

REGULATING MEANING, APPROPRIATING NATURE: THE CODIFICATION OF CALIFORNIA ORGANIC AGRICULTURE

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Sustainable agriculture generally refers to a mode of farming that attempts to provide long-term sustained yields through the use of ecologically sound management technologies. This requires that agriculture be regarded as an ecosystem (hence, the term agroecosystem) and, as such, farming and research are *not concerned with high yields of a particular commodity but rather with the optimization of the system as a whole*. It also requires *looking beyond production economics* and considering the vital issue of ecological stability and sustainability.

—M. A. Altieri, *Agro-Ecology: The Science of Sustainable Agriculture*, p. 89 (italics mine)¹

One of the guiding principles of the science of agro-ecology is that the design of sustainable food and fiber production systems should replicate natural ecosystems. In other words, the goal is to “farm in nature’s image” (Altieri, 1995; Soule and Piper, 1992). This credo would presumably apply to organic farming, which is characterized as a “modern” approach to sustainable agriculture that avoids the use of synthetic fertilizers and pesticides (Altieri, 1995:179). Yet, in California, conventional agro-food firms are beginning to appropriate the most lucrative aspects of organic food provision and to abandon the agronomic and marketing practices associated with sustainability. International marketing and its reliance on fossil fuels, value-added packaging and processing, and off-farm input manufacture

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—all practices that are increasingly prevalent in organic food provision—are refashioning the organic sector into yet another resource dependent industry.² As such, organic farming is becoming more akin to farming *off* of nature’s image, as the idiom of a “purer” nature is deployed to sell what is increasingly commodified nature. And although codification of the term “organic” has created a virtual monopoly on the use of this one particular idiom, shifts in both the practices and meanings of organic agriculture are not uncontested. Consequently, the organic regulatory sphere is the site of many struggles—struggles that echo the uneasy and complex dialectic between nature and capital in the American West.

While the history of organic farming as a production technique is somewhat complicated and will only be touched on here (but see Peters, 1979), it is safe to say that early advocates of organic farming conceived of it as a way to restore soil fertility in the face of ever-deteriorating soil conditions (Harwood, 1990). Championed by a handful of “visionaries” and “cranks,” organic farming eventually developed into a whole set of alternative production practices that explicitly countered trends in the industrialization of agriculture, but was regarded by most as quackery. Organic farming’s first significant boost in the United States came from the back-to-the-land hippies who started communes in the early 1970s (Belasco, 1989). Many practiced organic techniques (apparently not always very well) not least because self-sufficiency was one of their core values.

Meanwhile, the market for organic produce in the U.S. had been largely confined to a minuscule health food sector. Again, the counterculture movement of the late 1960s and early 1970s was the basis of the first round of growth, as food politics became a sort of left politics. The spread of alternative food institutions such as food-purchasing cooperatives and food collectives (mainly bakeries, but also restaurants) provided a market for local organic farmers (Belasco, 1989). Perhaps ironically, the “health food” restaurants that were part of this movement were the inadvertent instigators of broad changes in organic food provision, as it was their forefronting of local, seasonal, and organic produce that launched the gentrification of organic food that took place in the 1980s. The market for organic produce was also bolstered at that time by pesticide-related food scares, first in 1986 in response to the threat of Aldicarb poisoning in watermelons and again in 1989 when the Alar scare contributed to a quadrupling of California’s certified organic acreage (Schilling, 1995).

By 1994, there were 4050 *certified* organic farms in the U.S. (Dunn, 1995) and organic industry sales had surpassed \$2.3 billion per annum, growing more than 20% each year since 1989 (Mergentime and Emerich, 1995). The bulk of this growth took place in California, with close to one half of the organic farms in the U.S. Between 1992 and 1995, the number of organic farmers registered with the state increased 55% and gross sales more than doubled, with the largest increases coming from salad mix, cotton, and wine grapes (Klonsky and Tourte, 1995). Since then, organic farming has

continued to grow and it is now estimated that organic production constitutes close to 5% of the California agricultural economy.

So the question is: how did an inconsequential movement of neo-Luddite farmers and "health food nuts" evolve into one of the fastest-growing segments of the California food economy? Organic food provision, after all, is seemingly incompatible with the practices and objectives of agribusiness, in particular the latter's approach of valorizing short-term productivity and profits over long-term environmental and food quality. I will argue, however, that the political construction of the meaning of "organic" and its institutionalization in regulatory agencies has facilitated both the proliferation of agribusiness entrants and their adoption of questionably sustainable practices. As is often the case, this suggests that regulation does indeed function to bolster and legitimize accumulation, as well as to palliate oppositional movements (O'Connor, 1973). But what makes this case particularly interesting is the way in which regulation has "naturalized" these legitimating processes by quite literally naturalizing a certain group of commodities.

There are important aspects of organic regulation that could be read off as simply reflecting global changes in agro-food regulation. These would include the increased salience of environmental issues in regards to farm-based production practices, the shifting emphasis toward food quality over food quantity, and the devolution of regulatory practices into the private sphere. (Organic production was originally codified at the initiative of private growers.) But global trends have a geography; they begin somewhere and expand, albeit unevenly (Walker, 1996). Crucially, organic regulation began in California. Thus, I will proceed by grounding the development of organic agriculture in the context of California's regional history. Next, I will present an overview of the evolution of the existing organic regulatory structure and then show how it has paradoxically encouraged the participation of agribusiness. Thereafter, I will consider broader changes in agro-food regulation in order to suggest that California's organic sector is at the forefront of those changes.

Beginning in the West

It is no coincidence that California is the birthplace of organic regulation and currently the center of world growth in organic production and consumption. In fact, both must be understood as emerging from California's distinctive regional past. Here I want to examine four threads of this history, which are intertwined around the centrality of nature, both as discourse and material condition.

First is the durability of the trope of nature in discourses of the American West. Turner's frontier thesis, no matter how problematic, was fundamentally about a boundary between nature and culture, where the West was equivalent to nature. The draw of either "untrammelled" or

reconstituted nature continues to be an important idiom in western boosterism and utopianism. Though strongly connected to western tourism and the commodification of visual nature, the worship of nature was the basis of the preservationist wing of the U.S. environmental movement that arose in the West (Nash, 1982; Pomeroy, 1957). The countercultural back-to-nature movement, within which many organic farmers got their start, was a latter-day version of redemption through nature, founded on the ideals of self-sufficiency and living off the land.

An important subset of the nature motif has been that of health, where the West was seen as the antithesis of an unhealthy East and the source of sunshine, clean air, and healthy foods (Starr, 1985). The West capitalized on these images early on, from Sunkist labels to health colonies, the implication always being that nature is equivalent to health. A paradox of the western relationship to nature, therefore, is the eventual consumption of the latter, upon which the relationship depends. Organic consumption is at the crux of that idiom that associates nature with health.

At the same time, the development of the West rested on unprecedented natural resource exploitation and environmental transformation (Limerick, 1987; Robbins, 1994; White, 1991). So the second historical thread is that both environmental and agricultural regulation originated in the West, specifically to address the consequences of the West's exploitative encounter with nature. Some of the first environmental regulations, for instance, were born in the Progressive Era and were attempts to rationalize use of western forests and other public lands. This early conservation "movement" had as its objective bureaucratic and rationalistic control of natural resources and never questioned the capitalization of nature (although the preservationist wing of the movement surely did) (Hays, 1959). Indeed, an ironic consequence of Progressive conservationism was continued resource overuse, justified by utilitarian and science-based rationality. Agricultural regulation, in contrast, began with the New Deal and arose out of problems endemic to the Midwest, namely the overproduction of grains and the concomitant mining of soils. While the legacy of New Deal agricultural regulation was the protection of certain commodity producers, which encouraged agricultural intensification and its deleterious ecological ramifications, it also set the stage for an oppositional force to arise against the practices of intensive agriculture.

A later round of environmental regulation occurred in the 1960s and 1970s and received some of its impetus from problems of the Far West, as it addressed the effects of rampant post-war industrial and urban growth, including deteriorating air and water quality. Although this round was the product of a more broad-based movement than that of the Progressive Era (Gottleib, 1993; Hays, 1987), its outcome was a precedent-setting but very narrow and reactive approach to regulation, which took the form of standard-setting and disallowing only the most harmful substances and emissions (Walker and Storper, 1978). Efforts to ban DDT and a handful of other particularly egregious pesticides signified resistance to an industrial

style of agriculture having its origins in California, but were nonetheless similarly limited. Theoretically, the organic movement's promotion of an alternative agriculture is a more holistic and proactive approach to solving environmental problems. Yet the endeavor to regulate organic production has reproduced the artifice of exclusions and standard-setting.

The third thread is the evolution of California's exceptional agriculture. While constantly being promoted by the symbolism of nature, it is and has been the most modern in the world. Significantly, California never had much of an agrarian tradition, as it was never predominantly settled by a class of small landholders. Huge landholdings were partially a legacy of the Spanish and Mexican land grant system, but more importantly were consolidated out of Gold Rush-created wealth. Specifically, a small group of mercantilists and land speculators were able to defraud the erstwhile landholding Californios and to use dummy entrymen in the purchase of the vast "swamp" lands and other federal lands that had been removed from the Homestead Act (Leibman, 1983; McWilliams, 1949). After the wheat glut and cattle droughts of the late-nineteenth century, however, many of these large holdings that had been dedicated to wheat production and grazing were broken up or made into tenancies. They were then reconstituted as specialty crop farms, made possible by the technical expertise of new immigrants (e.g., Italians, Japanese), irrigation schemes, cooperative marketing arrangements, and the availability of cheap harvest labor (Leibman, 1983). Thereafter, land was capitalized on the basis of intensive horticultural production, which reproduced the need for low-cost labor and reinforced a pattern of racializing and exploiting the most vulnerable migrant groups (Almaguer, 1994; Daniel, 1981; Mitchell, 1996). One eventual consequence of such high capitalization rates in land is that alternative production practices that depend on rotations of marginal value crops, as is critical in most "sustainable" systems, ceased to be economically viable. Since World War II, the dominant strategy among agribusiness firms has been to vertically integrate while maintaining flexibility in production through, for instance, leasing land and contract farming. Thus, the direction of California agriculture is not so much toward *latifundia*-style farms, although they are quite large by national standards (Leibman, 1983). Instead, grower-shippers, marketing agents, processors, and other consolidators have assumed increased importance in a food system based on the marketing of highly perishable and delicate fruit and vegetable crops to increasingly distant markets (see, e.g., Friedland et al., 1981; Wells, 1996).

Another pattern that was established early on in California agriculture was the development of strong growers' organizations. From irrigation districts, to marketing cooperatives to gain access to eastern markets, to ad hoc associations to stifle union activity, growers' organizations, many of which are organized on a commodity basis, have had tremendous power in California agriculture and have played a large part in "regulating" their industries (see Daniel, 1981; Friedland et al., 1981; Wells, 1996). Organic

producers who have organized into nonstate regulatory bodies must be seen as part of this tradition.

The final thread is that the seeds were planted for a “yuppie” culture in California from the get-go. The Gold Rush made San Francisco an instant city, replete with stratified class arrangements, but also a culture of urbanity. Restaurants were a vital component of a bachelor city and provided an immediate market for California’s agricultural products. The early “foodie” culture of San Francisco was complemented by the nearby Napa Valley wine-producing region and has only developed further in the era of celebrity chefs. A strong regional economy, renewed by the growth in Silicon Valley, has recreated a high-wage professional labor force, but one that is still influenced by countercultural values (Walker, 1990). With the emergence of Los Angeles as a world-class city, bearing a similar social division of labor based on Hollywood and defense, California has maintained a wealthy urban market for nature’s goods, including the latest in food. In this vein, it is important to note that sales of organic food really took off in California when growers started to sell “through the back door” to celebrity chefs and their restaurants.

In sum, organic food provision in California is positioned in a very contradictory place. On the one hand, it is a product of the counterculture, representing a resistance to agricultural industrialization and its impacts and incorporating utopian visions with a serious commitment to health and food safety. On the other hand, it is also a legacy of California’s unique brand of agriculture: a focus on high-value specialty crops made necessary given the capitalized value of land. The existence of a sophisticated urban market, made up of those who will pay for their organic salad mix as a “vanity good” (Cook, 1994), regardless of the actual cost of growing it—or the working conditions under which it was grown—creates ample opportunities for agribusiness appropriation and the extraction of “excess profit.” Indeed, organic food seems to embody the contradictions that arise when nature is the central idiom and it is also the basis of economic growth. Now I want to turn to how these contradictions have played out in the “real” regulation of California organic agriculture.

The Institutions of Organic Regulation

In an article on “real” regulation, Clark (1992) argues that in contrast to New Deal regulation, which set up institutions to broadly regulate markets and the national economy, newer regulatory agencies carry specific agendas, develop more narrow objectives, and exist to administer individual rights. Hence, they manage economic relations less and instead focus on developing standards of performance, which require an entirely different administrative apparatus.³ This periodization affords some purchase on food regulation, which, ostensibly, is shifting from supporting certain

classes (e.g., farmers, the poor) to ensuring certain performance standards around food quality and safety.

Furthermore, the state appears to be devolving some of its direct regulatory power to quasi-public (e.g., NGOs, marketing boards) and private institutions (e.g., retailers) (Marsden and Wrigley, 1995). Much "quality" regulation evolves outside of the state altogether, in the form of trade organizations and private actor networks that depend on relations of trust to ensure particularistic standards and supply links (Arce and Marsden, 1994; Boyes and Allaire, 1995; Marsden and Arce, 1995). Eco-labeling, "appellation," and other forms of branding are thus a vital dimension of the new regulation of food. It is in this changing institutional context of regulation that organic regulation has emerged.

Beginning in California, organic food has come to be defined by its regulation. That is, the right to claim that any product was organically produced is contingent upon compliance with legal definitions, although in this case they were developed and negotiated prior to the involvement of the state. In fact, the codification of organic was initiated by private growers. Their interest in creating uniform definitions and standards for organic food was both to protect consumers from false claims and to differentiate the quality of their product in an overt way.

The first private certifying organization, California Certified Organic Farmers (CCOF), was founded in 1973 by a group of farmers at a time when "the first tentative claims of 'organically grown' produce began to multiply in the marketplace" (CCOF Certification Handbook 1994:iv).⁴ Its purpose was to ease consumer confusion and to combat fraud by verifying the growing practices of member farms. Certified member farms could use the CCOF label when selling their goods, a claim to legitimacy that came to be trusted by knowledgeable consumers and thus influential in the marketplace.

CCOF and other interested parties eventually lobbied for regulatory legislation, which culminated in the California Organic Foods Act of 1990 (COFA, 1990). The COFA establishes a legal baseline definition of organic growing practices, including a list of allowable materials. It does not require inspection or verification of practices, however, and is enforced only in cases of confirmed violation (Klonsky and Tourte, 1994). Although all growers must be registered with the state to use the term "organic" in describing their produce, historically the COFA has done next to nothing to ensure compliance with minimum growing standards.

Consequently, third-party certification has become increasingly desirable as a way to inspire consumer confidence and to differentiate organic products in the market. Certification requires verification that organic produce is separated from conventional produce and protected from contact with prohibited substances at every stage in its provision. Growers who are certified and registered with the state may sell their produce as "certified organic," a claim that has become more legitimate and influential in the market than merely "organic." Clearly then, the COFA fueled a

more intense drive for private and quasi-public (but nonstate) codification. CCOF has since been joined in California by eight competing certifying agencies: Farm-Verified Organic (FVO), Organic Crop Improvement Association (OCIA), Organic Growers and Buyers Association (OGBA), Quality Assurance International (QAI), Scientific Certifications Systems/Nutriclean Organic Certification Program (SCS), Oregon Tilth, Demeter, and Organic Certifiers. These agencies compete for market share, with CCOF historically controlling the largest percent.⁵ As competition intensifies and organic markets mature, some of these agencies have expanded their certification programs to include processors, handlers, and retailers, in addition to growers, and to certify internationally as well.

The federal Organic Foods Production Act (OFPA) was passed in 1990 as part of the federal farm bill. When it is implemented, the OFPA will dramatically alter the current regulatory structure of the organic foods industry. Implementation has been delayed by political struggle between the National Organic Standards Board (NOSB), created by OFPA to determine national standards, and the United States Department of Agriculture (USDA), which will administer the OFPA. Now that OFPA is in the public comment period, the USDA's proposed role has become a source of intense public controversy.⁶ At stake are not only specific standards, but whether standards will be universal (i.e., one uniform standard) or baseline (i.e., allowing enhanced standards) and how they will be enforced. It is not surprising that OFPA has been such a source of controversy, as it points to the political economy of regulation itself: it is all too clear to those involved how regulatory standards structure the organization of production and thereby determine how and for whom accumulation takes place.

Meanwhile, personalized relations of trust are reasserting their importance as "official" regulation gets increasingly politicized. Social relations distinctive to the organic sector, such as direct sales of organic produce to high-end restaurants and the attenuated producer-consumer links of farmers' markets and subscription sales, are on the rise and exemplify the social embeddedness of delivering "quality." Perhaps this intensely privatized sort of regulation also points to the inadequacy of regulation based on administrative standards.

Problematizing Organic Regulation

One of the problems with standards-oriented regulation is that it requires (top-down) technical solutions to complicated and hard-to-contain problems. Technical solutions are often simplifications: they may focus on inputs and factors of production rather than processes or may attempt to economize and internalize "externalities" rather than address complex social and environmental disruption. For the most part, the organic farming movement has not questioned a technological approach and enjoys with other environmental movements the current legitimacy gained from

the employment of science claims; it just prefers technical solutions to be practiced at the local level, as an effort to reduce external input dependency (Buttel, 1994). In Lampkin's (1990) book on organic agriculture, for instance, he explicitly disengages the hippie/Luddite myth of organic farming by claiming that it is essentially the application of agricultural science in a way that works with and not against nature. He goes on to argue that those scientifically minded farmers who convert from conventional methods are in the best position to advance organic farming because they are not anti-technocratic.

Nevertheless, as increasing numbers of conventional agro-food firms appropriate the organic label or, for that matter, as more organic growers start acting like agribusiness firms, it calls into question whether a technical approach to organic production says all that much about sustainability—either socially or ecologically. Not only are these newer producers hardly anti-technocratic, as Lampkin sanguinely shows us, but their overall commitment to sustainability in the broadest sense of the word is quite dubious. How else could we explain the cultivation of high-value produce on monocropped fields, using unorganized migrant wage labor, within vertically integrated grower-shipper complexes, which sell to huge retail establishments—in other words, practices differentiated from industrial agriculture only by the use of “organic” inputs? Yet, given the privileging of technological approaches within organic agriculture, supported by the simplifications of regulation, the above scenario would seem almost an inevitable outcome. The following three subsections should illustrate just how regulation has allowed these practices to occur within the organic sector.

The Problem of Institutional Interest

A familiar problem of managerial institutions in general is that they sometimes take on a life of their own removed from the broader objectives that they are designed to address. Organizations involved in the development and enforcement of regulatory standards are no less susceptible to decision-making in defense of their own institutional interests, regardless of the “public good.” The peculiar mix of state, nonprofit, and private-sector organizations involved in organic regulation has fostered a great deal of self-serving competition and has thus enabled a wide spectrum of allegedly sustainable practices to all occur under the name of “organic” (with many organic practices escaping legitimacy altogether if growers choose to entirely avoid the regulatory apparatus).

All nine of the certification agencies doing business in California must take the COFA as a baseline, but each sets different standards for its member growers, follows different certification and enforcement procedures, and charges different certification and membership rates. Most of the agencies refuse to release information about their standards, methods, or members. Several of the agencies are for-profit organizations, and all survive largely on membership fees and assessments. This gives rise to

potential conflicts of interest, in which protecting their members may be more beneficial to the agency than vigorously enforcing standards. The general pattern, however, is that nonprofit membership certification organizations tend to exact more stringent requirements than totally privatized fee-for-service certification agencies, which are more on the order of “the fox guarding the chicken coop.” As a result, the reputation of each agency differs, and therefore the degree of legitimacy in the claim that any particular batch of produce was organically grown may vary, depending upon which agency certified the grower. CCOF, as a nonprofit membership organization, retains its image as the most ideologically driven certifying agency and the one with the highest standards. Retailers and distributors who target the “purist” market tend to purchase food certified by CCOF. Even so, CCOF has shown unwillingness to offend its member growers by refusing to adopt standards perceived to be against their interest, such as farm size limitations, or to work toward improvements in working conditions.⁷ By betraying an allegiance to producers first, CCOF and others have thwarted realization of a broader notion of sustainability, which, for instance, takes labor issues into consideration.

Should the federal standards become universal, then those certification agencies that currently adopt and enforce standards more stringent than those of the state will no longer be able to do so. Because the OFPA will require both all growers to be certified before using the term “organic” and all certification agencies to be accredited by the USDA, universal standards would mean that agencies could only compete on the basis of convenience and cost to the grower. Agencies such as the CCOF perceive universal standards to be a threat: they represent themselves as a grassroots organization of small family farms, dedicated to sustainable practices and the highest possible standards. They fear that a committee in Washington, D.C., is more likely to be pressured by agribusiness and chemical interests into adopting diluted criteria. They also recognize that universal standards would undermine their “market share” in the certification business. Other agencies such as the OCIA have lobbied for universal standards. Belittling the grassroots and countercultural foundations of CCOF, a representative of the OCIA claimed it wants to “take the religion out of certification and make it just like getting a driver’s license.”

In any case, universal standards would probably favor those (typically larger) growers wishing to distribute across state lines and likewise clear the way for agribusiness capital to become more deeply involved in organic foods. According to Bob Scowcroft of the Organic Farming Research Foundation, many large corporations are interested in expanding into organic foods, but have been waiting for the creation of a larger, legally homogenous market before investing heavily. The irony, though, is that as the organic sector moves closer to self-regulation—any industry’s dream—the desires of organic farming’s most loyal consumers are likely to become quite compromised.

The Problem of Standards

Regulation potentially influences internal operations on the farm such as cropping patterns, labor conditions, and nutrient cycling, as well as external economic relationships with suppliers, intermediaries, and consumers. The task of regulation, however, is to define enforceable standards. Yet the organic movement has raised a multiplicity of complicated ecological, economic, and even sociocultural concerns that reach beyond the farm gate, such as the mass production of food, the healthiness and safety of food, the conditions of food workers, the survival of small farms, humane treatment of livestock, the energy costs of food delivery systems, the equity of food distribution, and the community basis of food delivery. It is nearly impossible to include these contested and sometimes contradictory imperatives in any standardization process, and there is tremendous political pressure to keep standards as simple and perhaps weak as possible (Clunies-Ross, 1990).⁸ As such, regulation has come to rely on gross simplification—an amazing irony considering the agronomic goals of organic agriculture.

For instance, organic agriculture is differentiated from conventional agriculture by virtue of the material inputs that are used. The original definition of organic allowed only the use of natural materials and proscribed industrially or synthetically produced chemical fertilizers, pesticides, herbicides, and other inputs. But such a simple definition was hardly airtight. For example, could sulfur and strychnine, two naturally occurring substances, be allowed? Could farmers use synthetic analogs to otherwise perfectly acceptable but hard-to-obtain substances, such as insect pheromones? Could the manure of cows and chickens, raised on industrially produced feed and injected with hormones and antibiotics, be considered an organic input? Could a fertilizer manufactured in California using sea kelp from Norway, bat guano from Texas, steamed bone meal from Iowa, and potash from the Great Salt Lake, which is in turn sold to growers throughout the U.S. and western Europe, be considered organic? While arguably “natural,” such a fertilizer seems hardly “sustainable,” given the large amounts of fossil fuel expended in transportation. Not surprisingly, the debates over allowable materials live on in the proposed federal rules.

But even more significantly, by focusing the debates on allowable inputs, regulation has preempted concern with broader agronomic and provisioning processes. In other words, as yet there exists no codification prescribing the use of on-farm agro-ecological methods such as polycultures, crop rotations, green manuring, and so forth (as described by Altieri, 1995; Lampkin, 1990). A telling byproduct of this is the rapid growth of an organic input market. In a classic case of Goodman et al.'s (1987) appropriationism, nonfarm firms are investing in the production and marketing of commodity inputs that once were integral processes to on-farm production.⁹ At the same time, it has become increasingly possible for nominally

organic growers to practice factory farm production (i.e., monocropped, high-input, mechanized production) by purchasing these inputs. This is one of the crucial avenues by which agribusiness firms have entered into organic food provision. Equally important, the standards being developed for marketing and processing are concerned primarily with labeling and allowable materials (including a certain percentage that are allowed to be nonorganic as processing aids) and in no way deter industrialized food production (i.e., Goodman et al.'s substitutionism).¹⁰ As such, most of the burgeoning investor interest in organic food is in processing, marketing, and, of course, retail.

The impossibility of a natural, readily apparent, and undisputed definition of the term "organic" should be clear. There exists a gradient of practices between organic and conventional agriculture; any boundary drawn between the two is subject to interpretation and is thus a source of political struggle, as is apparent in the debates over the federal standards. Should the state actually create subsidies for organic production, as is happening in some European countries, subsidies would likely draw in even more "profit-oriented" producers, which would further increase the pressure to lower standards (Clunies-Ross, 1990), but would also draw a wider range of participants into the debate.

The Problem of Rents and Barriers to Entry

By conferring a legal right to market food as organic, the registration and certification processes create a distinct set of incentives that shape who can participate in the sector, from producers to consumers. For producers, the registration and certification processes are costly and act as barriers to entry. In addition to fees and assessments paid for registration and certification themselves, land cannot be certified unless it has been used in compliance with minimum organic standards for at least three years. The three-year conversion process entails both direct costs and opportunity costs and consequently has the potential to increase the price of already certified land, a form of differential rent that may be more readily met by relatively capitalized firms. Some small growers avoid the costs and requirements of organic regulation altogether by selling through local, informal sales channels. Such growers may label their produce as "no spray" or "pesticide free" or may simply rely on local reputations cultivated over time. They are, however, effectively shut out of state and nationwide distribution channels, as many distributors and retailers will only buy certified products, and several important buyer states will not even allow noncertified products to be marketed as organic.

For consumers, the main barrier is the price of organic food. It is a subject of much debate whether organic food is more costly to produce than conventional produce, although it is fairly clear that cost differentials are crop specific. A complicated and likely more sustainable agromonic strategy undoubtedly internalizes many costs to the farm

(Lampkin, 1990), for which some consumers are willing to pay. But as we have seen, many producers eschew such complexity, and when the organic price premium is not related to increased costs of production, it reflects an economic rent, representing the difference between price (i.e., willingness to pay) and actual costs of production plus “normal” profit. It is then symbolic value-added and not cost-based, much like that of a brand name (Arce and Marsden, 1994). Currently, some small artisanal producers still enjoy these rents, but eventually the most powerful actors in the commodity chain (i.e., processors and retailers) are likely to capture them. Thus, by codifying the meaning of “organic” and elevating it to a brand name of sorts, regulation allows institutions with questionable commitment to sustainable food provision to have relatively easy access to a niche market.

Looking Globally

The agro-food system and the mechanisms that regulate it have been restructured on a global scale in the last two decades. Friedmann (1992, 1993), Le Heron (1993), McMichael (1994), and others argue that these changes are so substantial as to mark the beginnings of a “third food regime”: a whole new nexus of state and capital relations around the delivery of food. This “post-Fordist” food regime is said to be characterized by global production–consumption links, international free-trade regulation, the demise of farm-based price supports, and a shift to nontraditional exports and “niche” commodities.¹¹ There is no doubt that the international replication of U.S.-style grain productivism and its concomitant surpluses squeezed yet another strata of rural producers out of the farm sector and created new agricultures emphasizing so-called comparative advantage (Friedmann, 1992, 1993). And playing on changing consumption patterns toward presumably healthier diets, transnational food corporations are increasingly in the business of sourcing, inspecting, storing, transporting, and distributing exotic or “nontraditional” (i.e., temperate) fresh foods to wealthy first-world consumers. This “fresh fruit and vegetable complex” (Friedland, 1984) is currently the most dynamic in the world food economy and has provided a critical impetus for recent trade accords such as NAFTA and GATT (Friedmann, 1993).

At the same time, the strength of agro-food industries, the development of biotechnologies, and the diminishing of opportunities for surplus extraction based on labor productivity have shifted sites of food production away from farms altogether and into factories. Consequently, it is argued, surpluses are being redistributed away from agricultural producers to those who control (and add value) in the processing, distribution, and retailing links in various commodity chains (Buttel, 1994; Marsden and Wrigley, 1995). The industrialization of food provision, which forms the basis of “durable foods” and increasingly prevalent

convenience foods (Friedmann, 1992), in actuality transcends the boundaries between so-called Fordist and post-Fordist food. Yet the regulatory changes accompanying these shifts in accumulation strategies within the food system are in no sense a given and therefore must somehow emerge out of contradictions and opposition to industrialized and globalized food. Moreover, whereas past agricultural regulation was supposed to address a more singular crisis of agricultural overproduction vis-à-vis demand, current regulations must effectively deal with the dual character of agro-food accumulation. On the one axis are crises of a rural nature, such as that of overproduction vis-à-vis supporting natural systems. There regulation is increasingly directed to the rural outcomes of agricultural production such as environmental quality and competing claims on land use (Lowe et al., 1994; Marsden, 1992). On the other axis are crises having to do not with agriculture per se, but with food, arising precisely with the proliferation of off-farm agro-food industries and biotechnologies in food provision (Buttel, 1994). Here regulation is an attempt to mediate a legitimation crisis, bolstered by recent "food scares," and thus must address concerns with food quality, purity, and taste. A new emphasis on product labeling, designed to do everything from providing nutritional and additive information to identifying so-called craft producers, is but one example of this trend toward quality regulation, which serves to open up markets as well.¹²

But, in either case, regulation must somehow restructure the conditions of accumulation, and "nature" appears to be providing the obstacle: in one case, at the site of production; in the other, at the site of consumption (see Fine et al., 1996, on this latter point). Arce and Marsden (1994) argue that new socially minded consumption patterns are attempts to reconcile capitalist contradictions vis-à-vis nature, which would also explain why agro-industry is attempting to "naturalize" food provision by promoting fresh fruit and vegetables. In this way, organic food consumption is an expression of how people internalize the meaning of nature, by which consuming more "naturalized" commodities somehow legitimates what is effectively class-stratified consumption (Marsden and Wrigley, 1995). State regulation and intense civil society involvement in food quality, it is argued, may even further legitimize these new and lucrative forms of consumption by endowing agribusiness with an image of responsibility and caring (Fine and Leopold, 1994; Marsden and Wrigley, 1995).

In sum, the explosive growth in organic food is a distinct example of the commodity differentiation said to be representative of a post-Fordist food supply. And though it is most definitely associated with yuppie consumption, it is also oppositional, illustrating the potential for a new environmentalism that considers affronts to nature as not just affronts to so-called natural resources, but also affronts to human biology.

That said, it cannot be hastily concluded that the growth of organic agriculture in California and the regulation that engendered it merely

reflects these more global trends in agro-food delivery and regulation. Instead, I would like to argue for yet another case of California exceptionalism and leadership. Note that California was never a critical part of the grain–livestock complex that was the keystone of Friedmann’s second or “Fordist” food regime. Moreover, horticultural crops have been crucial to the California agricultural economy since the turn of the century and have been shipped to distant markets way before the putative beginnings of the “globalized” “fresh fruit and vegetable complex.” Likewise, “Fordist” regulation such as commodity price supports have played a minimal role at best in California. Nor can it be argued that recent opposition to the food system and the new types of regulation to which it gives rise is all that new. Recall that CCOF was founded in 1973 and was based on privatized regulation before neo-liberalism had torn asunder the state apparatus. Indeed, the birth of organic regulation occurred before the crises that were supposed to signify the end of the second food regime, such as the Soviet grain deals, structural adjustment and its encouragement of non-traditional exports, or the death of the Fordist consumption norm, ramified throughout the food system (cf. Friedmann, 1992, 1993). Perhaps California is where some of these global trends began.

Farming Off of Nature’s Image

The regulation of organic agriculture involves the “appropriation” of nature in at least two different senses. Insofar as there exist natural obstacles to capitalist agriculture (Mann, 1989), the goal of industrialized agriculture is to reconfigure production processes so as to minimize the role of nature. Since the dual processes of appropriation and substitution, as coined by Goodman et al. (1987), have not been inhibited by organic regulation, organic enterprises, if they so desire, are able to employ these processes to reduce their exposure to natural risks and uncertainties, in marked defiance of the stated goal of farming in nature’s image. The other sense is that regulation enables the discourse of nature, coded here as “organic,” to be evoked in selling new commodities. In this sense, natural—or naturalized—products incorporate consumer opposition to both rural (i.e., on-farm) and biological (i.e., within human metabolism) affronts to nature. But, in both senses, nature is posed as opposition to capital—a theme that also resonates with Turner’s frontier thesis. By extension, then, struggles on behalf of nature are also somehow oppositional, which is indeed the central theme of environmentalism as it has taken shape in the West.

There is a certain irony that California was the seminal site of the organic explosion. Whereas organic food provision in the rest of the U.S. is possibly more faithful to its social movement roots, in California it is tied to a historical legacy of industrialized agriculture.¹³ California capital, after all, long ago cornered the market on appropriating the imagery of

nature to sell its commodities, just as California consumers have sought to consume nature no matter how contradictory. The convergence of yuppie eating with agriculturally focused environmentalism in that way is not wholly different than, let's say, buying fancy outdoor gear for a trip to Yosemite (another industry formed in California and the West). And both instances have become dependent on regulation to make nature safe and available.

As for regulation itself, it fulfills a contradictory role precisely because it must mediate between accumulation and legitimation. The organic movement's countercultural roots and motivations seemingly stand in direct opposition to the denaturalization, industrialization, and globalization of food provision, which are at the basis of agricultural productivism and profitability. But regulation in general has also been a vehicle to control capital's crisis tendencies and, in this case, has effectively created a new basis for accumulation—in natural(ized), environmental(ized), healthy(ized) but clearly high-value niche commodities. This is somewhat reminiscent of Polanyi's (1944) double movement,¹⁴ but more so of O'Connor's (1989) second contradiction of capitalism, in which capitalism creates its own barrier or limit because of its self-destructive transformation and appropriation of (external) nature. In turn, civil society-driven regulation works to rein in capitalism's tendency to overexploit its own resource base, but effectively creates new and different conditions of accumulation. Or in other words, organic regulation makes organic agriculture safe for capitalism.

Nonetheless, regulation is also creating a product that in some important ways continues to fly in the face of capital. As Clunies-Ross (1990) points out, there are some aspects of organic food provision, such as direct producer-to-consumer sales, that cannot be easily incorporated into the highly industrialized food system (and clearly undermine value-added chains). Consequently, whether organic production will in the long run pose obstacles or opportunities to agribusiness appropriation is directly related to which product attributes and processes are codified in this increasingly privatized "post-Fordist" regulatory sphere. For this reason and others, organic regulation remains an important site of struggle, not least of which is a struggle over nature.

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Notes

1. Altieri goes on to argue that sustainability must consider processes and inputs beyond the farm gate (e.g., a reduction of not only fossil fuel-based inputs, but also reduction of their use in transportation), including some element of social sustainability.
2. This paper is based in part on research conducted between October and December 1995 on the northern California organic vegetable sector, with Daniel Buck and Christina Getz (see Buck et al., 1996, 1997). While the methodology and limited sample size could not claim to provide exhaustive coverage of the industry, the study noted several clear cases of agribusiness investment throughout the commodity chain.
3. It is important to note here that Clark's periodization differs from that of regulation theory. Clark sees the break from New Deal regulation occurring in the 1960s, as an outcome of the social movement-generated demands on the state that occurred in that period.
4. Technically speaking, the first certification program was the Rodale Seal of Approval, which was developed at the Rodale Institute in Emmaus, Pennsylvania, but CCOF was the first organization to systematically apply the Rodale criteria and create an institutional apparatus to enforce them.
5. In 1992, 55% of all registered growers were uncertified, 41% were CCOF certified, and 4% were certified by five other agencies (Klonsky and Tourte, 1995). In the last five years, the other agencies claim to have grown rapidly, but statistics are currently unavailable to demonstrate this.
6. This article went to press before the proposed rules were released. Consequently, a detailed discussion of the myriad of problems cannot be discussed here.
7. It is certainly debatable whether farm size is a significant variable in the question of sustainability. Thus, a more telling example lies in recent controversies around use of the short-handled hoe. Although the short-handled hoe has been banned in California for nearly twenty years, a loophole in the law still allows the use of bare hands. California Rural Legal Assistance and other labor rights groups nearly succeeded in an attempt to close this loophole with a bill in the California Senate (SB 587). The bill was strongly opposed by the organic and ornamental flower industries, who argued that such a ban would make many of their production practices obsolete. Last-minute lobbying by CCOF was instrumental in defeating the bill in June 1995 (CCOF, 1995).
8. As it stands, organic regulation does encompass broader concerns than consumer food safety alone. For example, all production processes must be chemical free, so, for instance, it is not acceptable to merely eliminate synthetic and chemical residues on food, which is the sole guarantee of California's Nutri-Clean (an alternative certification).
9. Goodman et al. (1987:2) define appropriationism as capital's reconfiguration of discrete farm processes as (factory-produced) inputs (e.g., seeds, tractors, fertilizers). Substitutionism, to be discussed shortly, refers to the industrialization of food production beyond the farm gate.
10. One of the "deal-breaking" debates in the pending federal legislation is whether to allow genetically engineered organisms to be used in processed organic foods. Organic processors are adamant that they should not be excluded, as many depend on the use of micro-ingredients that may have been already genetically altered (e.g., oil seed-based emulsifiers).
11. Yet the argument that agriculture is being completely deregulated since the 1980s (Lowe et al., 1994), based on attempts in the Uruguay round of GATT to

- reduce or phase out the agricultural export subsidies, tariffs, and price supports, must square with the fact that the U.S. "zero-option" position was far from reached, that regional trade blocks such as NAFTA are being newly constituted, and that the existence of nontariff barriers to trade may impose yet another style of protectionism (Goodman and Watts, 1994).
12. It must be said here that the dual nature of quality regulation is neither new nor coincidental. Standards and grades were established for a variety of commodities, including citrus, meat, grains, and milk up to fifty years prior to any New Deal agricultural regulation. The purpose of such standards were explicitly to facilitate marketing and had little to do with protecting the consumer (Blackford, 1977).
 13. There is also, ironically, a "natural" basis for organic agriculture to be practiced in an industrialized way in California. Whereas to recreate the Midwestern hog-soy-corn complex organically is agronomically complex, it is relatively simple to apply eternally produced organic inputs when horticultural crops are involved (F. Buttel, personal communication).
 14. See Barham (1997) on this point.

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