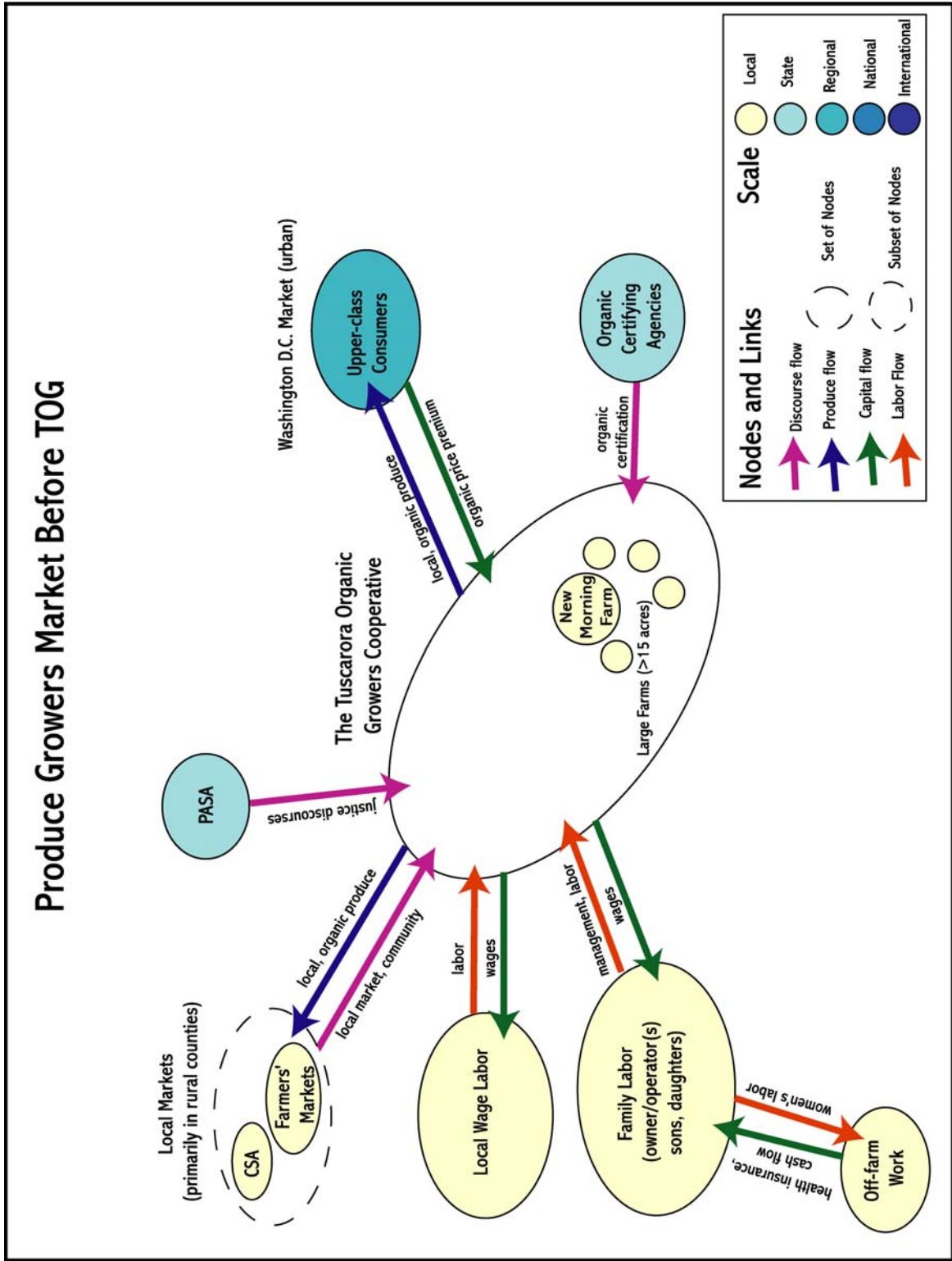
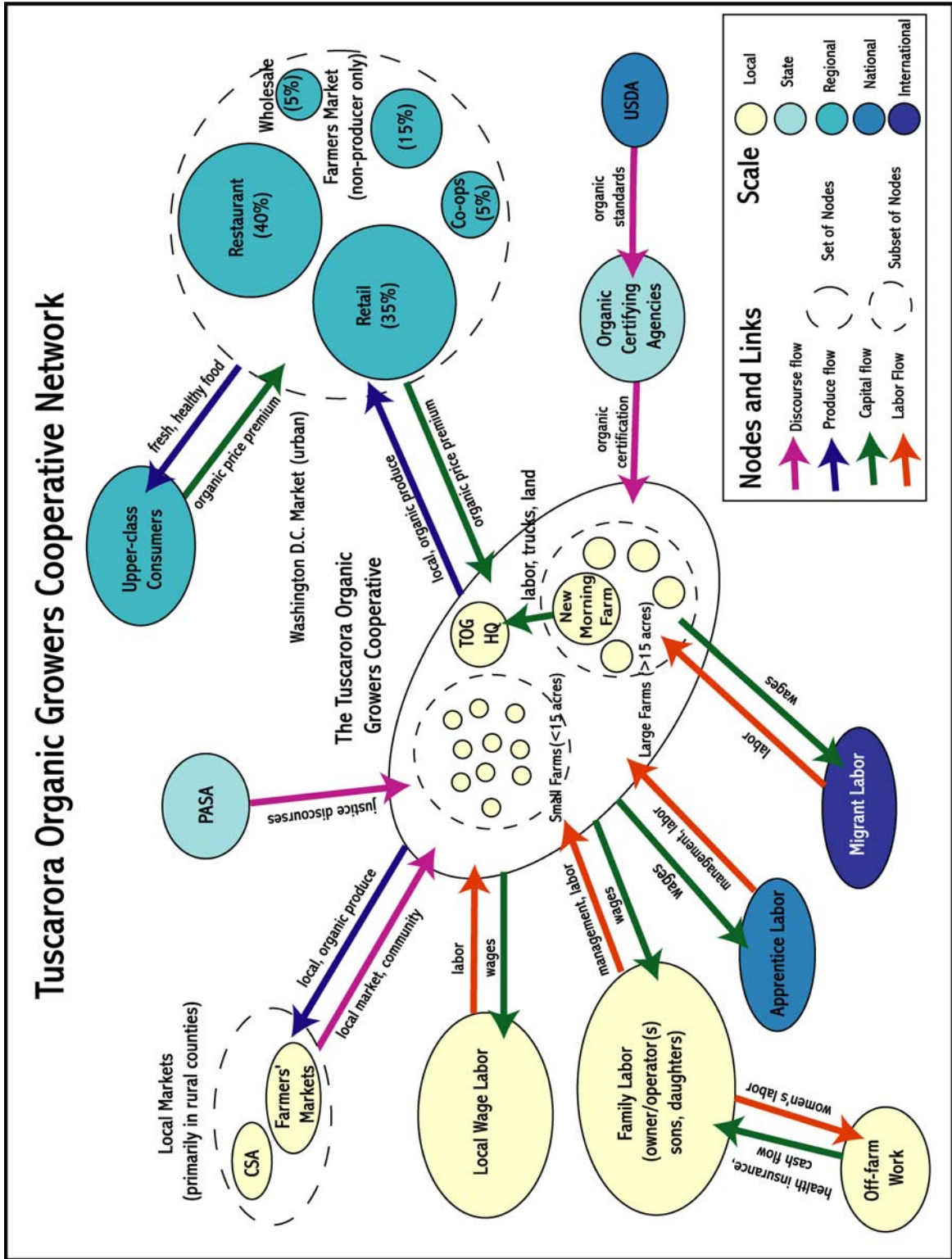


Figure 15: Tuscarora Organic Growers Cooperative Network



typically marginalized groups (laborers, women) in agriculture appear to be marginalized within this network as well. I suggest that the explanation for this is two-fold.

Organic production as a technical practice translates well to productivist methods. Organic agriculture is scope and scale neutral and can be practiced by large corporations or family farmers. There are no stipulations in organic certification about how much fossil fuel is consumed traveling from farm to plate, and there are no regulations about farm laborers or working conditions. Therefore, there is nothing about organic production that makes it necessarily different in a social context than conventional agriculture. It is simply the association and historical roots of organic production with an environmental and social movement with links to social justice that locates it under the rubric of sustainability. Without further incorporation into the sustainable agriculture social movement with explicit stipulations about social justice, organic production will go the way of conventional agriculture, with farms increasing in size to compete for a share of the market and increasingly cutting costs by lowering wages. Organic production has already shifted from primarily small-scale local (Guthman, 2004), to large-scale corporate production and is also shifting overseas to places in Africa where production costs are even lower (Hauser et al., 2004).

This trend relates to my second question about the character of economic relationships between TOG, farmers, workers and the upper-class consumer market it cultivates. As stated previously, not all TOG farmers are pursuing this trend, and not all are increasing in size with a motive for profit at the expense of workers, but rather they expand production to make the farm operation more sustainable. This is a reaction to the increasing saturation of the market with corporately produced organic food, and the

necessity to compete in larger circuits of capital. TOG farmers have created their own markets, but they are also embedded in larger scale forces of production and consumption, and to make their farm operation sustainable, it must be profitable. This highlights the hybrid nature of organic production, as being both inside and outside of mainstream and organic food supply chains.

This hybridity is increasingly difficult for small scale farmers, however, as the new USDA regulations have increased operating costs significantly. A few TOG farmers confessed to me that they were thinking about letting their certification go and to stop selling to TOG. They felt that the markets they had cultivated, based on trust and confidence in the quality of the product could be sustained without organic certification. The discourse then turns from an audit culture of “organic” certification to relational ethics based on trust. Also, consumer premiums are increasingly placed on “local” and “sustainable” as organic production is corporatized and globalized. TOG is at an auspicious moment in the history of organic production and attempts to straddle both sides of the divide by being a hybrid of both “local” and “organic.”

II. The Women’s Agricultural Network: Agency, Identity and Hybridity

WAgN was formed to mitigate the marginalization of women farmers from spaces of knowledge and power in agricultural production and politics. The sustainable agriculture social movement is committed to the triple-bottom-line of justice, but women are still (albeit to a lesser extent) marginalized from education and influence in more sustainable systems of production. Social justice in agriculture is often invoked in terms of food security, but there are a host of social ills associated with conventional

agriculture, and the traditional roles of women on farms are a source of concern for many activists.

The picture of women in agriculture previous to the development of WAgN illustrates that the relationships women in agriculture had with farm organizations was largely one of unmet needs. Relationships with organizations, agencies and associations intended to benefit farmers largely overlooked women, or recruited women members based on a particular identity disassociated with agricultural production. Those that did offer programs and support for women largely did so through the efforts of individuals. PASA, for instance offered a Women in Agriculture pre-conference and workshops through the commitments of conference committee volunteers. The graphic of women farmers before WAgN shows women farmers largely disconnected from farm organizations, including women's farm organizations, and potential connections, such as with Vermont and Maine WAgN are not illustrated because the mechanisms for connection did not exist. See Figure 16.

While some organizations or agencies may have been interested in devoting some resources to women's interests and needs, such as the USDA, Penn State or Rodale, the mechanisms for delivering those programs were not in place, which includes communication, contact people and knowledge about women's needs. WAgN has been able to call attention to these unmet needs, connect interested people and organizations and recruit members. This has been most dramatically felt through cultivating connections with writers and editors in the media. Efforts to create programming for women farmers with WAgN are still largely volunteer-based, but a steering committee member is a staff person at PASA, and therefore can wield

Figure 16: Support for Women Farmers before WAgN

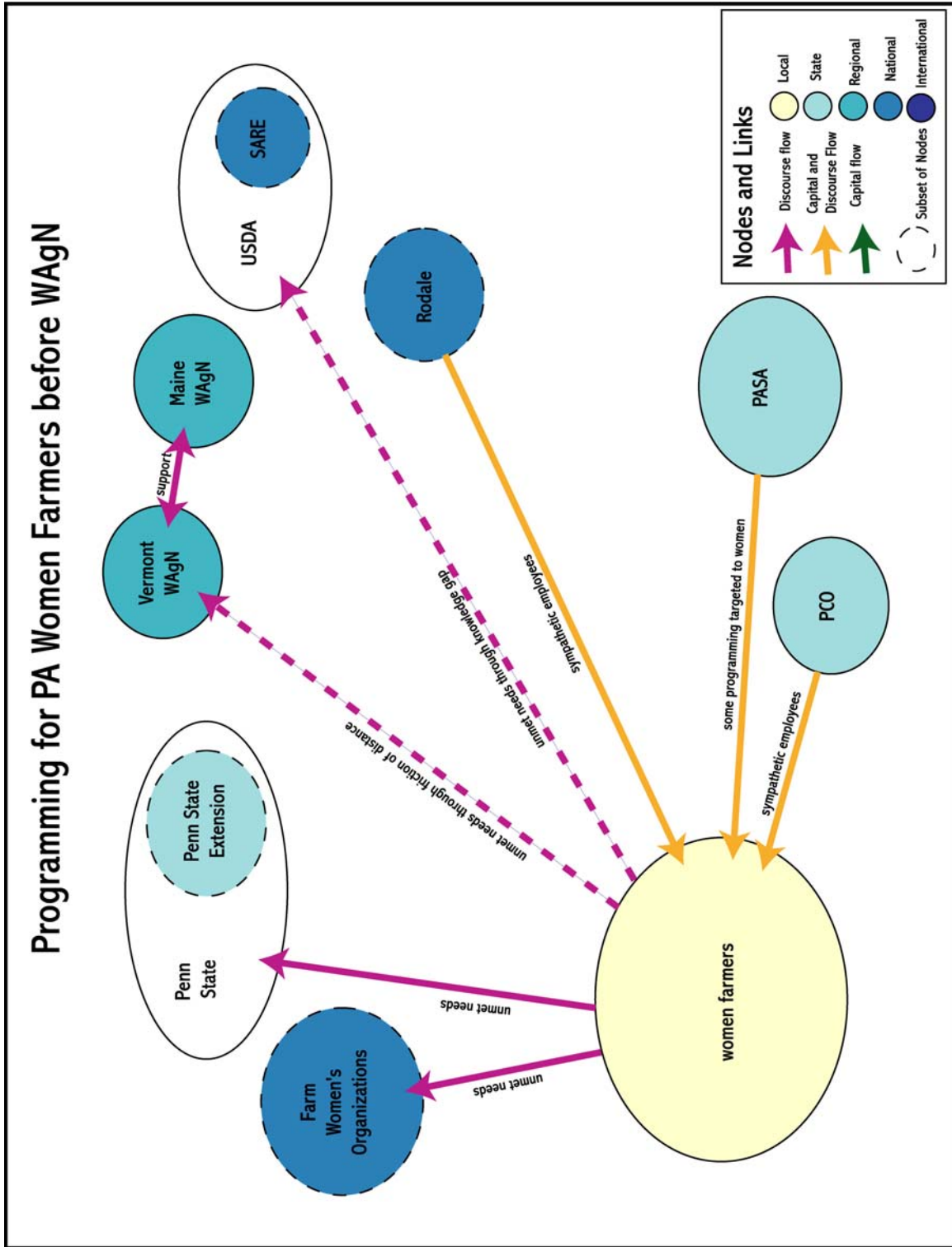
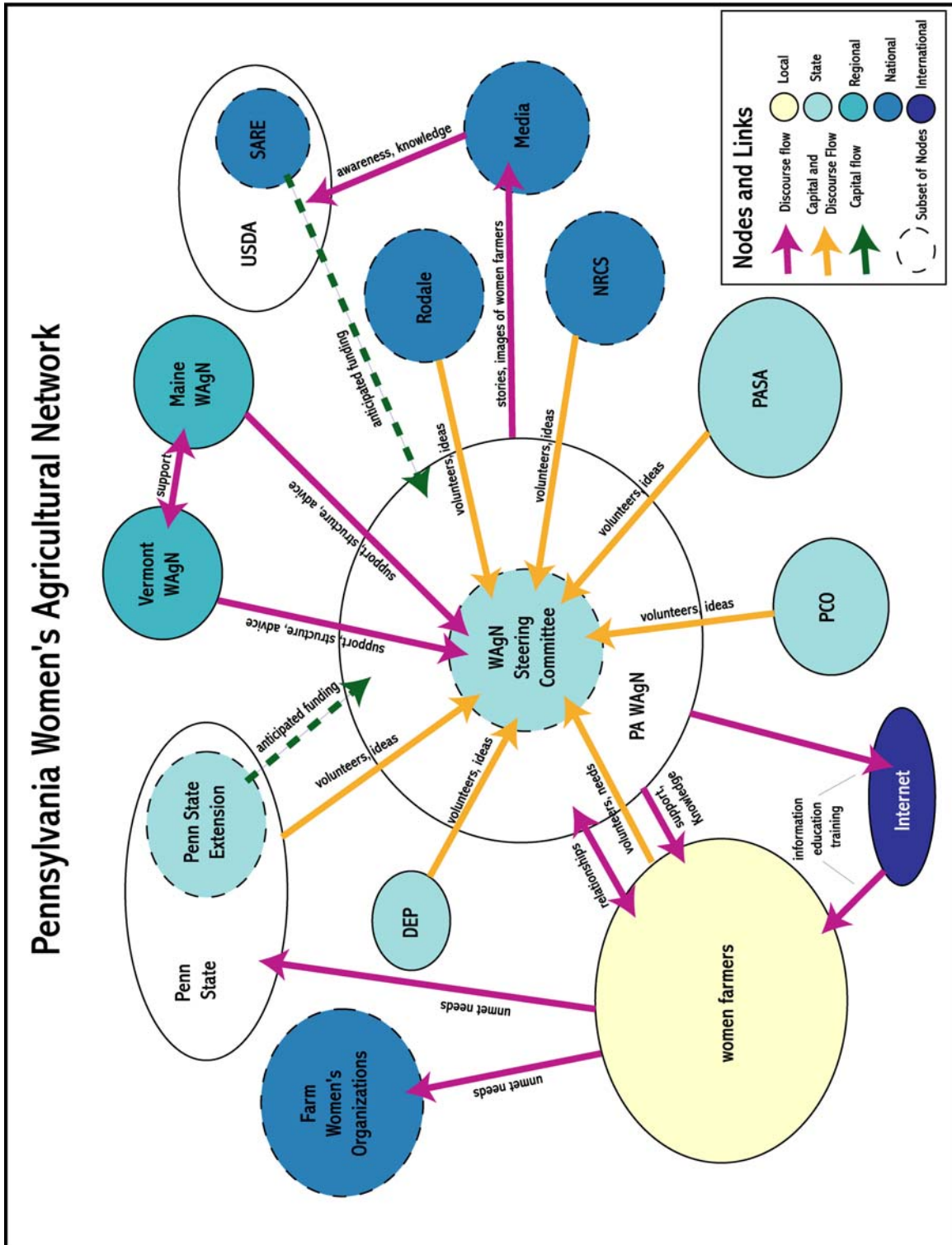


Figure 17: Women's Agricultural Network



considerably more influence in programming and opportunities than before WAgN existed. Likewise, a WAgN steering committee member is also faculty in Penn State Extension, and because of her position and presence in the College of Agriculture, was able to leverage some funding for support of the network. This has had the effect of institutionalizing programming for women's interests, and illustrates how agency can be conceptualized as an outcome of collective action. See Figure 17.

The primary observation from the network graphic is that WAgN serves as a vehicle for change through connection. The post-WAgN graphic shows how different entities, such as Penn State, DEP, NRCS, etc. can have access to women farmers for their programs. Perhaps what is most significant in light of previous research is finding women farmers to access (Trauger, 2000). WAgN uses the media, Internet and knowledgeable actors in the community to identify women and collect contact information for these organizations to use to develop programming.

Two questions arise from analysis of this network. Does the creation of WAgN significantly diminish the identity politics inherent in the before-WAgN picture, where women are divided along lines of "farm wife" vs "women farmers" through the discourses of women's appropriate role in farm organizations? Secondly, has the agency of women enrolled in the network increased, or do particular individuals or organizations still control who qualifies as a woman in agriculture and ultimately how the identity of women in agriculture is shaped? As suggested in chapter six, the tone of the debate has certainly changed to be more inclusive, and the individuals shaping the future of the debate has changed as well. However, the debate itself remains the same, which is a crucial point.

Women farmers as a group have often been dismissed by institutions as either not serious farmers or too small in number to have an important constituency. The new findings on the increasing number of women farmers in the U.S., however have gotten the attention of institutions such as the USDA and Penn State, and they appear to be seeing value in reaching out to this population. The number of women farmers according to the census has changed most dramatically, however, because of the way the question about operator status was asked. In the 2002 census, multiple operators could be listed per farm for the first time, and twenty-seven percent of all farms listed a woman as a first or second operator. The change however, is not necessarily demographic, but rather it is conceptual and semantic. The USDA now recognizes the women in partnerships with men are also farmers, where they were once seen as simply “wives of farmers.”

This framing of women’s identity is echoed among the community of women farmers who see themselves as the “sole operator” of the farm, and as such have been historically ignored by the institutions established to serve the needs of farmers. In discussions around identity in WAgN meetings, the prevailing sentiment was that women in partnerships with men have access to information through their relationships with men, and also have more traditional sources of support within women’s farm organizations (Cowbelles, WIFE, etc.) and as such have less of a need for a new program to serve women farmers’ needs. However, the debate seemed to vacillate between identifying who had the greatest need for WAgN, and concerns about being as open as possible to all women, as it was recognized that not all women in partnerships with men identified themselves as “wives.” It seemed almost impossible to settle upon a demographic of women who were the target audience of WAgN, and the fault lines along which the

debate opened were between the traditional “farm wife” and the independent women farmers.

It was eventually decided that the target audience would be identified as “women in agriculture,” and while not everyone agreed that this was the appropriate designation, it was decided that it was the least discriminatory, if not descriptive designation. This leaves it in the hands of women interested in joining to decide whether the organization would serve their purposes or not. As such this removes the political edge and statement that many women farmers would like to make regarding their marginalization. This begs the question, then: does WAgN grant women in agriculture more agency in terms of changing their social situation, or does it reproduce the same political cleavages that have always existed in agricultural organizations? To answer this, it is necessary to turn to who is shaping the debate.

For the most part, women farmers and women agricultural professionals participated in this debate. No men were present for these conversations, and no one was representing a traditional farm or farm women’s organization. All farm organizations represented fell under the broadly defined political umbrella of sustainable agriculture. Thus, the debate was framed by a rather select group of individuals, who, while sensitive to discriminatory practices, were interested in pushing the political envelope both in terms of social justice for women within agriculture in general, but the emphasis remained focused on gender identity as the criteria for involvement in the network. While it was a particular group of individuals discussing the issue, considerable concern was expressed that WAgN be “scope and scale neutral” and open to all who were interested.

This ultimately leaves the agency for pursuing social justice in the hands of those who choose to enroll.

I am not sure that this ambiguity is a good thing for WAgN, and as a steering committee member, my voice was also heard and recorded in the meetings on this issue. I feel that the larger issue at work here is that women are not comfortable with being categorized as occupying one particular subject position, even when identity can be politicized for resistance purposes. Farm women, like many women, occupy multiple subject positions, but yet it is always the common identity as women that is the glue that keeps the group together. In the case of WAgN, it was only a slight variation on the theme of women as a problematic category, and the debate was ultimately about *which* women would be the most likely recipients of what WAgN had to offer.

Perhaps it should be part of WAgN's mission as part of a new social movement (the Third Wave, if you will) to recognize the hybridity of women's identities. The emphasis on sex or gender as a unifying category continues to plague the women's movement, as it is well understood by the members of social change organizations that not all women are equal in the eyes of the organization. Operationalizing the theoretical position of hybridity is a challenging prospect, but perhaps it would be helpful to move the debate forward, rather than swinging between the poles of rigidity and ambiguity.

III. Farm Based Education: Agency, Nature and Hybridity

The Farm Based Education network is a crucial piece of agricultural sustainability as it educates farmers about environmentally friendly practices in a context that is, in most cases, outside of "mainstream" farmer education frameworks. As such, it forges connections between farmers with knowledge and other farmers seeking knowledge, as

well as consumers and activists with an interest in the subject. In many cases, conventional agricultural institutions are also enrolled in the network, and consequently are exposed to or engaged with the production of new forms of knowledge that promote environmental justice.

Before the FBE program was established, farmers existed in isolation from each other, and only informally exchanged information. There was very little knowledge exchange between farmers and institutions that are charged with the mandate for educating farmers, such as Penn State, NRCS and PACD. The relationship between nature, as an entity with agency, and farmers was largely characterized as a dialectical exchange, where nature functioned as an enabler or constrainer to individual farming practices. As such nature was an important piece of the education puzzle, and functioned as a de facto “educator.” See Figure 18.

After the FBE program was established, more actors were enrolled in the process of knowledge exchange and the FBE program functioned as an intermediary between farmers, institutions and nature. In most cases, conventional agricultural institutions were brought into the dialogue, and more voices on the subject can now be heard. In addition, more organizations, such as the PSI, were formed in response to the demand for education, and already existing organizations have a more formal role in shaping the discourse of farmer education. Thus, these organizations are able to have a longer reach, through being enrolled in the network. The relationship between nature and farmers has also changed, with nature having a dialectical relationship between farmers and the FBE. See Figure 19.

Figure 18: Education Networks Before PASA/FBE

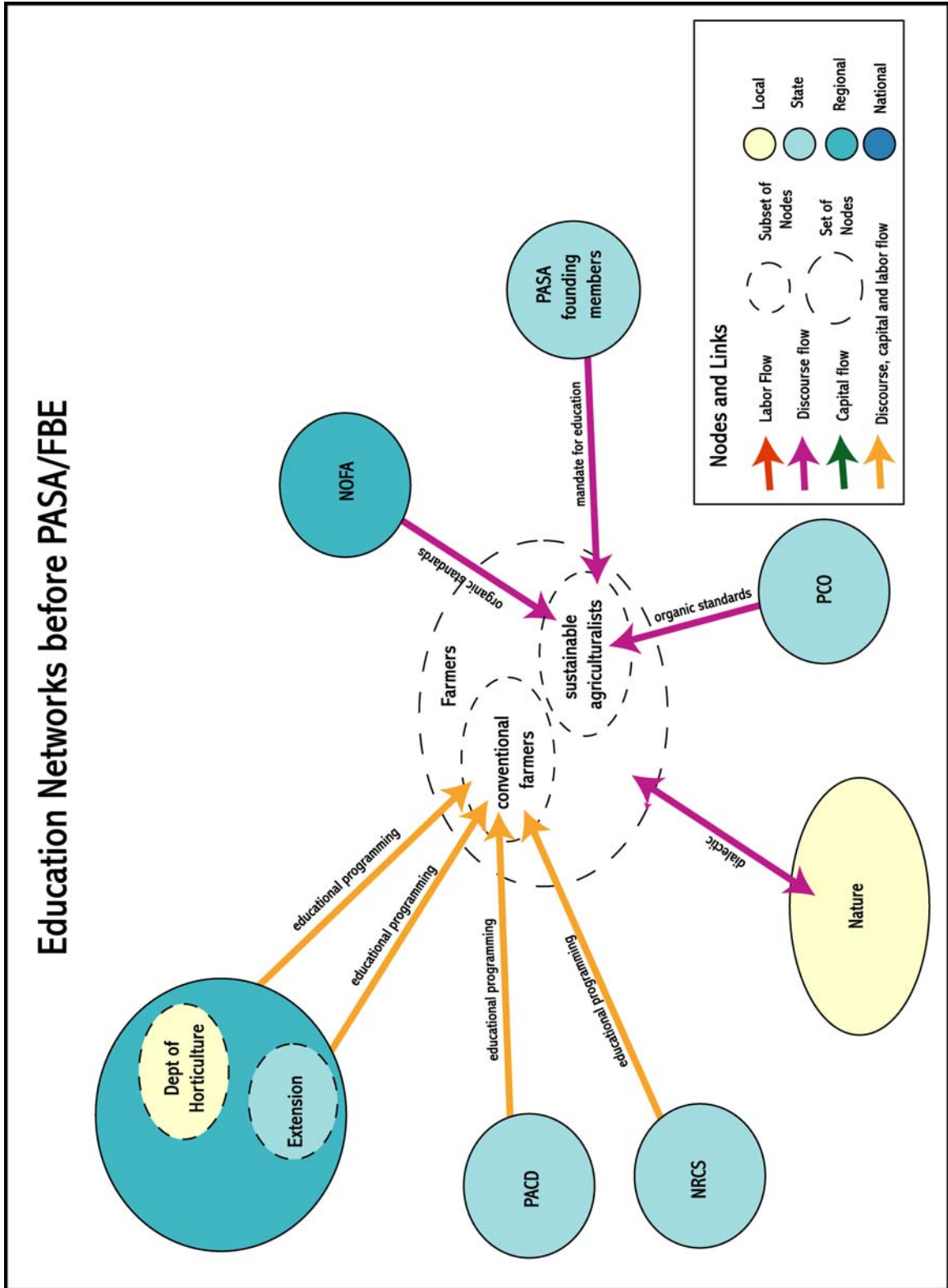
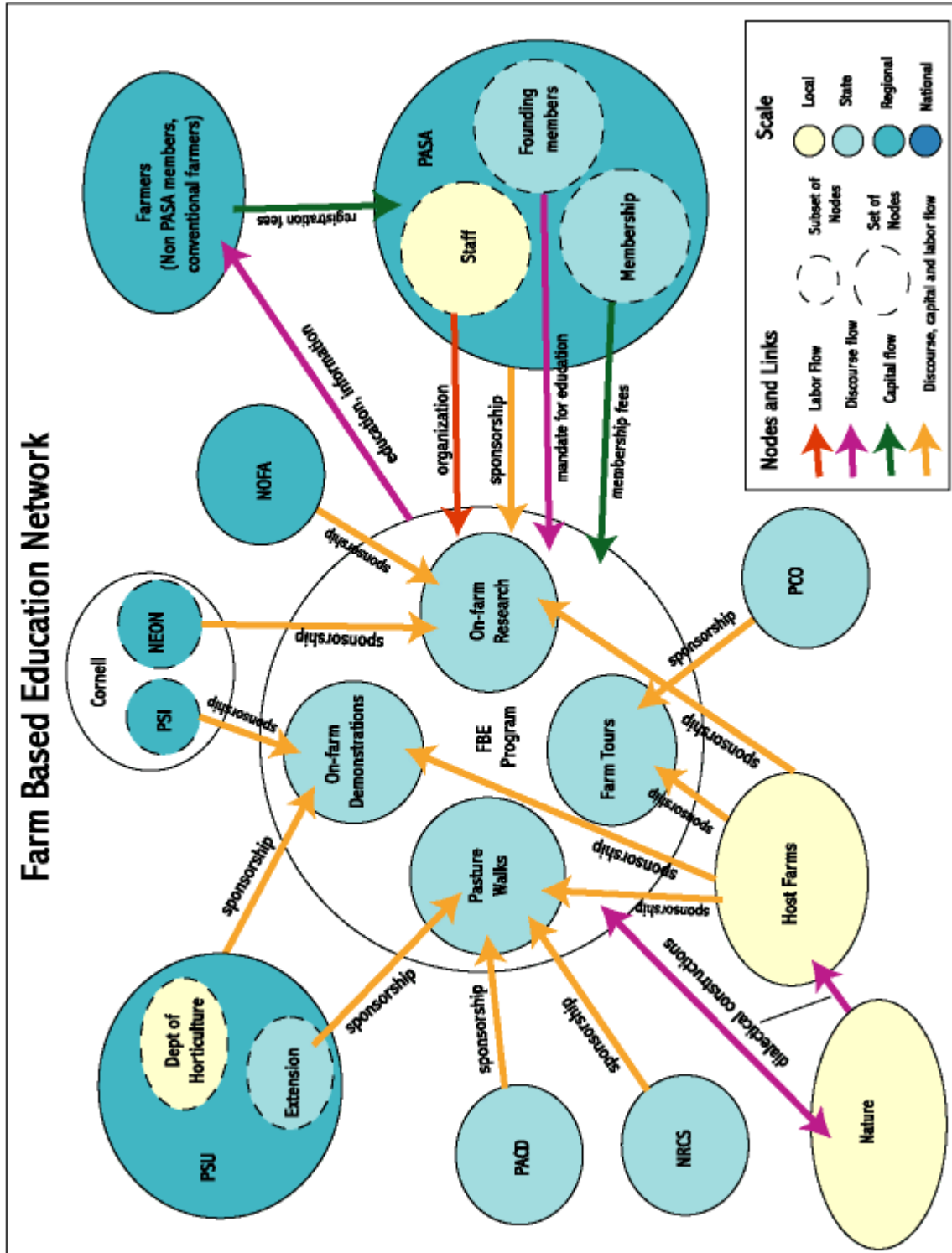


Figure 19: Farm Based Education Network



These observations again raise two important questions. First, is the nature-culture binary perpetuated through the discourse of environmentally friendly farming practices in this context, and consequently, how is the agency of nature articulated in the discourse? Secondly, are agricultural production practices changed because of the influence of this organization on the agricultural community? The answers to these questions again lie with the shapers of the debate and those with agency within the network.

The answer to the first question is a qualified yes. As illustrated in chapter seven, a number of different discourses around the role of nature were circulated in the educational programs. Those with an emphasis on sustainability, holistic farm management and community generally gave nature a higher degree of agency than those programs that emphasized manipulation, control and pre-emptive strategies. While both of these poles are encompassed within the broad spectrum of agricultural practice, those that emphasized the technical aspects of agriculture wandered farther from an overt articulation of environmental justice than those with an emphasis on community. As with the case of TOG, the focus on agriculture as a technical practice elides the agency of traditionally marginalized actors, such as nature. Thus, the diversity of perspectives present a variety of ways to conceptualize the relationship between nature and society, but only a few attempt to break down the division that characterizes conventional agriculture.

The answer to the second question is also a qualified yes. The scope and diversity of authorities and attendees at the field days indicates a certain level of change within the agricultural community regarding production practices. The rotational grazing field days in particular attracted a number of people from outside the sustainable agriculture

community, and often featured farmers with conventional practices as well. The problem with this strategy however, lies in the negotiation of political space within the movement. If the sustainable agriculture community gives up some of its voice to the conventional agricultural community, or changes its political emphasis towards broadening the scope of environmentally friendly practices, it risks losing the political edge and power that attracted farmers and consumers to it in the first place. While it is important to lengthen the networks and broaden the community, this program also suffers the growing pains of WAgN, as it works to reach as wide an audience as possible, without giving up the political ground it has gained.

Again, the conceptual construct of hybridity is at work with this organization. For both questions, the answer lies in negotiating social and political space with hybrid identities. Nature and culture exist in agriculture in hybrid forms, and the different discourses that circulate in the field days reflects varying degrees of hybridity within different kinds of farming practice. It is not necessarily advantageous to emphasize a equal measure of hybridity at all times, but it is instructive to note that those programs that stress sustainability over technical practice acknowledge a higher degree of hybridity than others. Likewise, the hybrid nature of blending conventional with sustainable agricultural practices benefits the sustainable agriculture community by broadening the scope and audience of the discourse, but there are political pitfalls in this strategy as well.

IV. General Conclusions, Findings and Challenges

The benefit of analyzing communities with a network ontology is that it allows for a number of observations about connection, agency and hybridity. Whatmore (2003) defines hybridity as a relational “becoming”, rather than relational “being”, and this

describes well the evolving process of building network communities committed to social change and justice. Key questions in this analysis are: Who exercises agency within the network? How is this accomplished? What are the affects of building the network on those involved, and those outside the network?

In general, agency is exercised by those who control the discourse. For all of the networks studied in this dissertation, those individuals within the network who took leadership roles were able to shape the network and determine the framework within which the rest of the enrolled members worked. This is not to say that those who were not in leadership positions were marginalized (although this was the case in some instances), rather the enrolled constituents were able to exercise agency through their relationships with others, particularly the leadership. The network provided structure for bringing together diverse populations, and gave them opportunities they would not have had otherwise. This is true for all the networks, but those that emphasized the hybrid nature of agency (or agency as an outcome of connection) seemed to enable more than constrain the opportunities of their constituents. However, those individuals and groups who are traditionally disempowered in western culture (lower classes, racial and ethnic minorities and women) were also disproportionately less connected and disempowered within the networks.

Similarly, identity politics shapes interactions within the network, in spite of the emphasis on a fluid and relational membership. For WAgN in particular, identity politics charged the debate about who was disempowered, and who deserved to be represented within the network. Thus, extending agency to disempowered populations still hinges upon who belongs within the community and in what role. Thus, hybridity becomes an

even more important element for shaping social change, as it can change the context of who belongs to the community. Hybridity can bridge gaps between identity politics, but operationalizing this rather academic concept remains a challenge.

In all cases, the networks met challenges to their mission or mandate when the network “lengthened” either in scope or in scale. The goal of organizations committed to social change is almost always to extend the reach of the organization, to broaden the discourse and to bring alternative values into the mainstream. In all cases, the networks committed to social, economic or environmental justice met with resistance or with challenges to delivering on their stated missions when the network became lengthened. This raises the question of how far the network can be lengthened before it loses its political purpose, and evolves into some other kind of organization, committed to some other kind of goal.

In short, the networks enable a particular relational becoming that both empowers and disempowers the ‘actors’ and enrolled constituents within the network. This relational becoming has implications for those within the network, as their opportunities are either expanded or contracted based on their identity and role in the community. This has implications for those outside the network as well, for their opportunities are also shaped by the decisions made and the discourses developed by the leadership. Finally, the network exists as a living entity, as it co-evolves through the dialectic between actors, constituents and those outside the network. The discourses of justice articulated in the beginning of the organization are changed throughout the life of the organization through the actions of individuals and collective decision-making.

V. Questions for Future Research

As with almost all research projects, the questions I have answered have only left me with more and seemingly larger questions. The new questions that I have raised circulate around some large issues of egalitarianism and social movements, or how to maintain equality while individuals take on leadership roles. Additionally, hybridity seems to be a solution to this, but how does an organization operationalize this concept into a mission statement? Another question revolves around whether sustainability is necessarily limited by scale. It seems that an increase in size and scope is associated with a shift away from what is thought to be sustainable. A final question is related to this, and perhaps easier to address. As organic food production shifts to the Global South, what are the contradictions and parallels with the organic food production in developed economies and what are the implications for the organic food movement in the Global North?

The first question of egalitarianism and social movements raises some fundamental questions about social and psychological behavior in groups. In all cases illustrated in this dissertation, a handful of actors emerge as shapers of discourse, and consequently, practices within the social movement. Sustainable agriculture attempts to apply itself to social justice and egalitarian practices, but in all cases, leaders must emerge who take action and exercise agency. Networks or cooperatives can enroll other actors, and agency can be an outcome of collective action, but it seems fundamental to have individuals who ultimately make decisions. WAgN's structure can speak to this, as it attempts to run itself with committees, revolving leadership and independent actions by individuals not identified as leaders. However, this process is inefficient and slow, and prone to miscommunication, so perhaps there is some middle ground, some hybrid

ground between structure and individual agency? Accountability measures with the enrolled constituents appears to have some kind of affect on mediating the power individuals can exercise and provides structure that makes the organization more efficient, but this is, regrettably, a question for future research.

Related to this question is finding a method for operationalizing the concept of hybridity into an organizational structure. WAgN appears to need a mission statement and a set of objectives that more accurately reflects the diversity and hybridity of its potential constituents. However, the conceptual language does not seem to exist to make this clear, cogent and compelling to women in agriculture. How can WAgN or any other organization that appeals to a diverse audience, craft a subject position that reflects the diversity of viewpoints that necessarily compose our fractured, partial identities as individuals. Finally, what are the political costs of trying to please all? In many ways this is political science, as is it a perennial question for political parties to find the base without alienating the fringe. In what ways can WAgN and the Farm Based Education program successfully bridge the gap between their potential constituents without losing too much of the political capital they have gained?

Thirdly, in two cases illustrated in this dissertation, the scale of sustainability is relevant to organizations, institutions and individuals, as it seems that there is a particular size or scope at which the fabric of sustainability becomes frayed. For TOG, it is the size of the farm operation and the demand for organic products, and for the FBE it is where the conventional and sustainable agricultural communities overlap. At what point does the change in the discourse or the context of production constitute a shift away from sustainability? In both cases, this calls into question what constitutes sustainability in the

first place, but rather than rehearse worn out verses on defining sustainability, a better, or at least different starting point is to ask whether what is recognized as sustainable changes after it undergoes a change in scale.

This ties into my final question regarding the more tangible implications of organic food production shifting overseas. The organic food movement and sustainable agriculture both have their roots in resistance to non-sustainable, industrial agricultural practices in the Global North. The globalization, however, of organic food consumption and the changing regulatory environments within the nation-state have driven production world wide, spatially lengthened commodity chains and changed the social and political contexts of the organic food social movement. This has particular relevance for rural sustainability movements in developed economies, as the revitalization of agriculture, experienced by many farmers in this research through the greening of consumption is threatened by the corporatization and globalization of organic production. However, the shifting of organic production to the Global South has opened new opportunities for farmers in developing economies, and I am interested in the parallels and contradictions with organic food production in the Global North.

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APPENDIX A
Interview Protocol A

Interview Protocol A: Questions for Leaders, Founders of Sustainable Ag Organizations (TOG, WAgN, FBE)

Section 1: Sustainability

1. What does sustainability mean to you?
2. What is the purpose of developing a sustainable agriculture community?
3. What is the most important aspect of sustainability in your mind?
4. What role does the environment play in your ideas about sustainability?
5. Are social justice issues important to your idea of sustainability? Explain.
 - a. Probe: More or less important than other issues?
 - b. Probe: Social justice for whom?
 - c. Probe: Is the sustainable agriculture movement empowering for you?

Section 2: Tell me about your organization/farm

1. When was it founded?
2. How long have you been involved?
3. Did any particular event bring it about? (what)
4. Who was involved?
5. Where did it start?
6. What is the organizational structure?
7. Has leadership changed? (how, who)
8. Has the focus of the organization/farm changed over its lifetime? (how)
9. Who or what has been involved with sustaining it? (how)
10. Has the location of the organization/farm changed over time? (why)
11. Do you have a website? How long have you had it? What is it used for primarily?
12. How do you communicate with potential members/customers/funders?

Section 3: Tell me about other groups or individuals associated with the organization/farm

1. Did any particular group/organization/individual contribute to the founding of this organization/farm? (any supportive role, name all) if no, skip to section 4
2. Describe this entity.
3. Who is involved?
4. Where is it located?
5. Has this entity remained involved?
6. Has your relationship with this entity changed over the lifetime of the organization?
7. What does this relationship provide for your organization?
8. Would you characterize the relationships you have with these entities, networking? If not, how would you characterize it?

Section 4: Wrap-up and the future

1. How important has networking been to the success of your organization?
2. If networking hasn't been crucial, what has been?
3. What do you see as being most important to the success of your organization?
4. Is there anyone you feel I should speak with for more information about the organization?
5. Anything important that I missed?
6. Would you like to see the final results of the research?

APPENDIX B
Interview Protocol B

Interview Protocol B: Questions for TOG Farmers

How long have you been farming?

What is the ownership structure of the farm? Family, Single owner, partnership, other

How many acres are in production?

What are the sources of labor? Family, apprentice, wage, migrant circle all that apply

What are your major crops?

What are your primary markets? wholesale, retail, CSA circle all that apply

How long have you been certified organic?

Why do you farm organically?

How long have you been a member of TOG?

What are the benefits to you from selling to TOG?

APPENDIX C
Survey A

Survey A: WAgN Needs Assessment

1. a. Are you farming (or have you been farming in the last year)? **Yes** **No** (go to question 2)
b. What kind of farm do you own/operate/work on? **Livestock** **Crop** **Fruit/Vegetable**
(circle all that apply) **Other** _____
c. How do you market? **CSA** **Farmer's Market** **Direct/Retail** **Wholesale**
(circle all that apply) **Other** _____
d. How long have you been farming? _____ **years**
e. What size farm? _____ **acres**
f. Do you know of other women farmers in your county? **Yes** **No**

2. If you are not farming, how do you describe your occupation? _____

3. Do you have access to internet/email? **Yes** **No** (go to Question 4)

a. Are you interested in receiving email mailings/updates?

Very Much **Maybe** **Not Very**

b. Are you interested in internet-based courses?

Very Much **Maybe** **Not Very**

c. Are you interested in email discussion list serves?

Very Much **Maybe** **Not Very**

4. Are you interested in discussion groups/on-farm network meetings?

Very Much **Maybe** **Not Very**

5. Are you interested in farm-based education programs (field days, farm tours, demos)?

Very Much **Maybe** **Not Very**

6. Do you presently use Penn State Cooperative Extension for your education needs?

Very Often **Sometimes** **Not Very Often**

7. What kinds of farm related information are you interested in?

8. Do you think there is a need for a program that addresses the particular needs of women in agriculture? Why or why not? (use the back if you need more space)

9. Any other thoughts, comments, concerns? (use the back if you need more space)

Return to display or mail to Amy Trauger, 853 Penns Cave Road, Spring Mills, PA 16875

Amy Trauger is conducting research on WAgN for a Doctoral Dissertation in Geography at Penn State. If you are NOT willing to allow Amy to use the confidential information in this survey, please check the box below. For more information you may contact Amy (akt122@psu.edu 814.422.0634) or Cindy Brewer (cab38@psu.edu 814.865.5072).

I would prefer that Amy Trauger NOT use the information provided here for research purposes.

APPENDIX D
Survey B

Survey B: Field Day Evaluation Questions

1. Is this the first PASA Field Day you have attended this year?
2. Are you a PASA member?
3. How satisfied are you with the quality of this educational program? (scale of 1-5)
4. Do you plan to make a change in your farming operation, business or community as a result of something you learned at this field day?
5. If yes, please list the changes you plan to make.
6. Did you meet someone at this event with whom you plan to stay in contact?
7. Please list any additional suggestions you have for future field day events
8. What is your occupation?
9. Please indicate if you hold a leadership role in your community.

ENDNOTES

1. All first names only are pseudonyms. When first and last names are used, they are the real names of respondents, used with permission.
2. Apprentice labor is a unique category of laborers in sustainable agriculture. They are typically 20-something middle-to-upper middle class suburbanites (of all races/ethnicities, but the majority are white) who are interested in farming and/or have a desire to experience farm life and practice an environmental ethic. They work for room and board and a monthly stipend that is typically well below minimum wage. They are sometimes given a stake in the profits in the farm and are often recruited to be managers of a crew of laborers or are responsible for a particular crop on the farm. In a sense, these are the Generation X back-to-the-landers.
3. CSA stands for Community Supported Agriculture. This is a form of marketing and distribution of farm products that involves the customers buying a share in the farm in exchange for a box or poundage of farm produce weekly or biweekly.
4. The organic certification standards are complicated and lengthy, but the primary condition is for the farm to have had no application of chemicals of petrochemical origin in the past three years. See Pennsylvania Certified Organic (www.pco.org) and USDA National Organic Program (www.ams.usda.gov/nop) for details on regulations.
5. The size of truck referred to holds 6-8 pallets.
6. Organic fruit production in Pennsylvania is difficult and expensive. Most producers growing fruit for local or organic markets use pesticides in the spring, and do not spray six or more weeks before harvest. TOG buys from orchards using low-spray regimes or Integrated Pest Managements methods. See paipm.cas.psu.edu for more information on IPM.
7. Producer-only markets are designed to benefit growers and are typically organized and managed by the producers themselves. They require that all vendors sell only those products that they have grown themselves, and usually only sell produce that is grown locally. Non-producer markets in Pennsylvania are typically run by produce brokers who buy fruit and vegetables (and other goods) from growers all over the country and resell them at a profit.
8. The majority of migrant laborers in the TOG network are recruited from the Mexican migrant labor community drawn to the area by work in the Chambersburg, PA fruit orchards. Chambersburg, in south-central Pennsylvania, is climatically well suited for fruit production and supplies the large mid-Atlantic consumer market with peaches, pears and apples.
9. Two farms in the network were more than an hour from a sizable community of migrant workers in Pennsylvania, and had a difficult time retaining 2-3 workers despite providing transportation and/or housing. The other farms were within a few minutes of a large community of workers, or provided housing for a large (10-15) crew on the farm.
10. While I assume all workers on these farms were documented, I did not ask about documentation status for reasons of trust and confidentiality. I was told however,

that work permits or other documents were relatively easy to obtain if necessary and could be provided in a few days.

11. The 2001 Farm Women Survey was a nation-wide survey conducted by the Penn State Department of Rural Sociology and Agricultural Economics in partnership with the USDA. The survey was a repeat of the 1980 Survey of Farm Women conducted by Rachel Rosenfeld in partnership with the National Opinion Research Center and the USDA.
12. Commodity organizations, such as the American Dairy Association or National Wheat Producers Association, and are designed to influence agricultural trade policy and federal farm programs.
13. Until 2002, the USDA Agricultural Census only allowed one operator per farm, which effectively made women (typically partners in family farms) officially invisible. The 2002 Census allowed up to three operators per farm, and thus, the majority of the increase in the number of women farm operators is largely semantic and symbolic, as women are now recognized in the official count as operators.
14. The USDA recognized in 1994 that all farmers are not socially and economically the same in the United States, and so developed a program to make low interest loans and other assistance, such as grants, available to women and ethnic/racial minorities. According to the USDA, a “socially disadvantaged farmer or rancher is one of a group whose members have been subjected to racial, ethnic, or gender prejudice because of their identity as members of the group without regard to their individual qualities” (www.usda.gov). Women were in the original 1994 Farm Bill, and were subsequently removed from the list of socially disadvantaged farmers. They have been added to the program again, as of 2001.
15. The numbers of steering committee members do not add up because some farmers operate both livestock and fruit/vegetable operations and have a diversity of marketing methods. The numbers were presented this way to illustrate the diversity of farms and marketing strategies.
16. These responses were based on evaluations of the Women’s Agricultural Network pre-conference in partnerships with PASA and surveys sent out to WAgN membership.
17. As of late fall 2004, Penn State Cooperative Extension approved funding for a full time coordinator of WAgN and the Sustainable Agriculture Working Group at Penn State. Responsibilities for this position are essentially split between the two groups, and as such constitutes a half-time position dedicated to coordinating PA-WAgN.
18. Timber framing is an artisanal building technique that only uses renewable building materials, and the frame is constructed with mortise and tenon joinery and wooden pegs rather than nails as connecting materials.
19. Copper fungicides are typically salts of copper, which constitute about 4% copper metal. They are certified for use in organic systems, but can be toxic to humans and also accumulate in the soil.
20. Best management practices are structural or nonstructural farming practices that are designed to reduce erosion and runoff, and ultimately are employed to protect water quality.

VITA

Amy Trauger

Department of Geography
302 Walker Building
The Pennsylvania State University
University Park, PA 16802
akt122@psu.edu
(814) 422-0634 (h)
(814) 865-5387 (o)

Education

Doctor of Philosophy: Dual Degree
Geography and Women's Studies
Social, Economic and Environmental (In)justice: Networks and Sustainable Agriculture
Graduation Date: May 2005
The Pennsylvania State University

Master of Science
Geography
"Getting Back to our Roots": Women Farmers in Sustainable Agriculture
May 2001
The Pennsylvania State University

Bachelor of Arts: Double Major
Geography and Environmental Studies
Placing the Invisible Farmers: Women Farmers in Minnesota
English Minor
November 1998
University of Minnesota, Duluth

Peer-Reviewed Publications

Beyond the nature/culture divide: corporeality, hybridity and feminist geographies of the environment. (Sole Author) *Geography and Gender Reconsidered* (August, 2004)
Women in Geography Study Group.

'Because they can do the work': Women Farmers and Sustainable Agriculture (Sole Author) *Gender, Place and Culture* (Special Edition: Gendered Livelihoods) Volume 11, Number 2 (June, 2004) pp. 289-307.

Women Farmers in Minnesota and the Post-Productivist Transition (Sole Author).
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