Social Dimensions of Organic Production and Systems Research

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Abstract
Organic food production in the United States began as a social movement response to the perceived negative externalities of an industrial food system. The agro-ecological advantages and production capabilities of organics have been well documented. To harmonize the various organic certification schemes, the national standard was developed and put into law in 2002. Since that time a process of organic conventionalization and bifurcation has occurred as traditional producers have entered the market and major firms have consolidated their organic positions. Conventionalization refers to the process by which organics take on similar characteristics of the mainstream agrifood system. Bifurcation refers to the process of organics dividing into large scale certified-organic operations selling in indirect markets and small-scale operations selling in direct markets based on trust. In this paper, we review the literature on conventionalization and bifurcation and contextualize it within the larger discussion on the sociology of agrifood. We conclude that organics provide a valuable case for looking at the ecological, social, and economic dimensions of an agricultural system and reveal future challenges regarding the long term sustainability of organics.

Background on Organics
For rural sociologists, the alternative agrifood system and organics is a central topic of discussion (1,2,9,10,24,40,44,47,72). Organics emerged out of the broader environmental movement that was critical of the negative ecological externalities of industrialism. It is a good example of what German philosopher Ulrich Beck (4) calls reflexive modernization, which would argue that upon reflection we realized that chemical-intensive monoculture generates significant negative externalities. It was a mistake to blindly adopt it but we can fix this error through the reflexive use of science and appropriate technologies, such as growing food using organic methods. Agricultural philosopher Paul Thompson (39) describes these contrasting viewpoints as the industrial and agrarian perspectives. The industrial perspective views agriculture as just another part of industrial society where commodities are produced at the lowest cost possible, while the agrarian, sometimes called alternative, perspective views agriculture as having important social functions beyond its efficient production of commodities. From this view, a major departure from the conventional agriculture model is needed because it is not sustainable.

In the 1980s research documented the feasibility of organic production as an alternative to chemical-based agriculture (64,73,74). The USDA LISA/SARE programs were grounded in organic philosophy, but employed the term "sustainable agriculture" to be more politically palatable (1,19,69). After a long battle and resulting compromise, in 2002 the USDA National Organic Program (NOP) created the certified organic label (19,40). While the NOP provided regulatory underpinning for organics, the resulting certified organic label was a market label with no claims to superiority to conventional systems. The lack of other forms of government support for organics – such as economic support for transition or research – hindered the entry of new organic farmers and conversion by conventional farmers (35) resulting in an increase in organic
imports to match rising consumer demand. In recognition of this shortcoming, new USDA monies and programs were funded in 2008 to facilitate adoption and improve the imports/exports balance sheet for US organics.

Organics have grown rapidly and continue to be a major growth area in food sales (35). The certified-organic label is well-known, but the success is problematic sociologically. While the origins of organics included a transformative agenda that addressed the environmental, economic, and social externalities of modern agriculture, the NOP compromise generated an incremental approach to organics that calls into question some of the original social movement aspects (1,21,23,41,50,51,65,66).

**Sociology of Agrifood**

An investigation of the social dimensions of organics needs to be interpreted within the larger discourse in the sociology of agrifood systems, in particular regarding the relationship between the structure of agriculture and its environmental impact (9,10,11,15,51) and its impact on the quality of life in rural communities (12,43,51,52,58,59). Today organic consumers obtain an increasing proportion of their organic food through large retailers linked to large producers via indirect global supply chains as part of the global agrifood system (20,35,40,41). Conventionalization refers to this general trend whereby organics take on many of the characteristics of mainstream agriculture regarding scale, commodification, and consolidation. It becomes eco-input-substitution farming, but with little philosophical attachment to organics (41). Economics tells us that the organic premium attracts entry, and entry increases competition, which shrinks the premium as business laws start to dictate success (70). The result is organic global supply chains based on comparative advantage – not that dissimilar from conventional global supply chains (30,31). Recent research (45,46) documents the growing consolidation in the organic industry over the past 10 years as the dominant conventional food companies enter the market through acquisition and expansion.

Bifurcation refers to the trend in organics towards a bipolar model of production whereby larger certified operations supply the major retailers and smaller, non-certified operations service localized, direct markets. As part of conventionalization, many of these larger operations have transitioned into organics and now farm to the NOP list of accepted inputs to capture the organic premium, while the other farms tend to have always been organic, farm agro-ecologically and sell on trust. Bifurcation creates “soft organic” and “strict organic” archetypes of production (20,40,41).

Conventionalization and bifurcation are problematic regarding sustainability. The quality of life for farmers and rural peoples is influenced by the structure of agriculture and the type of commodity chains they are linked to (30,31,52,58). The evidence indicates that family-based, middle-class farm operations tend to support a higher quality of life in rural communities than do industrial forms of agricultural production based on large-scale units and hired labor (10,52,58,60). As a result of conventionalization and bifurcation, organics lose much of their transformative agenda and become less sustainable (1,20,65).

**Conventionalization and Bifurcation**

Buck et al. (6) introduced the concept of conventionalization to analyze the changes in organic food production in California. They operationalized conventionalization through the concepts of appropriation and substitutionism (32,34). Firms practice appropriation when they reduce the risks of investing in agriculture by relocating off the farm such processes and practices as chemical fertilizers and pesticides. Similarly, substitutionism refers to the practice whereby agribusiness firms expand post-production activities to capture a higher proportion of the total value of the commodity. Through appropriation and substitutionism, agribusiness penetrates organic agriculture through the production of inputs and the processing of outputs (6,41). As a result, organic agriculture becomes more conventional.
Bifurcation is an outcome of conventionalization (6). As agribusiness enters organics, a bi-polar production system emerges made up of larger conventional operations that mix input substitution strategies with monoculture production of high value crops targeted to indirect markets while smaller farms employ artisanal practices to grow a variety of crops using more sustainable agronomic practices targeted to direct markets. The categories describing the bifurcation of organics have been referred to as: “pragmatic” versus “pure” (16,17); “conventional” versus “artisanal” (6); “agribusiness” versus “lifestyle” (37); “lifestyle” and “conventional” (14); “lifestyle/domestic/small-scale” versus “export/commercialized” (22); “chemical-lite” versus “movement” (33); “productivist/reductionist” versus “holistic” (75); “philosophical” versus “pragmatic/instrumental” (54); “organic-lite/shallow” versus “deep organic” (41); “old guard” versus “new entrants” (41); and “certified” versus “non-certified” (20). Although the transformative ability of organic agriculture had been questioned previously (16,17,61,68,72), Buck et al. (6) were the first to systematically research the structural trends taking place in organics. Guthman (37,38,39,40,41) continued this research which has contributed to a growing literature that critically evaluates the conventionalization and bifurcation theses. That literature is presented below in a chronological schema, to highlight the evolution of the professional conversation on the topic.

**The Conventionalization Debate**

In the United States the conventionalization debate began in California as organics moved beyond their niche status and agribusiness entered the market to capture the monopoly rents associated with the price premium (6). The California organic standards that emphasized inputs over processes allowed agribusiness to employ input substitution practices that met the minimum standards but avoided the costly practices associated with ecological sustainability, resulting in a form of agriculture that differs from conventional systems only by the use of organic inputs (6,37). Guthman and colleagues (6,37,38) found a bifurcation of organic producers in California characterized by large operations specializing in the mass production of a few high profit crops and smaller farms that employ artisanal methods to grow a variety of marketable crops. In the process, the organic label was co-opted by the large firms thereby blunting its transformative potential (6,32,33,37). Tovey (72) reported a similar process in Ireland.

Guthman and colleagues (6,37,40) argued that the technical approach to organics based on allowable inputs contributes little to social or ecological sustainability. While admitting the California focus of the research, they predicted that national organic standards would accelerate conventionalization as agribusiness re-shaped organic agriculture to its own advantage (6). Guthman (37) concluded that California was the exemplar and model of a broader process whereby nature is appropriated through the regulation and cooption of the organic label.

Early research from Australia and New Zealand (54,56,57) provided some support for the conventionalization thesis. Lyons (57) found that farmers recruited to convert to organics tended to have a pragmatic/instrumental approach whereby organic farming meant compliance with minimum certification requirements rather than a philosophical approach (56). This system exhibited conventionalization through vertical integration and the concentration of capital (54). Corporate greening in Australia and New Zealand contributed to the appropriation of the organic industry by incorporation into conventional agricultural networks (57).

While Campbell and his associates (13,14,22) agreed that organics was experiencing conventionalization and bifurcation, they disagreed that the impacts were necessarily negative and inevitable. They found a relatively stable bifurcation of the organic industry in New Zealand characterized by an interdependent domestic/small-scale sector of perishable goods and an export/commercialized sector of green durable goods (22). They criticized the linearity of the conventionalization thesis, noting that the meaning of organics changed over time as different actors entered the policy arena (14).
Michelsen (63) used the term institutionalization to describe the changes in the social organization of organics in Europe. He also criticized the conclusions of the early California studies for generalizing from too limited data. Lynggaard’s (55) work in Denmark and Belgium discovered several institutional factors that impacted the structure of the organic farming system and cast further doubts on universalistic interpretations of the trajectory of organics and highlights the importance of national/regional contexts.

Kaltoft’s (48) research in Denmark revealed that the process of the institutionalization of organics weakened the ideological base of the Danish Association of Organic Agriculture and enhanced the production, processing, distribution, and retailing of organics through conventional venues. In support of the early work in California, he concluded that organics stop being a social movement once the government and industry institutionalize them to ameliorate environmental externalities and service the growing global market.

Research by Hall and Mogyorody (42) in Canada showed that farms that had moved into organic production recently did tend to be larger, but they did not fit the pattern of specialized monoculture for indirect markets. Regarding ideological orientations, they noted that larger farms and newer farmers were more likely to have a profit orientation. They reported that bifurcation was not occurring, and the trends were very inconsistent across commodities. They did note that as prices peaked in certain commodities (e.g., organic soybeans), conventional producers entered the market in mass to service global markets. Hall and Mogyorody (42) attributed these results to the particular arrangement of organics in Ontario, Canada. They concluded that there was limited support for conventionalization or bifurcation, but the situation could change quickly.

In 2004, Guthman addressed the critics of conventionalization with new data (39,40,41). She found that agribusiness had rapidly increased its organic operations in California, as well as New Zealand and Australia, with most of the growth from converted conventional operations, which out-compete smaller producers via economies of scale. Industry entry means increased price competition, a drop in price premiums, a lowering of farm-gate premiums, and a weeding out of some lifestyle producers (41,70). The farm-gate price squeeze creates further pressure to intensify.

She also noted that state-supported agro-industrialization affected all organic growers because the incorporation of the organic premium values in land prices forces growers to farm more intensively to pay for the land (40,41). The industrial “organic lite” model constrains the continuance of the “deep organic” model and thereby diminishes the sustainability of organics (39). Guthman (41) concluded that it is these wider processes of agro-industrialization that casts doubts on the long term viability of the multiple paths to sustainability put forth by Campbell and associates. The question is not whether the California model is inevitable, as criticized by Campbell and Liepins (14), but rather that it will take creative state policies to change the direction from agro-industrialization to a holistic organic system (41).

Smith and Marsden (70) provided support for Guthman’s point. Their findings reveal a farm-gate price squeeze in the UK due to oligopsonistic supermarkets in organic retailing, a phenomenon associated with conventional food supply chains whereby the supermarkets increasingly drive the chain and producers have to adopt more intensive production strategies to stay in business. Price wars to gain market share lowers prices paid for organics and the resulting farm-gate price squeeze drives smaller producers out of business. Without government intervention, the value capture of organics will continue to shift from producers to retailers and organics will lose their contributive role regarding rural development.

For Lockie and Halpin (53), the debate on conventionalization centered on to what degree it was an inevitable phenomenon. In other words, is the California case as presented by Guthman (41) the ensuing model or is there room for social movement resistance and/or strong state-support to avoid the inevitable (42,63). Their research found no support for bifurcation and conventionalization regarding farm size, path to organics, or types of market channel. They did find some significant differences regarding motivations and
attitudes of organic farmers based on commodities and farm size. They found no
evidence of increasing polarization into expanding large operations and
marginal small operations; both types had plans to increase. The overall
expansion argument does fit the “agro-industrialization thesis” (39) but there
was no evidence that the smaller farms are being marginalized or that large
firms are recruiting conventional producers to convert. Lockie and Halpin (53)
concluded that their research in Australia provides some support for the
conventionalization thesis but little regarding bifurcation, thereby casting at
least some doubt on the conventionalization thesis.

Research from Texas (20,21) provided mixed support for the
conventionalization thesis. Constance and associates found that certified and
non-certified organic producers did often align with the predicted bifurcation
types. While both groups exhibited similar and strong ideological support for
organics, the certified producers tended to be larger, have a more economic
orientation, and focus on indirect markets. Their study of pragmatic
conventional producers found that the conventional producers that are
interested in organics were often more similar to organic producers in their
philosophical orientations, but more similar to conventional producers in their
structural characteristics and economic attitudes. Furthermore, these pragmatic
conventional producers reported high levels of “unsure” on most all of the attitudinal
issues related to production, marketing, information, and certification, which
highlights significant barriers to adoption, and therefore limited the kinds of
entry that drives conventionalization.

Best’s (5) research in Germany found some support for conventionalization.
The newer organic farms tended to be larger and more specialized, with a
growing proportion of the organic farmers who do not share pro-environmental
attitudes. He found a trend toward less diversified organic farms and away from
traditional organic marketing channels. Since 2000, several large and highly
specialized livestock and poultry farms had entered the organic market. Like
other authors, Best argues that the California case may be unique and care
should be taken in trying to generalize the California model to other regions or
countries.

Guptill’s (36) research on the dairy industry in New York revealed mixed
support for the conventionalization thesis. She found that government
regulations supported the commodification and conventionalization of organic
milk and the cost-price squeeze has accelerated in recent years as major firms
expanded into to market. She also found that in response to conventionalization,
many organic producers embraced the movement aspects of organic through
deeper commitment to local sourcing and a value-driven lifestyle.

**Sociology of Commodity Chains**

The discussion on the social dimensions of organics needs to be contexted
within the larger discourse on the sociology of agriculture and food, in particular
the relationship between the structure of agriculture and the quality of life in
rural communities. The sociology of agrifood literature often employs a
commodity systems or commodity chain methodology to analyze trends in the
food system and the relationships among actors along the supply chain
(18,26,30,31). There are several kinds of supply chains, also called commodity
chains and/or value chains. Global commodity chains are often long chains that
deal in undifferentiated commodities in indirect markets. These chains tend to
be characterized by unequal power where corporations drive the chain and
capture more of the profits (7,25,27,43,44). McMichael (62) calls this “Food
from Nowhere.” Global value chains are problematic sociologically in that they
tend to externalize social, economic, and ecological costs (18).

Fair Trade value chains (67) tend to be built on a cooperative philosophy that
encourages transparency along the chain and the reduction of the middle-man
functions in an effort to transfer wealth from the corporations to the producers.
Local value chains tend to be based on direct sales, smaller scale, and
community embeddedness. These types of value chains are more likely to
support the ecological, economic, and social dimensions of sustainability
(44,58,59). CSAs, farmers’ markets, and farm to institution value chains are some examples. Agriculture in the Middle (60) value chains focus on operations that are too large for direct sales and too small to compete in global commodity markets. They propose the development of regional fair trade value chains as a mechanism to support sustainable rural development by repopulating rural areas with moderate-sized operations.

Sociologically, these trends are embedded within the larger discussion of the globalization of the agrifood system (18). From a regimes perspective (7,29,62), organics fit well within Friedmann’s (28) Corporate-Environmental Regime. At various levels, countries and companies are mobilizing to enter the growing organics market and capture the green premium. The premiums will shrink with increased consolidation at the production and sales level, and inefficient actors will leave the market (70). As the global organic industry matures and the global retailers increasingly drive the chains (7), the global comparative advantage for organics will emerge and some regions will benefit as others lose out.

A useful framework to interpret these phenomena is “Four Questions in Agrifood Studies” (18). The first question is the “Environmental Question” which asks: “What is the relationship between the quality of the environment and modern agriculture?” The environmental dimension of modern agriculture was the first to reach critical mass, generate a movement critical of reductionist science and chemical monoculture, and produce legislation (SCS, EPA, SARE, NOP) to address the externalities. Organics are the most far reaching of these programs as the certified organic label reaches beyond national borders and gatekeeps the huge US market, but it also drives the global conventionalization of organics.

The second question is the “Agrarian Question” which asks: “What is the relationship between the structure of modern agriculture and the quality of life in rural communities” (12). The topics of conventionalization and bifurcation speak to this question. Both the theory and evidence indicate that the trend in organics is toward less sustainability if conventionalization and global value chains emerge as the dominant model and producers become low-cost input providers to transnational corporations.

Future of Organics

The social dimensions of organics are embedded within the broader relationships of the agrifood system. During the early period, organics were based on local and regional systems dominated by direct sales and an anti-industrial philosophy. The commodity chains were local and regional as opposed to national and global. The NOP rule focuses on farming practices, rather than scale or quality of life issues. As a result, the environmental quality improves, but not so the social and economic dynamics. We should keep in mind the great rural sociologist Fred Buttel (11) who warned us of the uncanny ability of the conventional agricultural system to sustain the unsustainable.

If conventionalization proceeds as theorized, and not all researchers agree, then the vast majority of the organic foods sold in the major supermarkets will be sourced through global commodity chains, increasingly as less differentiated commodities. In this agrifood system based on global commodity chains, labor relations, concentrated markets, short-term contracts, and money leaving the community remains the same as in the conventional system characterized by a race to bottom (62) and vertical linkages that send the profits out of the community (31). The early hopes for organics as a source of transformative change grounded in agrarian values gives way to incremental improvements in the ecological externalities of conventional agriculture grounded in industrial values (65,71). More research is needed to further reveal the patterns of conventionalization and bifurcation, as well as comparative research on the relationship between the type of value chain and community quality of life.

For Beck (4) and Thompson (71), deeper reflection regarding the negative externalities of the conventional agrifood systems combined with visioning what a truly sustainable alternative agrifood system would entail is required to bring about transformative change grounded in agrarian values. The alternative
agrifood system made up of CSAs, farmers’ markets, farm to institution, food
sheds, food circles, Ag in the Middle, organics, food policy councils, urban
agriculture, community gardens, and cooperatives is more likely to create
horizontal linkages that keep money in the community and build social capital,
because they are embedded in community (44,58,60). This system is more likely
to be based on participatory research methods and holistic conceptual
frameworks with a transformative agenda (65).

From a rural social sciences perspective, Lyson’s (58) “Civic Agriculture” is a
good model to vision and relink agriculture and community: “Food from
Somewhere” (62) grounded in an agrarian perspective (71). The Appalachia
Sustainable Agriculture Project is a valuable example of this model in action (3).
Regional fair trade value chains from Ag in the Middle are also useful (60). The
region is probably the appropriate unit of analysis for the development of
sustainable agrifood systems (49).

In conclusion, organics provide an interesting case for looking at the
ecological, social, and economic dimensions of an agricultural system. It reveals
notable successes and future challenges. New labels, standards, and metrics are
exploding, as part of a “beyond organics” push by the movement and the
agrifood industry (19). Governance seems to be replacing government as the
regulating function (8). Through persistence, the alternative agriculture
movement has secured and implemented important policies and programs that
increase the sustainability of US agriculture, and it needs to be ready to
intervene in the process again as the opportunity presents itself. The
USDA/NOP has positive and important functions to continue to carry out such
as protect the integrity of the label and oversee adjustments to the NOP
standards with transparency and legitimacy.

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