

Chapter 2

Key drivers of the food chain

Corinne Gendron and René Audet

2.1 Agriculture as a market

2.1.1 *The long history of food market disembeddedness*

Because we rely on large companies and supermarkets to feed ourselves, we often forget that, unlike many other goods, food was not provided through markets during most of human history. The commoditization of food, which has led to its current status as merchandise, has indeed been the result of a long and complex process from the age-old practice of self-production, through the subsequent trade in small markets. By bringing out the specificity of food in the current economic framework, an examination of these origins helps us understand what can be coined as “the exceptionality of agriculture,” that is, the fact that food is not like any other consumer good.

Approximately 10,000 years ago, the beginning of agriculture contributed to a deep transformation in the organization of social life, which evolved from the hunter-gatherer and nomadic forms of society to sedentariness. In 5550 BCE, the Sumerians started large-scale and intensive cultivation with irrigation techniques, allowing excess production that could be stored or sold, and reducing wild food to a marginal part of the usual diet of the population. Moschini (2008) explains this evolution as follows:

The challenge of population pressure faced by an environment saturated with hunter-gatherers, catalysed by the changing climatic conditions at the end of the last Ice Age, led some people to attempt the cultivation of wild cereals in an effort to supplement their traditional sources of food (Cohen 1977). Thus was agriculture born about 12,000 years ago in the

C. Gendron (✉) • R. Audet

Department of Strategy and Social and Environmental Responsibility,
Management Sciences School, Quebec University at Montreal, Montreal, QC, Canada
e-mail: Gendron.Corinne@uqam.ca; audet.rene@uqam.ca

Fertile Crescent, and independently in at least five other distant locations over the next few millennia (Bellwood 2005). A dwindling supply of large mammalian prey increased the attractiveness of early farming activities, and the ensuing Neolithic revolution saw the widespread transition of prehistoric humans from nomadic hunting-gathering bands to agriculture-based communities relying on a few successful domesticated species of plants and animals. Farming encouraged more permanent settlements, allowing the development of increasingly complex social structures and the ushering in of earlier civilizations.

Later on, numerous innovations led to increased productivity, freeing the population from other activities but also leading to specific configurations of social organization.¹ One could refer to commoditization and industrialization in relation to this period, but this would most certainly be an inappropriate anachronism given that society at that time was not what we call an “economic society,” that is, a society primarily organized on the basis of modern economic rationality (Vergès 1989). The trade associated with the surplus was part of a more general social system in which other rationalities were used as organizing principles, whether religious or political.

This was obvious in the feudal period, when the serf had the right to cultivate his parcel of land, but was also required to give up a substantial part of the harvest to his lord according to the vassal relationship. It is also interesting to note that the serf was denied the right to hunt; that is, access to “wild food” was specifically reserved for the lord. At this time, commercial relations were enacted through two dimensions, which Braudel (1967) judicially distinguishes as small markets and great capitalism. Small markets were local spaces in which, in search of variety, people could trade their surplus with that of others. However, this was a marginal means of accessing food: A self-production system prevailed. For the elite, luxurious exchanges were a way to demonstrate supremacy more than to provide basic commodities, and in the Age of Discovery, agriculture also participated in the colonization process and was a determining factor in the organization of slavery.

This is why, although new farming techniques and space reorganization allowed for the production of a surplus that could be traded, it would be misleading to refer to the commoditization of food or the industrialization of agriculture with regard to this period, because agriculture and food markets were still organized according to ecological realities and embedded in social and political relations that cannot be reduced to economic transactions.

This is what Polanyi theorized as the concept of embeddedness, pointing out that food markets have not always been free markets, and that food staples have not always been considered to be commodities (2001). In Polanyi’s view, although reciprocity served to sustain humane ways of sharing food and organizing society over

¹The understanding of this dynamic may vary among authors, as illustrated by this comment by Moschini: “The path from these early days to the modern world eventually saw the gradual augmentation of technology in food production, which supported a population expansion that is continuing to this day. Some see that as a vicious circle and also lament that ‘... the transition from hunting and gathering to farming eventually resulted in more work, lower adult stature, worse nutritional condition and heavier disease burden’ (Diamond 2002, p. 700). But civilization has also led to knowledge accumulation, culminating in the industrial revolution and the opening up of increasingly new opportunities” (Moschini 2008, pp. 331–332).

the millennia, the withholding and redistribution of food by a centralized authority (such as in the feudal system) also played a prominent role in many societies. These modes of economic exchange were always grounded—embedded—in social relations and nature’s cycles. The land and the work force that helped to fertilize it and cultivate its fruits, were not market values, they were social institutions. On the eve of the Industrial Revolution, the concept of the self-regulated market shattered these institutions and put modern society on the path toward the commoditization of agriculture.

2.1.2 The industrialization of agriculture

The industrialization of agriculture can refer to different realities, starting with the mechanization of farming and the use of new technologies and modes of organization, through what has been called the “Agricultural Revolution” (as compared with the concomitant Industrial Revolution in England).² The turning point in this process was the integration of agricultural production into a new economic order organized on the basis of market rules and rationality instead of other logics, whether social or biological. This transformation of the status of agriculture as a “market” or “capitalist” activity—not merely economic but dedicated to trade with the aim of accumulation—was the result of many structural and ideological transformations that some authors have interpreted as the inexorable March of capitalism to encompass all human activities (Wallerstein 1974).

First among the transforming factors were new techniques and technologies—including the use of mechanized tractors and fertilizers—that led to an increase in productivity and, to some extent, freed production from unpredictable natural conditions. Second, the organization of land, symbolized by the enclosures in England (which are generally seen as one of the major starting points of industrial capitalism), also allowed for an increase in productivity but led to another dramatic change: the exodus of former self-sufficient peasants to cities, where they formed the new work force relying on markets to provide them with food. Last, it must not be forgotten that these transformations were anchored in the development of an ideology of industrial progress, closely associated with market dynamics as an optimal social regulation.

²Kerridge contradicts this understanding (1960). Referring to the thesis developed by Toynbee, he explains: “Toynbee rightly concludes that agricultural progress was relatively slow between 1700 and 1760. But he can hardly have been expected to have devoted much of his short working life to agricultural history, which to him was no more than a sideshow. He gives the matter short shrift and takes the obvious and easy course of turning away from his door all those facts that do not fit in with his preconceived notions that the period 1760–1843 witnessed ‘an agrarian revolution [that] played as large part in the great industrial change at the end of the eighteenth century as does the revolution in manufacturing industries.’”

Thus, in Polanyi's view, the market appears to be an economic form of regulating social relations and human interaction with nature, a form that characterizes capitalism. Indeed, capitalism requires such a system based on the concept of a self-regulated market, at the expense of other economic models such as reciprocity and redistribution. Polanyi argues that at the peak of the industrial revolution, the concept of the self-regulated market shattered these other models. Trade and the search for profit became the fundamental rationale of economic activities in the new political economy of the eighteenth century, giving rise to "the market" as a social institution, different in this respect from local markets. Agriculture thus became part of the great capitalism referred to by Braudel. As a result, agriculture was subject to external pressures to become more productive and less expensive and, eventually, overrule natural cycles and processes. This evolution toward the disembeddedness of agriculture was later marked by the Green Revolution, and by the more recent process of globalization.

2.1.3 From the green revolution to globalization

The Green Revolution originated from the work of scientists who developed new varieties of crops, supported by the use of fertilizers and pesticides, both leading to increased agricultural productivity in response to the growing needs created by exponential population growth.³ The Green Revolution, as a process, appeared at the end of the 1960s, and deepened until very recently. As Huffman (2004) explains:

Overall, the productivity data suggest that the Green Revolution is best understood not as a one-time jump in yields, occurring in the late 1960s, but rather as a long-term increase in the trend growth rate of productivity. This occurred because successive generations of modern varieties were developed, each contributing gains over previous generations.

Evenson and Gollin (2004) show that without the Green Revolution, crop yields in developing countries would have been 20% to 24% lower.

Applying Western fertilization and pesticide techniques to agriculture in the South, the Green Revolution accompanied the conversion of the war industry into the petrochemical industry, as best illustrated by Monsanto's evolution (Champion 2004). But agricultural production was also transformed by the growing practice of trade

³The demographic rationale of the Green Revolution is well illustrated by Huffman: "as the demand for food and fiber grew during the past 300 years, because of the Earth's expanding human population and rising per capita incomes, society met this demand first by increasing the land area under cultivation and later by improving crops so that their yields were higher. Before 1900, land was abundant almost everywhere, and in the United States, new lands were brought into production as the frontier moved across the country between 1700 and 1900. ... By 1900, the frontier was closed in the United States, and this increased the urgency of finding new methods for increasing crop yields" (2004, p. 3).

that changed the conditions under which agricultural commodities were produced. Coleman et al. (2004) explain that since the end of World War II:

[A]s agriculture has continued the movement from subsistence, peasant polyculture toward commercial farming, production has become more specialized. Processing companies buying from farmers have demanded more evenness in quality and standardization in size and the markets for these more specialized and standardized products are extending gradually further away from the locality in which crops or animals are grown. The greater emphasis on monocropping has come to rest on various expert systems to achieve economies of scale and higher productivity, including sophisticated farm equipment, chemicals to control pests and weeds, and to stimulate growth, and biological science to improve yields from plants and to raise output from animals. In some areas of livestock production like poultry and hogs, farmers are entering into quite specific contracts with processing companies that govern the nature and the quality of products to be delivered.

These developments have led to a deep transformation of the relationship between the farmer and the consumer, which has been progressively mediated by economic agents, whereas agricultural production has become part of a complex economic system encompassing science and technology, mechanical instruments, and worldwide distribution networks in a world marked by geopolitical tensions or conflicts and a new consumerist way of life. In this system, the self-producing farmer has progressively been replaced by a market producer whose conditions of production are dictated by influential economic actors in concordance with state-led development strategies.

The production of agricultural commodities has gradually become enmeshed in linkages that are more globally extensive today than they were a half-century ago, whether through suppliers of inputs to agricultural production or through the processing, distribution and sale of agri-food products. Trade both in agricultural commodities and in processed food products has risen over the same period. This intensified economic competition on a more global scale has accentuated already powerful tendencies toward greater economic, technological and socio-cultural integration in the triad of the North America, Europe, and East and South-East Asia... (Goodman 2003).

These more intense regional and economic relationships have developed through the greater presence of multinational firms in the sector, and important changes in technology used in the transportation and distribution of commodities and processed food products. Consequently, global economic relations are a more important factor in the lives of farmers and food consumers than they were a half-century ago (Coleman et al. 2004).

For these authors, globalization can be seen in direct continuity with industrialization and the Green Revolution in the process of agricultural disembeddedness.

Globalising processes have accelerated changes in the countryside in most countries, changes already in train due to mechanization and chemical farming. More food is being produced on less land by fewer farmers than a half-century ago. Old patterns of relationships between farmers, the suppliers of their inputs and the buyers of their crops are shifting due to corporate restructuring. Political arrangements in the wealthier countries are being criticized and slowly changed in response to challenges from within and from those suffering the effects of subsidies in the Global South. Old orders are changing but there is scant evidence to date whether any new order will take their place (Coleman et al. 2004).

However, although globalization seems indeed to have intensified the process of commoditization initiated centuries ago, recent developments might be interpreted

as a suspension, and even a turning point in this process. We would argue that following its accentuation through different phases of varying length and speed depending on the country, and its final intensification toward the end of the 1980s, the process of commoditization of agriculture ended with the last attempts made under the globalization process to handle food as an ordinary good. The negotiations aiming to liberalize international agricultural markets were defeated by protectionist strategies of the World Trade Organization (WTO), confirming a suspension of the rationale behind the commoditization of food.

2.1.4 Global trade and agricultural policy toward decommoditization?

In spite of the commoditization process that has been underway for centuries, among global trade issues, the agricultural sector has always been recognized as being somewhat particular (Aggarwal 2005; Trebilcock and Howse 2005). Along with the services and investment sectors, it was one of the last major economic sectors planned to be liberalized after the Uruguay Round of the WTO. After World War II, the United States refused to apply General Agreement on Tariffs and Trade (GATT) principles to the agricultural sector for political and strategic reasons, and was allowed to do so. Under the postwar reconstruction, Europe also relied heavily on subsidies and market protection in structuring its internal agri-food economy. Becoming competitors on a global scale, the EU (Eur.Union) and the United States were then drawn into a “war of subsidies” during the 1970s and 1980s—a process that brought about increasing price distortion in the agricultural market.

Although every national situation is different, this era saw agricultural policies being constructed around three axes that would eventually become the three “pillars” of the WTO Agreement on Agriculture. One is the traditional imposition of entry tariffs and taxes, which make imported products less competitive than domestic equivalents. For some imported products considered to be sensitive, a country can impose “tariff peaks”—meaning tariffs that are many times higher than regular tariffs—as a barrier to entry. Another policy area that has the effect of distorting prices is domestic support. All kinds of tax reduction for producers, public insurance programs for farmers, subsidies for production or for the purchase of machinery, etc., can be considered as domestic support measures. Finally, the most contested policy area under the GATT and WTO is that concerning export subsidies, which constitute public support to sectors oriented toward exportation. Although these can be justified as a means by which to counter the effects of entry barriers (of the type described in the preceding) in foreign markets, their impacts are being widely felt in developing countries, where the total amount of subsidies is a fraction of that of the United States or the UE. Overproduction in developed countries can also be subsidized to facilitate exportation to other countries, thus creating a form of “dumping” (Drope and Hansen 2006).

Thus, for different reasons—mainly political—agriculture has never been governed by a free market, and this has impeded the process of commoditization.

This has made multilateral policy negotiations in agriculture quite paradoxical. Although free trade originally meant opening up markets in the Global South to products from industrialized countries, free trade in agriculture refers to the reverse; that is, the opening of markets in the Global North to foodstuffs produced in developing countries. For the first time in the recent history of trade negotiations, the Uruguay Round tackled the liberalization of agriculture. The result, however, was rather modest. According to most experts on international trade law, the Uruguay Round Agreement on Agriculture, resulting from a bilateral bargain between the United States and the European Commission, consisted more in the legalization of protectionism in the agricultural sector than in its liberalization (Aggarwal 2005; Clapp 2006). Such a result was not going to be satisfactory to developing countries, and the next negotiating round would have to address the problem of agricultural protectionism more deeply.

2.1.5 North–south inequities in agricultural trade and the case for food security

In the agricultural sector, the huge subsidies and market protection policies enforced by the European Union and the United States (along with the majority of developed states) have had the most adverse impacts on developing countries, whose advantage based on low-cost agriculture is nullified by closed markets in the North. Instead of bringing real liberalization to the sector, as observed, the Uruguay Round Agreement on Agriculture legalized European and American protectionism. This is why the Doha Round was launched in 2001 with much anticipation on the part of developing countries who were hoping for “the redressal of the inequitable nature of existing provisions of the Agreement on Agriculture” (G77 2001). After more than 2 years of stalled negotiations at the WTO, it is now clear that the North–South inequities written into international trade law still constitute a great challenge to the notion of “equity” in global agricultural trade. Simultaneously, they impede a potentially formidable driver of the food chain: food security.

Food security is an interesting concept because it is based on the notion that food is more than a commodity—it is a vector of security or insecurity. Indeed, because a proper diet and the nourishment of communities, whether rural or urban, ensures greater stability and productivity, food is an essential driver of development. This is why the “G33 on special products and the special safeguard mechanism,” a coalition of developing countries that emerged at the Cancun WTO Ministerial Conference in 2003, states that the “deepening global food crisis has clearly demonstrated that indeed the principles of food security, livelihood security and rural development are relevant and must indeed be a part of the equation in discussing the optimal solutions to [the Doha] Development Round” (G33 2008). If the Doha Round is ever concluded, multilateral trade agreements may well institutionalize mechanisms to ensure food security in developing countries, such as the possibility of designating “special products”—meaning products that are considered important for food security and rural development—that would benefit from better tariff protection, and a “special

safeguard mechanism” that would allow countries to react with tariffs and quotas in the case of a sudden price drop or domestic market “flood” of competitive imported products (Lal Das 2005). Similar mechanisms could be available for developed countries under the denomination of “sensitive products” (Trebilcock and Howse 2005).

It is interesting to note that the content of the last negotiations occurring under the WTO, rather than being a pure translation of the commoditization rationale, indeed recognized the “exceptionality” of agriculture. Clearly, the food security issue has brought about the idea that agriculture may have functions other than simply being a commodity. Agriculture is increasingly presented as being “multifunctional,” as shown by the new trends in food consumption and production. Thus, although we recognize that the globalization process is transforming agriculture through an intensification of the economic integration of its actors and activities, our understanding differs from that of Coleman et al. (2004) who see in globalization a deepening of the commoditization and disembedding process.

In short, despite its rootedness in place and its dependence on the natural rhythms of the seasons, the life cycles of animals, and the climate, agriculture is changing rapidly in character as it becomes drawn into globalising processes in the economy, the world of politics, and culture. As an economic activity, it is losing its exceptionality and becoming one sector among others contributing to economic growth. Politically, the long-standing protective mantle of the nation-state is yielding to new forces, new rules and new constraints defined at regional and global levels. With nation-states yielding some authority, such cultural notions as farming being the backbone of the nation and these nations must be self-sufficient in food are being reconsidered and recast (Coleman et al. 2004).

It is mainly because of the exceptionality of agriculture that the trade liberalization process undertaken by the Uruguay Round failed, and that the globalization process took a new direction in accordance with this special status: a limitation of free trade primacy with regard to geo-strategic imperatives fuelled by the particular status of agriculture. This is not to say that we are entering a process of decommodification of food, but that the March towards commoditization has reached an end. This can be explained by a series of factors anchored in the nature of agriculture itself, wherein there have always been intrinsic limitations to the de-territorialization rationale of globalization, as clearly pointed out by Coleman et al.:

[T]he immobility of land and the local circumstances of land use would seem to make farming a highly unlikely sector to be integrated into international and global processes. ...

With its implications for the declining constraints of physical location and its emphasis on de-territorialisation (Appadurai 1996), globalisation would seem to refer to processes not particularly relevant for understanding agriculture. After all, farming remains an activity intimately tied to particular rural communities, their soils, their microclimates, and their physical environments. Although buying and selling currencies might occur anywhere at any time, growing wheat or milking cows takes place in very particular localities, following regular patterns dictated by the seasons or basic cycles of life. Tied to the land and drawing upon centuries, if not millennia, of tradition and cumulated experience, farming, one of the ancient arts of human civilization, would seem to be somewhat beyond the reach of current globalising processes (Coleman et al. 2004).

As Coleman et al. (2004) explain, despite these characteristics, agriculture has not been spared the effects of globalization. However, we would go one step further. Inspired by a comment made by these authors suggesting that continuing globalization

should not be seen as the only possible outcome of the current interplay of economics, politics and technology, we argue that the exceptionality of agriculture has actually changed the course of globalization, in part because of the struggle that its initial liberalization rationale brought about in this sector.

The changes that we observe bring in their train a variety of avenues of contestation and struggle. The introduction of biotechnology, the growing of genetically modified organisms, and the incorporation of these into processed foods and animal feeds have given rise to field burnings, consumer boycotts, and political debates across the globe. Environmentalists have challenged “industrial farming” and its use of chemicals because of the effects on water courses and human health. Nation-states misuse global and regional trade rules to give “their” farmers an edge over competitors. Farmers continue to fight to stay on the land in most countries of the world. In short, the production and preparation of food promise to remain a prominent site of resistance to globalisation for the foreseeable future (Coleman et al. 2004).

Initially driven by universal free trade agreements, the economic integration that occurred during the first era of globalization is now entering a new age in which it obeys new logics and parameters. These parameters will both sanction the exceptionality and multifunctionality of agriculture and be supported by them. In this sense, agriculture plays an important role in the general restructuration of markets illustrated by the rise of responsible consumption and social responsibility strategies adopted by firms. In this new age, as the North–South tension is made more complex by commercial alliances rooted in the strategic interest of nations (as is the case with genetically modified organisms, GMOs), new issues such as environmental protection, greenhouse gas emissions, water supply, and foreseeable shortages are deeply changing the governance challenges and the rationale behind state-led negotiations and the strategies adopted by firms in the field of agriculture.

2.2 New trends: rediscovery of embeddedness through multifunctionality

Although agriculture has been a domain in which the human spirit has overcome nature’s unpredictability and led to civilization and progress, today it seems to illustrate a total loss of control over nature’s dynamic because it participates in disease, health problems, and social fracture. Agriculture is no longer presented as the instrument of progress and well-being, but rather as an area involving the convergence of economic, political, and social problems.

The publication of Rachel Carson’s *Silent Spring* was a revelation for Western citizens concerning the dangers of chemicals for ecosystems (Hails 2002), and this revelation was followed by discoveries about the risk they present for human health as well. Considering the awakening provoked by what can be called the side effects of the Green Revolution, it is not surprising that the “Gene Revolution” has aroused suspicion. Even more recently, the environmental issue has brought up the problem of transportation, showing that the energy needed for food trade often exceeds the energy accumulated in food itself. In addition, issues of water supply and new data about fishery shortages (FAO 2006) have also led to concern.

Another issue that has been raised by the growing control of agricultural production by corporations relates to the use of land. Concurrent with the advent of urbanization, rural land is no longer seen as a space for social and human life, having been transformed into large dehumanized production areas in some countries, and being subject to severe conflict over usage in others. With regard to consumption, production processes have also been associated with health problems, especially obesity, heart disease, and even cancer. Moreover, the consumer has progressively been disconnected from the ecological and natural dimensions of food, which is increasingly packaged and transformed. Finally, food is increasingly seen as a major focal point of tension between the North and the South, as shown by the WTO negotiations, with tensions also arising between Europe and United States over the issue of GMOs.

This concentration of issues and the conflicts that have arisen over the last decade have been theorized in terms of the coexistence of four different paradigms to which countries refer in the governance of their agricultural sector: the dependent, competitive, multinational, and global production paradigms (Josling 2002). The dependent and competitive paradigms could be said to illustrate the first two economic periods of the last century. Coleman et al. (2004) define them as follows:

A dependent paradigm organized around the core belief that agriculture fulfils basic food needs and provides national security, as well as social and political stability and rural employment and welfare, but requires government help to enable it to generate adequate incomes.

A competitive paradigm that emphasizes agriculture as a sector that can hold its own against other sectors of the economy and that can thrive in a market economy and an international trade system (at least, where markets are permitted to operate free of distorting, dependent paradigm style policies).

In our view, we are currently experiencing competition between the two last paradigms,⁴ a situation that is most likely to result in a combination of the two rather than the success of one over the other. These paradigms are also defined by Coleman et al. (2004) based on the work of Josling (2002):

A multifunctional paradigm organized around the belief that agriculture is an integral part of the countryside and provides non-market goods that would be under-produced without some degree of government support.

A globalised production paradigm that situates agriculture in potentially global food supply chains, where farmers are seen as supplying land and animal management services to an integrated vertical process from input supply and technology provision through marketing of the product.

As Coleman et al. (2004) add in a note, this last globalized paradigm does not exclude local food systems, which are part of the model: “Josling (2002) called this paradigm ‘globalized’ agriculture to emphasize the international nature of many of the supply chains. We follow this terminology while recognising that local and regional (short) supply chains are also part of the model. In some cases, the ‘driver’ of the chain is the ultimate consumer: in most cases it is the retailer that defines the

⁴The analysis offered by Coleman et al. presents current conflicts as a struggle between these four paradigms (2004, p. 119).

requirements to be met by the supply chain.” This remark leads us to the reflection that we are indeed probably experiencing the exploration of a new articulation between the dependent and competitive paradigms, an articulation which will manifest itself through a globalized production paradigm encompassing a multifunctional paradigm, and that becomes possible only by assessing the particular nature of agriculture and confirming its exceptionality. In our view, it is this articulation that is illustrated by the numerous innovations prevailing in the agricultural field, some of which are presented in the following.

2.2.1 The turn to quality and alternative models of consumption

As shown by the diversification of restaurant food, the growing number of ethnic shops, the success of television shows about cooking, and the content of advertising, food consumption today refers to more than simply satisfying basic needs (if indeed it ever meant so little). Buying food, in many sectors of society, is a symbolic act that goes as far as an expression of identity or a political statement. Slow food, local food, labeling, community-sustained agriculture, etc.: All of these new trends mark a “turn to quality” in food consumption. The word “quality” here should not be restricted to the meaning of “better quality” or “different quality,” but refers to the characteristics of food resulting notably from distinct processes. Indeed, the turn to quality relates to a search for better-quality products, but quality also includes a range of symbolic motivations behind the purchase of a food product: its origin (Is it from my region, from this area?), its mode of distribution (Will I have contact with the producer? Can I find it in specialized, health, or green food stores?), its mode of production (Is it antibiotic free, GMO free? Is it organic? Does it respect religious traditions—halal, kosher...), and values (Is it fair? Is this tuna dolphin safe?).

Thus, there is a great diversity of consumption practices existing under the label “turn to quality.” Moreover, contradictions are numerous. For example, some authors have associated the turn to quality with progressive values such as fairness in consumer–producer relationships or ecological protection. Yet research has shown that buying local is not always a matter of fairness, and neither is it inescapably an ecological good. In a study of food consumption in five regions of England in the wake of the sanitary crisis of the 1990s, Michael Winter (2003) showed that what is sometimes interpreted as a search for quality can also appear as a fear of risk. He concludes that consumption is a complex act and that researchers should avoid false dichotomies such as capitalism on the one side and “buying local” on the other. A similar argument is made by Clare Hinrichs (2003) concerning local food distribution systems in Iowa, where localism seems to express a certain conservative reaction to globalization, a cultural defense against foreign food. Hinrichs thus argues for a broader vision of the turn to quality that could simultaneously integrate defensive conservative reactions and progressive sustainability values by putting them at the poles of a continuum where different degrees also exist.

This also implies that what is called the “embeddedness” approach to alternative agriculture should be reconsidered. According to David Goodman, the embeddedness concept favors only one aspect of social life—connectivity—and fails to see the social relations related to market dynamics (Goodman 2003). This approach thus tends to build a caricature that portrays society as being in opposition to the market. As drivers of the food chain, however, the turn to quality in consumption practices and the initiatives of alternative agriculture seem, rather, to involve a complex mix of the market, the social relationship and values, and also new modes of regulation.

2.2.2 Environmental and sustainable agriculture certification

One concern encompassed by the turn to quality trend is protection of the environment. Because, like other such issues, environmental protection cannot be assessed by examining the product itself, the consumer must rely on specialized distribution channels or certification programs. The Rainforest Alliance, to provide a first example, certifies shade-grown products in the tropics so as to help poor farmers sustain the forest as their home, as a source of income, and as a refuge for migrating birds. The Core Northeast Values initiative, with the collaboration of universities in the region, has developed a program to help farmers transition to ecological agriculture, which also involves certification and labeling. Producers from numerous regions are getting together to begin certifying local “terroir” products to protect their added value against imitation by larger competitors. Indeed, sustainable agriculture (and food) initiatives have widely adopted the certification and labeling strategy to promote their products. In doing so, they have contributed to the creation of a new regulatory framework in this sector—one that can be termed as “hybrid” (Audet 2010).

Certification and standardization existed well before most of these examples. Kosher and halal labels originating from faith-oriented organizations may have been among the first of the kind. However, governments have also played a part in the emergence of this phenomenon: The Dolphin Safe label was an initiative of the U.S. government to promote the use of a certain kind of (dolphin safe) net in tuna fishing, and the French government has long had its own system of certification and labeling for “origin appellations” in the winery, cheese and dairy, and meat products sectors, among others. Moreover, because a few sustainable agriculture labels have received a lot of attention from consumers and firms, governments have begun to introduce regulations to ensure consumer protection and foster the development of this sector. Organic agriculture may be the best example of this trend, as most governments now have regulations concerning organic certification and even organic standards (Willer et al. 2008).

In a bottom-up fashion, a hybrid regulation framework has emerged from the interlocking of all these initiatives, in the domain of agriculture as well as in many other sectors. This framework involves different types of organizations attending to certification, inspection, accreditation, promotion, standard-setting, etc., whether

they originate from civil society or from government or intergovernmental agencies. Such a mix of private sector, civil society, and state actors brings a set of very complex issues to the growth of the food certification business. For example, labeling confers a new characteristic on a product, one that an unlabeled equivalent product does not have. According to free market promoters or Global South producers trying to export in northern markets, such a characteristic can become an unfair advantage, hence introducing “distortion” in the market. This is why WTO rules on technical barriers to trade state that certification schemes should aim at international harmonization, so that the advantage will be the same for certified products—such as organic products—all around the world, and certification does not become a technical barrier to trade (Audet 2010). As a result, hybrid regulatory frameworks increasingly interact with conventional national and international regulation frameworks, forcing them to adapt to the new reality of sustainable food production and distribution.

2.2.3 *Fair trade and organic agriculture*

Among types of sustainable agriculture certification, organic agriculture and fair trade are probably the best documented and most widely known. Although organic agriculture organizes agricultural production around techniques aimed at maintaining soil productivity and controlling pests without the use of chemicals, genetically modified organisms or other synthetic materials (antibiotics, growth hormones, etc.), fair trade, on the other hand, is a system of trade between marginalized producers in the South and consumers in the North, based on values related to equity. Both organic agriculture and fair trade use certification and labels to control the transparency of their respective food and staple chains and to make their products identifiable on market shelves. Historically, both initiatives conceived themselves as “movements,” but fair trade and organic agriculture have evolved a great deal since their emergence in the 1960s. They now also share the challenge of conventionalization, that is, the process by which organic agriculture is being mainstreamed and its standards weakened (De Wit and Verhoog 2007), and by which fair trade is being extended to larger production models (such as plantations) and multinational agri-food corporations.

The conventionalization phenomenon is also somewhat challenging when it comes to analyzing sustainable agriculture, especially for those observers who tend to understand these initiatives as being in opposition to capitalism and free markets. It is in part in the literature on this subject that Polanyi’s concepts of embeddedness and disembeddedness have grown roots. For example, Laura Reynolds (2000) and Elizabeth Barham (2002) have shown that the organic and fair trade movements were partly built on a critique of conventional agriculture, as both movements reject the specialization, intensification and “chemicalization” of agriculture. These authors demonstrate that productivism is a figure against which these movements define themselves, and that the “international organic and fair trade movements seek

to create alternative trade circuits for items produced under more environmentally and socially sustainable conditions that simultaneously parallel and challenge the conventional global agro-food system. ... Both movements work to re-embed production in natural and social processes and create an alternative agro-food system” (Raynolds 2000, p. 306).

Re-embedding means that the production and trade activities in organic and fair trade food chains are supposed to create or strengthen social relations of solidarity and redefine the role of farmers in natural cycles. Fair trade and organic agriculture hence hypothetically contribute to the creation of new social and economic institutions embedded in nature and social relations. This interpretation, however, can be challenged. In fact, one of the main characteristics of these social movements is their tendency to work inside the market. Of course, they have led to the development of alternative distribution routes and networks—although conventionalization is making these networks increasingly less alternative—but they have also had to mobilize expertise on product quality and sanitary standards, shipping and handling, marketing know-how, and above all, the business of standard-setting, evaluation, and certification. This has not only been true for fair trade and organic agriculture, but also for most initiatives related to sustainable agriculture and food.

2.2.4 Social responsibility

Partly in response to the protest movement and fair trade discourse, but more generally anchored in a global trend toward corporate social responsibility, agri-business corporations have begun to rethink the branding of their products, enhancing the social and environmental quality of the latter and sometimes initiating a more profound transformation of their strategic positioning. The case of Danone, among big players, and Liberty as an example of a smaller business, clearly illustrate how the discourse, as well as practices, development strategies, and public positioning have begun to be modeled around social issues, especially in the field of agriculture. Corporate social responsibility is often defined as voluntary initiatives going beyond the law and mechanisms for dialogue with stakeholders; however, Gendron (2009) has shown that this movement indeed reveals a deep transformation in business legitimacy rationale, forcing corporations to define their mission with respect to the common good and general interest of society. Corporations thus play a new role in the shaping of social issues, which shed light on their positioning and discourse like never before. One must add to this the fact that corporations are seen as being responsible for numerous contemporary problems, especially those of an ecological nature. Contrary to what is sometimes said, corporate social responsibility cannot be reduced to greenwashing or superficial change. When these practices are encountered, they are generally only first and wrong steps in a long path toward the real integration of new parameters in production, governance, and relations with communities and consumers or economic partners in the food chain. As shown by the “awakening” of

some supermarkets that were denounced by environmental groups, corporate social responsibility is no longer an option, and even in areas that are not (as yet) regulated, firms are obliged to show their contribution to solving society's challenges.⁵

These corporate strategies are inspired by and in some ways embody an expression of the exceptionality of agriculture, and they build on the social and ecological embeddedness of the products themselves. They are thus participating in the construction of the new rationale that will predominate in agricultural governance in the coming years.

2.3 Conclusion

Considering the intensity, diversity, and persistence of struggles surrounding agriculture, it seems to be at the heart of the construction of a new rationale that will bring about or sustain a governance system that will move away from the ideal of liberalization. Although this hypothesis seems daring today, it is not absurd to think that the evolution of ecological issues and their growing importance at the international level will compel a governing system that challenges the paradigm of trade liberalization as the only or most powerful vector of public good.

In this sense, as it seems to bring together today's social and environmental problems, agriculture might also be the most fertile ground for governance innovation as well as a window into the most important cultural, political, and economic transformations of our societies. Following the arguments we have presented in this chapter, the key drivers of the food chain are not to be found in the increased commoditization of food, as was the case during the last centuries, but rather in the social, ecological, and even mythical reinvestment in food.

This reinvestment does not have to occur outside the market, because indeed it is transforming the market, which is increasingly being structured around normative parameters that cannot be reduced to the procedural imperatives of a free market. Agriculture is contributing to this transformation and to the rule of what might be called the second globalization; that is, an international integration organized on the basis of a rationale other than market liberalization. Multifunctionality will play an important role in the legitimization of this new order in the field of agriculture, and this is all the more probable because it will serve the interests of the dominant actors, as proved by the failure of the last round of WTO negotiations.

⁵By way of illustration, we present the following case: After being ranked last in 2009 by Greenpeace with regard to the issue of fisheries, the Metro supermarket adopted a new policy to avoid the distribution of endangered species, to which the environmental group responded favorably, granting them a fifth position in 2010.

Acknowledgments The authors would like to thank Johanna-Maud Egoroff and François Décary-Gilardeau for their help with the reference resources that inspired this chapter, Bernard Girard for his careful reading of the preliminary version of the text, and Nguyen and Murray associées for their work in editing the final version. René Audet would like to thank the Social Sciences and Humanities Research Council of Canada, postdoctoral scholarship program, for the financial support granted during the writing of this chapter.

References

- Aggarwal, R. 2005. Dynamics of agriculture negotiations in the world trade organization. *Journal of World Trade* 39(4): 741–761.
- Appadurai, A. 1996. *Modernity at large* cultural dimensions of globalization, Minneapolis: University of Minnesota Press.
- Audet, R. 2010. L'institutionnalisation de l'agriculture biologique vue par le sud: régulation inégalitaire vs tropicalization. In: *Développement durable et responsabilité sociale. De la mobilization à l'institutionnalization*. Montréal: Presses internationales Polytechnique.
- Barham, E. 2002. Towards a theory of values-based labeling. *Agriculture and Human Values* 19(4): 349–360.
- Bellwood, P. 2005. *First Farmers—The Origin of Agricultural Societies*. Oxford: Blackwell Publishing.
- Braudel, F. 1967. *Civilization matérielle, économie et capitalisme (XVe-XVIIIe siècle)*, vol. 1. Paris: Armand Colin.
- Champion, E. 2004. Analyse du discours de Monsanto 1970–2002: les dimensions sociales et environnementales dans le renouvellement de la légitimité institutionnelle de l'entreprise transnationale. Mémoire de maîtrise, Université du Québec à Montréal, Montréal.
- Clapp, J. 2006. WTO agriculture negotiations: Implications for the global south. *Third World Quarterly* 27(4): 563–577.
- Coleman, W., W. Grant, and T. Josling. 2004. *Agricultural in the new global economy*. Cheltenham: Edward Elgar Publishing.
- Cohen, M. N. 1977. *The Food Crisis in Prehistory—Overpopulation and the Origin of Agriculture*. New Haven, CT: Yale University Press.
- De Wit, J., and H. Verhoog. 2007. Organic values and the conventionalization of organic agriculture. *NJAS—Wageningen Journal of Life Sciences* 54(4): 449–462.
- Drope, J.M., and W.L. Hansen. 2006. Anti-dumping's happy birthday? *The World Economy* 29(4): 459–472.
- Evenson, R.E., D. Gollin. 2003. Assessing the impact of the green revolution, 1960 to 2000. *Science* 300: 758–762.
- Food and Agriculture Organization of the United Nations (FAO). 2006. *The state of the World Fisheries and Aquaculture 2006*, Rome: FAO.
- G33 on Special Products and the Special Safeguard Mechanism (G33). 2008. G33 Statement Informal TNC, Geneva, 26 June 2008.
- Gendron, C. 2009. L'entreprise comme vecteur du progrès social: la fin ou le début d'une époque? *Cahiers de la chaire de responsabilité sociale et de développement durable—collection recherche (1-2009)* Université du Québec à Montréal, Montréal.
- Goodman, D. 2003. The quality 'turn' and alternative food practices: Reflections and agenda. *Journal of Rural Studies* 19(1): 1–7.
- Group of 77 and China (G77). 2001. Declaration by the Group of 77 and China on the Fourth WTO Ministerial Conference at Doha, Qatar, 22 Oct 2001.
- Hails, R.S. 2002. Assessing the risks associated with new agricultural practices. *Nature* 418(6898): 685–688.

- Hincrichs, C.C. 2003. The practice and politics of food system localization. *Journal of Rural Studies* 19(1): 33–46.
- Huffman, W.E. 2004. Production, identity preservation, and labeling in a marketplace with genetically modified and non-genetically modified foods. *Plant Physiology* 134(1): 3–10.
- Josling, T. 2002. Globalization and transnational corporations. In *Agricultural globalization, trade and the environment*, ed. J. Moss, G. Rausser, A. Schmitt, T. Taylor, and D. Zibermann. Dordrecht: Kluwer.
- Lal Das, B. 2005. *The current negotiations in the WTO. Options, opportunities and risks for developing countries*. London/New York: Zed books/third world network.
- Moschini, G. 2008. Biotechnology and the development of food markets: Retrospect and prospects. *European Review of Agricultural Economics* 35(3): 331–355.
- Polanyi, K. 2001. *The great transformation: The political and economic origins of our time*. Boston: Beacon.
- Raynolds, L.T. 2000. Re-embedding global agriculture: The international organic and fair trade movements. *Agricultural Human Values* 17(3): 297–309.
- Trebilcock, M.J., and R. Howse. 2005. *The regulation of international trade*, 3rd ed. London/New York: Routledge.
- Vergès, P. 1989. Représentations sociales de l'économie: une forme de connaissance. In *Les représentations sociales*, ed. D. Jodelet. Paris: Presses universitaires de.
- Wallerstein, I. 1974. *The modern world-system I: Capitalist agriculture and the origins of the European world-economy in the sixteenth century*. New York: Academic.
- Willer, H., M. Yussefi-Menzler, and N. Sorensen. 2008. *The world of organic agriculture. Statistics and emerging trends*. Bonn: IFOAM.
- Winter, M. 2003. Embeddedness, the new food economy and defensive localism. *Journal of Rural Studies* 19(1): 23–32.

Green Technologies in Food Production and Processing

Boye, J.; Arcand, Y. (Eds.)

2012, XVIII, 686 p., Hardcover

ISBN: 978-1-4614-1586-2