COMING IN TO THE FOODSHED

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ABSTRACT Bioregionalists have championed the utility of the concept of the watershed as an organizing framework for thought and action directed to understanding and implementing appropriate and respectful human interaction with particular pieces of land. In a creative analogue to the watershed, permaculturist Arthur Getz has recently introduced the term "foodshed" to facilitate critical thought about where our food is coming from and how it is getting to us. We find the "foodshed" to be a particularly rich and evocative metaphor; but it is much more than metaphor. Like its analogue the watershed, the foodshed can serve us as a conceptual and methodological unit of analysis that provides a frame for action as well as thought. Food comes to most of us now through a global food system which is destructive of both natural and social communities. In this article we explore a variety of routes for the conceptual and practical elaboration of the foodshed. While corporations which are the principal beneficiaries of a global food system now dominate the production, processing, distribution, and consumption of food, alternatives are emerging which together could form the basis for foodshed development. Just as many farmers are recognizing the social and environmental advantages to sustainable agriculture, so are many consumers coming to appreciate the benefits of fresh and sustainably produced food. Such producers and consumers are being linked through such innovative arrangements as community supported agriculture and farmers markets. Alternative producers, alternative consumers, and alternative small entrepreneurs are rediscovering community and finding common ground in municipal and community food councils. Recognition of one's residence within a foodshed can confer a sense of connection and responsibility to a particular locality. The foodshed can provide a place for us to ground ourselves in the biological and social realities of living on the land and from the land in a place that we can call home, a place to which we are or can become native.

> ...to draw in our economic boundaries and shorten our supply lines so as to permit us literally to know where we are economically. The closer we live to the ground that we live from, the more we will know about our economic life; the more we know about our economic life, the more able we will be to take responsibility for it.
>
> Wendell Berry (1992: 35)

For virtually everyone in the North and for many in the South, to eat is to participate in a truly global food system. In any supermarket here in Madison, Wisconsin, we can find tomatoes from Mexico, grapes from Chile, lettuce from California, apples from New Zealand. And, in what we take to be an indicator of a developing slippage between the terms "sustainable" and "organic," we can even buy organic blackberries from Guatemala (which may be organically produced but in all likelihood are not sustainably produced if the term sustainable is understood to encompass more than on-farm production practices and any reasonable element of social justice). We cannot, however, count on finding Wisconsin-grown tomatoes, grapes, lettuce, strawberries, or apples in any supermarket in Madison, even when those crops are in season locally.

That food in the United States travels an average of 1300 miles and changes hands half a dozen times before it is consumed (The Packer, 1992) is deeply problematic. What is eaten by the great majority of North Americans comes from a global everywhere, yet from nowhere that they know in particular. The distance from which their food comes represents their separation from the knowledge of how and by whom what they consume is produced, processed, and transported. If the production, processing, and transport of what they eat is destructive of the land and of human community--as it very often is--how can they understand the implications of their own participation in the global food system when those processes are located elsewhere and so are obscured from them? How can they act responsibly and effectively for change if they do not understand how the food system works and their own role within it?

Recognizing the ecological and social destructiveness of the globally-based food system, a variety of analysts have suggested an alternative founded on respect for the integrity of particular socio-geographic places (Berry, 1992; Crouch, 1993; Dahlberg, 1993; Friedmann, 1993; Gussow, 1993; Herrin and Gussow, 1989; Kneen, 1989). Counterposed to the global food system in such analyses are self-reliant, locally or regionally based food systems comprised of diversified farms using sustainable practices to supply fresher, more nutritious foodstuffs to small-scale processors and consumers to whom producers are linked by the bonds of community as well as economy. The landscape is understood as part of that community and, as such, human activity is shaped to conform to knowledge and experience of what the natural characteristics of that place do or do not permit.

We find this vision of people living well and responsibly with each other and with the land on which they are *placed* to be deeply appealing. In our effort to work toward realization of that vision, we have found the notion of the "foodshed" to be particularly useful in helping us to analyze the existing food system, to imagine the shapes an alternative might take, and to guide our actions. It is our purpose in this essay to elaborate and extend that concept and to share our initial understandings of its utility.

The term "foodshed" was coined as early as 1929 (Hedden, 1929), but we were introduced to it by an encounter with the article, "Urban Foodsheds," written by Arthur Getz (1991). The idea of a foodshed immediately triggered a wide range of unexpected insights and evocative associations. The intrinsic appeal the term had and continues to have for us derives in part from its relationship to the rich and well-established concept of the watershed. How better to grasp the shape and the unity of something as complex as a food system than to graphically imagine the flow of food into a particular place? Moreover, the replacement of "water" with "food" does something very important: it connects the cultural ("food") to the natural ("...shed"). The term "foodshed" thus becomes a unifying and organizing metaphor for conceptual development that starts from a premise of the unity of place and people, of nature and society.

However, the most attractive attribute of the idea of the "foodshed" is that it provides a bridge from thinking to doing, from theory to action. Thinking in terms of foodsheds implies development of what we might call "foodshed analysis," the posing of particular kinds of questions and the gathering of particular types of information or data. And foodshed analysis ought in turn to foster change. Not only can the results of foodshed analysis be used to educate, we believe that the foodshed--no less than Gary Snyder's watershed (1992)--is a place for organizing. In this unstable, post-modern world, the foodshed can be one vehicle through which we reassemble our fragmented identities, reestablish community and become native not only to a place but to each other.

In expanding on these points we will be departing from Getz's usage in one very important way. Getz defines the foodshed as "the area that is defined by a structure of supply" and notes that "our most rudimentary map of a foodshed might cover the globe" (Getz, 1991: 26). We want to establish the analytic and normative distinction between the global food system that exists now and the multiplicity of local foodsheds that we hope will characterize the future. Since we give the term "foodshed" this normative meaning, "global foodshed" is for us an oxymoron. Within the existing food system there already exist alternative and oppositionalist elements that could be the building blocks for developing foodsheds: food policy councils, community supported agriculture, farmers markets, sustainable farmers, alternative consumers. We will use the term "foodshed" to refer to the elements and properties of that preferred, emergent alternative.

Where we are now: a global food system in a market economy

> There will be a road. It will not connect two points. It will connect all points. Its speed will be the speed of light. It will not go from here to there. There will be no more there. We will all only be here.
>
> Anna Paquin, for MCI (1993)

We are not the only ones who see the importance of becoming native to a place; the global communications firm MCI is working hard to promulgate its own version of "nativity." In a series of surreal but engaging television commercials for MCI, Oscar-winning child actress Anna Paquin describes the coming "information superhighway". For some, the fallacies in this technological cosmopolitanism may be apparent but the message must be powerfully appealing to

those who can afford (or hope to be able to afford) to plug in to the nowhere/everywhere of cyberspace and the possibility of instantaneous and limitless gratification that it purports to offer.

The tendency represented by the MCI commercial is already very well developed in the global economy generally and in agriculture and food systems in particular. While some now travel MCI's road connecting all points via computers on desks, a much larger proportion of the world's people already travel a global highway through the food on their breakfast or dinner tables. The global sourcing increasingly being practiced by transnational corporations has already resulted in the emergence of the "global steer" (Sanderson, 1986) as well as the "global car." Harriet Friedmann (1993: 221) identifies the principal dynamic in the world food economy as a move to "...distance and durability," the suppression of particularities of time and place in both agriculture and diets. No less than for MCI, the objective of the transnationals is to restructure this marvelously diverse world into a homogenous plain free of physical or social obstacles to the free flow of money and agricultural commodities.

How is it that the global "here" envisioned by MCI is already well on its way to realization in the area of food products? This process of "distancing" (Kneen, 1989) has been driven by the demands of a competitive market economy that, as Murray Bookchin (1986: 49) writes, "reduces the entire world of life, including humanity, to merchandisable objects, to mere commodities with price tags." Given historically inexpensive petroleum, the development of transportation technologies predicated on cheap oil, the mobility of capital, and the development of "controlled environment" production technologies, the food system has an increasingly global reach. Agribusiness tends to gravitate to areas where government intervention is minimal and wages are low (e.g., production of broccoli in Guatemala) or in which costs can be reduced through mechanization and increases in scale (e.g., confinement production of broiler chickens in Arkansas), or both (e.g., mechanized tomato production in Mexico).

Tropical and subtropical areas have an additional appeal for agribusiness in that their climates permit year round production of many crops which are subject to seasonal constraints in temperate regions. The preferences of retailers and processors for dealing with suppliers who can provide a consistent, year round flow of product tend to foreclose markets to local but seasonal producers. Ironically, the global food system is at once decentralized and centralized. It is decentralized inasmuch as production tends to be globally dispersed and any given food item is likely to have been grown and processed far from its point of consumption. The food system is centralized in the sense that any given agricultural product is grown in an increasingly limited number of areas on a decreasing number of farms, and is processed and retailed by a narrow set of transnational agribusinesses in which economic and political power are being progressively concentrated.

One of the most salient characteristics of the global food system is the economic and social "distancing" it creates and the wide variety of problems associated with it. Perhaps the most obvious problem is the amount of energy required to move agricultural and food products from field to table. But the extensive environmental costs associated with the recovery and combustion of fossil fuels are regarded largely as externalities in conventional accounting. Mistaking the price of energy for its true cost effectively subsidizes the concentration of

production in monocultures and confinement systems irrespective of their distance from consumers. Cheap energy further facilitates such concentration by lowering the cost of the fuel, fertilizers, pharmaceuticals, machinery, irrigation, packaging, and refrigeration so essential to industrial farming and food manufacture. Ubiquitous and over-intensive use of these inputs and technologies has resulted in widespread degradation of soil and water resources and in erosion of the health and vitality of our own and our fellow species (National Research Council, 1989) .

Nor does food itself escape the deleterious effects of distancing. If food products must travel 1300 miles before they are consumed, they must be sufficiently durable to withstand shipping. But durability and shelf-life are too often realized at the expense of palatability and nutritional content. The denatured, deflavored, industrial tomato is but the best known exemplar of a process that has affected many fruits and vegetables. Consumption even of such "fresh" produce has declined in favor of processed foods which depend on artificial colors, flavors, stabilizers, emulsifiers, sweeteners, and preservatives for their appeal. In what has been termed "substitutionism" (Goodman et al., 1987), farm products are increasingly being treated as chemical components for the manufacture of an enormous range of reconstituted foodstuffs whose provenance and composition are opaque to the consumer.

Besides these material and physical features, there are also important economic components to the phenomenon of distancing in the food system. Jim Hightower (1973) explicitly made the connection between the hard tomatoes and the hard times, between the growing power of corporate agribusiness and the decline of rural communities. The growing spatial separation of farms is paralleled by increasing economic distance as the "disappearing middle" of family farms leaves a dual structure of small operations and large producers. Whatever their size, farmers are ever more economically distant from consumers. Seventy five cents of every dollar spent on food goes to processors, packagers, shippers, advertisers and retailers. Most consumers have only the vaguest idea of where, how, and by whom the food they purchase was produced and handled. And some 14 percent of the U.S. population can be said to be radically distant from food inasmuch as they are poor and by definition possess inadequate resources to assure consistent access to food, whatever its source or characteristics (Ashman et al., 1993: 11). In perhaps the most troubling facet of the new global food order, whole regions or populations--especially in the Third World in places such as Chiapas and Nicaragua--may be effectively excluded from both production and consumption of food.

There is also a critical epistemological dimension to the phenomenon of distancing. The enormous market for machinery, pesticides and other inputs represents the degree to which farmers are now "thought for" (Berry, 1984: 28) by agribusiness. The kind of local knowledge and live, craft intelligence which is sensitive to the "expectations of the land" (Jackson et al., 1984) has all too often been replaced by the universalizing perspectives of agricultural science that are generated in the nowhere/everywhere of the laboratory and the experimental plot. But while even those farmers who are most profoundly committed to the technological domination of nature retain some direct knowledge of the land's limits, most consumers do not. Provided with an apparent cornucopia of continuously available foods, few consumers have much knowledge of the biological, social, or technical parameters and implications of food production in the global village.

Of course, much of the power of agribusiness ultimately depends on farmers and consumers not knowing. If we do not know, we do not act. And even if we do know, the physical and social distancing characteristic of the global food system may constrain our willingness to act when the locus of the needed action is distant or when we have no real sense of connection to the land or those on whose behalf we ought to act. Ultimately, distancing disempowers. Control passes to those who can act and are accustomed to act at a distance: the Philip Morrises, Monsantos, and ConAgras of the world.

Where are we, then? We are embedded in a global food system structured around a market economy which is geared to the proliferation of commodities and the destruction of the local. We are faced with transnational agribusinesses whose desire to extend and consolidate their global reach implies the homogenization of our food, our communities, and our landscapes. We live in a world in which we are ever more distant from each other and from the land, and so we are increasingly less responsible to each other and to the land. Where do we go from here? How can we come home again?

Where we would prefer to be: a foodshed in a moral economy

> "We of Mattapoisett are famous for our turtles and our geese. But our major proteins are plant proteins. Every region tries to be ownfed."
> "Own what?"
> "Ownfed. Self-sufficient as possible in proteins."
>
> Marge Piercy, Woman on the Edge of Time (1976: 70)

There can be no definitive blueprint for the construction of some preferred future. Accordingly, we offer the foodshed not as a manifesto but as a conceptual vocabulary, not as a doctrine to be followed but as a set of principles to be explored. Below, we set out five principles that seem particularly important to us. We do not claim that this set is either exhaustive or particularly original. We have drawn inspiration and insight from a wide variety of people whom we consider to be engaged--whether they know it or not--in what we are calling foodshed work. We invite others to join us in that work.

Moral economy

A foodshed will be embedded in a moral economy that envelopes and conditions market forces. The global food system now operates according to allegedly "natural" rules of efficiency, utility maximization, competitiveness and calculated self-interest. The historical extension of market relations has deeply eroded the obligations of mutuality, reciprocity, and equity which ought to characterize all elements of human interaction. Food production today is organized largely with the objective of producing a profit rather than with the purpose of feeding people. But human society has been and should remain more than a marketplace. E.P. Thompson (1966: 203) describes a "moral economy" as exchange "justified in relation to social or moral sanctions, as opposed to the operation of free market forces" (see also Bookchin 1986: 77-97; Scott, 1976). Wendell Berry (1993: 14) points to similar ethical precepts when he writes of the need for "social and ecological standards" to guide us toward the aims of human freedom, pleasure, and longevity. The term, moral economy, resonates for us and we use it here as a

provisional short-hand phrase for the re-embedding of food production primarily within human needs rather than within the economist's narrow "effective demand" (demand backed by ability to pay).

Adopting the perspective of the moral economy challenges us to view food as more than a commodity to be exchanged through a set of impersonal market relationships or a bundle of nutrients required to keep our bodies functioning. It permits us to see the centrality of food to human life as a powerful template around which to build non- or extra-market relationships between persons, social groups, and institutions who have been distanced from each other. The production and consumption of food could be the basis for the reinvigoration of familial, community, and civic culture. We are all too well aware of the difficulty that will be involved in realizing this most fundamental principle of the foodshed. Nevertheless, we are encouraged by such things as the emergence of Community Supported Agriculture (CSA)--"partnerships of mutual commitment" between farmers and consumers (Van En and Roth, 1993). CSA represents a concrete example of the real possibility of establishing economic exchanges conditioned by such things as pleasure, friendship, aesthetics, affection, loyalty, justice and reciprocity in addition to the factors of cost (not price) and quality.

The commensal community

Community Supported Agriculture also serves as an illustration of our expectation that the moral economy of a foodshed will be shaped and expressed principally through communities. In The Left Hand of Darkness, novelist Ursula Le Guin (1969) imagines a society whose basic social unit is the "Commensal Hearth." The word "commensal" (from the Latin mensa, table) refers to those who eat together, and the word "commensalism" is used in ecology to designate a relationship between two kinds of organisms in which one obtains food from the other without damaging it. We imagine foodsheds as commensal communities which encompass sustainable relationships both between people (those who eat together) and between people and the land (obtaining food without damage).

In human terms, building the commensal community means establishment or recovery of social linkages beyond atomistic market relationships through the production, exchange, processing, and consumption of food. Such social construction will occur among producers, between producers and consumers, and among consumers. Witness the recent proliferation of small-scale, cooperative and collective production and marketing strategies now being implemented by farmers to meet growing consumer interest in organic, locally grown, non-industrial food. Other examples of such non-market cooperation from the upper Midwest include the mutual assistance commitments made within associations of small-scale producers of specialty cheeses and the information and technology exchange that occurs through networks of farmers experimenting with the rotational grazing of dairy animals as an alternative to conventional, capital intensive, confinement milk production systems (Hassanein and Kloppenburg, 1995). With respect to new relationships between producers and consumers, emerging cooperative linkages between fresh vegetable growers and neighborhood restaurants and consumer coops parallel the birth of CSA and the revitalization of farmers markets (Waters, 1990; Hendrickson, 1994). Among consumers themselves, buying clubs, community gardens,

and changing food purchasing patterns reflect growing concern with the social, economic, ethical, environmental, health and cultural implications of how they eat.

While concrete precursors of what could conceivably become commensal communities are now visible, commitment to a moral economy requires that we work to make those communities as inclusive as possible. The sustainable agriculture movement has so far tended to be "farm-centric" (Allen and Sachs, 1991: 587) and has not yet seriously engaged issues of race, class and gender even within--much less outside of--rural areas. Hunger in the city is indeed an agricultural issue (Ashman et al., 1993; Clancy, 1993). The commensal community should confront and address the need not just for equitable access to food but also for broader participation in decision-making by marginalized or disempowered groups. That progress is possible is evidenced by the activities of the Hartford Food System which has made a priority of linking farmers directly to low income consumers (Winne, 1994) and by initiatives to foster the acceptance of food stamps at farmers markets. The "food policy councils" now being created in a variety of U.S. and Canadian cities are indicators of the plausibility of addressing foodshed issues by relating food affairs to such other fundamental community dimensions as economic development and nutrition and public health (Dahlberg, 1993; The Toronto Food Policy Council, 1993).

Finally, the standards of a commensal community require respect and affection for the land and for other species. It is through food that humanity's most intimate and essential connections to the earth and to other creatures are expressed and consummated. In the commensal community, production, processing, distribution, consumption, and waste disposal will be organized so as to protect and, where necessary, to regenerate the natural resource base. Responsible stewardship will involve sustainable cropping and humane livestock practices, reduced use of non-renewable energy sources, and a commitment to recycling and reuse.

Self-protection, secession and succession

The dominant dynamics of the global food system actively erode both moral economy and community. We agree with those who believe that this destructiveness is an inherent property of that system, and that what is needed is fundamental transformation rather than simple reform (e.g., Allen and Sachs, 1991; Berry, 1993; Friedmann, 1993; Orr, 1992). However, given the current dominance of the existing world food economy, people working toward foodshed objectives will need to carve out insulated spaces in which to maintain or create alternatives that will eventually bring substantive change. In opposition to the extension of the market system there have always been examples of what Friedmann (1993: 218) calls "movement(s) of self-protection." From the Luddites of nineteenth century Britain to the Zapatistas of contemporary Chiapas, there has been continuous refusal to submit without contest to the dictates of the globalizing food system. At the margins of consumer society and in the interstices between McDonald's and Monsanto and Philip Morris Cos., Inc., there are all manner of alternative producers and eaters--Amish, vegetarians, rotational graziers, seed savers, food coop members, perennial polyculturists, bioregionalists, home gardeners, biodynamicists--who are producing and reproducing a rich set of alternative agro-food possibilities.

What these diverse people and groups share is that their activities and commitments involve various degrees of disengagement from the existing food system and especially from the

narrow commodity and market relations on which it is based. We follow Wendell Berry (1993: 17-18) and David Orr (1992: 73) in our conviction that a fundamental principle of the foodshed is the need for "secession." The principle of secession is based on a strategic preference for withdrawing from and/or creating alternatives to the dominant system rather than challenging it directly. Certainly, there are many circumstances in which direct opposition to elements of the global food economy is appropriate and necessary (e.g., the situation in Chiapas, or the current manipulation of the Green Bay Cheese Exchange by such food corporations as Kraft and Pizza Hut). But another approach is "slowly hollowing out" (Orr, 1992:73) the structures of the global food system by reorganizing our own social and productive capacities. This is essentially what grazier groups are engaged in as they rediscover their own indigenous capacity for producing the knowledge they need to be "grass farmers" and as they withdraw from the agribusiness firms and agricultural scientists who had been doing their thinking for them (Hassanein and Kloppenburg 1995).

A second and corollary element is that of "succession," or the conscious and incremental transfer of resources and human commitments from old food-associated relationships and forms to new ones. Neither people nor institutions are generally willing or prepared to embrace radical change. The succession principle finds expression in a strategy of "slowly moving over" from the food system to the foodshed. Food presents people with hundreds of small opportunities to realistically take increasingly important steps away from the global market economy and toward the moral economy. An example is the consumer who decides not to purchase milk produced using recombinant bovine growth hormone (rBGH). While the motivation for that initial, simple step may be narrowly based on personal health considerations, the potential is there for making further connections. Once the link between rBGH and Monsanto is made the consumer may become aware of the corporate/chemical/food link more generally, and begin moving a progressively higher percentage of the household food budget into purchases from alternative food sources. Similarly, restaurants or schools may be encouraged to purchase more of their food supplies from local producer cooperatives as these foodshed alternatives generate capacity.

Proximity (locality and regionality)

There are key spatial components to the secession and succession dynamics which we see as characterizing the foodshed. If mitigation of the deleterious effects of distancing is one of the central challenges posed by the operation of the global food system, then greater attention to proximity--to that which is relatively near--should be an appropriate response. But apart from the principle of relative proximity, foodsheds will have no fixed or determinate boundaries. The extent of any particular foodshed will be a function of the shapes of multiple and overlapping features such as plant communities, soil types, ethnicities, cultural traditions, and culinary patterns. Hence, we identify proximity rather than locality or regionality per se as a fundamental principle of the foodshed. But though their precise boundaries will rarely be sharply defined, we insist that foodsheds are socially, economically, ethically and physically embedded in particular places.

We do not, however, imagine foodsheds as isolated, parochial entities. While they might be--in Marge Piercy's (1976) term--as "ownfed" as possible, we see them as self-reliant rather

than self-sufficient. Self-reliance implies the reduction of dependence on other places, but does not deny the desirability or necessity of external trade relationships (Friedmann, 1993: 228; Gussow, 1993: 14). For too long, however, trade in the global food economy has meant farmers selling low value commodities to distant markets and processors and the subsequent re importation of finished food products at high prices. In the foodshed, efforts would be made to increase the level of local and intra-regional food production, processing, and distribution and so to retain economic value and jobs. Since economic concentration is a prime engine of distancing, secessionist and successionist alternatives ought to be built around small and mid-sized enterprises (e.g., dairies, cheese factories, smithies, greenhouses, canneries, restaurants, specialty markets) capable of responding affirmatively to the opportunities and responsibilities of the emergent commensal community.

The self-reliance associated with proximity is closely linked to both social and environmental sustainability. A community which depends upon its human neighbors, neighboring lands, and native species to supply the majority of its needs must ensure that the social and natural resources it utilizes to fulfill those needs remain healthy. A consequence of proximate self-reliance is that social welfare, soil and water conservation, and energy efficiency become issues of immediate practical concern. For example, it is difficult for most city dwellers to be concerned about preserving farmland unless the destruction of farmland directly affects their food supply, or unless they know and care for the land being paved over. Awareness of and affection for one's place can forestall the ethical distancing so characteristic of the global food system. In the foodshed, collective responsibility for stewardship of people and of the land becomes a necessity rather than an optional virtue.

Nature as measure

We understand the foodshed to be a socio-geographic space: human activity embedded in the natural integument of a particular place. As such, those human activities are necessarily constrained in various ways by the characteristics of the place in question. Ignoring those natural constraints or overriding them with technology is one of the besetting sins of the global food system, the ecological destructiveness of which is now unambiguously apparent even to its apologists. In the foodshed, natural conditions would be taken not as an obstacle to be overcome but as a measure of limits to be respected.

While restraints on human activities will indeed often be required, to interpret natural parameters in terms of "deficiency" rather than "capacity" is to fail to transcend the conventional industrial mindset. Nature may be understood not just as a set of limits but as an exemplar of the possible, as an almanac of potential models for human conduct and action (Jackson, 1980; Orr, 1992: 33; Quinn, 1993). For example, from the perspective of the foodshed, one answer to Wendell Berry's (1987: 146) query, "What will nature help us do here?" points toward the development of regional palates based on "moving diets" of locally and seasonally available food. Who knows what lessons nature may offer us should we free ourselves to see its "capacity?" But these opportunities are by no means obvious. They must be discovered in intimate, extended conversation with the land. By acting with respect and affection for the natural world, we may begin to produce and eat in harmony with and within the rhythms and patterns of the places in which we live.

Thinking like a mountain: toward foodshed analysis

> By analogy, we may conceive of the flow of foodstuffs to consuming markets as determined by foodsheds. The barriers which deflect raindrops into one river basin rather than into another are natural land elevations, while the barriers which guide and control movements of foodstuffs are more often economic than physical.
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> W.P. Hedden, How Great Cities are Fed (1929: 17)

Ironically, much foodshed analysis will necessarily involve examination and explication of the structure and dynamics of the existing global food system. We are not as willing as Berry (1991) to frame thought and action strictly in terms of local epistemic and physical venues. The global food system exists and is a very powerful and dominating structure indeed. Secession--even for a group with as much solidarity as the Amish--can now be only partial and contingent. Emergent elements of what might become foodsheds are presently embedded in and often constrained by the rules, interests and operations of regional and global actors and institutions.

Aldo Leopold (1949: 129) suggested that we need to learn to "think like a mountain"; that is, to think ecologically, to engage the hidden and unlooked for connections among the elements of a system or between different levels of a system. Until and unless we know where we are in the larger social and political ecology of the global food system, we may not be able to move effectively toward realization of a foodshed locally. This does not mean we have to accept the demands of the global food system, but we must understand and realistically address the constraints it imposes if we are to identify the space it permits for secessionist activities or simple self-protection.

There is a danger, however, that in thinking too much like a mountain we may underestimate what is possible. The last decade has seen the emergence of a very sophisticated and interesting critical analysis of the global food system. We now have a pretty good idea of how the global steer is assembled and of the shape and historical dynamics of international food regimes all the way from Columbus to ConAgra (Bonanno et al., 1994; Friedmann, 1993; Goodman et al., 1987; Sanderson, 1986). But from the distance of historical perspective and through the abstraction of a global prism, agribusiness too often seems omnipotent in its power to reshape the world to its liking. We know all too little of the ways in which such restructuring was contested and of the alternatives to the global food system that were and are now being constructed. A tendency to focus on the activities of business rather than people, on problems rather than solutions, and on national/international rather than local/regional frameworks is shared generally by academic and popular analysts of food and agricultural issues. While the character and action of corporate power needs to be recognized and understood, we need to see that farmers, consumers, and local communities are not simply victims or pawns and that they are capable of resistance and regeneration (Barlett, 1993; Whatmore, 1994).

Foodshed analysis will not eschew engagement with issues at the national or even the global level. It will ask that this extra-local investigation serve the objective of framing the prospects for successfully implementing concrete initiatives or changes within a particular socio-geographic place. Foodshed analysis will involve investigation of the existing food system in order to inform strategic decisions regarding opportunities for self-protection and secession.

Such analysis should also involve the identification, celebration, and study of existing and emergent alternatives to the food system. Ultimately, foodshed work should seek to link such elements in a system of mutual support and integration with the objective of fostering emergence of a truly alternative system: the foodshed. While as a general rule it is good to think and act as proximately as we can, we must recognize that the appropriate and necessary locus of both thought and action in the foodshed may sometimes be regional, national, and even global.

Concretely, what would foodshed analysis entail? In simplest terms, it means answering Getz' basic question: "Where is our food coming from and how is it getting to us?" For us, a good part of the appeal of the term "foodshed" has to do with the graphic imagery it evokes: streams of foodstuffs running into a particular locality, their flow mediated by the features of both natural and social geography. Measuring the flow and direction of these tributaries and documenting the many quantitative and qualitative transformations that food undergoes as it moves through time and space toward consumption is the central methodological task of foodshed analysis.

What unit of analysis is appropriate for such study; what, after all, are the boundaries of a foodshed? What kinds of data/information ought to be collected? Answers to these questions will vary as a function of who is engaging in foodshed analysis and what their objectives and resources are. The foodshed is not a determinate thing, and so foodshed analysis will be similarly variable. It may involve collection of data on local exports of corn or the capacity of the local landfill, on the distribution of edible plant species or the patterns of human hunger, on the organization of harvest festivals or the composition of the County Board, on the content of school lunch menus or the forage preferences of dairy cows.

Foodshed analysis will be constructed not to conform to some predetermined theoretical and methodological framework, but will be constituted by the concrete activities of those who seek to learn about the food system in order to change it. Many such projects have been completed or are under way at a variety of levels. The "Cornucopia Project," organized by the Rodale Press in the 1980s, chose states as its unit of analysis and emphasized collection of aggregate state-level data suited to the Project's objective of raising the general public's awareness of the vulnerabilities of the national food system through state-specific reports and publicity (Rodale, 1982; Rural Wisconsin Cornucopia Task Force, 1982). Also at the state level, several studies by nutritionist have been undertaken in order to explore the parameters and implications for human health of sustainable, regional diets (Hamm, 1993; Herrin and Gussow, 1989).

Using cities as their sociogeographic framework, a variety of "food policy councils" have been created to address issues of sustainability and equity in the food system (Dahlberg, 1993; Hartford Food System, 1991; The Toronto Food Policy Council, 1993). The students and staff at several colleges have taken their own institutions as their basic unit of analysis and explored the rationale and mechanisms for getting commitments from their colleges to buy local food (Bakko and Woodwell, 1992; Valen, 1992). "Local food projects" at Hendrix College in Arkansas and Saint Olaf and Carleton Colleges in Minnesota were successful in reorienting food purchasing patterns to more proximate sources. The degree of resolution characteristic of the lens of foodshed analysis can become very fine-grained indeed. One of the most impressive and revealing analyses we have encountered is a self-study of a personal foodshed--"from gut to

ground" (Peterson, 1994)--which explores individual consumption and its implications for personal responsibility in the global food system.

An example of foodshed analysis that focuses on the urban poor is an initiative undertaken under the auspices of the Southern California Interfaith Hunger Coalition (IHC). The IHC's report, Seeds of Change: Strategies for Food Security for the Inner City, is an ambitious and finely realized effort to take an "integrated, whole-systems approach" to assessing the need and prospects for reforming the existing food system in a specific and delimited place (Ashman et al., 1993: v). The IHC document is also of interest because the research and analysis for the report was undertaken largely by students and faculty from the University of California-Los Angeles. Much criticism has been directed toward universities (and especially toward the Land Grant Colleges) for their subservience to industrial interests and their failure to orient knowledge production to local or regional needs. Seeds of Change is striking evidence that academics can work effectively with advocacy groups oriented to transformation of the food system.

Although few of those whose efforts we have described above think of what they do as "foodshed analysis," we feel they are moving in directions similar to ours. To the extent that these diverse projects and undertakings are complementary, they constitute a rich set of conceptual and methodological resources for thinking about and assessing the nature and structure of the global food system in which we are now embedded and for helping us to consider how and where we can realistically expect to make changes.

Conclusion: radical reformism

> ...directions for radical change emerge only through our attempts to make what one might have thought were merely reforms, and because 'mere reforms' have nevertheless created resources for those radical changes."
>
> Sandra Harding, The Science Question in Feminism (1986: 247)

It is apparent to increasing numbers of people that fundamental changes are needed in the global food system. Of course, we see that the question of food is simply a specific case of the general failure of Late Capitalism, or Post-Industrialism, or Post-Modernism, or whatever you wish to call this period of intense commodification and of accelerating distancing from each other and from the earth. We could equally well be calling for fundamental changes in the global health system, the global industrial system, the global political system, the global monetary system, or the global labor system. Ultimately, what sustainability requires of us is change in global society as a whole. We need the recovery and reconstitution of community generally, not simply in relation to food. But though we may be able to think like mountains, we must act as human beings. To begin the global task to which we are called, we need some particular place to begin, some particular place to stand, some particular place in which to initiate the small, reformist changes that we can only hope may some day become radically transformative.

We start with food. Given the centrality of food in our lives and its capacity to connect us materially and spiritually to each other and to the earth, we believe that it is a good place to start. We offer the term "foodshed" to encompass the physical, biological, social, and intellectual

components of the multidimensional space in which we live and eat. We understand the foodshed as a framework for both thought and action. If our use of the term has any virtue, perhaps it is to help people see the relatedness of apparently disparate elements, and to perceive the complementarity of different but parallel initiatives for change. We also think it is useful to make a clear semantic distinction between where we are now and where we wish to be in the future. Thinking and acting in terms of the foodshed is an indicator of our commitment to work not simply to reform the food system but to transcend that system entirely. And while a system can be anywhere, the foodshed is a continuous reminder that we are standing in a particular place; not anywhere, but here.

And we need to keep place firmly in our minds and beneath our feet as we talk and walk our way toward a transformed future. Because the path is long and because we must build it as we go--the foodshed offers a project, not a blueprint--our actions will be "slow small adjustments in response to questions asked by a particular place" (Berry 1990: 121). We share David Orr's (1992: 1) hope for "a rejuvenation of civic culture and the rise of an ecologically literate and ecologically competent citizenry who understand global issues, but who also know how to live well in their places." If we are to become native to our places, the foodshed is one way of envisioning that beloved country.

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