

Introduction

Food Relocalisation and Knowledge Dynamics for Sustainability in Rural Areas¹

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Introduction

Since the 1980s the evolution of the agrofood economy and agrofood policy has experienced a profound change in Europe as indeed it has in other regions. Globalisation and liberalisation have led on the one hand to a reform of the agricultural policies of post-industrialised countries and on the other to a restructuring of production and markets in response to the application of new technologies and the emergence of quality as a new criterion for competitiveness. There has been a reversal of the previous tendency in the agrofood economy towards consolidation of a rigid vertically-integrated complex dominated by the processing industry and structured according to economies of scale and product standardisation. Global production has been re-organised into a flexible demand-driven value chain, ruled by standards of quality and co-ordinated by the retailing industries (Gereffi et al. 2004, Marsden et al. 2000).

On the side of this global system, though, a multitude of initiatives for the social and spatial re-embedding of the food economy have emerged and acquired new importance, pre-figuring features of an alternative model. A number of sub-types are included in this model, embracing pre-modern, non-modern and post-modern local food products, some of which were never detached from their socioeconomic and cultural contexts but were regarded by political economists and sociologists as peculiarities or 'irregularities' characteristic of backward or less favoured areas within the developed countries. Although the two models – conventional and alternative – are often considered autonomous, they operate in contiguous economic spaces, intersecting and overlapping with each other.

Whereas in the agro-industrial food complex, production processes are de-territorialised, placeless and centred around the commodification of food (*food from nowhere*), the alternativeness of the local food economies is contingent on their embeddedness in the social, cultural and territorial context (*food from somewhere*) as well as in affirmation of the importance of non-monetary values in food production and consumption. Socio-economic rights, rural citizenship, respect

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for the environment, fair trade and cultural identity all give the appearance of foreshadowing a new model of civic agriculture and food economy (Lyson 2004).

Local food is a focus of attention for many disciplines (rural sociology, anthropology, economic geography), but it has also triggered many controversies. After years of debate the scale of locality remains a critical factor, but it is still not clear what the optimum size might be for a locality. There is disagreement over whether local food is really alternative to the conventional food system, or whether by contrast it is merely a defensive, un-reflexive reaction against globalisation (Hinrichs 2003, DuPuis and Goodman 2005, DuPuis et al. 2006, Guthman 2007b). Conceived as consumer-driven, local economies are projected as in effect 'the progenitor of a neo-liberal anti-politics that devolves regulatory responsibility to consumers via their dietary choices' (Guthman 2007a: 264). Sharp political and academic battle-lines have been drawn around local food, with different practices accordingly understood – and legitimated or condemned – as good or bad, reformist or radical, alternative or conventional.

In the wealth of relevant literature that has emerged, the relation between the agro-industrial complex and the local food economy is often left implicit. According to some interpretations (e.g. Hendrickson and Heffernan 2002), the two are to a large extent interdependent. The pressures being exerted in the direction of homogenisation and standardisation also generate counter-pressures towards social and economic differentiation, which however involve only the 'interstices' (Renard 1999) of globalisation: the spaces left empty by the standardisation process of the agro-industry. The global and the local co-exist, the local being 'alternative' insofar as it is organised on different principles, without being a threat to the global.

The proliferation of initiatives and calls for relocalisation of food production over the last two decades or so have led many to imagine that local food might totally replace the dominant system of food provision. Rather than being seriously integrated into the local food debate, the subject is however left for political economists to discuss.

This volume represents an attempt to pursue further empirical investigation of food relocalisation, in conjunction with theoretical reflection on the findings. It emerged out of the CORASON project, CORASON being an acronym for 'A cognitive approach to rural sustainable development: the dynamic of expert and lay knowledge'. Funded through the EU VI Framework Research Programme and carried out in 12 European countries between 2004 and 2007, this research project was aimed at identifying the forms of knowledge and analysing the dynamics of their interaction in the economic development initiatives being carried out in the European rural areas, among which food relocalisation initiatives were being included.

A recent volume by Bruckmeier and Tovey (2009a) sheds light on the thinking and the organisation behind the CORASON project. Researchers from 12 European countries were involved, all of them belonging geographically to the European 'rim', the selection criteria deriving from – and representing an application of

– the ‘Green Ring’ hypothesis (Granberg, Kovach and Tovey 2001): Hungary, Poland, Czech Republic, Greece, Italy, Spain, Portugal, Ireland, Scotland, Sweden, Norway, Germany. What all these countries have in common is that agriculture and rural culture have played, and continue to play, an important part in their social, economic and political development. Bruckmeier and Tovey discuss the role and dynamics of local knowledge in initiatives pertaining to a non-agricultural economy, to innovatory development, nature protection and biodiversity. Here, from the same perspective, we present and analyse initiatives of food relocalisation. We have included 10 of the 12 CORASON partner countries because of their particular focus on the issue of interest (see Figure I.1). One specific contribution made by the present volume is that it presents a critique of modern science from the perspective of local food and the countryside.

Interest in knowledge dynamics in rural areas grew out of two social trends (Bruckmeier and Tovey 2009b: 3): the movement toward a knowledge society and the increasing emphasis on sustainable development. Both trends are significant in rural areas, but in their own particular way. Rural areas are often perceived as being rich in natural resources but lacking in the human capital and knowledge that are a necessary prerequisite for remaining competitive in a modern economy. It is not clear, on the other hand, what implications sustainable development might have for them. In several of its variants (Buttel 2000) ecological modernisation ‘centres on the idea of rebuilding core industrial production processes using “clean technologies”’ (Bruckmeier and Tovey 2008: 319), without this entailing any necessary concern for the social and economic conditions of rural sustainability. Inspiring EU and intergovernmental policies at the official level, this vision of sustainability, as an expert-dominated discourse employing rules of science for establishing percentages of allowable emissions, has the potential to block rather than promote rural development, excluding local actors and their knowledge from participation in its construction.

The CORASON project favours ‘polycentric management’ of local resources (Bruckmeier and Tovey 2008: 323), involving a new model of rural governance with the capacity to secure the participation of local people both as individual users and producers and as formal and informal groups and institutions. The model also creates opportunities for joint learning, collective formulation of principles and sharing of decision-making power.

While reflecting a variety of approaches, the local food case studies considered in the different chapters of this volume were all selected on the basis of common assumptions, which were discussed extensively among the researcher teams prior to crystallisation in a conceptual and methodological synthesis (Fonte and Grando 2006). Social and ecological embeddedness and the producer-consumer nexus were at the core of the analysis. As for local food, a broad differentiation of meanings soon emerged in the discussion, polarised around two main perspectives. In the first, ‘local’ was understood as denoting *socio-spatial proximity*, reconnecting producers and consumers in the same place (*the re-connection perspective*). In

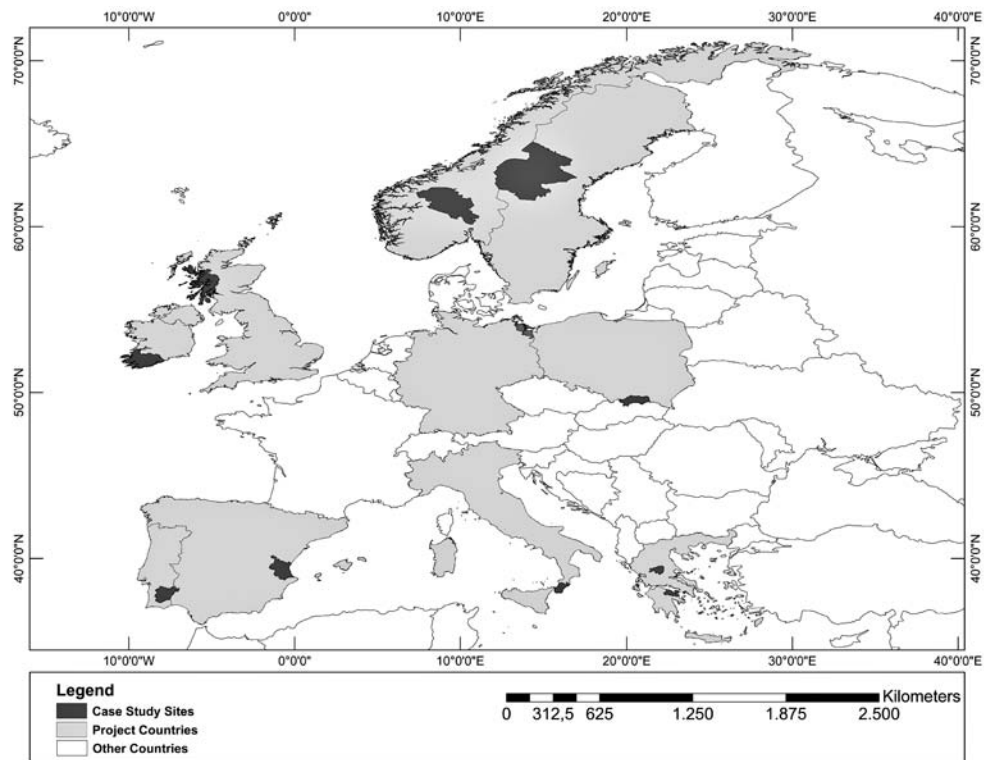


Figure I.1 Map of the study areas of the local food initiatives in the CORASON project

Source: Elaborated by Erasmia Kastanidis, Department of Geography, Harokopio University of Athens.

the second, the concept of ‘localness’ was also linked to the specific conditions of production in a *territory (the origin-of-food perspective)* (Fonte 2008).

Rather than privileging one discourse over the other, we decided to explore both of them, distinguishing – in the relation between producers and consumers – ‘local production for local consumers’ from ‘local production for distant consumers’. For each perspective we agreed, through analysis of case studies in the CORASON research areas, to explore the characteristics of the network (including the actors and actants involved, the objectives and the strategies pursued) and to identify the forms of knowledge mobilised by the rural actors as well as the way they changed and interacted over time. Within this perspective the local is not only identified with a geographic location and a particular community but also constituted through ‘its methods of producing situated knowledge’ (Jasanoff and Martello 2004: 14).

The main research assumption was that the knowledge debate would enrich the analysis of local food. It is hard to exaggerate the role of science and technology in the constitution of the agro-industrial model of food production. The ‘green revolution’ is generally considered to have been the product of a breeding revolution brought about by scientists in the land-grant universities and diffused in the field by an army of extensionists and development agencies, persuaded that an increase in productivity would eradicate hunger and bring progress all over the world (Schultz 1964, Mosher 1966, Brown 1970, Evenson and Gollin 2003). Given that the political agenda of local food is to establish a new food economy offering an alternative to this model, the local food project will necessitate new ways of knowing and a new science (Kloppenborg 1991). Combined discussion of ‘local food’ and ‘local knowledge’ is seen as a first step in the construction of a new science of agriculture with a potential for elaboration in the various national and regional contexts. The attention paid to the dynamics of knowledge in developing local food is crucial both in addressing the objective of food re-localisation (as part of an attempt to construct alternatives to the dominant agro-food production model) and in gaining insights into the processes that may serve to legitimate different ways of knowing, in the process leading to new, democratic ways of generating knowledge.

In the following sections of this introduction we first consider some of the key insights that have contributed over the last decades to revitalising the debate on the role of local food. We pay particular attention to the spatial and socio-economic dimensions, subsequently touching on the question of knowledge dynamics in local food projects and always bearing in mind the most important findings of the case studies presented in this volume.

The chapters of the book are organised under two headings: ‘Re-inventing Local Food and Local Knowledge’, and ‘Valorising Traditional Food and Local Knowledge’, in accordance with what appears to us to be the differing economic and cognitive dynamics of the initiatives under analysis.

Local food and the political agenda

The local food movement has grown rapidly in the last decades, both in North America and Europe and so has academic debate about it. Local food is promoted as an alternative to the globalised industrial system of food production, whose products dominate the supermarket shelves. Shortening the food chain and the distance between producers and consumers is expected to have beneficial effects for the environment, the local economy and the rural community.

For its activists and proponents, local food represents a radical alternative for supporting food produced, retailed and consumed locally. There is an appeal to 'three aspects of sustainability: invigorating local economies; sustaining diverse environments; nourishing healthy communities'.² The political strategy constructed around local food proceeds to canvass the wider support of citizen-consumers, i.e. those who use their consumption choices as an expression of social agency and citizenship (Lockie 2009). For them the organisation of the global food value chain is based on unfair exchange relations favouring big intermediaries, above all the retailing industry, against the interests of agricultural producers – who do not earn a living income – and the final consumers – who pay too much for food (Patel 2007). The global food chain is moreover characterised by great paradoxes: overproduction and food shortages, systems of production that deplete the same natural resources that are necessary for future production and, most dramatically, the co-presence in the world of a billion people suffering from hunger and a billion suffering from obesity and related illnesses (diabetes and cardio-vascular disease). A recent international assessment (IAASTD 2009) recognises that the global food system is environmentally, socially and economically unsustainable.

The new movement for localising food production gained impetus in the 1990s as a result of growing dissatisfaction with the organic movement and its increasing 'conventionalisation' (Guthman 2003, Buck et al. 1997). There was a widespread perception that the organic movement had dropped its alternative/environmental ideological baggage and had been seduced by multinational retailing firms and the prospect of a mass market (Blythman 2005). Certification began to be seen as encouraging non-local food consumption, raising costs for producers and prices for local consumers. Accordingly, a 'post-organic' (Moore 2006) local food movement shifted the focus to direct sales to the consumer, specifically addressing the sustainability of the distribution system in the food chain.

Local food cannot challenge globalised industrial food production everywhere in the same way, for the simple reason that there is not, and could not be, either a generally accepted definition for local food production or a uniform practice of relocalisation. In its different guises, as community gardens, farmers' markets or community supported agriculture, as food circles or box schemes, as food fairs or certification programmes, the local food project emerges out of different contexts, is inspired by different values and may inspire different social practices

2 See the material at <http://www.localfood.org.uk/>.

and different social relationships. Because of the heterogeneity of the initiatives it inspires and the objectives it pursues, local food is, as Tovey convincingly argues in her chapter in this volume, also a 'contested concept'.

Localness is associated with space and short distance, but also with place, regions and territories; it is associated with small-scale farms, multifunctional agriculture, quality food, rural livelihoods, sustainable community agriculture. The most comprehensive list of the different objectives pursued by local food projects is provided by Pratt (2007: 288–289):

- alternative food movements promoting local produce for environmental reasons;
- localised food systems as part of a political project to construct local economies outside/against/opposing the capitalist system (locality is socially constructed as a space of resistance, autonomy, empowerment, sustainability);
- food system localisation as a strategy for increasing farmers' income in rural development policy (community-supported agriculture, rural development strategies);
- the connection between locality and quality (food quality as a territorial connotation);
- food sovereignty as the right of each society to establish its own food economy, an objective pursued by alternative global movements such as the small farmers' movement led by Via Campesina.

Each objective has to do with a different connotation of 'local': environmentally friendly, anti-capitalist, favouring small farms and marginal areas or food quality, food sovereignty. The different meanings and the different objectives may overlap, complement or contradict each other, so that one major issue for further investigation is whether all these different initiatives may be articulated with each other in a coherent trans-local project or whether they must remain partial, localised forms of resistance to the global food system. The question to be asked, in other words, is whether they are niche phenomena filling the spaces overlooked during globalisation of production and markets or whether they portend a paradigm shift leading to an alternative food economy (Morgan et al. 2006: 81–85). McMichael (2008: 95) suggests that they should be seen as an 'expression of transitional relations within/between food regimes in which both objective and subjective forces are at play'.

Environmental sustainability and the spatial dimension of the 'local'

In its immediate meaning 'local' has to do with the physical distance food travels from the place of production to the place of consumption, a distance expressed in miles, as in the '100-mile-diet' or kilometres, as in the '0 km restaurant'.

A sharp contrast is drawn between the short chain for local food and the long distance food is required to travel in the conventional, centralised, industrialised food system (Pretty et al. 2005). In the United States Pirog et al. (2001, 2003) analysed the transport arrangements for 28 fruits and vegetables to Iowa markets via local and conventional food distribution systems and calculated that produce in the conventional system travelled an average of 1,546 miles (about 2,500 kilometres) while by contrast locally sourced food travelled an average of just 44.6 miles (72 kilometres).

Attention to food miles links concern over food to environmental concern with climate change and emissions of carbon dioxide and other greenhouse gases (GHG) from transport. The environmental impact of the food economy, though, does not depend only on the distance 'from farm to fork', but also on *how* food is transported, grown, transformed and prepared. Only a life-cycle analysis of food can yield an accurate assessment of the total volume of gas emissions. Studies in the UK and the United States (Garnett 2007, Weber and Matthews 2008) revealed that it is agricultural production that accounts for the largest proportion of the food system's greenhouse gas emissions: between 50 per cent and 83 per cent of total emissions occur before food goes out the farm gate. Different food groups also differ widely in GHG-intensity; on average red meat is around 150 per cent more GHG-intensive than chicken or fish. It is thus evident that

dietary shift can be a more effective means of lowering an average household's food-related climate footprint than 'buying local'. Shifting less than one day per week's worth of calories from red meat and dairy products to chicken, fish, eggs, or a vegetable-based diet achieves more GHG reduction than buying all locally sourced food. (Weber and Matthews 2008: 3508)

The difficulty of establishing well-defined boundaries for the notion of 'locality', taking into account the conditions for the entire life-cycle of production, appears to undermine the usefulness of 'localness' as a category for analysis of the sustainability of food systems. But there are two major considerations to corroborate the suggestion that the spatial dimension of local food remains important. First, most studies on GHG emissions from agriculture start from an assumption that there is no difference between 'long-distance' and 'short-distance' agriculture when it comes to production technique. If one were to take into account existing differences in farming practices and farming structure, this could lead to different results. Local food is better not only because it has travelled shorter distances, but also because it is grown differently, on farms of a different type, usually small and utilising more sustainable practices (DeWeerd 2008). Harris (2008) also suggests that emphasis should be placed on scale as an important aspect of practice. He would like our attention to be directed to the ways in which 'scalar narratives, classifications and cognitive schemas constrain or enable certain ways of seeing, thinking and acting'. The 'local' becomes the space for enactment of a political agenda involving construction of a new, more equitable and more sustainable food

system. 'The local' acquires a variety of complex meanings within this perspective, encompassing not only spatial but also political and social dimensions.

The socio-economic dimension of localness

Relations of production and relations of exchange in the food economy Local food is not only about short distances. From a sociological viewpoint local food is place-embedded, the opposite of the placeless food of industrial agriculture. This concept of embeddedness imparts social meaning to notions of place, social meaning to be elaborated by the rural communities inhabiting the 'places' in question. The shortness of the local food chains makes it possible to trace the food almost personally to the individual farmer who produced it, enabling relations of *trust* to be established in the local society. Food production is re-contextualised within the formal and informal social relationships that constitute the basis for community life. Geographical proximity is, then, important because it implies or makes possible social proximity, i.e. face-to-face interaction between producers and consumers. Such interaction has a significant impact on rural community life. Local food becomes part of a political project for keeping rural communities alive and constructing local economies with a degree of independence from the powerful forces of globalisation. Partially protected or separated from global competition, local economies encourage values other than the suffocating market law of profit: respect for natural resources, attention to cultural and biological diversity, economic sustainability for small farmers, social justice and food sovereignty.

Place-embeddedness of food may thus be conceived of as local society's *resistance* strategy against globalisation and neo-liberalism (Polanyi 1957). Place-embeddedness and differentiation of food comes forward as a cultural, individual and collective societal response to the commodification-of-everything (Strassen 2003) drive of the neo-liberal economy.

Not everyone agrees with this assessment. Place-embeddedness can be seen as having been co-opted by the same globalisation process that it is supposedly fighting. Valorisation of local foods – as 'commodities that embed ecological, social and/or place-based values' (Guthman 2007b: 456) – green labelling and 'fair trade' are nothing more than aspects of a 'third wave of marketisation' (Burawoy 2005a and 2005b) as it extends to the fictitious commodities of nature, land and natural resources. Commodification is able to embrace niche production and place-specific products, sweeping them up in a movement of appropriation by global capitalism that allows of no escape, with every action and every aspect of production susceptible of integration into the market mechanism. The 'commodification-of-everything' argument is evidently predicated on a linear conception of modernisation involving a progressive shift from non-market to market economy (through successive waves of commodification), absorbing everything and destroying cultures and society.

In the Marxian tradition commodities are associated with the capitalist mode of production and with the production of goods for sake of their exchange value.

They represent a *fetish* insofar as they conceal the fact that (surplus) value has its real source in labour and production relations are relations of labour exploitation. In the recent debate on commodification, references to relations of production are downplayed and circulation, i.e. the market, rather than production, becomes the source both of value (or rent) and of a new form of alienation deriving from excessive individualism and loss of sociality (not the alienated worker but the alienated consumer). In post-industrial society there has undeniably been an expansion of the commodity sphere, but cultural anthropology warns us against 'an excessively positivist conception of the commodity, as being a certain *kind* of thing' (Appadurai 1986: 13). Appadurai instead proposes to see things as having a social biography and a 'social life', in the course of which they may change status and switch from a condition of commodities to one of non-commodities. In this perspective the commodity and the gift are not something separate and the one does not exclude the other.

Gifts, as we know, are conceived of as a type of exchange involving both things and persons and embedding the flow of things in the flow of social relations; 'commodities represent [by contrast] the drive ... of goods for one another, a drive mediated by money and not by sociality' (Appadurai 1986: 11–12). But the term 'commodity' should not be taken as denoting a fixed category of thing. It is rather a socially specific situation in which things are exchanged in a certain regime of values. 'The commodity situation in the social life of any "thing" may be defined as the situation in which its exchangeability (past, present and future) for some other thing is its socially relevant feature' (Appadurai 1986: 13). Following the social life of things in their total trajectory from production to exchange to consumption 'we can see *things* moving into and out of the commodity state' (Appadurai 1986: 13), subject to various processes of commodification and de-commodification. Kopytoff (1986) identifies the former process (commodification) with homogenisation and the latter (de-commodification) with singularisation.³

In this reading the commodity is not born with the capitalist mode of production: the term denotes something that is cross-cultural and common to numerous modes of production. The 'tendency of all economies to expand the jurisdiction of commodification' is moreover counterposed to the tendency of 'all culture to restrict it' (Appadurai 1986b: 17).

The situational, contingent construction of things as commodities comes over as a contradictory process, which it is therefore important to investigate. There are in fact in any society culturally defined hierarchical spaces surrounding commodities and serving to establish which items are exchangeable. But, apart from this, individuals too have their own criteria for evaluation and their own need to discriminate between things, and these criteria do not necessarily coincide with those applying in general in the public sphere or in the society. Kopytoff

³ Appadurai (1986: 17) is less convinced of this opposition, noticing that the most interesting cases show a permanent commodifying of singularities. Flexible accumulation can be also seen as a process of appropriation of 'singularities' by capital.

(1986: 79–80) argues that in simpler societies the culture and the economy are in relative harmony, with the economy reflecting the cultural classifications and the latter quite effectively satisfying the individual need for discrimination. Complex societies, by contrast, are characterised by functional specialisation at the social level and by cultural pluralism and relativism. Here one finds not only enormous momentum in the value-homogenising drive of the exchange system but also publicly recognised classifications underwriting commodification and operating side by side with innumerable schemes of valuation and singularisation that have been devised by individuals, social categories and groups and may conflict inexorably not only with public commodification but also with one another.

An examination of local food from this perspective opens new possibilities of interpretations and new avenues for research. It might, for example, be interesting to trace the social and cultural trajectory of local food through the successive transmutations of commodification and de-commodification, with social relations of production and exchange both playing an important role as mechanisms of material and immaterial value production. It is perhaps worth noting from a theoretical viewpoint that a rigid interpretation of commodity fetishism could have the effect of obscuring the differences that lie behind different types of commodity exchange, especially in the case of place-specific food products (Gibson-Graham 2006).

In the individual and collective fight to redefine cultural, symbolic and also social values, local food is simultaneously subjected to contradictory forces of commodification, de-commodification, homogenisation and singularisation (Kopytoff 1986: 76). Transactions in farmers' markets may furthermore, by shortening the food chain and establishing direct links between producers and consumers, help to unveil rather than obscure the economic, social and environmental conditions of production, thus making possible a re-composition of the specialised, segmented knowledge of the long-distance commodity trade. Exchange of 'meaningful commodities' (Guthman 2002) may not only serve to redistribute value and rent but may also contribute to affirming common intangible ethical and political values and, in so doing, creating or strengthening social bonds and/or social networks in the context of a moral economy.

Transcending the traditional Marxist emphasis on the social relations of production, local food points to the importance of the innovative organisation of social relations at the point of exchange, between producers and consumers, as potential driver for the construction of new food communities.

The relation between 'de-commodification' and 'singularisation' on the one hand and 'resistance' on the other is a topic requiring further research investigation. In their origins the former are cultural concepts; the last-mentioned social and political. Appadurai argues that it is politics (in the broad sense of relations, assumptions and contests over power) that links value and exchange in the social life of commodities. The constant tension between the existing frameworks (of prices, bargaining, etc.) and the tendency of commodities to breach these frameworks in search of a re-definition is political, that is to say, pertaining to power (Appadurai 1986: 57).

Van der Ploeg (2007: 1) recently made the point that ‘a more comprehensive concept of resistance can play a more prominent role in sociology, especially when it comes to sustainability in rural areas and food production’. He distinguishes three forms of resistance: overt struggle (typical of the working class fighting for better terms and conditions of work), sabotage (typical of traditional peasants, see Scott 1985) and, last but not least, direct intervention in the organisation of labour and production.

Sabotage is a form of passive resistance but resistance of the third kind represents production and action, based on innovativeness and autonomous co-operation between producers and consumers:

One important feature of these new forms of resistance, especially relevant to sustainability, is that they entail searches for, and constructions of, *local* solutions to global problems. ... Individually these expressions are innocent and harmless: considered together they become powerful and change the panorama. (van der Ploeg 2007: 3–4; emphasis in original)

Returning to innovativeness in the organisation of production and consumption, the concept of ‘resistance’ in its various forms by its nature entails the cultural concept of de-commodification. Both ideas bring to the fore the role of new subjectivities and of the social movements that fight consciously to win self-determination and autonomy from the global forces of the economy.

From neo-liberalism to new ‘food communities’? In an effort to make intelligible the multiplicity of local food initiatives, which often become prescriptions about what to eat and how to consume food (Guthman 2007a), Maye, Holloway and Kneafsey (2007) distinguish between a ‘product and place’ and a ‘process and place’ approach. ‘Process and place’ initiatives (farmers’ markets, CSA, etc.) are seen as radical, politically oppositional, alternatives, offensive strategies because they draw into question the social and ethical values of the dominant food system, seeking to create a direct relationship between producers and consumers.

The ‘product and place’ approach, by contrast, has the appearance of a defensive strategy. Its aim is to produce geographically specific food products that can be sold outside the production region as niche market commodities (Maye et al. 2007: p. 5). Supported by policy schemes such as the Protected Designation of origin (PDO) and Protected Geographical Indication (PGI) labels that were introduced by the EU in the 1990s, this strategy comes over as a weak alternative: it focuses on rural development objectives for marginal areas and offers no truly radical alternative to the conventional food supply chain. For some authors such schemes are not alternative at all. Labelling is an instrument of neo-liberal politics, part of a shift from government to governance, limiting the right of access and creating scarcity through enclosure (Guthman 2007b).

These oppositional authors put forward a simplistic reading of the PDO and PGI policy. It is not just some final characteristics of the product that the PDO/

PGI labels certify but also the entire process by means of which it was grown and transformed. The link between ‘product and place’ derives precisely from such a specific process of production, from local knowledge and a local culture embodying knowledge of how such a food might be produced and consumed. It is also interesting to note that the GI labels do not bestow exclusive rights on techniques, animal breeds or plant varieties, but simply protect geographical names. Anyone can copy the production techniques for parmesan, feta, cheddar or oscypek cheese and commercialise their products without any authorisation being required, as long as they do it under a different name. It is the identity and the reputation of the name that is protected, and protected as a collective, not a private good. It is protected, that is to say, as a good that belongs to a community of producers in a specific geographical area. Any producer in that region (even outsiders who operate there) can use it as long as he/she observes the rules that have been negotiated. It is a collective good which justifies community rights. It is particularistic and exclusionary, as the domestic convention (Boltanski and Thevenot 1991) and the concept of community imply. It is regarded as a defensive strategy in the sense that it aims to protect ‘what the market leaves after it has filtered out everything else’ (Pratt 2007). But it implies a quest for place-based differences rather than a drive towards homogenisation. This means that GI labels may open up a possibility for preserving and valorising local identities and ways of life, as against the global appropriation of local resources. In that sense they may be seen as a form of cultural resistance to commodification (Kopytoff 1986). To the extent that they offer and elaborate political and institutional instruments making possible the management of collective goods they may be considered not only a defensive, but also an offensive strategy against the neo-liberal rush to individualisation and homogenisation.

Guthman (2007b) underlines the contradictions and paradoxes in the use of neo-liberal tools to protect community and collective goods. But the stories of biodiversity, bio-piracy and free software convey the message that in order to avoid a commons, a *res universitatis* (i.e. a thing belonging to everybody in a community) becoming *res nullius* (a thing belonging to nobody), it is necessary to devise protective institutions and new regimes of regulation⁴ (Rose 1986).

Although it is generally understood that management of the commons and of common-pool resources is affected by the increasing scale of social interaction, new theories and concepts are needed if there is to be firstly recognition and then

4 If today we have something called ‘free software’, we are indebted for this to Richard Stallman, a former researcher at IBM, who in the 1980s, amidst the extension and strengthening of intellectual property rights legislation, was able to use the copyright law to protect free software by means of the *GNU General Public Licence* (GNU GPL). The GNU GPL allows everybody to use, study, modify, and redistribute free software on the proviso that he/she does it under the same conditions of the GNU GPL (see <http://www.gnu.org/philosophy/free-sw.html>). It excludes those who do not share the values of ‘free software’ – the outsiders to the (place-less) community of ‘free software’.

analysis of the transformation that is taking place in the new millennium in the commons and in the 'community' (Dolsak and Ostrom 2003). In many disciplines calls are being issued for renewed attention to the concept of community. In economics, Bowles and Gintis (2002) speak of community governance being likely to acquire greater rather than less importance in the future as a complementary form to the state and the market.

Far from representing holdovers from a premodern era, the small-scale local interactions that characterize communities are likely to increase in importance as the economic problems that community governance handles relatively well become more important. (Bowles and Gintis 2002: 422)

Territory,⁵ the institutions of microfinance, the production of free software through voluntary participation are all seen as being underwritten by some kind of community governance. Gibson-Graham (2006) try to develop a sociological discourse of the 'community economy' which articulates a set of concepts and practices able to provide potential co-ordinates for counter-hegemonic projects. Finally, Etzioni (2006a) calls for a *new* approach in the form of a responsive or democratic communitarian social philosophy counteracting liberalism. While the latter focuses on the individualistic conception of self-interest, the former favours a balance between liberty and social order and between particularistic (communal) and society-wide values and bonds. Unlike the old neo-communitarianism, it takes as its starting point the assumption that both the universalistic demands for human rights and the particularistic demands of communities have strong moral standing. It recognises also that the two may be reconciled through compromises that are both morally defensible and sound (Etzioni 2006b).

In the global movements around local food we should recognise that there are new food communities emerging with quite specific features, that they are trying to link together and reconcile universal and particularistic/collective claims when they propose what may seem to be a paradox: empowerment of local food communities as the best strategy for asserting and implementing the universal right to food.

Science and knowledge in the post-positivist era. What place for local knowledge? In the debate on local food there has been an enrichment in meaning in the concept of the 'local', which has come to be associated not only with geographical locations but also with particular communities, particular histories, particular institutions. One other important constitutive element of locality is its specific, collective way of being in particular places, producing situated knowledge and elaborating a particular method for knowing things (Jasanoff and Martello 2004: 13) which is often labelled 'local knowledge' as opposed to scientific or expert knowledge.

5 See the literature on industrial districts and local production systems (Becattini 1989, Garofoli 2003).

The CORASON project was conceived as an attempt to analyse the interrelations among different forms of knowledge – scientific, managerial, local (Box I.1) – in the process of constructing sustainability in rural areas, starting from the observation that ‘changing society in a sustainable direction means both changing knowledge processes and relationships, and using knowledge to manage resources for rural development in a sustainable way’ (Tovey, Bruckmeier, Mooney 2009: 265).

Box I.1 Knowledge forms and knowledge producers

1 Scientific knowledge generated by researchers in clearly defined research roles.

Criteria: specialised, discipline-bound or interdisciplinary, methodologically guided, may be experimental, documented/written, public and published, learned in public and controlled/certified education and training, neutral with regard to persons, age, gender, social organisation, produced by researchers.

2 Managerial knowledge generated or used in resource management, programme and project management, political, administrative and economic decision-making, including planning. Criteria: shares many criteria with scientific knowledge and its specialisation; is mainly learned in public and controlled/certified education and training; is more clearly and explicitly bound to use of power and decision-making and normative criteria; not always public and published; often about routines and procedures; can also be informal, person-bound and based on individual experience.

3 Local knowledge as locally specific, context-and actor specific. Criteria: locally and culturally specific/particularistic – context-bound or situated, often orally transmitted, person-bound, experience-bound or more experiential than scientific knowledge; not neutral with regard to person, age, gender, social organisation, status; bound to production and resource use in agriculture; learned in informal and private contexts of family and face-to-face interaction, in neighbourhoods, from local cultural traditions and practices; intergenerational transmission; print and other media may be of increasing importance in local knowledge use and transmission.

Source: Bruckmeier 2004.

Knowledge is today considered the most important resource for economic development, but there still persists an *urban bias* in the conception of technological progress, which is thought to be linked only to the scientific knowledge produced in the urban *milieux* of the universities, government and industrial laboratories, especially in the fields of informatics, telecommunications, biotechnology and nanotechnology. Rural areas are by contrast often characterised as ‘lacking in human capital’ and rural societies are said to be suffering a ‘knowledge deficit’ (Bruckmeier and Tovey 2009c: 276–277) which hinders the spread of global technologies.

Recent social science studies have criticised the triumphalism of technical progress based on modern science, disputing its capacity to capture the full complexity of natural phenomena. Modern science and technologies have engendered a risk society, in which people perceive themselves to be constantly endangered by scientific and technological projects and products, whether through economic crisis or through ecological destruction (Beck, Giddens and Lash 1994). Modern science has in fact never really attained the status of being a superior form of objective, universal knowledge, as the rhetoric may perhaps have suggested. Latour (1987, 2004) argues that the ontological separation between nature and society and facts and values that is often represented as being part of the 'constitution of modernity' has in fact never been realised. The results of scientific research are always socially constructed. Their success is judged by their capacity to build social networks 'acting at a distance' as a means of creating the social conditions for their own diffusion.

Nowotny, Scott and Gibbons (2001) describe the innovation of post-positivist science as being a shift from *mode 1* to *mode 2*. In *mode 1* the context of discovery was considered to be the domain of scientific creativity. Scientific methods of justification were portrayed as de-contextualised, 'that is to say, detached as much as possible from social aspects of the worlds from which they had arisen and in which they were practised' (Harding 2008: 81). In *mode 2* the *loci* of knowledge production have shifted from universities to industry and government laboratories. Science is now always mission- directed and by consequence is even more contextualised. Focused as it has been since its emergence on solving practical problems, scientific research is organised in such a way that it transcends disciplinary boundaries, involving multi- and trans-disciplinary teams, in which not only researchers and scientists are called to participate, but also target groups, users and other lay persons.

The growth of uncertainty and complexity in society, as illustrated among much else by the proliferation of controversies between experts, further underlines science's inability to deliver a socially binding definition of truth. The sites of problem formulation and negotiation move away from the institutional domain of industry, government and universities – dubbed 'the triple helix' by Leydesdorff and Etkowitz 1998 – into the public space, the *agora*, where 'science meets the public' and the public speaks back to science. People are forced to enter the scientific debate in an experimental frame of mind, with experience rather than data and procedures becoming the decisive factors in handling ambivalence and uncertainty (Beck 1992 and 1997, Harding 2008). Participation by the public, bringing all its experiential baggage with it into the debate, makes science more socially robust and the knowledge system more open and more democratic.

The trans-disciplinary approach opens the stage of knowledge production to lay persons, stakeholders, ordinary citizens. But the rural context and local knowledge are not specifically discussed in the new post-positivist scenarios. They rather constitute the object of debate in development and ethnographic

studies of local cultures in Third World countries (Sillitoe et al. 2002, Bruckmeier and Tovey 2009c).

The originality of the CORASON project lies in the way it highlights the relevance of local knowledge as a necessary component in the sustainable management of local resources in Europe. It could of course be argued that in Europe the prevalence of industrial agriculture and the fact that a large part of the rural population has undergone a process of formal education and professional training have both undermined the foundations of local knowledge. The CORASON project set out to explore the role of local knowledge in contemporary rural development and it indicates that the best way of interpreting the present situation is to posit an interaction between, and a blending of, knowledge forms as processes through which local knowledge and its related practices are updated, not finally eroded (Bruckmeier and Tovey 2009c: 270).

Local food is a privileged domain for exploration of knowledge dynamics, not least because food production and preparation are among the oldest of human activities: activities within which different forms and processes of knowledge have found optimum expression and become consolidated. A second reason for interest derives from the fact that in the second half of the twentieth century agriculture became a special field for application of scientific knowledge, through the spread of what is today known as the 'green revolution', a development admittedly disastrous for the patrimony of knowledge accumulated by generations of farmers.

Revitalisation of local food economies necessarily implies a renewed attention to local conditions of production and consumption. Local food networks may not only represent resistance to the globalised, placeless reorganisation of food chains but may also serve to challenge a continuous trend towards simplification and homogenisation of agricultural techniques and agro-ecosystems, leading to a revaluation of traditional/local forms of knowledge and techniques and their recognition as a specific and important resource in the management of agricultural and natural ecosystems.

A critical analysis of the notion of 'local knowledge', with discussion of its ambiguity, is developed in CORASON project publications (Bruckmeier and Tovey 2009c, Fonte 2008). The concept is also explored by the various authors who have written chapters for this volume. Tovey and Bruckmeier (2009b) and Fonte (2008) stress the importance of drawing distinctions between *tacit* knowledge and *lay* knowledge.

Tacit knowledge is understood as being 'the sort of knowledge which we use, more or less unconsciously, to manage our interactions with other people' (Bruckmeier and Tovey 2009c: 273). Created through normal processes of socialisation, this is a form of knowledge transmitted pre-discursively in a community through its social norms and habits. It is important in rural development because it helps to strengthen informal social networks and social relations, promoting trust and social cohesion. Lay knowledge, by contrast, is 'about "objective reality", practical causal connections or "how things work"'

(Bruckmeier and Tovey 2009c: 273). It is a technical form of knowledge acquired through particular experiential circumstances and transmitted by specific 'local experts' in informal learning situations. It differs from 'scientific' knowledge in that it is neither standardised nor formal. Its variability (linked as it is to specific places and cultures) has earned it a status that is inferior to that of 'scientific' knowledge.

The authors of this volume agree on the importance of local knowledge in the organisation of alternative, sustainable food economies, while offering different perspectives on how it should be defined or characterised. Kvam, for example, stresses the importance of the tacit components in lay local knowledge, to the extent even of making it difficult for the two to be distinguished; Adamski and Gorlach introduce a category of 'adaptive local knowledge' to denote a modification, indeed a 'misuse', of traditional forms of lay knowledge under the pressure of economic opportunities opened up by mass tourism. Papadopoulos focuses on a specifically ecological variant of local knowledge, analysing the practical skills and the intelligence that are acquired through interaction with a constantly changing environment. Bruckmeier, but also Dargan and Harris, stress how the boundaries between 'lay' and 'expert' knowledge become uncertain in the construction of local food, an expert being, in that context, a person with expertise in specific traditional and artisanal practices of food production.

Notwithstanding all these differences, common understandings and findings do emerge from the case studies: local knowledge is not only an important resource for local development but is also a constitutive element in the identity of rural communities and in construction of their sense of place. The analysis of local food projects does not presuppose an opposition between local/lay and global/scientific forms of knowledge. It is rather an analysis of institutional processes, social mechanisms and networks through which ideas and ways of acquiring knowledge are empowered and legitimated.

Local food and the dynamics of knowledge

Fonte (2008) has elsewhere identified two types of conceptual reference for the case studies reported in this volume: a re-connection perspective and an origin-of food perspective (see Boxes I.2 and I.3).

The re-connection perspective supports strengthening of the social relations between producers and consumers at the exchange site as a way of strengthening rural community and augmenting the sustainability of food production systems. In the origin-of-food perspective, 'local' acquires a temporal dimension, denoting a 'place' where common history and a common belonging have consolidated into collective norms, traditional forms of knowledge and 'typical' products.

Box I.2 Case studies in the reconnection perspective

Ireland

The C— Farmer Market in Tipperary, south-east Ireland, was established by the C— Development Association with the aim of attracting people to the village of C— on Saturdays and promoting the sale of a wide range of local products.

Germany

Netzwerk Vorpommern is a voluntary association started in 1995 by a group of active organic food consumers. The initiative gradually grew, with various activities supporting new projects for a sustainable local and regional development.

Scotland

The Skye and Lochalsh Horticultural Development Association, in Scotland, was set up in 1995. It is a network of actors committed to support horticulture on Skye and teach local farmers horticultural skills that have gradually become lost.

Sweden

The Eldrimner initiative is a rural network for the small-scale refinement of agricultural products centred in Rösta, in the municipality of Ås in Jämtland.

Box I.3 Case studies in the origin of food perspective

Portugal

The construction of the Barrancos cured ham PDO (Protected Designation of Origin).

Italy

The construction of the ‘Aspromonte National Park Product’ certification.

Poland

The valorisation of oscypek cheese.

Norway

Valdres Rakfisk brand (traditional fermented fish).

Kurv frå Valdres BA (traditional salami).

Spain

Utiel-Requena PDO wine.

Requena sausages Protected Geographic Indication.

Greece

Mavro Messenikola wine production ‘Quality Wine Produced in Specific Region’ (VQPRD).

Nemea wine production (VQPRD).

From the CORASON case studies it clearly emerges that the understanding of localness from the two different perspectives reflects their differing agro-food contexts. The context for the first perspective is what is called a ‘food desert’,

Table I.1 From the ‘cold’ negotiation of the market to the face-to-face relations of local food production

Consumers/ Markets	Rural development strategy	Social relation consumers – producers
Local/Local	Territorial development through valorisation of regional food; integrated rural development strategies	Face-to-face routine relations
Local/Distant	Migrants markets	Face-to-face regular but spatially discontinuous relations
Distant/Local	Rural tourism	Face-to-face discontinuous relations
Distant/Distant	Product/sector strategies of rural development Certification for access to differentiated markets	Market connection through information/certification

Source: Own elaboration.

i.e. a place where there is no potential for local provisioning of food and where supermarkets are the only place to shop for food. The context for the second is an environment of socio-economic marginalisation, persistence of small farms and traditional food production and consumption practices.

Local lay knowledge is important in both contexts. In the marginalised areas by-passed by modernising programmes of agricultural industrialisation, local lay knowledge may take the form of ‘traditional’ knowledge, associated with pre-industrial practices of production and transmitted from generation to generation of farmers. In the context of ‘food deserts’ we see how the efforts to re-localise food necessarily implies an effort to re-create or create *ex novo* (as in eastern Germany) a local lay knowledge of growing and preparing food. Thus, side by side with efforts to valorise and mobilise traditional local knowledge, we find in European rural areas efforts to re-create the conditions for development of ‘non-traditional’ forms of local lay knowledge, from a variety of sources, formal and informal, oral and written, and with prominent involvement of social movements such as the movement supporting organic agriculture.

Consumers have a special role to play in these processes: elaboration of a new definition of quality demands their involvement in the food system. Direct relation with producers at the level of exchange is one way of strengthening trust and reciprocity in the rural community, establishing and sustaining a common sense of place, fostering tacit and lay knowledge through operation of the local food system (see Dargan and Harris’s contribution to this volume).

In marginal rural areas depopulated through emigration, local markets have declined and lost the ability to provide a sustainable livelihood for the local

population. Very often rural development strategies aim at inverting this trend and revitalising local economies, both by producing local food that will be traded at a distance and by attracting tourists. At the same time local markets are also expanding as, in distant places, migrants maintain their local food culture and, through it, a link to their local community.

'Local markets', bearing in mind these processes, could be subdivided into two components: consumers and place of exchange (Table I.3). A whole spectrum of variations is possible from the 'cold' negotiations of distant markets to the 'warm' sociality of direct exchange in local markets (Callon 1998), implying different types of relations between producers and consumers.

Re-skilling farmers and consumers in the new local food economies

In the food desert created by trade- and export-oriented industrialisation of the food production, processing and retailing industries, most uncoded lay knowledge about how to produce food crops and how to prepare them for consumption has been expropriated from farmers and consumers:

[A]rtisan production and processing of food has existed before, but the modernisation of agriculture during the past century led to an 'intellectual expropriation' of the local producers and farmers and their tacit knowledge about agriculture and food production. (Bruckmeier et al. 2006, 12)

Local knowledge and skills in food production have largely vanished, even among rural populations. (Bruckmeier, in this volume: 118-119)

With produce readily available in the supermarkets, fewer and fewer people grew their own food, and the pool of tacit knowledge around this type of food production was gradually lost. (Dargan and Harris, in this volume: 85)

The knowledge needed by the small artisan producers in these networks has to do firstly with learning how to grow food in accordance with non-conventional agricultural practices that take into account local conditions and resources. Initiatives to relocalise food systems include attempts to educate both food growers and consumers in matters of food quality and consumption practices. In the Scottish and Swedish cases a key objective of the project organisers was to re-skill farmers in agro-food practices that had been lost in their area and to re-educate consumers in the characteristics of local foods and methods for preparing and cooking them.

Scientific knowledge is not always considered appropriate by local farmers, given the scale of their production and the specific difficulties of the growing conditions they face. In their daily routine they need to be able to avail themselves of the local expertise of other farmers and of the residents of their area generally.

This makes it possible for new combinations of lay and expert knowledge to be generated, and local growers come over time to be recognised as ‘experts’. The newly created knowledge is then shared with other local growers by word of mouth, through mentoring schemes, and through printed materials (see Dargan and Harris, in this volume).

The Eldrimner initiative in Sweden included setting up a resource centre to convey local knowledge of small-scale food production and food processing (cheese-making, pork butchering and jam-making) to wider groups of local actors. It provides courses on how to improve product quality and assists with the procedures involved in starting and managing small enterprises. For the Eldrimner initiative the ‘expert’ is not a scientific specialist but someone with experience, ‘somebody who has already done it’. To revitalise local knowledge various methods have been followed: knowledge is compiled from elderly people in local communities as well as from many other sources, through contacts with local producers in other countries, in literature as well in archives, and through the information and networking in the project, which often resulted in new members with special knowledge joining the project (see Bruckmeier, in this volume).

In our Irish case study many stallholders at the farmers’ market are, or have been, members of the organic movement, which to them is an important source of knowledge about how to produce using small-scale, environmentally friendly techniques. Also important are other informal and formal sources of knowledge, including older farmers, experience and common sense, books, courses, networks and contacts with ‘experts’. Consumers are involved in exchanging knowledge about food quality and ways to prepare food, especially at the point of purchase through interaction with the grower/seller, but also in other events like food tasting, exhibitions and school programmes (see Tovey, in this volume).

The East German case draws attention to the fact that the concept of ‘re-localisation’ implies local production as a historical starting point (Siebert and Laschewski, in this volume). But, as the authors argue, in many peripheral rural areas of Central and Eastern Europe agriculture has always been export-oriented and characterised by a history of expulsion and mass emigration. In such circumstances it is difficult for local actors to find a common tradition from which to initiate a process of re-creating a locality. Locality therefore has to be built again from scratch; the ecological paradigm and the de-contextualised concept of organic farming offers a useful framework of reference for the regionalisation of food production. Consumers’ knowledge of food appears to be the most significant impulse behind the creation of a new tradition of local food.

These examples suggest that scientists from universities or bureaucratic-managerial experts from governmental development agencies are not the best experts, and scientific knowledge not the most relevant form of knowledge, for local food initiatives. Sometimes scientific knowledge may be an appropriate starting point, but it needs to be integrated, adapted and mediated by those with expertise and trained in specific traditional and artisan modes of food production.

Local knowledge is rebuilt through experience, including experience of exchanges with other growers, with farmers in other regions (nationally and internationally), experience of relationships with the consumers at farmers' markets, or through formal and informal contacts with experts. In this process of creation, re-invention and consolidation of local knowledge, new social networks are created and rural communities strengthened. The definition of 'expert' is broadened to include non-scientists; knowledge production becomes more inclusive.

Recovering and valorising traditional knowledge

On the peripheries of modernity and agro-industrial development local knowledge has been conserved firstly in the form of traditional knowledge, as part of the local culture of growing, producing and preparing food in a specific socio-agro-ecosystem. Cultivars adapted to specific locations are the outcome of centuries of collective communal work on domesticating and adapting plants and animals to the geographical micro-habitat. They embody characteristics both of geographical places and of the empirical knowledge of generations of farmers.

Preparing semi-fermented trout has been a food tradition since the sixteenth century or earlier, with the producers sourcing trout from local lakes. (Kvam, in this volume: 203)

Oscypek is a smoked cheese made of sheep's milk or a mixture of cow's and sheep's milk. It is an important part of the shepherding tradition, with a history going back to the fifteenth century ... For hundreds of years it was produced in the mountains by local shepherds. (Adamski and Gorlach, in this volume: 174)

[The Utiel-Requena area] is a traditional wine-producing region, with one of largest, but at the same time most compact, vineyard areas in Spain. The production of wine here dates back to prehistoric times... (Buciega et al., in this volume: 219)

The Alentejano-breed pig (*Sus ibericus*) has constituted the basis of the local diet over the centuries due to the range of products it supplies and its ease of preservation, using simple techniques that make possible year-round consumption. (Rodrigo and Veiga, in this volume: 135)

Undervalued and dismissed under the technocratic assumptions of national and local development agencies during the agro-industrial era (van der Ploeg 1986; Benvenuti et al. 1988), traditional lay knowledge attracts new interest today. Markets and policies articulate a demand for quality and for regional diversification of food, necessitating a step back from the homogenisation of industrial agriculture. New technological and institutional developments, such as biotechnologies and the strengthening of intellectual property rights on seeds, have intensified the preoccupation with conservation and valorisation of biodiversity.

Traditional indigenous knowledge accompanying the practice and the conservation of biodiversity, especially in developing countries, has become a valuable asset, to be defended from appropriation by private interests.

A wide debate has developed in international fora (the United Nations Conference on Trade and Development (UNCTAD), the World Intellectual Property Organization (WIPO), the World Trade Organization (WTO) and numerous non-governmental organisations such as the Action Group on Erosion, Technology and Concentration (ETC Group) or GRAIN⁶) on the value of traditional knowledge and the necessity for it to be protected. In these contexts traditional knowledge is seen as knowledge that is generally, 'not produced systematically, but in accordance with the individual or collective creators' responses to and interaction with their cultural environment' (WIPO 2002: 1). It does not perform a specialised function in society, but rather embodies cultural values as an element integrated into a vast and mostly coherent complex of beliefs and knowledge that is for the most part held collectively and transmitted both orally and through common practices, from generation to generation. In this context the term 'traditional' can be used of a form of knowledge

only to the extent that its creation and use are part of the cultural traditions of communities. 'Traditional', therefore, does not necessarily mean that the knowledge is ancient. 'Traditional' knowledge is being created every day, it is evolving as a response of individuals and communities to the challenges posed by their social environment. In its use, traditional knowledge is also contemporary knowledge. (WIPO 2002: 1)

Arguably, then, it is not so much the contents or forms of knowledge that distinguish the 'traditional' and 'local' from the 'scientific' and 'managerial'. It is more the specific way in which they are created and transmitted. The CORASON research makes it clear that local and traditional lay knowledge persists in many European rural areas, not only in the southern, Mediterranean, countries, but also in the marginalised areas of northern European countries such as Norway or eastern European countries like Poland. A marginalisation process lasting for decades blocked the co-evolution of traditional knowledge in response to changes in the functions of food and new consumption habits. We accordingly find in our case studies that for certain types of production traditional lay knowledge may have the reputation of being static or outdated. Relocalisation of food, though, sets in motion processes of recovery and valorisation of traditional lay knowledge that result not only in interaction and dialogue, but also in confrontation, with other forms of knowledge and other actors, experts and managers. In the next sections

6 GRAIN is not an acronym but is the name of 'an international non-governmental organisation (NGO) promoting sustainable management and agricultural biodiversity on the foundation of people's control over genetic resources and local knowledge' (www.grain.org).

we propose to examine two special instances of this dynamic that are accorded particular emphasis in our case studies: the elaboration of origin (or provenance) certification and the nexus between experts and lay knowledge in the wine sector.

Provenance certification: opportunities and risks for local knowledge

A discussion of local food and local knowledge cannot avoid taking into account certification. Certification has become the dominant route for recovering, codifying and valorising the lay knowledge embodied in local products. It is a contested process, in which local lay knowledge comes up against other forms of managerial and scientific knowledge. In her presentation of the Italian case study, Fonte (in this volume) draws attention to the many approaches to be found in the literature on certification. Certification can be seen as a tool of governance in a system of civic agriculture (Oosterveer 2007), a neo-liberal tool in a new food regime based on quality governance, an information tool or a hybrid forum for the development of a dialogue among different forms of knowledge.

Certification stands as an opportunity or looms as a risk in all our case studies. It introduces local networks to an adjustment process whose economic, social and cognitive results are not defined *a priori* and are dependent upon the power relationships inherent in the process of its construction: local actors may lose or gain significant bargaining power and win or forfeit representation in the development of certification (see Rodrigo and Veiga, in this volume). In the reconnection perspective, certification is mostly perceived as the risk of de-linking consumption from production (see Tovey, in this volume). But it is not regarded as a priori incompatible with a local food economy. The Eldrimner project, for example, sees the development of certification for small-scale products as a way for them to become more independent of national and EU funding (see Bruckmeier, in this volume).

It is, of course, first and foremost from within the origin-of-food perspective that certification is considered and discussed, being presented as an inclusionary or exclusionary economic process leading either to expropriation or to an improvement and updating of local knowledge.

The case studies of Portugal and Italy (the development of Barrancos cured ham and the Aspromonte National Park certification) provide deep insights into the evolution of the certification process. In both cases the interest in certification first emerged among groups external to the producers, the Department of Zootechny at the University of Evora in the Portuguese case and the managers of the Aspromonte National Park in the Italian case. The certification process is initiated through selection of one or more exemplary farmers. Their production practices are observed, some improvements or modifications are suggested in production (most commonly in relation to hygiene) and production protocols are compiled (i.e. codification is carried out). Certification of origin for a local product thus involves compilation and selection of the available stock of local traditional

knowledge as well as interaction with expert, managerial or scientific knowledge (see Rodrigo and Vega, in this volume and also Fonte, in this volume).

The two chapters by Rodrigo and Vega and by Fonte illustrate the opposite results to which such processes may lead. The 'ethnographic' description of the Barrancos cured ham certification process in Portugal is very impressive. The image of the university researcher in charge of the certification process who spends a year 'recording the various stages of manufacture (of the local producers) and listing the unforeseen occurrences, without involvement in the technological matrix' conveys a powerful impression of the top-down process that will lead to economic restructuring of the sector and exclusion of the local actors, both from participation in the cognitive process and from the economic benefits of certification.

Local product certification in the Aspromonte National Park (Italy) is by contrast envisaged as a civic action, aimed at improving the image of the locality and strengthening both the economy and the community. Certification becomes a process of negotiation among local actors, a cognitive process with aspects of participative intervention in development, serving to increase the local actors' awareness of the importance of local knowledge and the value of local resources (also see Kvam, in this volume).

The chapter on the valorisation of oscypek cheese, produced in the Podhale region of southern Poland, introduces additional dimensions into the analysis of the effects of certification (see Adamski and Górlach, in this volume). Traditional knowledge may be appropriated not only by experts but also by other local producers. The complex relationship between a traditional product, local knowledge, rural development and certification is here well illustrated. The cheese is part of the shepherding tradition of the Tatra Mountains and is produced in summer in mountain sheds, using non-pasteurised sheep milk. It was made by shepherds for their own consumption and for sale in the local villages. The social and political changes of the 1990s, in particular the fall of the communist regime, the decrease in sheep stock and the development of mass ski tourism in the Tatra Mountains, all contribute to the great economic transformation opening up new opportunities for oscypek cheese, which now becomes a valuable commercial asset.

The proliferation of economic opportunities favours the emergence of new production networks, further developing and transforming traditional knowledge. Three separate social and economic networks develop around the re-elaboration of the traditional knowledge, each offering economic opportunities to different local actors, each differently embedded in both the conventional and the alternative food systems.

Will the institutional process for PDO certification of the oscypek cheese limit rather than expand opportunities for the economic development of the Tatra mountains? Is local knowledge of the production procedure for oscypek cheese a collective property of the traditional shepherds or does it belong to the whole community? Will 'misuse' of the traditional knowledge end with its final erosion

and homogenisation of production? These are some of the new questions opened up by the certification process for oscypek cheese.

The risk of appropriation of local knowledge by experts and big manufacturers is greater when products possess the potential to become 'global' products, that is to say, when production reaches a minimum quantity sufficient for industrial production and the link to local consumers and the local food culture is weakened (as in the Portuguese and the Polish case studies). When small niche products are the object of valorisation, certification may constitute an important element for activation of an integrated rural development strategy by local actors. Local producers and citizens often promote participative certification schemes as part of a more comprehensive initiative for valorisation of the local cuisine through fairs and festivals to attract tourists into the area, particularly former residents who have migrated to other places. We here see deployment of a multiplicity of post-industrial rural development strategies, with tourism as their common element. Rural tourism has the potential to create complementarities, synergies, cohesion as between the different rural activities of a territory. The traditional or local lay knowledge that is mobilised interacts, by contrast, mostly with the managerial knowledge that is necessary for setting up and administering rural development projects (see especially the valorisation of cold meat in the village of Requena, Spain and the Norwegian case studies).

The nexus between traditional and expert knowledge: the case of winemaking

In many food processes, such as the production of oscypek cheese in the Podhale region of Poland, Barrancos cured ham in Portugal, the fermented fish and salami of Valdres in Norway, traditional artisan knowledge is the key element from which the product's excellence is derived.

In other food sectors, such as olive oil production and even more so wine production, the contribution of expert technical knowledge to the production process is of the utmost importance for attainment of what are today considered high standards of quality. It is in the initiatives to valorise the origin of wine and olive oil (in Greece, Spain and Italy particularly) that the limits of traditional lay knowledge start to become evident, as may be seen from the felt need for a nexus to be established with technical and scientific knowledge (Buciega et al. in this volume, Papadopoulos in this volume). The environment for knowledge production is highly institutionalised, through specialised technical schools, co-operatives and PDO institutions. Further elaborations for the development of these issues emerge in the Italian, Greek and in the Spanish case studies.

Local varieties of wines (Mavro Messenikola in the Lake Plastiras area and Ayiorghitiko in the Nemea area in Greece; Bobal in Utiel-Requena, Spain; Nerello Mascalese and Nerello Cappuccio in Palizzi, Aspromonte, Italy) have adapted over centuries to their specific agro-natural habitat, thanks to the work and the empirical knowledge of generations of farmers, who were also winemakers. Since the mid-twentieth century, however, wine has ceased to be a subsistence product

consumed by the farmers' families. It has been transformed into a commercial good. Vineyard cultivation is segregated from winemaking and the sector goes through a process of commercialisation and specialisation culminating in the co-existence of separate economic and social structures. The wine industry in Europe today is evidently something complex, comprising family wine cellars (where winemaking remains linked to the farm), specialised commercial enterprises and social co-operatives.

Along with this differentiation process, in the process of which vineyard cultivation has become something more and more separate from winemaking, specialised public schools have been established, with corresponding professionalisation of the technical knowledge required for producing high-quality wines. Professionalisation and reliance on formal knowledge has been strengthened since the 1970s, when there was a turn to quality wines and the 'oenologist' emerged as the 'expert' who understands the chemical process of wine fermentation. The travelling oenologist, who sells his knowledge to many different winemaking companies – the 'flying winemaker' – has become a powerful international actor in the global industry (Lagendijk 2004 quoted by Papadopoulos, in this volume).

Isolated from the evolution of the markets and the product's new roles, traditional lay knowledge of winemaking has come to be seen as outdated:

Traditionally wine was produced for self-consumption and for the local market and responded to different functions and tastes compared to today. It was an energetic drink, targeted for consumption within the year, rather than ageing. Only new techniques can create the conditions to keep and even improve wine characteristics during ageing. (The president of Qualiter Co-operative, in Fonte, Agostino and Acampora 2006: 21)

In the case of the Utiel-Requena PDO wine (Spain) the limitations of traditional lay knowledge in winemaking may be attributed to the fact that the area in the past was associated with a different specialisation: production of *dobla pasta*, which was used to add colour to other wines. But the establishment of oenology schools in the 1960s and subsequently has led to technical and expert knowledge taking the lead in the process of winemaking, marginalising local knowledge (see Buciega et al. in this volume).

In Greece the diffusion of an agro-industrial and productivist logic, with its stress on high yields and increased quantities, has meant the loss of local lay knowledge of vineyard cultivation and winemaking:

In the past vineyard yields were smaller but the wine was of much higher quality. And other products, for example *tsipouro*, were also made from the remains of grapes. The new tacit knowledge based on agro-industrial logic has displaced the former repertoire of practices and of experiential knowledge. There was a break with former knowledge repertoires, justified on the basis of the higher incomes and guaranteed prices... (Papadopoulos, in this volume: 256)

This separation between lay and expert knowledge in the evolution of the wine industry has produced a gap between ‘industrial wines’ and ‘terroir wines’. The quality of the former is associated primarily with the brand and with winemaking techniques, while for the latter it is linked to the ensemble of properties conveyed by the concept of ‘terroir’, i.e. a conjunction of human (history, cultural, technical) and natural characteristics (local variety of grapes, soil and micro-climate). There is thus a perennial tension between the two concepts of quality, also implying a different dynamics of knowledge. According to Buciega et al. (in this volume), the mode of incorporation of new knowledge, primarily codified technical and managerial knowledge, into the wine production process in the Utiel-Requena region (Valencia, Spain) was such as to preclude interaction and communication between traditional/lay and codified/technical knowledge. Nevertheless, the development of Labels of Origin with their emphasis on the ecology and culture of specific places has the potential to re-embed wine ‘in the natural processes and social context of its territory’ in a system that is ‘nested with multiple levels of co-ordination from the local to the global’ (see Buciega et al. in this volume: 224).

The chapter by Papadopoulos (in this volume) makes the point that there is a certain convergence in the quality and knowledge trajectory of ‘industrial’ and ‘terroir’ wines. An illustration is provided to corroborate what may seem a paradoxical finding: the traditional farmer is not always able to participate in the construction of wine quality based on the territorial identity of the product. He may remain locked in the agro-industrial logic of high quantity, supported by the productivist policy of local institutions such as the Union of Wine Co-operatives in the Lake Plastiras area. By contrast, the success of the Nemea area in constructing the ‘terroir’ for a quality strategy in winemaking is attributed to a capacity to generate interactions and exchanges between different forms of knowledge within the area and with other areas. The local winegrowers possess a stock of tacit and lay knowledge linked to the Ayiorghitiko variety of grapes, while the new wineries that have relocated their activity in Nemea bring the scientific knowledge and the dynamism that is necessary for reconstruction of the locality as a quality wine area. The rhetoric of traditional local knowledge and the local/expert nexus play a vital role in construction of the quality narrative, issuing a challenge to the conventional, industrial wine sector (Papadopoulos, in this volume).

Concluding remarks

Local food can be seen as a political project pursuing the construction of new food communities among producers and consumers, centred around shared civic values of equity, justice and holistic sustainability. No model is more ‘alternative’ than any other for the accomplishment of this objective: community supported agriculture, the farmers’ market, certification schemes – all are equal contenders. Every form of local food is susceptible to appropriation and commodification by the dominant global economy. But cultural anthropology teaches us that

commodification is a specific process that may be counteracted by an opposite process of de-commodification where products are attributed values other than their exchangeability (e.g. local food value). One paradox of local food is its capacity to embody de-commodification in the same market place, re-embedding the exchange act in sociality and (in some cases) in a project, common to producers and consumers, of building an alternative food economy. The great contribution of local food literature is precisely its identifying and stressing the importance of exchange relations in the local market (as opposed to the global market) in the construction of new models of food production and in promoting a 'moral economy', as against the commodifying push of the global economy.

But our aim, both in the CORASON project and in this volume, goes beyond this. Placing at the centre of our analysis the dynamic existing between different forms of knowledge (scientific, managerial, local) and the role assigned to local knowledge in the development of local food, we would like to stress that no new food economy is possible without a reform of the dominant scientific and knowledge-production processes.

The case studies considered in this volume suggest that local knowledge in the European countryside cannot be dismissed as useless or totally eroded. That established, the fact remains that efforts to rebuild new food communities will face problems of recovering, valorising, re-inventing or even re-building local ecological knowledge of the context in which food is grown, prepared and consumed. The new food communities must be constituted not only as reflexive political subjects but also as learning communities where democracy is predicated on the capacity to recognise importance, status and dignity in the different knowledge forms and their bearers, not the least being local knowledge and those possessing it.

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