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Exploring hybridity in food supply chains

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Summary

In recent years, a number of dynamic aspects of food supply chains have attracted great interest among social scientists investigating rural restructuring and change. These include: the expansion of organic agriculture; the development of new value added enterprises at farm level and the revitalisation of traditional and new-old artisanal production practices; the expansion from a low base of the market share of 'alternative' short supply chains, such as farmers' markets; and the so-called quality turn, riding on the heels of another turn in rural social research - the consumption turn.

All of these changes come together in a vision of alternative agro food networks (AAFNs) that has been built around empirical and theoretical work from a number of predominantly European social researchers, centred on Wageningen, but conducted in a number of countries in Europe. These and other associated changes in the composition of farm-based economic activity are seen to be constitutive of a new paradigm of rural development comprising an alternative network of producers, consumers and other actors in relation to the mainstream agro-food system (Van der Ploeg et al. 2000; Van der Ploeg and Renting 2004; Renting et al. 2003).

The theorisation surrounding this work on AAFNs has been sharply criticised by Goodman (2004). He challenges the vision of certain European social scientists of an alternative food sector rising like a phoenix from the ashes of the commodity-based food system to constitute a new paradigm of rural development. He notes their view of AAFNs as:

'innovative precursors of paradigm change, of a more endogenous, territorialized and ecologically embedded successor to the allegedly crisis-ridden modernisation model of conventional industrialised agriculture.' (Goodman 2004:6)

In particular, he challenges the binary categorisation into alternative and mainstream and is deeply sceptical as to the existence of a new paradigm while, at the same time, highly cognisant of dynamic changes within the agro-food sector.

This paper is motivated by a desire to explore the extent to which different theories can help interpret and explain some of the most dynamic areas of agro-food systems that belong neither in the mainstream food supply chains and networks, nor in the alternative food supply networks. We review two areas where we argue that hybridity is evident in food supply chains and networks, and draw conclusions as to the research needs in a field where too often dualistic interpretations have prevailed.

Hybridity

In this paper, as elsewhere in the social sciences and more widely, hybridity is characterised by 'both, and' categories rather than 'either, or' categories. Thus, rather than exploring opposites, whether expressed as ideal type categories or nature:culture type dualisms, the exploration of hybridity entails the identification of co-constitutive socio-economic and biophysical phenomena. It constitutes a challenge and a deconstruction of previous dualistic thought (Cloke 2003).

The original use of the term hybridity in social sciences is found in the literature surrounding the study of post-colonialism. Since the rather specific early use of hybridity, the variety of contexts in which the term has been used have multiplied (Whatmore 2002). In particular, the term is widely used in Actor (or Actant) Network Theory, which draws together the study of the natural and social worlds in a mutually constitutive study of process and practice. This study of co-constitutive relationships is often described as an exploration of hybridity. This recognition of complex hybrid mixes of people, animals, plants and things challenges the previous one dimensional exploration of political economic structures (Cloke 2003: 6). Much of the discussion of hybridity is framed within heterogeneous interactions of heterogeneous actors (both human and non-human) in networks. Networks, in Murdoch's view are necessarily hybrid (Murdoch 2003: 269).

Additionally, the term hybrid is used to describe situations where elements of more than one policy perspective manifest themselves, not as separate entities but as interconnected parts of the same policy or governance framework or where theoretical explanation draws on more than one theoretical perspective to explain socio-economic phenomena. In essence, the exploration of hybridity entails the study of relationships between phenomena frequently categorised in terms of opposites and which are often theoretical constructs or ideal types, rather than observable realities. Thus, the exploration of hybridity necessarily entails exploring straddling, crossing and threatening conventional categories of and approaches to analysis.

The term hybridity has been used in a rural context by Higgins and Lockie (2002) and Lockie and Higgins (2007). In their work, the term hybridity refers to the emergent forms of governance in natural resource management, where elements of neo-liberal economic policy are juxtaposed with social and environmental resource management practices constituted at local level. This intermixture of policies is seen to underpin the operation of the neo-liberal policy agenda through hybrid 'policies of rule' (Higgins and Lockie 2002: 420). This same sense of mixing of values is evident in the way UK and Italian governments in the early 2000s have fostered a neoliberal policy regime whilst at the same time nurturing localised food supply chains through specific policy means (De Puis and Goodman 2005).

We assert that the areas of dynamic change in food markets, whether in AAFNs or the mainstream conventional sector are often better understood through an analysis of hybridity rather than through representation as inflexible dualisms. Food is a core context in which hybrid theories have been explored whether in relation to technical human natural interactions in Callon's work (1986) or in more recent studies of GM food (Whatmore 2003: 120ff.).

Understanding food supply network change: the role of theory

This section briefly reviews some of the competing theoretical perspectives that have been used to explore change in food supply networks. Some of these theoretical perspectives are rooted in economics, some in political economy and some in rural sociology. Some theoretical perspectives such as globalisation transcend the narrower disciplinary boundaries and span many of the social sciences; whereas other theories belong to a narrower disciplinary tradition. In each case, the consideration ends with brief observations on their limitations as comprehensive explanatory models.

Neoclassical economic theory

Neoclassical theory focuses on resource allocation and price determination in food markets. The principal lessons that can be drawn from neoclassical economic analysis of developed country food markets are: an expectation that food purchases will absorb a reducing share of the consumer's pound (following Engels' Law); an expectation that, of that pound, a greater share will be spent on eating out as part of expanding expenditures on leisure (because of the positive income elasticity of eating out); Additionally, a cost price squeeze is widely evidenced in the primary production sector, largely a result of supply curve shifts in the face of an inelastic demand for most commodity products. However, there may remain scope for niche and speciality products to absorb an increasing share of the affluent consumers' retail pound spent on food.

Because of the dependence of much food production on biophysical resources and the attendant uncertainties of the natural world, yields can vary and prices can prove very volatile. Further, the movement of resources out of the farm sector is often impeded by factors that induce asset fixity¹, which compounds the free market outcome of low and declining farm incomes and exacerbates the cost-price squeeze. Buffered as they have been by decades of protectionist policies, Western European commodity food production has become relatively high cost compared to Latin America, Australia or New Zealand. However, there is a long tradition of long-distance food imports into the UK from its former colonies, which was challenged by the policy consequences of the UK's entry into the European Union. However, as the GATT and WTO have turned their attention to agricultural protection over the last decade, so the more highly supported commodity agriculture support regimes have come under intense adjustment pressure. Especially in certain sectors such as poultry meat, sourcing has globalised

¹ For example a dairy farmers fixed assets in milking machinery and parlour are not much use for other enterprises.

and significant imports arrive in the UK from Brazil and South East Asia. The inevitable consequence in highly supported markets has been a search for a new rationale for farming, either through niche production or the delivery of environmental services. This search for alternative production and supply chain models can be seen as a defence and survival mechanism against the seemingly inexorable forces of globalisation, exacerbated as they are by the new global policy settlement. Indeed, Marsden et al. (1999: 295) suggest that AAFNs can “create positive ‘defences’ for rural regions against the prevailing trends of globalisation and further industrialisation of markets”; while Winter (2003) suggests that some of the emergent AAFNs can be described as ‘defensive localism’ (Winter, 2003).

The nature of contemporary food market structures, with their increasingly concentrated power, coupled with the inevitable tendencies of a primary industry with a tendency to overproduce, has exerted general downward pressure on food raw material prices. This downward pressure, coupled with a growing interest in speciality and local food, has undoubtedly triggered a push factor into farm-level diversification and value-added projects and a range of initiatives, some collectively organised and often with public sector support assisting the realisation of these new opportunities. AAFNs are thus both demand-driven by the emergent markets, a supply response to the cost-price squeeze in contemporary agriculture, a lifestyle choice for some food producers and a policy response to the increased support given to local and regional food initiatives.

However, mainstream food markets are vulnerable to volatility from a number of sources, not only to climatic events and more widely climate change which affect supply, but also to demand shifting factors such as changing tastes and consumer responses to food scares. The national and international imperatives to address global warming are likely to trigger substantial demands on land currently used for food production for biofuels. As such, some observers have predicted rising prices of food commodities triggered both by global warming impacting on production levels and the policy responses at national level to increase land-based renewable energy production. Interestingly, this might have a rejuvenating effect on commodity production in Europe, shifting production systems away from localised value adding enterprise to regional scale commodity energy raw material production thereby reducing the supply of commodity products that have often been facing long-term declining prices. This may weaken the push factor towards alternative food production in developed western countries.

Whilst market analysis through the neoclassical lens can expose disequilibria and enhance understanding of market prospects, it is less able to explain the drivers of demand change and the new institutional structures which have emerged to support AAFNs. Neither can neoclassical economics readily explain the remarkable shifts in market power towards the food retail sector, away from processors and producers. Instead of stagnation in food markets as a result of the food sector absorbing a declining share of the retail pound, as might reasonably be predicted, the food retailers have been amongst the most dynamic and rapidly growing businesses in Europe, although much of their recent dynamism is not only to do with food, but broader diversification.

Political economy of agriculture

The political economy perspective, with its roots in Marxian political economy, posits that there are inherent monopolistic tendencies in capitalist markets and that there are likely to be periodic crises in their operation. Inequalities in power and access to resources will lead to adjustments in the structure and organisation of food production and distribution. In addition, a general process of subsumption has been observed in the farm sector which has drawn farming into wider circuits of capital and subordinated farming interests to those of more powerful agents in the agro-food sector. These processes have been described by Goodman *et al.* (1987: 2) as *appropriationism* “in which elements once integral to the agricultural production process are extracted and transformed into industrial activities and then re-incorporated into agriculture as inputs”: and *substitutionism* “in which agricultural products are first reduced to an industrial input and then replaced by fabricated or synthetic non-agricultural components in food manufacturing”.

Although not exclusively a concept within the political economy perspective, the concept of globalisation can be seen as the outcome of a set of internationalised processes in food production, processing and distribution. Supported by an internationalisation of policy regulation by the WTO, itself underpinned by a broadly neo-liberal economic and political agenda, both commodity and speciality food can be expected to figure prominently in international trade. The evolving food market

entails global sourcing and the characteristic time-space compression observed in globalisation, with substantial long distance movement of food to meet the diverse and increasingly de-seasonalised demands of consumers and retailers.

Inter alia, the political economy perspective stresses the changing structural and power relations in the food sector, the globalisation of food procurement and the unequal relations between capital and workers.

AAFNs can be seen as a multi-stranded counter-culture which challenges the hegemony of the corporate giants in the food sector. The early origins of many AAFNs were extra-market phenomena, such as the pursuit of self sufficiency through organic farming. Over time, AAFNs have developed substantially as market phenomena, driven by the antagonism of some consumers towards large-scale food production, who are 'voting with their mouths' in preferring alternative production and distribution models. However, the alternative sector is by no means clearly differentiated from the mainstream and is subject to corporate predation, when profitable niches expand.

With its focus on the large-scale structures, the political economy perspective in many ways fails to pick up the micro-dynamics of AAFNs. Whilst political economists might have foreseen the concentration of corporate power within the food supply chain, it is less evident that the dominance of the retail sector was so readily predictable. Further, the rapidly expanding niche of AAFNs could not reasonably have been predicted. In addition, the nature of lifestyle businesses and the different ethical drivers of many actors in AAFNs rather undermines the notion of self-interested, profit-seeking behaviour which underpin the political economist's conception of the farm or food business.

New institutional economics

New institutional economics focuses on transaction costs and the institutions that underpin the operation of markets. Transaction costs are the costs of using the market that include information costs, negotiation costs and enforcement costs. Transaction cost analysis can provide 'an explanation for the structure of forms and for the nature of vertical co-ordination within a supply chain' (Hobbs 1996). The contemporary major food retailers have managed to strip out transaction costs by reducing the number of actors in food supply chains. However, emerging new technologies also afford new opportunities for smaller operators to reduce transaction costs and develop new AAFNs, for example through internet marketing.

Among the drivers of change in the mainstream food sector, it is clearly evident that reducing the costs of using the market is an important factor. The reduction in the number of food chain actors and the field to shop control of production processes helps large retail firms reduce transaction costs and has dramatically weakened some of the traditional components of marketing chains such as wholesale markets. However, in their past pursuit of homogenous standards and year round availability of commodities by retailers, supply chains have been lengthened in physical distance terms and this has generated much debate, especially in the UK, about food miles.

Many traditional food retailers have suffered against the competitive supply chain efficiencies introduced by the large retailers, and there are likely to have been negative impacts on some AAFNs operating outwith the mainstream sector. However, there are several reasons deducible from the analysis of transaction costs that expose why AAFNs might now constitute preferred marketing channels for some primary producers. First, the corporate muscle of the retailers can drive down prices received by farmers. The Observer (28th January 2007) cites evidence from the UK Milk Development Council of the declining farmers share of the retail value of milk from 58% of the retail value in 1995 to 36% in 2005. This enormous change might be expected to incentivise the development of alternative short food chain marketing channels or the development of value-adding enterprises by primary producers as survival strategies for deeply pressured farm businesses arising at an individual farm level or through collective action by groups of farmers. Second, supermarkets are regarded by many critics as agencies which undermine local food systems and generate a wide-ranging but similar offer to the consumer (NEF 2003), undermining traditional food outlets such as bakeries, butchers and green-grocers as well as competing with emergent AAFNs. The path dependency created by their national level distribution systems (particularly in the UK) may limit the opportunities for exploitable local niches for alternative supply channels. Third, constellations of local agencies have sometimes come together to address these problems and new alliances have emerged, often with public funding, to

build constructive partnerships which support the partial relocalisation of food markets. A partial public sector shift from sectoral to spatial policy has enabled new locally based coalitions and new forms of rural governance to shape at least some facets of rural support.

It is possible to explore the possibilities of AAFN development through the lens of transaction costs, both to explain the rejection of the mainstream marketing channels and the emergence of the new networks. However, it seems likely that competitive localism- essentially different regions competing in the regional food market (see Morris and Buller 2003) might increase the total transaction costs of AAFNs and that, rather than offering an opportunity of reducing transaction costs the development of AAFNs may constitute an exercise in self-interested rent seeking by powerful or articulate local interests who are able to extract public money from a range of sources. Although new technologies such as the internet offer new means of marketing speciality food which potentially lower direct marketing costs, the transaction costs of some AAFNs are likely to be relatively high and underpinned by public sector action.

Endogenous development

Since the early 1990s, an alternative model of developed country rural development has been actively promoted both at a theoretical and a policy level. Indeed, this model can be seen as the intellectual underpinnings of the new European paradigm of rural development (van der Ploeg and Renting 2004). The endogenous development model is articulated as both a survival strategy and development option for farmers and as a redoubt against the modernisation model. It is seen as development from within or from the bottom up, built on locally nuanced farming systems and value added production and the cultivation of rural distinctiveness.

Over the early 1990s, a research group at Wageningen-led an EU project (Van der Ploeg and Long 1994) which endeavoured not only to explore the agro-technical manifestations of endogenous development, but also to provide a theoretical rationale for both its existence and its dynamic potential in a wider rural development context. Van der Ploeg and Long (1994) explicitly challenge a unilinear model of development, arguing that at any point in time a farmer faces choices and that certain critical decisions can move the farm to a more developed state either by adopting modern farming practices, essentially buying into the modernisation of farming; or alternatively, developing the market potential of endogenous enterprise. Amongst the diverse observable styles of farming, it is often possible to identify some farmers who retain elements of traditional practice and engage in a process of deconstructing and reconstructing core knowledge and adapting it to their specific circumstance. This is the antithesis of the modernisation approach and offers scope for a range of value-adding and/or differentiated forms of production and marketing.

It is possible to rationalise the development of endogenous enterprise by reference to transaction costs or by reference to the new market opportunities created, *inter alia*, by rural repopulation, rural tourism and the development of local and/or distant niche markets. It is further possible to explain the existence of endogenously rooted enterprise by recognition of different farming styles (van der Ploeg 2003). Van der Ploeg's rationalisation is principally rooted in an analysis of the supply side- the farmer's attributes, indigenous technical knowledge and the desire to develop effective survival strategies in the face of market price pressure - rather than in acknowledgement of changing demand, although the changing demands patterns and the decline of trust in the commodity food system are also now articulated as major drivers of change.

In one of van der Ploeg's examples of an endogenous enterprise, an Italian wine producer is described whose wine is highly regarded and widely purchased by locals who understand and appreciate the growers' chemical-free production methods. In this example, the low transaction costs of using direct marketing and the build up of trust mean that a relatively labour-intensive production system can be sustained by use of an alternative route to a local market. This general model has been rolled out in somewhat different formats as a wider developmental model for the local food sector (see van der Ploeg and Renting 2004) and provides an exemplar for the sustenance and development of AAFNs. Other forms of AAFNs have emerged: for instance, farmers markets have been re-established to reconnect producers to final consumers via short supply chains; organic box schemes have been developed; and many farmers have developed value added small-scale food enterprises, often selling a significant proportion of their production to the final consumer.

The articulation of the endogenous development model as a vehicle for sustaining traditional agricultural and food processing practices is not without some foundation. In fact, in some areas, in particular in areas with residual traditional agricultures that were less fully penetrated by the processes of modernisation a significant proportion of the food system may revolve around AAFNs. However, over large swathes of Europe, the endogenous mode of production has been marginalised to such an extent that a neo-endogenous model seems more apposite, whereby farmers or small-scale processors and retailers (or indeed any development actors) assert a distinctive regional provenance, whether or not it is rooted in traditional practice (Ray 2003). However, the scale of endogenous and neo-endogenous enterprise is such that it has not become a major driver of rural change in north-west Europe, though it probably figures more prominently in countries and regions where old and traditional production practices can be effectively melded to new demands from counter-urban growth or tourism. The scope for neo endogenous development may be enhanced by incursions of urban wealth and purchasing power, whether through tourism or residence in rural areas.

Some evidence of hybridity in UK food supply chains

The above theoretical explanations of change in food supply chains offer an economic or political economy context in which these changes can be framed. However, the tendency to polarise the food chain into two components: a mainstream and the AAAFN sector tends to obscure the analysis of the interface between the two. This section explores two important arenas where hybridity in contemporary food supply chains is strongly evident. First, the growth and change in the organic farming sector is examined in a UK context. Second, the backward-reaching of the highly concentrated food retail sector towards speciality products is explored.

The conventionalisation of the organic farming sector

In the early 1990s, one of the authors was working on a project to explore the potential for the development of the organic sector in the Highlands and Islands of Scotland (Daw et al. 1991). Part of this study involved looking at another region of the UK with more highly developed organic supply chains. South West Wales had emerged as a leading region in the development of organic food in the UK. As part of the research project, a number of key actors were interviewed and it was evident at that time that there was much disagreement in the organic sector in Wales between the purist organic farmers whose ambitions were to create an alternative food system and whose motivations were more ethical than commercial and another set of pragmatists who were prepared to develop global sourcing in order to feed the demand from supermarkets. This debate is highlighted by Morgan and Murdoch (2000: 168-169) who argue that organic "producers face a Faustian bargain: while the supermarkets provide a large and ready market, they seek to tailor organic produce to the conventions of the industrial market....This problem is especially acute with regard to 'quality' conventions: supermarkets set a premium on cosmetic appearance, which in turn leads to waste and packaging. In contrast, the organic community understands 'quality' in terms of taste and nutrition, and it accepts blemishes as natural and sees little or no need for packaging".

This dualistic division into purists and pragmatists is clearly a simplification, but over the last decade and a half a debate has continued with the purists still driven by a desire to create an alternative food supply system and the pragmatists eager to sell through supermarket channels. The debate was revitalised in the autumn of 2006 as the result of an agreement by the increasingly pragmatic Soil Association to certify organic salmon farms, which was widely criticised by purists as a sell-out to powerful retailers, which condoned a completely unnatural and rather intensive production system.

On that same visit to Wales in the early 1990s, Rachel's Dairy, a dynamic West Wales organic business that had developed through adding value to organic milk on the first Soil Association certified organic dairy farm in the UK, was held up by local academic researchers as an exemplar of what organic agriculture could do for local development (see Lampkin 1990:482-485). Indeed, there are reports that there are now around 150 jobs in West Wales associated with the development of the business. Its website still asserts its local embeddedness and the narrative on the website is a personal history of its founders (<http://www.rachelsorganic.co.uk/about/history.html>) and their connection with the un-named current owners. Nowhere on that website is it mentioned that in 1999 a large US-based organic milk company, Horizon, had taken over Rachel's Dairy in a multi-million pound deal. Rachel's Dairy now supplies a range of supermarkets, as well as international hotel chains.

The growth and concentration of organic production and retailing has led to the emergence of two major box scheme suppliers in southern England (Abel and Cole and Riverford Organic Vegetables) who both use large articulated lorries in the relatively long-distance transport of their products, even though the origins of the box schemes were to provide a mixed box of local food, occasionally supplemented by bought-in extras, in order to keep food miles to a minimum and freshness to a maximum. The local franchises of these schemes may still use a significant proportion of local produce but the scale of enterprise and the business models used suggest anything but alternative food networks. This transformation of what were historically highly localised distribution systems may reduce some of the generally accepted environmental benefits and weaken the close ties with consumers which have been identified as two of the key characteristics of AAFNs.

At various times, organic farming has been incentivised by policy support, largely on the basis of widely asserted beneficial effects of organic farming on the environment, as well as a range of other asserted benefits relating to rural employment, and other more controversial assertions about benefits to health. This public support has led to organic farming methods being adopted by new entrants for narrower commercial reasons, rather than embracing the traditional organic ideologies that might resonate more closely with those associated with AAFNs.. Indeed, the current minister of agriculture in the UK (David Miliband), a strong advocate of the adoption of radical environmentally friendly policies and of the Worldwide Fund for Nature's One Planet Living, has recently (January 2007) dismissed organic agriculture as a 'lifestyle choice' by consumers. In the light of those comments, the debate about the merits of organic farming has been widely aired in the public arena and organic advocates have used both environmental and health reasons for justifying their approach to farming.

Although organic food is only 4% of the UK food market, it has experienced rapid growth and as such has become increasingly contested territory between purists and pragmatists. It has also become a symbolic battlefield amongst the major retailers who are using organic products to jockey for position with food purchasers. At various times it has been used as a loss-leader to give particular supermarkets a green identity. The rapid growth in demand has required overseas sourcing of many products (about 70%) which is necessarily underpinned by long-distance food supply chains. The resultant hybridity of food supply chains/networks in the organic sector is an inevitable consequence of this contestation being played out in the market place. This is not exclusively a UK issue, as work in both the US and Australia has explored what is termed the 'conventionalisation debate' with the implication that there is an actual or potential morphing of the original values of organic practitioners as they are drawn into conventional food networks (e.g. Guthman, 2000; 2004; Lockie et al. 2000).

There are many features of the organic sector that display hybridity between the apparent in the tensions between its original 'purist' form and the current manifestations of organic food supply chains/networks. Our contention is that those areas of the organic sector the fastest growth and greatest potential to contribute to rural development can often be found in the boundary area between purists and pragmatists and in the evolving marketing structures associated with this hybridity.

The growth and adaptive capacity of major retailers

There are widely discussed concerns about the market power of supermarkets, both in relation to the tendency towards monopoly at a local level, (where in some towns in the UK single firms have a market share in excess of 60%), their buying power and ability to drive down prices received by suppliers (including farmers), and their control over development land through speculative purchase which might lead to the exclusion of competition. Many supermarkets in the UK have also entered the local convenience store market where it has been argued that they have created even greater pressure on small independent food retailers. It is also asserted that 'water-bed pricing' occurs, with food suppliers having their margins forced down by supermarkets and then raising their prices to smaller and weaker retail customers. Supermarket power is undoubtedly a concern of regulatory bodies dealing with workable competition in many countries, but supermarkets have also been at the forefront of introducing regulatory practices with respect to food hygiene and safety. There have been several inquiries into monopolistic practices by food retailers in the UK and one is currently under way, but the evidence to date is inconclusive, except in the areas of land banking (accumulating development land possibilities in ways that restrict competitors' access) and in recognition of their ability to drive a hard bargain with farmer suppliers.

In general, until recently, supermarkets in the UK have not exhibited a marked tendency to purchase significant volumes of produce from the immediate locale. In the UK, at least, this is often attributed to their centralised distribution systems and onerous quality control systems (Vorley 2006), which may require the long-distance movement of supplies from a region of production to a central distribution point and then back to the same area for consumption. This contrasts somewhat to other European countries where in France, for example, considerable shelf space is committed to local and regional produce and the organisation of procurement is very different.

Taking the UK as an example, the 'big four' supermarkets now control 71% of the food retail market, with the largest, Tesco, now accounting for roughly one out of every three pounds spent on food purchases in the UK. Supermarkets such as Tesco use sophisticated customer profiling techniques to maintain customer loyalty and are acutely aware of their customers' aspirations and interests regarding food. Tesco have moved from the 'pile it high sell it cheap' business approach that it used to break into the food market place in the 1960s, and now offers a highly differentiated range of products and encroach substantially into the market space captured partially by speciality food producers. They have, like most other supermarkets, adapted their offer to include quality labels and have made efforts to present themselves as a convenient exchange location between the individualised farmer producer and the final consumer, wherein convenience is largely based on a one-stop-shop and a wide ranging offer. The complex relations between consumers and those from whom they buy their food are beyond the scope of this paper, but it is clear that the supermarkets have tried to personalise their shopping space with images of farmers who produce exclusively for them to promote an image of quality and personal relationships between farmer and consumer. The overall evidence suggests that the so-called quality turn regarding food has not so much led to a decline of supermarkets as their continued expansion.

Given supermarkets' capacity to garner market information, it is unsurprising that they should adapt their offer to changing consumer demand, and they may, through various means, be able to help shape demand. Given their highly motivated profit-seeking behaviour, they have accommodated the growing demand for food with a local provenance. The UK supermarket chain, Waitrose, has pioneered the development of short speciality food supply chains and has recently extended this from speciality to more mainstream produce, but all supermarkets are now showing signs of trying to connect to local food suppliers, particularly but not exclusively in speciality food in order to broaden their offer to the customer. In some cases, the supermarkets will provide substantial support in product development to the supplier. The capacity of supermarkets to sell significant quantities of speciality product is a strong incentive for the small speciality supplier to engage with them. The disincentive to the producer is their dependence on a limited number of buyers with power to impose exacting demands with the associated risk that failure to comply with these demands could lead to the loss of a major sales outlet.

Supermarkets have thereby entered into new relationships with speciality food producers and small-scale suppliers. How many food products now retailed by supermarkets constitute genuinely locally grounded (endogenous) products and how many, rather than being genuinely traditional, are the invention of marketing consultants or imaginative farmers is not entirely clear. For example, the highly successful Yarg cheese, which is produced in Cornwall is not a traditional product rooted in the valleys of Cornwall, but a marketing opportunity seized by an outward-looking farmer who developed a clearly differentiated cheese product to enhance his survival prospects in a dairy sector feeling the cost price squeeze. Even many of the local food initiatives in a country with a deeply traditional food economy such as Italy can often be seen as quite recent examples of innovation and attempts to develop niche products.

As well as the corporate giants that dominate the UK food retailing sector, there are also some regionally based supermarkets that operate regional procurement strategies, which have underpinned their commercial success. Booths, a supermarket chain in North West England, is perhaps the best example of this in the UK and in Germany the Tegut supermarket chain has long been operating a similar regional procurement strategy with its food suppliers (Schaer et al. 2006). It is apparent that current market drivers are forcing supermarkets to reduce the dualism between commodity and speciality food. However, we would suggest that this process has actually been going on for some time, with retailers intent on achieving competitive advantage through strategies of differentiation, often involving place. In the case of regional speciality food and drink, the supermarkets have long stocked these products. This is particularly evident in the delicatessen and alcoholic drink sectors where *Appellation d'Origine Contrôlée* (AOC) and *Protected Designation of Origin* (PDO) foods have long been widely stocked.

The extension of regional labelling principles more widely has expanded the major retailers' scope to market regional speciality produce.

Several studies have pointed to the capacity of larger actors, normally supermarkets to expropriate the economic surplus of small scale producers. De Puis and Goodman (2005: 364) note how AAFNs have become a setting for a struggle for the economic rent created by the new market opportunities and talk earlier in the same article about the vulnerability of small producers to corporate 'co-optation'. Tregear et al. (2007) echo the general concerns about who actually controls local product designations and point out how conflictual such attempts to create local food certification can be. Mutersbaugh and Klooster (2005) also explore the development of quality certified products and note the increased dominance by the new and powerful private actors mainstreaming strategies that seek to increase the quantity of certified products sold through conventional markets.

In the case of organic produce, supermarkets now command a very significant share of the UK market at between 65 and 70% of the market (Firth et al. 2004). Sainsburys is contended to be the market leader in organic sales at c. 30% of the supermarket share of organics but proportionately, Waitrose has an even bigger organic proportion of their total food sales. Both firms now offer organic boxes, which have long been a distinctive feature of the traditional short chain direct selling of organic food from producers and this represents a further morphing of the dualism between the alternative food sector and a conventional or mainstream food sector. Interestingly, the organic market share of supermarkets has dropped in recent years, reflecting at the margin a preference of some consumers for alternative marketing channels (see Firth et al. 2004).

Certain supermarket procurement practices begin to challenge some of the stereotypical views of globalised food supply chains. Given their scale, in some senses it could be argued that they have a greater capacity to engineer a sustainability-enhancing relocalisation of food markets than AAFNs. It is possible to detect emergent hybridity in their FSCs, including their partial and ongoing reconnection to local producers and processors; again, notwithstanding issues of downward price pressures and an overdependence on a single outlet for local producers.

Hybridity in UK food chains and networks- implications for rural development

This section draws together evidence from the theoretical perspectives and the available evidence to make the case for the existence of dynamic hybridity in the UK food sector. We extend the debate about hybridity in its narrower ANT context to embrace the possibility of hybrid forms, of hybrid theories and hybrid policies. As early as the mid 1990s, Lowe et al. (1995) were arguing that the simplistic endogenous: exogenous dualism had limited explanatory power. This judgement has been endorsed recently by a range of commentators from Goodman (2004) to Lockie and Halpin (2005). We too endorse this assertion.

The brief review conducted in this paper of the principal economic macro-theoretical lenses which have been used to explore change in the food sector reveal a hotly contested debate. On the one hand, the neoclassical paradigm offers a world in which some types of AAFNs might be expected to emerge from the crisis-ridden farm sector, but where the evident market power of the major retailers limits the scope for expansion of AAFNs. A political economy reinforces this assertion of a challenging business and economic environment for AAFNs because of their predatory capacity on other food chain actors. On the other hand, a much more positive view of rural renaissance can be found by the adherents of the new rural development paradigm who assert that at the heart of rural development are new agrarian and food production and marketing practices, rooted in locale, both in terms of farming style and market output, which offer an economic keystone of the new rural economy. The political economy perspective posits a danger of expropriation of surplus value by larger food chain operators. Such firms can predate on those small scale producers and processors who have developed successful products. The often lifestyle individualism of many small-scale processors offers a free market-testing laboratory for the more market-oriented businesses, which will predate, not always successfully, on the small-scale producer should a bigger market opportunity present itself.

In spite of an enormous amount of literature, there is no unitary body of social science theory explaining rural development. This is to be expected. Different disciplines have addressed rural development through different lenses. Different lenses may throw different light on different facets of

rural change in what are acknowledged to be highly differentiated rural areas. In relation to the interactions between food markets and rural development is questionable whether any single meta theory from new rural development in the Wageningen agrarian model, to new rural development in the OECD consumption-driven rural economy model (OECD 2006), to ecological modernisation can adequately embrace the complex range of adaptive responses of rural social and economic actors and their reflexive engagement with new institutional forms and approaches to governance. If a theory is needed it must accommodate the uncertainty of outcomes and the complex interactions of actors. Around the same time as Lowe et al. (1995) were criticising the simplifying dualisms that prevailed at the time, so Marsden and Arce (1995:1277) were proposing Actor-Network Theory as a lens through which to explore the interaction of local and globalised food supply chains, again pointing to the restrictions of conventional dualisms. Ten years on the dualistic models and polarities have resurfaced with vigour, but there are at least a few examples of the application of Actor Network Theory, which reveal something of the complexity of hybrid forms and the uncertainty of food network outcomes.

Network analysis has been extensively utilised within the social sciences to understand relations between social actors, as well as the take up of new technologies, but ANT can be understood as “a hybrid of these two more traditional forms” (Murdoch 1994: 3) which allows network construction to be viewed in action (Law 1992). ANT, or ‘the sociology of translation’ (Callon 1986), was conceived by its originators (most notably Michel Callon, Bruno Latour and John Law) as a means of understanding how scientific, technological, natural and social components can form into an interdependent and coherent network. There is no preconceived frame of reference, simply an exploration of network formation that is recognised as negotiated and contingent, whereby “if the proponents of a new theory fail to gather a large enough network of allies then, in the long run, it will be unsuccessful” (Comber et al. 2003: 303). Crucially, ANT makes no *a priori* distinctions between the various components of a network, thereby allowing for the breakdown of modernist ontological dualisms, such as those between nature and society, structure and agency, production and consumption, and macro and micro-level perspectives (Lockie and Kitto, 2000). In so doing, it facilitates the scrutiny of networks that may be composed of ‘hybrid collectives’ of actors and mediations in relation to the development of particular food supply chains (Goodman, 1999).

The hybridity of food supply chains is evident in the complex and dynamic relations between small scale localised and often regionally certificated producers and national or even international food retailers. This is exhibited in the early hybridisation of organic food supply chains where the idealism of the early producers has been increasingly compromised by the market penetration practices of the pragmatists. The sector is now characterised by a range of forms of marketing from traditional local direct sales, to the hybrid box schemes, to mainstream supermarket channels. Organic food is shipped in large volumes over enormous distances and forms a symbolic engagement with the AAFNs. Whilst some, such as Lockie and Halpin 2005, assert that the evidence for conventionalisation is limited, their study does not consider the European context where substantial subsidy has attracted new entrants for opportunistic reasons, who may even have cynically used organic subsidies as a fallowing strategy.

In other work, Lockie with Higgins (Higgins and Lockie 2002; Lockie and Higgins 2007) explores hybridity in governance, where elements of neoliberal farm policy are hybridised with community based agri-environmental policy. We detect similar forces in the UK food sector where substantial support is being given to local food initiatives by regional development agencies in a political climate in which neoliberal values and a widening of international trade opportunities are widely extolled.

Interim conclusions

The postulation of a new rural development paradigm based on the relocation of food supplies seems to be based more on normative constructions than strong empirical evidence. It is not that these relocated food chains are absent, but that their overall impact is uncertain and the calculations of economic impacts to date are anything but robust. It is undeniable that the competitiveness of many rural areas will be contingent on the valorisation of local assets (OECD 2006) but likely that these assets may depend on much more than the food producing capabilities of the farm sector. The agri-centrality of the Wageningen school’s new rural development paradigm differs substantially from the more multi-sectoral consumption-driven OECD perspective. The bulk of evidence about rural demographic and economic change supports the idea of an increasingly consumption-driven rural economy rather more than the impending triumph of a localist counter hegemony (De Puis and Goodman 2005: 361).

AAFNs have attracted enormous research attention in Western Europe and more widely. This interest is evident not least because this model affords possibilities of at least providing an alternative livelihood strategy for some farmers, but because they may act as a harbinger to a stronger relocalisation of food systems. Further, these AAFNs are often contingent on new institutional forms which are often spatially circumscribed and thus different to the predominantly sectoral development policies which have hitherto prevailed. However, this does not of itself amount to the underpinnings of an alternative or new rural development paradigm. It simply exposes a developing arena of interesting activity in food markets, which is perhaps most highly developed in the European Union than elsewhere because of Europe's policy history, though it is by no means an exclusively European phenomenon. Instead of a new paradigm of rural development, we see important development prospects evident and emerging in the hybrid zone, both in relation to policy and practice.

The examination of organic farming shows how in practice many of the core ideologies of the organic movement can be compromised by the scaling up of organic production and the engagement with major food retailers. Lockie and Halpin (2004: 304) have argued with some conviction that: 'we need to unpack the concept of conventionalisation and avoid an uncritical aggregation of multiple dualisms between small and large, artisanal and industrial radical and regulatory local and international, regenerative and substitutionist and so on.' However, they also argue that the values of established and new organic farmers in Australia are not significantly different, suggesting that if some elements of organic farming's supply chains are scaled up and internationalised, this does not necessarily impact on the core values of the organic farmers involved.

Although the mainstream food system has been challenged by 'food scares' and deserted by some 'discerning' consumers who have shifted their allegiance to alternative production systems and markets, the mainstream food sector still appears to be resilient, in good financial health, and quick to adapt. The evidence of the impending demise of the mainstream food supply chain system may be much exaggerated, although the imbalances of power in favour of the retailers have put supply chain intermediaries under enormous pressure. The historic success of major supermarkets in recent decades is probably based more on their ability to deliver convenience and variety to consumers than abuse of corporate power. Their success is testament to their adaptive capacity in driving a tough bargain with producers and stripping cost (and other supply chain actors' profit) out of food supply chains and in developing sophisticated awareness of consumer needs. Their short supply chains may be short in terms of numbers of links but still often long in terms of distance, but there is some evidence of the short localised chain development, not all of it successful. Their market development often involves increased engagement with what have been described as alternative food sector actors who are experiencing pressures of conventionalisation.

An array of arguments has been levelled against the mainstream food sector (primarily but not exclusively the retailers) in the academic and popular press. These include: their tendency to use the cheapest supplier; their unwillingness to factor in environmental costs including road miles to their operations; their willingness to use their corporate muscle to establish quasi monopolies and coercive practices to stifle competition; their willingness to purvey food to consumers often with hidden ingredients such as trans fats, high levels of sugar and salt, as well as with numerous 'e numbers' of additives, stabilisers and preservatives. These criticisms are not without some foundation.

This same sector has been highly innovative in its response to the recognition of local and regional foods. They have developed relationships with many suppliers of speciality regional foods. They have adapted their offer so that the consumer is now confronted by an enormous range of choice. They have pioneered the expansion of the organic food market. They have recognised the public concern about traceability and (with public support and policy requirements in the wake of the BSE/vCJD crisis) now operate rigorous traceability systems. With their enormous care in market research and product development, they have moved on from simple quality control of commodities to embrace other dimensions of quality with new 'taste the difference' or equivalent brands.

The supermarkets have both the power to predate on the producers who might normally be associated with AAFNs and to provide outlets for their produce. For the supplier of a high quality food or food raw material currently operating in AAFNs, there are at least two possibilities: to engage and accept the significant loss of independence but counter this with the increased capacity for growth; or to reject any overtures and use alternative marketing channels and remain within AAFNs. In effect, the production

and processing parts of AAFNs offer the supermarkets a free food science laboratory on which they can predate, except where some 'rebel' producers refuse to sing to their tune². Further, although there are concerns about the path dependencies established by supermarkets' predominantly national and regional distribution systems which compromise (or at least delay) the development of local trading arrangements, their record of flexibility suggests a continued capacity to extract a high proportion of even the discerning shoppers' retail expenditure on food.

Both Goodman (2004) and van der Ploeg and Renting (2004) argue for 'actor-oriented and behaviourally grounded research'. The former argues that this does not yield evidence of paradigm shifts in rural development; the latter argue that it does. In a Delphi-based study by Ilbery et al. (2004), respondents questioned the emergence of 'an agrarian based rural development dynamic'. Ilbery et al's uncertainty reinforces our uncertainty, while recognising, as he does, the potential rather than the actuality of new/alternative supply chains to promote rural development.

We are left wondering why the advice not to get hooked into binaries and dualisms has been so repeatedly ignored. The real interest in food chain dynamics should be in the existing and emergent hybrid relationships between AAFNs and the mainstream. Perhaps the paradigms and theories outlined above represent rather partial takes on the complexities of change and through a process of bagging their own decoys, the hunters are not really finding anything novel in form or process. This is a great pity, because we believe that in this negotiated territory between mainstream and AAFNs, there are profound changes afoot, which will manifest themselves in different ways in different places in different hybrid forms. In the emergent food system we anticipate a dynamic response to emerging policies that address sustainability generally and climate change specifically. This will probably lead to a degree of regionalisation of food supply, in a retail system which remains dominated by major retailers, which will continue to offer a mix of commodities and specialities and which will increasingly incorporate local demand in their offer through connecting to local supplies. We anticipate continued buoyancy in AAFNs but argue that there will be pressures for scaling up, during which some of the factors that predicated the development of AAFNs will be absorbed into the mainstream system, further heightening the tendency towards hybridity. We conclude that it is necessary to reject the dualistic interpretations of contemporary food systems and better understand the expanding elements of hybridity in both process and form.

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² The case of Tyrells crisps is an interesting example. Implicating Tesco in the demise of an earlier enterprise, the owner of this highly successful SME refuses to allow Tesco to stock his product

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