Campus Sustainable Food Projects: Critique and Engagement

Peggy F. Barlett

ABSTRACT Campus sustainable food projects recently have expanded rapidly. A review of four components—purchasing goals, academic programs, direct marketing, and experiential learning—shows both intent and capacity to contribute to transformational change toward an alternative food system. The published rationales for campus projects and specific purchasing guidelines join curricular and cocurricular activities to evaluate, disseminate, and legitimize environmental, economic, social justice, and health concerns about conventional food. Emerging new metrics of food service practices mark a potential shift from rhetoric to market clout, and experiential learning builds new coalitions and can reshape relations with food and place. Campus projects are relatively new and their resilience is not assured, but leading projects have had regional, state, and national impact. The emergence of sustainability rankings in higher education and contract-based compliance around purchasing goals suggests that if support continues, higher education's leadership can extend to the broader agrifood system. [*food, sustainability, higher education, alternative food systems, agricultural anthropology*]

RESUMEN Proyectos universitarios de sostenabilidad agro-alimentaria crecen rápidamente. Examinación de cuatro componentes—objetivos de compra, programas académicos, mercado directo, y aprendizaje experiencial—muestra ambos el intento y la capacidad a contribuir a un cambio transformacional hacia un sistema alternativo. Las exposiciones publicadas y objectivos específicos de compra participan con las actividades curriculares para evaluar, difundir, y legitimar cuestiones del ambiente, el desarollo económico, la justicia, y el salud que provoca el sistema alimentaria convencional. Nuevas métricas de prácticas de servicio alimentario indican un cambio entre declaraciones a un impacto mercadario. Aprendizaje experiencial soporta nuevas alianzas sociales y reestructura relaciones profundas con alimento y lugar. Projectos universitarios/campus son todavía nuevos, y su resalto no asegurado, pero ejemplos notables han tenido impactos regionales y nacionales. Sistemas de clasificación de sostenabilidad y contratos corporativos que exigen nuevos modelos de compras alimentarias indican que el liderazgo universitario, si apoyado, extendería al sistema amplia agro-alimentario.

Sustainable food initiatives have expanded rapidly in higher education in North America, joining green building, energy, water, and waste as foci of campus sustainability efforts. Changes in dining-service procurement toward sustainable sources began at a handful of leading schools where students, faculty, or staff were concerned about the harmful impacts of the conventional agrifood system. Urgent issues in water and air pollution, public health, and worker justice led to calls for changes in food provisioning to include social and environmental dimensions as well as economic criteria (Fricker 2006; Grey 2000; Hamm 2008). As campus audits show that food production and transportation are major greenhouse gas contributors, over 676 institutions have now signed on to the American College and University Presidents Climate Commitment, representing a second wave of interest in a more local and sustainable food system.

Campus projects contribute to civic agriculture, which includes the restoration of local foodsheds, strengthening

AMERICAN ANTHROPOLOGIST, Vol. 113, Issue 1, pp. 101–115, ISSN 0002-7294 online ISSN 1548-1433. DOI: 10.1111/j.1548-1433.2010.01309.x

of farmer–consumer ties, and values-based food chains that make more transparent the impacts of production, distribution, and consumption (Hassanein 2008; Lyson 2004). Academic engagements with sustainability and food have led the way on some campuses, and community gardens and farmers markets add experiential learning about sustainable food to college and university life.[1] Food can be a strong location for campus sustainability efforts because of its economic clout, corporate connections, and emotional resonance with family traditions, place, and identity (Gibson-Graham 2006).

Scholars and food activists debate, however, whether the development of an alternative food chain is sufficient to address the serious challenges of the conventional food system; critics doubt the political impact and transformational capacity of campus projects (DuPuis et al. 2006; Friedland 2008; Hess 2009). In light of higher education's pivotal role in other social movements including disinvestment efforts in South Africa, I argue that campus food projects can begin as incubators, pioneering new nodes in an alternative food chain for local regions (Hassanein 2003, Stevenson et al. 2007). They also evaluate, disseminate, and legitimize critiques of the conventional food system, both inside the classroom and in cocurricular activities. With attention to clear goals, timetables, accountability, and transparency, campus food initiatives can go beyond demonstration projects and public education to have significant political and economic impact on the agrifood system.

Commitments to new food sourcing have broadened and gained traction with national networks and contractual relations with food service providers. Leaders from higher education have also played a role in local and national political efforts toward sustainable food. At present, many campus projects are at an early stage and have yet to achieve major or lasting results. Critiques are limited in scope, and implementation challenges are substantial. At the same time, experiential learning in farms and farmers markets deepens connection to place, integrates values beyond those embedded in the conventional food system, and fosters new ethical choices, both for dining services and campus participants. A broadened view of the act of eating draws together new campus coalitions with impacts on behavior and identity and with potential for future political action. As colleges and universities of many types begin to create food projects, this is a critical moment for academic engagement with food.

There are four common components of campus sustainable food projects:

1. dining-service innovations in procurement, menus, and kitchen operations;
2. academic and co-curricular programs, including courses, concentrations, and internships;
3. direct-marketing opportunities, including farmers markets and community supported agriculture (CSAs);
4. hands-on experiences in community gardens and campus farms.

Most institutions begin with one or two of these components; developing all four is still relatively rare. Actors and political contexts are highly variable, reflecting particular economic, political, and administrative opportunities at each school and region. Students have taken the lead on many campuses, but faculty and administrative involvement is essential for continuity and contractual compliance. Formal commitments to sustainable food have sometimes been led by one professor or administrator but often thrive where a coalition exists. Sometimes a grant or donor is key. Increasingly, food service directors or staff are the innovators, with or without classroom connections or student support. There seems to be no common pattern in how campus projects begin or gain traction.

Why have sustainable food initiatives appeared now? Although some campuses have supported such efforts for several decades, Molly Anderson (2008) argues that the cracks in the industrial food system are wider and more visible now, with health threats in produce, meat, and processed products. Concerns about global climate change are linked to desires to reduce greenhouse gas emissions. Growing awareness that conventional food does not taste as good as fresh, local food joins aesthetic celebration of local foodways to create shifts in consumer demand. In addition, in the words of one campus leader, "With all the money parents are paying for this education, they want to know their kids are eating chemical-free food" (conversation with author, November 3, 2005). This research was based on a sample of 30 colleges and universities, identified over a five-year period as innovators in sustainability and food efforts. In-person and telephone interviews with campus leaders, food service administrators and workers, nonprofit leaders, and scholars were supplemented by 19 campus visits, conference conversations, and review of many other schools' websites and reports. Experience as chair of Emory University's Sustainable Food Committee and as cocoordinator of the Atlanta Local Food Initiative offered grounded details for comparisons. Campus dining issues often involved confidential financial information and intense politics, and therefore some locales and sources of information must remain anonymous. Although there are important innovations in Canada, Europe, and elsewhere, this research focused mainly on the United States. The institutions are from all geographic regions, both public and private schools; one-third are liberal arts colleges, one-third are medium-sized universities, and one-third are large, research-focused schools. Table 1 shows the frequencies of the four food-project components.

CAN ALTERNATIVE FOOD SYSTEMS BE TRANSFORMATIVE?

Campus food projects build on the pioneering work of advocacy groups, farmers, and chefs who have critiqued the corporate agrifood system that emerged since World War II and who have laid the foundation for an alternative system (Allen and Brown 2006; Friedmann 1993; Kloppenburg et al. 1996). Attention to the environmental and social

TABLE 1. *Frequency of Components of Campus Sustainable Food Projects*

	Purchasing goals and guidelines	Academic courses or programs	Direct marketing: Farmers' markets and CSAs	Experiential learning in campus farms or community gardens
Small liberal arts colleges ($n = 10$)	6	6	7	9
Medium-sized universities ($n = 10$)	2	6	7	8
Large universities ($n = 10$)	6	8	8	8
Total ($n = 30$)	14	20	22	25
Percent of sample	47%	67%	73%	83%

impacts of the food system and the role of federal subsidies, protectionist measures, and corporate control supports a new triple bottom line of environmental, economic, and social issues connected to the paradigm of sustainability (Fricker 2006; Moberg 2005; Pollan 2006). Concepts of civic agriculture and food democracy articulate concern for social relations within regions and communities and the importance of personal ties between farmers and community members (DeLind 2002; Lyson 2004). (Re)developing long-term commitments to soil and to farm environments as a public trust, as well as to living wages and social justice for farmers and workers, returns to Karl Polanyi's central thesis that capitalism disembeds the economy from its social context (Hinrichs 2000; Kirschenmann 2008). Experiments in civic agriculture have created space for innovations that prove the feasibility of an alternative commodity chain to counter such claims as "organic agriculture is not possible in our region" or "paying a living wage will put food costs out of reach of urban consumers." Small trials that demonstrate the quality, cost, and impact of alternative production and distribution systems, such as rotational grazing or farmer cooperatives, pave the way for larger efforts (Hinrichs 2007).

George Stevenson and colleagues (2007) have distinguished three kinds of efforts around alternative food systems: builder, warrior, and weaver work. Builder work creates insulated spaces for the growth of new nodes, actors, and institutions in the food chain, and campus food projects can perform important builder work (Allen et al. 2003). Some critics, however, highlight the contrast between reformist food efforts and those with more transformative goals. To add, for instance, a farmers market to supplement local grocery store chains may leave the conventional food chain itself relatively untouched (DuPuis et al. 2006; Hassanein 2003). Is this simply a new niche, a different flavor of consumerism, without challenge to the fundamental patterns of production or consumption (Papavasiliou 2008:17)? For example, the introduction of organic food into Walmart may cater to the "lazy locavore," siphoning off those who are dissatisfied with conventional food, leaving little impact on corporate business-as-usual (DeLind 2009).

Warrior work involves efforts that challenge corporate practices with new constraints so that long-term environmental and social consequences are included in economic decision making in firm orientation (Allen et al. 2003; Stevenson et al. 2007). This transformative approach echoes Gus Speth's call for "a new operating system" for the global capitalist economy (Speth 2008). David Goodman and Melanie DuPuis (2002) argue that reflexive consumption can be a part of such warrior work, a new form of politics that critically engages the assumptions of the conventional food system.

William Friedland's (2008) analysis of the transformative potential of social movements, in contrast, emphasizes that dissatisfaction with the conventional food system and even a resistant stance to the actions of agrifood corporations are not sufficient to affect the lives of large numbers of people—his ultimate test for social significance. To be transformative, organizations must have the intent and capacity to make a broad impact. Examples are the Nestle infant formula boycott or the mobilization of protests that led to tighter U.S. Department of Agriculture (USDA) organic-certification rules. Smaller actions may "enroll new individuals in actor networks," but larger-scale impact is necessary to assess alternative food movements as transformational (Friedland 2008). Douglas Constance and others have also warned that as an alternative chain is developed and legitimized, the power of large corporations to co-opt it should not be underestimated (Constance et al. 2003; Grey 2000). Their work on the pork industry in Missouri showed that as voters were able to reregulate concentrated feeding operations (CAFOs), the concentrated swine industry then relocated to Texas, where such restrictions are not in place.

Weaver work, the third kind of effort around alternative agriculture, supports conceptual and strategic linkages between warriors and builders (Stevenson et al. 2007). Examples are the food policy councils emerging in many cities and changes in agricultural extension service focus toward sustainable agriculture. The broad coalition built by many alternative food systems unites diverse actors and "underscores the promise as a foundation for social change" (Allen et al.

2003:73; Hassanein 2003:81), although some scholars raise doubts that broad coalitions of interests and fragmented actors can be politically effective for long-term change (Buttel 1997; Charkiewicz 1998).

J. K. Gibson-Graham (2006) supports the view of weaver work as transformational, arguing that contemporary progressive social movements intertwine and reconfigure the individual and the institutional, the transformational and the reformist, the global and local. Reaffirming a previous stance that capitalism is not monolithic, Gibson-Graham (1996:71) points to variations in types of transactions and labor forms among family farms, corporate farms, "green firms," and cooperatives to challenge a simplified view of one dominant capitalist system of relations. As ostensibly capitalist firms engage in alternative ways of making decisions that are "inherently social," dimensions of ethical action can coexist and expand within capitalism.

Seeking a postcapitalist politics in renovated commitments to ethical action, Gibson-Graham draws attention to the role of affect, identity, and experiential place-based learning in social change. Here, Gibson-Graham builds on Harvey's perspective that transformational change begins with "tangible solidarities . . . patterns of social life organized in affective and knowable communities," which can then reach out across space to larger social solidarities (Allen et al. 2003:62). The sensual pleasures of food as well as the provision of farms, gardens, and farmers markets fit the call for "an open and experimental orientation to action" (Gibson-Graham 2006:196). A review of the emerging campus sustainable food projects around the country will assess evidence of intent and capacity for builder, warrior, and weaver work as well as the potential for institutional decision making to incorporate expanded values and for meaningful personal experiences to lay the groundwork for transformational change.

ASSESSING INTENT: RATIONALES FOR CAMPUS FOOD PROJECTS

Colleges and universities publicize institutional commitment to a sustainable food system through websites, internal reports, news releases, and educational materials. Each issue discussed or goal adopted describes or implies reservations about business as usual with regard to the environment, community development, social justice, and human health. Rarely is a vision of a sustainable local food system articulated in detail; usually aspects of the existing system are critiqued indirectly and positive steps celebrated. An example of a commitment to a broad sustainability paradigm is the Campus Sustainability Plan from the University of California (UC) Santa Barbara, in which the goal is to "create a local and organic closed loop food system by observing sustainability criteria for all food purchasing, preparation and service, cleaning, waste disposal, and purchase of equipment and supplies" (UC Santa Barbara 2008). Similarly, the University of New Hampshire's Food and Society Initiative says, "As a *Sustainable Food Community,* UNH is committed to being a model community in the state and region. . . . The mission . . . is to integrate ethics, science, technology, and policies of civic agriculture and community food security into the university's identity and practices" (University of New Hampshire Food and Society Initiative, Office of Sustainability 2010). In contrast, the Yale Sustainable Food Project emphasizes rebuilding connection to place: the initiative "fosters a culture that draws meaning and pleasure from connections among people, land and food" (Yale n.d.). Yale's purchasing guidelines highlight a critical stance: "Default sources of institutional dining . . . provide uniform quality and economies of scale at a cost to taste, nutrition, environmental health, and local communities" (Yale n.d.).

Environmental and Social Issues

Many schools address a narrower range of issues: of primary concern is global environmental health and especially greenhouse gas emissions resulting from the production and long-distance transport of food. Commitment to local food at Evergreen State, for example, supports the university's goal of campus climate neutrality by 2020. Other campuses' documents mention environmental issues, such as pesticide use, water pollution, and soil erosion, and introduce sustainability-related terms such as *the true cost of food* and *full-cost accounting.* Food processing increases energy intensity of food, and some schools encourage dining-service menus to shift toward more unprocessed foods. Purchases of heirloom varieties signal concern about preserving biodiversity and reducing corporate control of seed stocks. Articulating the harmful consequences of conventional farming practices also suggests an unwillingness to accept past governmental assurances about technology-driven food systems.

Commitment to buying meat, milk, vegetables, and fruits from nearby farmers expresses social, economic, and community concerns and injects ethical and social justice dimensions into decisions about food purchasing. The Berea College (n.d.) food service website articulates a desire to follow its "social conscience" as well as a "commitment to be affordable." "If we expect students to be thoughtful, ethical leaders, the college should set an example," argued Middlebury (n.d.) students in their 2004 campaign for fair trade, shade grown, and organic coffee. Eating seasonally is "the right thing to do" says Stanford Dining's website (n.d.).

By prioritizing sales to local independent farmers, several campus food leaders said their projects seek to ameliorate and even reverse the national trend to farm concentration, capital intensification, and contract production, although these issues are not commonly raised directly in project rationales. A few schools highlight farm labor injustices in the conventional system. The Sustainable Agriculture Research and Education Program at the UC Davis, for example, describes labor issues and community problems attributable to conventional farming, advocating for "socially just and safe employment that provides adequate wages, working conditions, health benefits, and chances for economic stability" for agricultural labor (UC Davis 1997).

Farmland preservation, one of Brown's goals, is articulated as a multifaceted argument, affecting farmers' economic lives, community vitality, and regional food security as well as general quality of life, environmental health issues, and preservation of biodiversity and greenspace (Hamilton 1999). Inherent in the argument is recognition of the harmful impacts of sprawl and a vision for different urban–rural land uses.

Fair trade goals, in contrast, seek to use the campus food dollar to benefit farmers and communities in other nations, replacing anonymous market relations with closer and more mutually beneficial ties between producers and consumers (Fridell 2007; Moberg 2005; Raynolds et al. 2007). The University of Wisconsin Oshkosh declared itself "the first U.S. Fair Trade University" (University of Wisconsin Oshkosh 2008), thus expanding an academic discussion of economic-development strategies to institutional decisions by administrators and purchasing agents. Rarely, however, does the embrace of fair trade include current debates on regulation and international governance in the fair trade commodity chain (Jaffee 2007; Lyon and Moberg 2009).

Health Issues

Another critical driver of the sustainable food movement has been the growing awareness that U.S. food habits are connected to poor health and that the next generation will probably see declining life expectancy (Wang and Brownell 2005). The Food for Health Initiative at UC Davis incorporates interdisciplinary attention to the study of obesity, nutrition, healthy food availability, organic farming, and industrial food production. In general, health and wellness language focuses on the welfare of the individual ("not in my body") and on food safety concerns (DuPuis 2000). Attention to expanding consumption of fruits and vegetables, lowered amounts of saturated and transfats, and reductions in processed foods are all part of a campus wellness focus. Food contamination and disease outbreaks have contributed to interest in food traceability and smaller-scale production. Also cited are concerns about hormone residues in food and waterways and antibiotic resistance linked to routine antibiotic administration in CAFOs. Although focused on individual health, the attention to such issues encodes a broader mistrust of government regulatory agencies to keep the food system safe.

Some campus food project rationales point to new research showing higher nutritional content of organic or sustainably grown foods—as well as improved taste—although claims are still controversial among conventional nutritionists and schools of agriculture. Scientific uncertainty has not stopped some schools from signaling their dissatisfaction with the conventional product: Brown University's dining service supports local purchases for "higher quality foods whenever and wherever possible" and to provide "fresher and healthier options" (Brown University, Brown Dining n.d.). Santa Barbara's dining service lists as its long-term goal "foods without additives, pesticides or preservatives" (UC Santa Barbara n.d.) and a Bowdoin leader argues that "local-grown is fresher, of higher quality, and nutritionally superior" (Scott 2005).

In sum, rationales for sustainable food projects review a range of environmental, social, community, and health concerns and reflect both a distrust of conventional food channels and support for alternatives. Although the rationales do not generally advocate national policy changes or explicit political goals, their transformational intent is clearly visible. The rationales of campus projects offer a platform for warrior work and legitimize consumer concerns that coalesce into specific political agendas, such as efforts to restrict routine antibiotic use in animal production or the "no CAFO" movement. Turning now to the extent to which the rhetoric of campus projects is translated into action, I explore evidence from dining services and kitchen operations, academic programs, direct marketing, and experiential components of campus food projects.

ASSESSING CAPACITY: DINING-SERVICE INNOVATION

Creating new supply chains for dining services presents some of the most complex challenges for campus food efforts. The Community Food Security Coalition (n.d.) cites over 155 institutions committed to local procurement in their "farm to college" list. A year-round effort to buy locally is often preceded by an "organic dinner" or "low-carbon meal" that stimulates awareness once or twice a year, often providing an opportunity to meet local farmers. At Gustavus Adolphus, the "locavore meal" shrouds the soda machines to carry the educational message (Perez 2008).

Goals and Purchasing Guidelines

The first step toward major impact in purchasing is the adoption of sustainable food purchasing goals and guidelines. Yale was one of the first schools to clarify their purchasing guidelines; this excerpt for meat and poultry purchases reveals trade-offs in sustainability goals for local sourcing, production methods, and scale of operations, expressed as preferences.

> Purchasing Guidelines, Yale University, Meat and Poultry (Yale n.d.)
>
> First Tier (ranked in order of preference)
>
> - Connecticut free-range/pasture-fed
> - Connecticut organic
> - Regional free-range/pasture-fed
> - Regional organic
> - Regional conventional (small-scale operation)
>
> Second Tier (ranked in order of preference)
>
> - U.S. free-range/pasture fed
> - U.S. organic (small/medium scale operation)
> - Conventional (small/medium-scale operation)
> - U.S. organic (large-scale operation)
> - U.S. conventional (large-scale operation)

Specific goals and metrics vary. Iowa State's goal is to source 35 percent of food on campus from organic, sustainable, or local farms, while Evergreen State seeks to grow its sustainable purchases at the rate of five percent a year with an estimated cost of $24,000 (Evergreen State 2008). A UC Santa Cruz report notes that nearly a quarter of its produce was organic in 2006–07, through an innovative arrangement with a local farmers' cooperative (UC Santa Cruz 2007). As part of a university-wide strategic planning process, Emory established a goal of "75% locally or sustainably grown by 2015" (Emory University n.d.). Some goals are simply stated as "percentage of produce" while others are based on the dollar value, a measure now part of Sustainability Tracking Assessment and Rating System (STARS) of the Association for Advancement of Sustainability in Higher Education (AASHE).

Criteria of Sustainable Food

Measurable goals require clarity about criteria for sustainable food, and college and university committees and policy makers vary widely in which issues draw their attention. Each criterion puts its own kind of pressure on the conventional system but may also represent more or less robust change.

Locally grown food. Many schools celebrate closer connections to nearby producers, emphasizing personal relations, accountability, and improved taste. The distance adopted for local food varies widely. A 50-mile radius, 150-miles, a day's drive, or the state boundary are various common measures of "local." Emory supports the revitalization of fruit and vegetable production throughout the eight Southeastern states with a two-tier goal of at least regionally grown and preferably Georgia grown. Some schools in less favorable climates, such as Vassar, emphasize local purchases of value-added "salsas, sides, and sauces," supporting local processors (AASHE 2007). Local purchases can offer a celebratory moment: when local apples appeared on one campus, "students ate three times as many of them" (Rappaport 2005).

Purchases from local farmers may not necessarily affect sustainable production practices, however, beyond reducing food miles; local growers may be large, conventional farms that contribute to the same environmental and social justice concerns that spawned the sustainable food movement (Feenstra 2002; Hinrichs 2003). Some programs address this issue directly: for example, the UC Santa Cruz Food Systems effort specifies local sourcing of produce purchases "from small, organic farm operations with commitments to social responsibility" and from "third party certified organic" (UC Santa Cruz n.d.). Although less precise, the Indiana University "Statement of Sustainability Principles" commits to "crops grown in a way to protect the health of the land, the water, the environment, and the consumer" (2008), reflecting a desire to invest in production alternatives. Stanford Dining lists Petaluma Poultry as its source for sustainably produced chicken, offering a level of transparency that allows for debate over this large-scale grower's specific farm practices (Pollan 2006).

Third-party certifications. Many schools embrace goals for certified organic food, sustainable seafood, or fair trade. Schools that embrace USDA-certified organic food emphasize the environmental benefits of reduced pesticide use but do not generally discuss concerns with large-scale industrial organic production (Guthman 2004). Sustainable seafood is a less common commitment. Princeton was an early adopter of the Monterrey Bay Aquarium Seafood Watch standards for all fish and seafood procurement on campus, and at one point Harvard reported its use of sustainable seafood by species. Stanford's commitment to sustainable seafood resulted from two years of deliberations: "Educated consumers who know where their food comes from create market pressure. This gives fishermen an incentive to adopt more sustainable techniques" (Liu 2007).

Certified fair trade products are a primary way that campuses seek to intervene in international food chains, but strong institutional goals for fair trade are rare. Some dining services are vague, claiming fair trade coffee is "offered" but do not specify the percentage sold. Expansion in fair trade purchases in one year has been noted on some campuses to quietly disappear in subsequent years. In one case, a food service supervisor refused to implement a student petition for fair trade coffee but was later overruled by an administrator. Clearly, monitoring total sales can clarify consistent progress toward campus goals.

Meat and dairy. Livestock production issues are part of purchasing guidelines in a growing but still small number of schools. A desire for purchases free of synthetic hormone supplements and routinely administered antibiotics is common, based on concerns both for human health and animal welfare. Certified grass-fed meats and humane treatment of animals are increasingly common goals, although working conditions in meat and dairy industries are invisible issues for the majority of institutions.

Cost and Accountability

Pace, scale, and cost of food service innovations vary widely. One small college shifted to organic cafeteria food in one year, at a 30 percent cost increase. Another major university phased in sustainable food procurement practices over nearly a decade, holding cost increases to a minimum. Students at one liberal arts college ran a campaign to reduce plate waste, intending to recoup funds to pay for more sustainable (but expensive) alternatives. Reducing menu choice or reducing frequency of expensive menu items are other strategies to reduce costs. Not all schools experience cost increases; said one purchasing agent, "Our local food initiative has generally saved us money while increasing quality" (conversation with author, November 3, 2005). Although higher costs for local, organic, or sustainably grown foods are regularly reported,

only 33 percent of the 146 institutions responding to the Community Food Security Coalition survey (n.d.) pass on cost differences to customers, as of 2010.

Published goals and clear metrics allow accountability and transparency—perhaps the most important steps toward major impact. Tensions have arisen as some faculty or administrators question the claims of contractees, and existing oversight processes have not yet adapted. "I just have doubts about [the food service]; they put a lot of propaganda around, but I'm not sure they're following through," said one faculty member (conversation with author, April 17, 2008). Another worried that claims to meet Farm to College goals were inflated by counting "grey areas" of sustainability criteria. Relatively few campuses carry out purchasing audits, but such tracking can shift policies from a preference to an enforceable part of food service contracts. Competition to excel in meeting sustainability goals has increased among the big three food service corporations: Aramark, Sodexo, and Chartwells–Bon Appetit. National headquarters provide signage and educational materials, but dependence on local supply can be challenging, especially if menus are set a year or more in advance.

Some schools have found progress with food service contractors too slow and have changed their corporate contractee to gain desired results (Friedmann 2007). Kenyon College, Yale, and UC Santa Cruz are examples of campuses where efforts to "green" the food system ended in a termination of contracts with corporate providers in favor of self-operated dining. Independent food service operation can allow for greater flexibility such as direct purchases from farmers with payment "at the back door" (rather than requiring 90-day invoicing) and farmer insurance requirements below the standard $5,000,000.

Supply Chains and Kitchen Practices

Sustainable food goals affect more than purchasing preferences: spin-off effects include new supply chain nodes, corporate practices, and kitchen operations. Tracking local and sustainable food challenges conventional distribution channels because some warehousing systems do not trace geographical source. One major distributor spent six months adapting its computer invoicing to add state source codes to track compliance at the behest of a university client. Several food service administrators expressed dissatisfaction with the reliability of national distribution chains to obtain or report local food. As a response, new local distributors who bulk small farmers' produce have appeared in some areas, generating spin-off jobs for the local economy. Kenyon College is one of several schools that addressed supply constraints by helping local businesses or cooperatives expand. The college obtained appropriate cuts of local beef by helping a grocer become a USDA-certified processing plant. Local middlepersons, however, still charge a percentage, and some farmers prefer direct sales. It remains to be seen whether price advantages to sustainable producers persist as supply grows, but new distribution channels can also offer greater market predictability and shelter fledgling operations.

Local supply of sustainable food is currently limited in many regions, and availability requires a revitalization of the regional farm economy. Several schools have created a forager position to find ways to support appropriate farm expansion; others work with the agricultural extension service. A number of food services now support a sustainability coordinator for dining; such reallocated resources and personnel signal the effort needed to support campus projects.

Sustainable food commitments also affect menu decisions and kitchen practices. Eating seasonally can lower food costs and support local purchasing, although some worry that reduced variety will be unpopular. Reducing the use of processed food shifts expenses to in-house kitchen preparation. Some schools engage in canning and freezing of fruits and vegetables in season to provide local products during the winter. At the University of Portland, for example, chefs make seasonal fruit butter and jams, preserving the harvest from local farmers for winter use. New-recipe development and culinary staff training for seasonal, vegetarian, and local menus with fresh foods reverses a decades-long process of kitchen deskilling through the use of processed and prepackaged foods. Kitchen job changes can be met with enthusiasm or resistance; some food service workers find added workloads burdensome, but others express satisfaction with contributing to greener practices and "really cooking again."

Certifications for green kitchen operations are beginning to shift expectations of good business practices. Stanford leaders express pride in becoming the first nationally certified Green Business University. Berkeley's first organic kitchen was certified in 2006, a process that involves dishwashing, food preparation, and pest control (Greensfelder 2006). Green Seal and local green business programs offer certifications, and campus support for fledgling certifications has demonstration effects for local business. Such efforts blur the lines between builder, warrior, and weaver work. In addition, closing the loop of resource use in waste, composting, and recycling often has positive financial payoffs that motivate further innovation.

Capacity for Food-System Impact

"Colleges and universities are leading the sustainable food movement and have been for a while," said Roberta Anderson of the Food Alliance (personal communication, June 8, 2010). One effort emerging from that leadership is the Real Food Challenge network in which over 330 schools are committed to at least 20 percent of purchases sustainably raised, grown with fairness, and from local and regional farms by 2020 (Real Food Challenge n.d.). The UC system has also incorporated clear social and environmental concerns in its 2009 sustainability policy for food. All universities, colleges, community colleges, and hospitals in the UC system are asked to track and report progress in meeting

the following criteria, with a goal of reaching 20 percent by 2020:

- Locally Grown
- Fair trade Certified
- Domestic Fair trade Certified
- Shade-Grown or Bird Friendly Coffee
- Rainforest Alliance Certified
- Food Alliance Certified
- USDA Organic
- AGA Grassfed
- Pasture Raised
- Grass-finished or 100 percent Grassfed
- Certified Humane Raised and Handled
- Cage Free
- Protected Harvest Certified
- Marine Stewardship Council
- Seafood Watch Guide "Best Choices" or "Good Alternatives"
- Farm or business is a cooperative or has profit sharing with all employees
- Farm or business's social responsibility policy includes (1) union or prevailing wages, (2) transportation or housing support or both, and (3) health care benefits
- Other criteria can be proposed.

Franchise operations, beverage companies, and other corporate partners are not exempt from the UC goals, and green kitchen certifications are encouraged. Tim Galarneau of the Center for Agroecology and Sustainable Food Systems at Santa Cruz estimates that the UC schools and hospitals have a combined food budget of $88 million a year, and if they meet the goals of the Real Food Challenge, by 2020 between $20 and $25 million in purchases will have shifted to more sustainable sources (personal communication, July 26, 2010). Alan Moloney, director of strategic sourcing in the UC Office of the President, indicates that as franchises and other retail locations under contract are included in the sustainability goals, the impact over time could be greater still (personal communication, July 27, 2010). Although colleges and universities are only a small component of total U.S. retail and restaurant food-and-beverage sales, institutional food sales in schools, hospitals, and prisons combined total almost $70 billion, and sustainability efforts are underway in some states in all those arenas (Brown and McNulty 2006:2). Higher education's leadership has the potential to affect many links in the conventional food chain. Whether the potential impact will be realized and spread beyond institutional purchasing will depend on the persistence of actors and groups at many levels.

The evidence of new kitchen certifications, new job descriptions, distribution nodes, and more seasonal menus suggests that sustainable food projects have begun to encourage the incorporation of social and environmental criteria into conventional food service business operations, as Gibson-Graham has suggested is possible. The efforts of one institution to create new distribution and supply chain nodes can enable many more in the area to enact sustainable purchasing at lower costs. If campus leadership enforces goals and if school rankings on green practices continue to gain a foothold, local efforts can stimulate new "business models" for institutional food provision.

Resilience of Sustainable Food Innovations

Early adopters of any innovation experience higher levels of risk, and within a complex international food system, an important question is the durability of innovation. Hendrix College in Arkansas was famous for its path-breaking program of relationships with local farmers in the 1980s, led by an administrative champion, Gary Valen (Valen 1992). Begun in 1986 as part of a student wellness effort, Hendrix's in-state purchases peaked at 30 percent, without cost increases. Dining-hall meals became famous with even townsfolk coming to eat there. Menus identified food origins, and a steady beat of informational articles in campus papers fostered a culture of food awareness.

By 2008, a number of shifts had occurred. Valen and other administrators had left, and the college's recruitment focus shifted away from environmental concerns. Mike Flory, the dining-services director, affirms that considerable local buying still occurs but without much publicity. Students are less interested today: "Our student body *wants* strawberries in January." The farmer cooperatives established in the 1980s are no longer viable, local produce availability is not always in sync with the season of demand, and the ungraded local product available is difficult to work with. Food service personnel recount that the local broccoli had bugs; "there was screaming at the salad bar" (conversation with author, April 8, 2008).

Hendrix built its local food movement on a new group of "second-career" farmers in the area, and a grant funded a forager-coordinator for recruit local suppliers. When the grant ended, the position was not renewed. Most of the original cohort of local farmers has now retired, and relations with the subsequent cohort have been less successful. "We used to buy eggs from down the road," but the farm burned and is not yet back in production. In one case, the college helped a farmer expand his meatpacking plant, but he "got big and was bought out by a local corporation" (conversation with author, April 8, 2008). That corporation, in turn, was bought by a conglomerate that then closed down the plant. Even in a rural region that experiences significant economic development from the campus project, the Hendrix story cautions that changes within the institution, pressures of the national agrifood system, and the vulnerabilities of small producers present significant challenges for continuity. Other experiences in small, rural schools, such as Berea and Warren Wilson, have been more resilient, and as many schools in a region attempt such changes, long-term continuity may be easier.

ACADEMIC COMPONENTS, DIRECT MARKETING, AND EXPERIENTIAL ENGAGEMENT

Intent and capacity to foster cultural change can be seen in both academic programs and experiential learning in sustainable food projects. Student interest has fostered new courses, concentrations, and even a new Ph.D. program (the Anthropology of Food at Indiana University). At Ivy League Yale, the Food and Agriculture concentration began in 2007 with 22 courses in 20 disciplines. Curricular innovations tend to focus either on production issues, both domestic and international, or on consumption issues, such as foodways, cuisine, or health–diet issues. The warrior work of critical analysis of the conventional food system is also supported by extensive research to measure energy costs, health impacts, and international comparisons.

Schools vary in the extent to which issues of sustainable food are connected to formal academics. UC Santa Cruz is one of the few schools that foregrounds both "academic and experiential learning about local and global food systems" (UC Santa Cruz 2007), and UC Santa Barbara's mission is unique in joining visual and performing arts to classroom instruction and service learning (UC Santa Barbara 2008). Together with popular books and movies such as *The Omnivore's Dilemma* (Pollan 2006), *Animal, Vegetable, Miracle* (Kingsolver with Hopp and Kingsolver 2007), and *Food, Inc.* (Schlosser 2008), academic food programs add legitimacy, building public awareness and fostering the emergence of "food citizenship" (Kloppenburg and Hassanein 2006:420). Cocurricular activities such as farm tours and Slow Food chapters can unite constituencies on and off campus, contributing to weaver work.

The momentum for Kenyon College's "Food for Thought" initiative, for example, was initially academic, emerging from a public humanities project in the early 1990s on family farming and community life in central Ohio. Growing public concern over sprawl from Columbus resulted in a long-range plan to preserve rural character, and Kenyon's Rural Life Center proposed Food for Thought as a broad-based initiative to build a countywide sustainable local food system. Kenyon began local food purchasing, in part, to develop a model for other area institutions. An academic component with dining-hall presentations, farm internships, and student research on the regional food system today is joined by over two dozen courses in a special listing in the course catalog. Students contribute to the public initiative with projects designed to raise consciousness about local foods; one developed a statewide farm-to-school guide for the Ohio Department of Agriculture. Food for Thought has also strengthened sustainability awareness through a deeper connection with place. One faculty member recounted how a student driving with friends "was telling them about the crops they were seeing and what was going on in the fields and why [the farmers] hadn't harvested yet. The student was absolutely delighted. To me, that's sense of place. It's absolutely essential" (conversation with author, November 10, 2006).

Direct marketing narrows the information gap between consumers and producers, allowing ethical choices and putting "the farmer's face on the food" (Drake University 2003). Farmers markets have emerged rapidly across the country in schools as diverse as Clemson, Princeton, and University of Utah, although they do not always thrive immediately. An alumna of Brown spent three years building momentum for a market; one strategy was to distribute free local apples through campus offices, using the taste difference to lure buyers downstairs. Civic agriculture (Lyson 2004) also encourages CSAs, and schools sometimes provide refrigerated space, facilitate drop-off of weekly shares, or offer membership information. At North Carolina State Greensboro, students and other university members made possible a farmers market and a CSA that benefited both the campus community and the surrounding neighborhoods by facilitating the purchase and delivery of CSA shares to low-income households (Andreatta 2005).

Community gardens and farms offer experiential learning that teaches sustainable growing practices but can also be transformative in new careers and orientations to food and place. Campuses provide land, water, and tool storage, and enthusiastic gardeners are drawn from students, faculty, staff, and sometimes community members. A portion of produce is occasionally donated to a local food bank or incorporated into dining service meals (Hassanein 2008). Well beyond the impact on the small number of students involved, gardens and farms stimulate awareness of seasons and local ecosystems. At Emory, each day thousands walk past several small food gardens, and hundreds have expressed their delight to garden team members. Said one passerby, "Oh . . . so *that's* how broccoli grows!"

Campus farms from half an acre to several acres in size are found in over 90 schools in the United States and Canada in the Rodale Institute "Farming for Credit Directory" (n.d.), and the number is growing. Land-grant institutions have long had campus farms, and a few schools such as Berea in Kentucky and Warren Wilson in North Carolina were founded on the integration of farmwork and academic life. The addition of farms to liberal arts institutions such as Dartmouth, Hamilton, and Luther and nonagricultural schools such as Stanford, Washington University, and Humboldt State demonstrates a new level of interest among students in agricultural skills, especially in organic production. Most began since 1995 and offer volunteer opportunities, course credit, or paid internships. Farming is no longer a male occupation; in some of these programs, women are in the majority.

Campus farms and markets affirm a number of long-held "American" values, such as respect for the family farm, but replace some of the distanced romance of that image with hands-on knowledge of farmwork. A small trickle of students at both elite, private colleges and public universities are choosing alternative agricultural occupations; campus leaders note that the projects are "growing growers." Both this career choice and volunteer work on campus farms

and gardens subvert the traditional academic disdain for manual labor and are part of a greater respect for nontraditional growing methods, at least among a sector of campus populations.

One of the best-known campus food projects illustrates how experiential learning on farms combines with new behaviors and choices in the food service to weave together multiple constituencies. The Yale Sustainable Food Project began with the intervention of Alice Waters—pioneer of the taste revolution in U.S. cuisine based on local, organic produce. With the support of Yale's president, provost, and a generous donor, the project began with two codirectors, Josh Viertel and Melina Shannon DePietro, who quickly began a campus farm. Yale's farm, in the middle of campus buildings, offers a contrasting work rhythm from academic life. Although some students expressed concern about sustainable food's possible elitism, weekly farm gatherings to eat pizza with fresh-picked ingredients cooked in a brick oven have a regular following, and over 300 students were engaged in some aspect of the project in its early years. Competition is stiff for unpaid summer farm internships, and interns report the experience has a strong influence on their subsequent life choices.

The initiative sought to foster community as well through the dining experience in the residence halls.[2] After students and faculty vetoed the pilot project in one hall, the master of Berkeley Hall welcomed it "passionately," despite student opposition. A committee devised purchasing guidelines and experimented with organic and local sourcing. New chefs revised recipes to take new flavors and produce freshness into account. Supervisors sought to include kitchen staff in decisions, such as which local breadmaker to patronize. Dining-hall workers embraced cooking innovations with mixed reactions at first; "it was a sea-change for the chefs," said one supervisor. Several kitchen workers expressed satisfaction that the job now required cooking skills again. Seasonality became an important determinant of the menu, although lack of winter variety remains a complaint. Students interviewed described the "wonderful" quality of fall heirloom tomatoes as an example of the menu tradeoffs. Said DePietro, "You can't convince people to suffer to do the right thing—you have to seduce them."

The popularity of Berkeley Hall food is attested by the strong cohort of faculty who eat lunch there regularly and the waves of ID-card forgeries among students. One student who was opposed to the project reported that after eating the diet for several months, "I really felt better. Now, I can't imagine going back." Said faculty leaders, "We see the cultural impacts of this project all the time. The students linger longer now and have more conversations. They often talk about what's in their meal." Said another, "Before, the meal was just to be devoured—to feed the beast. Once they experience this food, it's hard to go back."

The philosophy of Yale's program begins with taste and enthusiasm for the food, then educates about environmental and other issues through flyers, posters in the dining hall, conversations among students and leaders, and campus events. One of the leaders explained how connections are built among Yale's foodies "just interested in good pie," the political activists who want to make campus change, "the food security people" concerned about social justice and hunger, and the local food people, connected to land and local economies (conversation with author, November 3, 2005). This integration of campus constituencies illustrates how campus sustainable food projects can build a common language and political capacity. Student demands have extended aspects of the sustainability pilot to all dining locations.

The Yale example illustrates the "weaver work" that campus food projects can achieve. In Gibson-Graham's perspective, the strong affective component of the effort, its enactment by a community of students and supportive staff, and its experimental orientation to action all support its transformative potential. The numbers of students participating in farm and garden activities on many campuses is small, but there is a lively energy around the projects and many report the experiences are deeply meaningful (Hassanein 2008; Kirschenmann 2008). Campus gardens and farms embody and encourage a new food paradigm, ethical action, and connection to place that affects many more students than just those who participate directly (Kloppenburg and Hassanein 2006).

Engaged learning in academic settings has supported subsequent political action around sustainable food in several locales. An alumna of the University of Montana founded Grow Montana, a nonprofit that successfully built a statewide coalition to change school procurement laws to allow local food in cafeterias. Pioneered in Montana but now emerging nationwide, a Food Corps seeks to rebuild local foodsheds through a national program of service. The Agricultural Law Center at Drake University was critical to the founding and success of the Iowa Food Policy Council, and it subsequently supported the emergence of many others across the country. Food Policy Councils are notable for their weaver work, bringing sustainable agriculture activists into alliance with food security and health policy leaders. Student concerns about farmworker rights and social justice supported organizing efforts with the Coalition of Immokalee Workers in Florida's tomato industry. The resulting national Alliance for Fair Food joins religious, human rights, agricultural, labor, environmental, and academic groups and has won agreements for tomato chain transparency, price concessions, and farmworker participation from Taco Bell, McDonalds, and Burger King. The coalition's recent efforts focus on purchasing agreements with food service providers such as Aramark and Sodexo as well as grocery-store chains and other fast-food franchises.

The breadth of examples cited in this study show that colleges and universities embark on many avenues to robust food projects. Faculty-led programs with a strong academic base have the advantage of mobilizing student research and of opportunities for public education. Food service

leadership has shown that even without institutional commitments, shifts in buying practices can affect local economies. The operations-side efforts have the advantage of visible (and tasteable) results. Projects with a long-term record of leadership and regional impact are generally built on broad partnerships across academic, operations, and community groups, suggesting that collaborations are the most effective strategy. Such breadth, however, may not be feasible in early years, and the persistence of key champions can be crucial to lasting results.

CONCLUSION

The capacity of institutions of higher education to pioneer alternative sustainable food chains that embody ethical principles has moved beyond the stage of a few pilot projects to a wide range of schools across the country. Academic components of campus food initiatives contribute to more critical perspectives on conventional food and raise the possibility of incorporating long term social and environmental concerns into public policy (Gottlieb 2001:271; Watson 2002). Rationales of campus food projects clearly reject aspects of the conventional agrifood paradigm and practices, and although often phrased in positive, nonpolitical terms with examples of progress toward campus goals, they legitimize a degree of distrust for governmental, corporate, and academic reassurances about the conventional system. Such public critique expands debate and lays the groundwork for political action and regulatory reform.

Growing numbers of institutions with formal commitments to sustainable food purchases demonstrate higher education's capacity to have an economic impact on the conventional food chain. Although some purchasing goals are focused on local, small farms and others on certified organic, fair trade, or seafood, the existence of goals as large as 25 percent of multimillion-dollar food budgets represents builder work of substantial proportions. Competition among food service corporations to offer more sustainable programs signals financial benefits to meeting demand for new purchasing practices.

Verifiable evidence of the extent to which goals are being met remains rare, and unreliable implementation has been noted at some schools. Most institutions do not track and post purchasing totals, although this may change as emerging green-campus rating systems require such data. In addition, each criterion of sustainable purchasing represents only partial progress toward removing environmental, social, or economic concerns. For example, a local banquet meal may include foods produced with heavy chemical use by poorly paid immigrant workers. Tension between localist and social justice goals will undoubtedly continue as price pressures on local farmers increase. David Hess (2009:160) shows that when nonprofit institutions are involved at such a juncture, however, it makes the social justice component more likely to succeed—an important argument for the role of higher education.

Evidence suggests that normal business practices can shift toward a broader bottom line that includes social and economic concerns as new green-kitchen certifications and alternative distribution networks emerge at leading schools. Not yet "a new operating system" for capitalism (Speth 2008), such corporate accommodations do not quiet concerns that campus food projects can be greenwashed or co-opted. Especially as large institutions require local farmers and distributors to "scale up" to meet needs for substantial quantities, specialized and uniform sizes, and packaging, there can arise pressures toward "sustainability lite" (Constance 2008). Nevertheless, campus projects exemplify Gibson-Graham's call to support the emergence of "green" firms and more inherently social decision making within capitalism.

The short history of many projects makes it difficult to assess whether the challenges of transparency, resilience, and cost constraints will be met. The Hendrix example echoes many campus innovations that find it difficult to survive the loss of their original champion. However, growing concerns about greenhouse gas emissions, food miles, soil and water health, food safety, and the obesity epidemic make it unlikely that campus food projects will wither away.

Sustainable food initiatives have shown that they offer a bridge between diverse campus constituencies that normally do not intersect; they do not require one consistent political philosophy or agenda (Allen et al. 2003:73). Critique of the "self-complacent and egocentric" consumer concerned with health, rather than social justice, misses the potential for a politically significant coalition that can encompass multiple agendas (Charkiewicz 1998; Hassanein 2008). The breadth of constituencies now advocating for sustainable food in K–12 as well as higher education and support at the level of the White House suggest the national context is shifting.

Significant as well is the reconfiguration of individual and institutional meaning, as suggested by Gibson-Graham. Experiential aspects of sustainable food systems on campus—community gardens, farms, CSAs, and farmers markets—help reshape participants' relationships with food and the local bioregion (Barlett 2009; Vitek and Jackson 1996). Grounded in sensual pleasure and a redefined notion of "quality of life," environmental health, and empathy for workers far away, the welcoming nature of many campus food events can reframe worldview. Tangible solidarities supported by weaver work are essential to maintain accountability and transparency.

At the same time, the challenges of change in a concentrated, highly coordinated, energy-intensive, globalized food chain are enormous. Steps to reintegrate social justice and the true cost of food into campus dining rooms involve daily compromises (DuPuis et al. 2006). Faculty, student, staff, and administrative leadership has shown that higher education can demand long-term changes—whether institutional commitment will persist until implementation is secure is yet unclear.

Anthropologists and other academics can play a crucial role in monitoring campus rhetoric and reality and in researching local conditions and opportunities. Research is needed at the farm level on structural and cultural barriers, incentives to sustainable agriculture, and the remarkable gender shifts now seen in farming careers. Household economies that include both urban and rural food production and the kinds of commodity systems that support fair wages and working conditions as well as environmentally sound practices are traditional anthropological topics in need of updating with a focus on the sustainable food movement. Commitments to new growing practices, marketing structures, and consumption patterns are emerging not only in North America but also around the world. New distributors, domestic fair-trade chains, and sustainably certified food processors offer grounded opportunities to assess socially responsible practices within a conventional market economy, and studies of their trajectories, philosophies, challenges, and impacts are needed.

The cultural transformation toward sustainability supports food as well as other campus projects, and anthropologists have much to offer in research to understand emerging meanings and interactions with daily lives and the local political economy. Sustainability will require cultural shifts in personal aspirations, assessments of quality of life, and consumption practices; nuanced assessments are needed within distinct gender, race, class, ethnic, and regional groups. At the level of the college or university, unfolding institutional change offers interesting test sites for theories of social change, including which alliances, personalities, and structures are most effective. The emerging leadership among food service professionals raises questions about motivations, satisfactions, and incentives for long-term change. Finally, a focus on food and foodways—a robust field—calls for additional attention to the potential impact of direct marketing, food-safety issues, and sensual pleasures of local, fresh food on family habits, food work, individual preferences, and long-term support for a more sustainable food system.

As higher education serves as an advocate and critic, some locales have offered insulated spaces for the fledgling alternative food system, the promise of reallocated budgets, and embodied learning in gardens, farms, and markets. With persistence and political savvy, campus food projects have shown they can build coalitions far beyond the classroom. Through a broader view of the act of eating, hundreds of colleges and universities in North America are now exploring the possibilities of ethical food choices and new communities of meaning. Their actions illustrate, in the words of a St. Olaf College student, that "the foundation of the ivory tower does indeed rest on the earth beneath our feet" (Thorngate 2006:40).

Peggy F. Barlett *Department of Anthropology, Emory University, Atlanta, GA 30322; pbarlett@emory.edu*

NOTES

Acknowledgments. This article was first presented in "Agricultural Anthropology: Formative Engagements and Emerging Themes," organized by Robert Rhoades and Todd Crane, American Anthropological Association, December 1, 2007, Washington, D.C. I am grateful to the participants and to Christy Cook, Lisa Dillman, Patty Erbach, Carol Goland, David Hanson, Chaz Holt, Molly McGehee, Joe Mitchell, Faidra Papavasiliou, Alice Rolls, Glenn Stone, and Ron Taylor. Tom Boellstorff and anonymous reviewers were very generous with their time and commentary, and the project would not have been possible without the expertise and strong support of campus leaders across North America.

1. The term *farmers markets* is not given an apostrophe in this article because such a usage is misleading. Such markets are not owned by farmers and often include other vendors, such as bakers. Usually places where community convenes, such markets are often controlled by state and city ordinances and public tax dollars; farmers often have little say in how they operate.
2. All quotes from the discussion on Berkeley Hall are from conversations with author on November 3, 2005.

REFERENCES CITED

Allen, Patricia, and Martha Brown
2006 Growing a Program in Sustainable Agriculture at UC Santa Cruz. Chronicle of the University of California, Fall: 49–61. http://casfs.ucsc.edu/about/history/sustainable-agriculture-at-uc-santa-cruz, accessed September 20, 2010.

Allen, Patricia, Margaret FitzSimmons, Michael Goodman, and Keith Warner
2003 Shifting Plates in the Agrifood Landscape: The Tectonics of Alternative Agrifood Initiatives in California. Journal of Rural Studies 19:61–75.

Anderson, Molly
2008 State of the Art Food System Sustainability Metrics. Paper presented at the annual meeting of the Agriculture, Food, and Human Values Society, New Orleans, June 5.

Andreatta, Susan L.
2005 Urban Connections to Locally Grown Produce. *In* Urban Place: Reconnecting with the Natural World. Peggy F. Barlett, ed. Pp. 116–140. Cambridge, MA: MIT Press.

AASHE [Association for the Advancement of Sustainability in Higher Education]
2007 Digest. http://www.aashe.org/resources/pdf/aashedigest2007.pdf, accessed July 1, 2008.

Barlett, Peggy F.
2009 Reason and Reenchantment in Cultural Change: Sustainability and Higher Education. Current Anthropology 49(6):1077–1098.

Berea College
N.d. Sustainability. http://www.berea.edu/diningservices/sustainability.asp, accessed August 13, 2008.

Brown, Martha, and Jennifer McNulty
2006 Center Researchers Lead USDA-Funded Study of Farm-to-Institution Programs. Cultivar 24(2):3.
Brown University, Brown Dining
N.d. Sustainability: Food Team. http://www.brown.edu/Student_Services/Food_Services/sustainability/index.php, accessed September 25, 2010.
Buttel, Frederick H.
1997 Some Observations on Agro-Food Change and the Future of Agricultural Sustainability Movements. *In* Globalizing Food: Agrarian Questions and Global Restructuring. David Goodman and Michael Watts, eds. Pp. 344–365. London: Routledge.
Charkiewicz, Ewa
1998 Civil Action on Sustainable Consumption as Transformative Projects: If and When? Development 41(1):43–47.
Community Food Security Coalition
N.d. National Farm to College Program. http://www.foodsecurity.org/farm_to_college.html, accessed September 20, 2010.
Constance, Douglas H.
2008 The Emanicipatory Question: The Next Step in the Sociology of the Agrifood Systems? Agriculture and Human Values 25(2):151–155.
Constance, Douglas H., Anna M. Kleiner, and J. Sanford Rikoon
2003 The Contested Terrain of Swine Production: Deregulation and Reregulation of Corporate Farming Laws in Missouri. *In* Fighting for the Farm: Rural America Transformed. Jane Adams, ed. Pp. 76–95. University Park: University Press of Pennsylvania.
DeLind, Laura B.
2002 Place, Work, and Civic Agriculture: Common Fields for Cultivation. Agriculture and Human Values 19(3):317–224.
2009 Hitching Our Wagons to the Wrong Stars: Considering the Local Food Movement. Paper presented at the Agriculture, Food and Human Values Society meetings, University Park, Pennsylvania, May 28–31, 2009.
Drake University
2003 Making the Connections in Iowa's Food System. 20 min. DVD. Agricultural Law Center. Des Moines, IA.
DuPuis, E. Melanie
2000 Not in My Body: rBGH and the Rise of Organic Milk. Agriculture and Human Values 17(3):285–295.
DuPuis, E. Melanie, David Goodman, and Jill Harrison
2006 Just Values or Just Value? Remaking the Local in Agro-Food Studies. *In* Between the Local and the Global: Confronting Complexity in the Contemporary Agri-Food Sector. Research in Rural Sociology and Development 12:241–268.
Emory University
N.d. Office of Sustainability Initiatives. http://www.emory.edu/sustainability, accessed September 20, 2010.
Evergreen State University
2008 Dining Service ARAMARK Contributes to Evergreen's Organic Farm. Evergreen State University website, March 4. http://www.evergreen.edu/news/archive/2008/03/aramark, accessed September 20, 2010.
Feenstra, Gail W.
2002 Creating Space for Sustainable Food Systems: Lessons from the Field. Agriculture and Human Values 19(2):99–106.
Fricker, Alan
2006 Measuring Up to Sustainability. *In* The Environment in Anthropology. Nora Haenn and Richard R. Wilk, eds. Pp. 191–202. New York: New York University Press.
Fridell, Gavin
2007 Fair Trade Coffee: The Prospects and Pitfalls of Market-Driven Social Justice. Toronto: University of Toronto Press.
Friedland, William H.
2008 Agency and the Agrifood System. *In* The Fight over Food. Wynne Wright and Gerad Middendorf, eds. Pp. 45–67. University Park: Pennsylvania State Press.
Friedmann, Harriett
1993 After Midas's Feast: Alternative Food Regimes for the Future. *In* Food for the Future: Conditions and Contradictions for Sustainability. Patricia Allen, ed. Pp. 213–33. New York: Wiley.
2007 Scaling Up: Bringing Public Institutions and Food Service Corporations into the Project for a Local, Sustainable Food System in Ontario. Agriculture and Human Values 24:389–398.
Gibson-Graham, J. K. [Julie Graham and Katherine Gibson]
1996 The End of Capitalism (As We Knew It): A Feminist Critique of Political Economy. Oxford: Blackwell.
2006 A Postcapitalist Politics. Minneapolis: University of Minnesota Press.
Goodman, David, and E. Melanie DuPuis
2002 Knowing Food and Growing Food: Beyond the Production-Consumption Debate in the Sociology of Agriculture. Sociologia Ruralis 42(1):5–22.
Gottlieb, Robert
2001 Environmentalism Unbound: Exploring New Pathways for Change. Cambridge, MA: MIT Press.
Greensfelder, Liese
2006 New Organic Dining Option a First for U.S. Campuses. UC Berkeley News, April 3. http://berkeley.edu/news/media/releases/2006/04/03_organic.shtml, accessed November 29, 2010.
Grey, Mark A.
2000 The Industrial Food Stream and Its Alternatives in the United States: An Introduction. Human Organization 59(2):143–150.
Guthman, Julie
2004 Agrarian Dreams: The Paradox of Organic Farming in California. Berkeley: University of California Press.
Hamilton, Neil D.
1999 Preserving Farmland, Creating Farms, and Feeding Communities: Opportunities to Link Farmland Protection and Community Food Security. Northern Illinois University Law Review 19(3):657–669.
Hamm, Michael W.
2008 Linking Sustainable Agriculture and Public Health: Opportunities for Realizing Multiple Goals. Journal of Hunger and Environmental Nutrition 3(2):169–185.

Hassanein, Neva
2003 Practicing Food Democracy: A Pragmatic Politics of Transformation. Journal of Rural Studies 19:77–86.
2008 Locating Food Democracy: Theoretical and Practical Ingredients. Journal of Hunger and Environmental Nutrition 3(2):286–308.

Hess, David J.
2009 Localist Movements in a Global Economy: Sustainability, Justice, and Urban Development in the United States. Cambridge, MA: MIT Press.

Hinrichs, C. Clare
2000 Embeddedness and Local Food Systems: Notes on Two Types of Direct Agricultural Market. Journal of Rural Studies 16:295–303.
2003 The Practice and Politics of Food System Localization. Journal of Rural Studies 19:33–45.
2007 Introduction: Practice and Place in Remaking the Food System. *In* Remaking the North American Food System: Strategies for Sustainability. C. Clare Hinrichs and Thomas Lyson, eds. Pp. 1–18. Lincoln: University of Nebraska Press.

Indiana University
2008 Statement of Sustainability Principles. http://cees.iupui.edu/Education/Campus_Sustainability/Publications/Guiding_Principles/2008_01_Campus_Sustainability_Principles.pdf, accessed July 28, 2008.

Jaffee, Daniel
2007 Brewing Justice: Fair Trade Coffee, Sustainability, and Survival. Berkeley: University of California Press.

Kingsolver, Barbara, with Steven L. Hopp and Camille Kingsolver
2007 Animal, Vegetable, Miracle: A Year of Food Life. New York: HarperCollins.

Kirschenmann, Frederick L.
2008 Food as Relationship. Journal of Hunger and Environmental Nutrition 3(2):106–121.

Kloppenburg, Jack, Jr., and Neva Hassanein
2006 From Old School to Reform School? Agriculture and Human Values 23:417–421.

Kloppenburg, Jack, Jr., John Hendrickson, and G. W. Stephenson
1996 Coming in to the Foodshed. *In* Rooted in the Land: Essays on Community and Place. William Vitek and Wes Jackson, eds. Pp. 113–123. New Haven, CT: Yale University Press.

Liu, Jennifer
2007 Dining Halls Go Local. Daily Stanford, March 6. http://www.stanforddaily.com/2007/03/06/dining-halls-go-local/, accessed November 29, 2010.

Lyon, Sarah M., and Mark Moberg
2009 Fair Trade and Social Justice: Global Ethnographies. New York: New York University Press.

Lyson, Thomas A.
2004 Civic Agriculture. Medford, MA: Tufts University Press.

Middlebury College
N.d. Green Dining at Middlebury. http://www.middlebury.edu/sustainability/food/dining, accessed September 20, 2010.

Moberg, Mark
2005 Fair Trade and Eastern Caribbean Banana Farmers: Rhetoric and Reality in the Anti-Globalization Movement. Human Organization 64(1):4–15.

Papavasiliou, Faidra
2008 The Political Economy of Local Currency: Alternative Money, Alternative Development and Collective Action in the Age of Globalization. Ph.D. dissertation, Department of Anthropology, Emory University.

Perez, Jan
2008 Bringing Students, Farmers and Food Service to the Table: Integrating Findings from Farm-to-Institution Research. Roundtable at the annual meeting of the Agriculture, Food, and Human Values Society, New Orleans, June 5.

Pollan, Michael
2006 The Omnivore's Dilemma: A Natural History of Four Meals. New York: Penguin.

Rappaport, Julia
2005 Holy Mole! It's Farm Fresh Guacamole. College Hill Independent. April 7. http://www.brown.edu/Students/INDY/archives/2005-04-07/articles/spread-rappaport_avocados.htm, accessed August 14, 2008.

Raynolds, Laura T., Douglas L. Murray, and John Wilkinson, eds.
2007 Fair Trade: The Challenges of Transforming Globalization. New York: Routledge.

Real Food Challenge
N.d. Real Food Challenge: Uniting Students for Just and Sustainable Food. http://realfoodchallenge.org/, accessed September 20, 2010.

Rodale Institute
N.d. Farming for Credit Directory. http://www.rodaleinstitute.org/ffc_directory, accessed September 20, 2010.

Schlosser, Eric, dir.
2008 Food, Inc. 91 min. Magnolia Home Entertainment. New York.

Scott, Keisha
2005 Serving Local Goodness at Bowdoin. Presentation at the Northeast Campus Sustainability Consortium, Cambridge, Massachusetts, October 28.

Speth, James Gustave
2008 Bridge at the End of the World. New York: Caravan.

Stanford University
N.d. Sustainable Stanford—Food. http://sustainablestanford.stanford.edu/food, accessed September 20, 2010.

Stevenson, G. W., Kathryn Ruhf, Sharon Lezberg, and Kate Clancy
2007 Warrior, Builder, and Weaver Work: Strategies for Changing the Food System. *In* Remaking the North American Food System: Strategies for Sustainability. C. Clare Hinrichs and Thomas A. Lyson, eds. Pp. 33–62. Lincoln: University of Nebraska Press.

Thorngate, Steve
2006 Food for Thought. Sojourners Magazine, May 6:36–40.

University of California (UC) Davis
1997 What Is Sustainable Agriculture? Sustainable Agriculture Research and Education Program, December. http://www.sarep.ucdavis.edu, accessed August 11, 2008.

UC Santa Barbara
2008 Sustainability Plan, http://sustainability.ucsb.edu/plan/docs/sustainability_plan_workingdoc4.08.pdf, accessed July 2, 2008.
N.d. Sustainability, Food Team. http://sustainability.ucsb.edu/change_agents/food.php, accessed October 7, 2010.
UC Santa Cruz
2007 Campus Sustainability Assessment. http://sustainability.ucsc.edu/images/docs/UCSC-Assessment-fulldocument-042108-FINAL.pdf, accessed July 2, 2008.
N.d. Sustainability: Food Systems. http://sustainability.ucsc.edu/content/food-systems, accessed September 25, 2010.
UC System
2009 Policy on Sustainable Practices. http://www.universityofcalifornia.edu/sustainability/documents/policy_sustain_prac.pdf, accessed July 25, 2010.
University of New Hampshire Food and Society Initiative, Office of Sustainability
2010 Food and Society Initiative (FAS). http://www.sustainableunh.unh.edu/fas/, accessed July 30, 2008.
University of Wisconsin, Oshkosh
2008 UWO First in U.S. to Become Fair Trade University. UW Oshkosh Today, September 3. http://www.uwosh.edu/home/about-uw-oshkosh/, accessed October 7, 2010.
Valen, Gary L.
1992 Hendrix College Local Food Project. *In* The Campus and Environmental Responsibility. David J. Eagan and David W. Orr, eds. Pp. 77–87. San Francisco: Jossey-Bass.
Vitek, William, and Wes Jackson, eds.
1996 Rooted in the Land: Essays on Community and Place. New Haven, CT: Yale University Press.
Wang, Shirley, and Kelly D. Brownell
2005 Public Policy and Obesity: The Need to Marry Science with Advocacy. Psychiatric Clinics of North America 28:235–252.
Watson, James L.
2002 Commentary. Current Anthropology 43(4):624.
Yale University
N.d. Yale Sustainable Food Project. http://www.yale.edu/sustainablefood, accessed September 25, 2010.

FOR FURTHER READING

(These selections were made by the American Anthropologist *editorial interns as examples of research related in some way to this article. They do not necessarily reflect the views of the author.)*

Crooks, Deborah L.
2003 Trading Nutrition for Education: Nutritional Status and the Sale of Snack Foods in an Eastern Kentucky School. Medical Anthropology Quarterly 17(2):182–199.
Khanna, Sunil K.
2009 Anthropological Approaches for Understanding the Complexities of the Global Food Crisis. National Association for the Practice of Anthropology Bulletin 32(1):193–200.
Thu, Kendall
2009 The Centralization of Food Systems and Political Power. Culture and Agriculture 31(1):13–18.
Veteto, James R., and Kristine Skarbo
2009 Sowing the Seeds: Anthropological Contributions to Agrobiodiversity Studies. Culture and Agriculture 31(2):73–78.
Zurayk, Rami
2000 Sustainable Agriculture in the Middle Eastern Context: Why Prevailing Models Won't Work. Culture and Agriculture 22(1):37–42.