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**Alternative Agro-food Networks:  
A New Knowledge-based Agro-food Paradigm?**

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*Introduction*

In recent decades, a ‘cognitive turn’ has become increasingly important in the making of post-industrial societies (Bell, 1973 in Blackler, 1995). Knowledge has gradually become an essential condition for the transformation of industrial, technological societies into ‘knowledge societies’ driven by innovation (Notwotny et al. 2001 in Tovey, 2008), equipped with the power not only to define but also to produce social change and reality (Foucault, 1972). Within the new ‘knowledge society’ paradigm, scientific knowledge and its technical application have appeared as key factors not only in the creation of new knowledge and information (Nonaka, 1995), but also in the division between expert and lay knowledge (Tovey, 2008) and the informational and the cultural content of the commodity itself (Lazzarato, 1996). According to this economic ‘imaginary’, ‘knowledge-data’ increasingly replace cultural values and become an economic resource (Nowotny et al, 2001), and manual labour is displaced by an ‘immaterial labour’, involving the manipulation of information and symbols outside the traditional terrain of production processes<sup>1</sup> and more extensively embedded in economic, social and political relations (Lazzarato, 1996).

Within the imaginary of ‘informational capitalism’ (Castells, 1996), knowledge has also proved to be an integral part in the reconfiguration of the agrarian society and its transformation into the new ‘knowledge society’. As agriculture has been one of the

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<sup>1</sup> For Lazzarato (1996), the immaterial labour becomes a mutation of the ‘living labour’ which operates and affects the society at large and establishes a new social relation, in which not only commodities, but also capital relations are produced in subjective and ideological terms.

most important economic sectors worldwide which resisted full incorporation into the capitalist mode of production (Grigg,1982; Goodman & Redclift, 1991), a new knowledge production within the agro-food sector appeared significant in the re-configuration and re-organisation of agricultural processes (Kloppenburg, 1988). For this reason, twentieth century agriculture saw a gradual shift away from the ‘art de la localite’ (Mendras, 1970), the ‘Savoir Faire Paysan’ (Lacroix, 1981:95 in van der Ploeg, 1993) and tacit forms of knowledge that proceed ‘from practice to practice’ (Bourdieu 1990), in favour of the scientific, explicit and codified forms of knowledge that enabled the gradual capitalisation of the agro-food processes and the commodification of its contents.

However, within the imaginary of a post-industrial, ‘post-productivist’ agro-food regime (Ilbery & Bowler, 1998), new ‘modern geographies of food’ (Whatmore & Thorne, 1997) have been described which point to what could potentially be an extensive transformation of the power dynamics within the agro-food system. Terms such as re-localisation (Renting et al. 2003), re-connection (Hartwick 1998), and re-socialisation (Marsden et al. 2000) have all been used to describe the space of ‘alternative agro-food networks’,(AAFNs) which contrasts starkly with the dominant productivist model of conventional agro-food systems (Ilbery & Bowler, 1998). In dialogue with the literature exploring the centrality of knowledge for the acquisition of a competitive advantage within post-industrial societies, this paper will explore the potential of AAFNs to constitute a new knowledge-based agro-food paradigm, one associated with different future visions of society. Based on our findings from interviews conducted for the EC FAAN Project<sup>2</sup> in two areas of the northwest of England – the Manchester urban conurbation and rural Cumbria – we aim to explore the diverse knowledge systems operating in them – e.g. old and new, traditional and modern, expert and lay, explicit and tacit (Polanyi 1967), encoded and embedded (Nonaka, 1994) – and identify their links with different patterns of social relations and kinds of value. Based on a range of relevant studies conducted within the disciplinary fields of sociology, social anthropology, philosophy and organisational studies we aim to offer an analysis of the role of knowledge within AAFNs and initiate a discussion

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<sup>2</sup> Facilitating Alternative Agro-food Networks: Stakeholders Perspectives on Research Needs – see <http://www.faanweb.eu>.

on their potentiality to stand out as promoters of an alternative value-laden knowledge-based agro-food paradigm.

*The Different Forms of Agrarian Knowledge in the 'Knowledge Society'*

A useful starting point in a discussion of different forms of knowledge mobilised in agro-food production and distribution is the distinction between explicit and tacit knowledge. Explicit knowledge, such as that codified in modern, western science, is declarative knowledge which can be divorced from any specific context of action, and thereby communicated, stored and retrieved. In contrast tacit knowledge is personal and context-dependent. In relevant agro-food studies literature, it has been understood as a form of knowledge created pre-discursively in a community through the process of socialisation, and takes the form of social norms and habits (Fonte, 2008). Following a Latourian approach (1987), whereas explicit knowledge can act as an 'immutable mobile', articulating the understanding of socially and spatially dispersed phenomena, tacit knowledge, following Jack Kloppenberg, could be termed an 'mutable immobile'.<sup>3</sup> Local, traditional, indigenous or ethnic, lay, non-expert, or non-professional knowledge are some of the terms attributed to non-explicit forms of knowledge, which could become components of a cultural alternative to modernisation (Agrawal, 1995 in Nygren, 1999).

However, under the circumstances of greater risk and uncertainty, new hybrid knowledge systems emerge, where 'the traditional politics of expertise' (Pelizzoni, 2003,p.330) is replaced by a 'post normal' scientific imaginary (Funtowicz & Ravetz, 1994) which includes not only 'certified expertise' – academic scientists or bureaucratic-managerial experts – but also experts trained in specific traditional and artisan modes at particular localities – 'non accredited' (Tovey, 2008) or 'uncertified' local expertise (Collins and Evans, 2000). Science no longer holds the sole, authoritative claim to truth; instead, we also see new hybrid systems of knowledge, where scientific and tacit knowledge co-exist. Such a development can be seen as a response to the imaginary of a 'global science of sustainable development' (Goldman 2004, p.59 in Tovey, 2008), but also to the commitment to locally specific ways of knowing and responding to environmental problems (Jasanoff and Martello, 2004,

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<sup>3</sup> For Tovey, it is the sort of knowledge 'that remains particularistic and oriented to understand in detail a particular place and context' (2008, p. 194).

p.335 in Tovey, 2008). A co-existence of professional and local experience, of explicit and tacit knowledge, has been perceived as one of the main tools for the generation of a new knowledge-model sufficient to rebuild trust in the agro-food system (Nygren, 1999), one which has seen a series of major food scares and crises.

Within this battlefield, the organic movement has been seen as the main alternative to the conventional agro-food knowledge system. Organic agriculture is sometimes represented as a 'radical innovation' (Dosi et al., 1988), which requires innovators to forget much of the knowledge they have acquired in intensive production (Johnson, 1992), and farmers to utilise their tacit knowledge and share it with their peers either through their communicative knowledges and skills expressed either in informal/formal forms of civic interaction or through links with specialised knowledge networks. It has been considered as the model for the resurrection of local, context-dependent knowledge; an interactive extension model not only between the 'local experts' but also between the 'external' science-based experts, which aims to challenge the traditional system and create an innovative 'learning system' where a combination of farmers' local or indigenous knowledge and science-based knowledge is achieved (Bager and Proost, 1997). As Fonte identifies, organic farmers appropriate various local knowledges, where new combinations of traditional, tacit and explicit/codified forms of knowledge appear at the production, managerial/commercial and technical level (Fonte & Grando, 2006) and contribute to the creation of a more inclusive knowledge-based agro-food model. Such a model might even leave some space for the construction of a 'post-organic' (Moore, 2004) knowledge framework, focusing not only on the technical/practical knowledge model around agro-food production, but also the distribution system, which relies on the decentralisation of agro-food networks, promoting an agricultural knowledge model based on the local farmer's knowledge and 'agrarian localist discourses' (Goodman & Goodman, 2007). Therefore, as Turnbull and Verran (1995) identify, new knowledge models and skills, as well as different values, appear to be significant in the establishment of a future sustainable agrarian knowledge society. Thus, in our discussion about a possible alternative knowledge-based agro-food system, it is worth identifying the kinds of knowledge which play a significant role in its constitution. In

so doing, a further understanding of the explicit and tacit forms of knowledge as conceptualised by different scholars is of great importance.

### *Conceptualising Explicit and Tacit Forms of Knowledge*

Nonaka has elaborated the dualism of tacit and explicit knowledge, stressing its significance for the development and transmission of knowledge in contemporary society. Based on Polanyi's understanding of the tacit dimension of knowledge (1967), according to which there is a direct interconnection between tacit and explicit forms of knowledge, he claims that a continual dialogue between explicit and tacit forms of knowledge is important for the creation of new concepts and ideas. For Nonaka, whereas tacit knowledge has a personal quality which makes it hard to formalise and communicate, explicit knowledge constitutes knowledge which is transmittable in a formal systematic way (Nonaka, 1995). Therefore, knowing is perceived as an action-oriented process. Agents are in a constant dynamic process of knowing where tacit knowledge constitutes the subsidiary elements of knowledge through which a focal, explicitly-given, knowledge is acquired (Polanyi, 1967).

Nonaka (1995) uses the terms externalisation and internalisation to refer to the two social processes through which the 'knowledge conversion' between tacit and explicit knowledge could take place. First, in the externalisation process, tacit knowledge becomes explicit and communicated through a declarative symbol-based form. Second, an internalisation process occurs when this knowledge is transferred to the field of action. Given the significance of the socialisation processes in the knowledge production, it is worth looking at the organisation studies literature and a broader categorisation of the explicit and tacit forms of knowledge, depending on the particular locations on which knowledge production takes place. Brains, bodies, dialogue, routines and symbols constitute the main factors for the creation of four distinct images of knowledge: embrained, embodied, embedded and encoded (Collins, 1993 in Blackler 1995).

a. Abstract and theoretical knowledge, based on the individual's conceptual skills and cognitive abilities and the rational understanding of universal principles or laws (Lam, 2000) constitutes '**embrained knowledge**'. This is an explicitly given form of

knowledge, which Morgan and Murdoch (2000), following Lundvall and Johnson (1994), refer to as ‘know what’ – ‘knowledge of the facts’.

b. Context-specific, ‘intimate knowledge’, which comes into surface ‘in the light of a problem at hand’ (Lam, 2000), and is based on practical thinking and bodily experiences (‘doing’) rather than abstract rules, constitutes the category of **embodied knowledge**. During this process of knowing, direct interaction between the agents and the objects has a significant role to play. This is a ‘know how’ knowledge form (according to Lundvall and Johnson’s (1994) typology in Morgan and Murdoch, 2000).

c. Interaction and the socialisation process also prove to be an integral part in the third process of knowing, through which a communication of personal experiences and the social construction of shared understandings is achieved. **Embedded knowledge** is the collective form of tacit knowledge, based on shared beliefs and understanding, establishing ‘communities of practice’ and a socially constructed and interactive process of knowing (‘learning’) (Brown and Duguid, 1991 in Lam, 2000)<sup>4</sup>. This kind of knowledge is similar to what Lundvall and Johnson (1994) refer to as ‘know who’, the social skills that enable individuals and organisations to gain access to the ‘know-how’ of others – a kind of knowledge that has become increasingly important for knowledge production within contemporary ‘knowledge societies’.

d. Finally, **encoded knowledge** is the decontextualised, ‘culturally alien’ form of knowledge (Poster, 1990 in Blackler 1995), which is formulated in an explicit form of information, conveyed by signs and symbols and stored in a set of written rules and procedures (Blackler, 1995 and Lam, 2000). It is the ‘knowing why’ process (Lundvall and Johnson, 1994 in Morgan and Murdoch, 2000) through which knowledge is articulated in a body of objective principles and laws, where language becomes a tool through which a knowledge conversion from tacit into explicit forms of knowledge can take place (Polanyi, 1995).

In our attempt to identify the diverse knowledge models embedded within the alternative agro-food production processes, a greater diversity and a broader

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<sup>4</sup> In this context, as Blackler claims, a re-stabilisation between the individual’s skills and the interpersonal organisation skills, which finally leads to the creation of the ‘organisational routine practices’, is achieved in the absence of written rules (Blackler, 1995 and Lam, 2000).

categorisation and classification can be useful in initiating a discussion of the potential knowledge dynamics and interactions within the agro-food processes. Based on our findings from our two case-studies in the northwest of England, we aim to contribute to the discussion on the conceptualisation of the scientific and local, explicit and tacit forms of knowledge as expressed in the alternative agro-food networks practitioners' discourse. In so doing, we will examine diverse stakeholders' perceptions and understandings of scientific and local knowledge, of explicit and tacit forms of knowledge and their role in the definition and construction of their alternative knowledge-based agro-food system. Finally, we will attempt to identify any specific characteristics which may lead us to speak about a different knowledge-based agro-food paradigm, one associated with different patterns of social relations and kinds of values.

*Knowledge Production within the AAFNs: Evidence from the Northwest of England*

The Northwest of England with its diverse and distinct geographical and socio-demographic characteristics and different grades of urbanisation has proved to be of great interest in an attempt to look at the possible alternative agro-food models. Traditionally, extensive industrialisation has been one of the important aspects of the economic history of the Northwest of England. Due to the geographical specificities of the region, agriculture has not been prioritised and the industrialised agricultural model of production has been identified as the key feature for the long-term profit-making sustainability of the farming industry and its entrepreneurs. However, several pressures, such as food scares as well as the GM controversy over GM food have led UK food producers and consumers to generate or support alternatives to conventional food chains.

The AAFNs identified in Cumbria are predominantly farmer/producer based; they primarily use farm shops, farmers' markets or vegetable box schemes to distribute their produce. Organic and local food productions are important characteristics of Cumbrian producers, who are trying to organise themselves and build coalitions based on common interests and aims, in an attempt to develop a sustainable local economy. Interconnections have been established between a local organic co-operative, an organic small-scale farmer-based box scheme, a family-run a farm shop, a

biodynamic water mill-dependent bakery, and a third-sector initiative organised around agricultural production. In Manchester, by contrast, alternative food networks have responded to socio-demographic characteristics, especially socio-cultural inequalities and poor health statistics. In the Manchester regeneration strategy, food has become an important symbol for a social change; several projects, citizen-led initiatives, charity or non-profit organizations have been set up with the support of local authorities, and new coalitions have emerged. Old and new actors have entered the arena of the alternative agro-food sector. Consumers and retailers have been the key actors, aiming to regenerate local communities; producers have not had a significant role to play as directly involved actors, except some consumers as producers.

In the relevant literature, the alternative agro-food networks have been considered as the main alternative to the conventional agro-food knowledge paradigm. It is therefore interesting to explore the way that knowledge production and transmission is materialised in AAFNs in the northwest of England. For example, despite the practitioners' self-understanding as different to the conventional techno-scientific advances and the mass food production, for most of them, scientific knowledge is not only restricted to the dominant paradigm of the conventional agro-food model. Phrases, such as '*sound science*' (Interview KG269898), '*best science*' (Interview GW030908), '*good science, multidisciplinary based on empirical material and not on a political agenda*' (Interview AL080908) illustrate the multidimensional character which could be attributed to scientific advances. Therefore, in their discourse, scientific knowledge is not perceived in a narrow sense, mainly linked to the reductionist model of 'normal science'; it appears as a value and motivation-laden concept, depending on its users, its applications and outcomes. As an interviewee says:

*'...science isn't a bad thing is it? Its like, anything that contributes to knowledge and understanding has got to be a good thing, then you have got like the scientific industry ... like someone says to you here is a scientific project we need someone to research this... and it's like we are developing nuclear technology and yet the result is going to be a bomb which is going to kill half a million people...'* (Interview RS300708).

The practitioners tend to keep an ethically relativist approach to science, which heavily relies on the socio-cultural context and the ultimate use of the knowledge embedded in it.

In one of the interviewees' discourse, a '*good science*' (Interview AL080908) is also possible and organic agriculture in constructing an alternative agro-food paradigm. As one of the interviewees in Cumbria says, the kind of science they see as used in organic agriculture '*.. is more science based in the fundamentals...*' (Interview KG260808).

Therefore, scientific knowledge has been recognised as one of the key aspects in the creation of an alternative agro-food model of production. As revealed in the stakeholders' argumentation, it is not a static model of scientific knowledge, but a process where codified knowledge stems from a tacit system of knowledge, a '*common sense*' (Interview HF150808) derived from '*work with nature*' (Interview JM260808). Codification and standardisation of knowledge appears to be a stage through which knowledge transfer could take place. For the stakeholders, organic science becomes a knowledge model which is shaped by natural limits and farmers' experiences, but in turn it also shapes the farmers' knowledges, skills and practices. Therefore, it is a codified knowledge model which can circulate and then become embedded and embodied in the farmers' practices and knowledges. In this framework, organic science appears to be a 'knowing process' where 'know what' and 'know how' seem to interchange and co-exist in the successful implementation of the agricultural system. A distinctive knowledge model, based on the practical knowledges and experiences of knowledgeable 'local experts', becomes transferrable in its explicit standardised form and subsequently embedded in dispersed, situated local farmers' practices.

Despite the fact that most of the practitioners identify the centrality of scientific knowledge in the alternative agricultural mode of production, phrases such as 'traditional' or 'old' were frequently deployed in their descriptions. For them, a 'continuity' between traditional and new forms of knowledge makes their knowledge production an on-going experience-based learning process that combines old and new (Fonte and Grando, 2006). In their understanding, traditional knowledge links them

back to the experiences of the older generations and their knowledge of a pre-industrialised agro-food model of production; it is the recovery of past experiences, knowledges and skills practiced by the older generations, which finally become used by and integrated with the expert organic system. However, personal experiences have also been central in their understanding of the new model and the shaping of their practices. For example, for the Glebelands Market Garden interviewees in Manchester, knowledge about organic production was a better '*understanding of the soil*' (Interview AL080908), gained both by personal experience and by knowledge transfer from the 'knowledgeable' older generation. In general, many interviewees have had no prior '*hands-on farming experience*' (Interview HO140808) and as they claimed, direct connection to the land and experimental/ 'self teaching' (Interview HF150808) and 'on the ground' knowledge of the locales has been significant in the acquisition of the needed skills.

Overall, knowledge production emerges through the co-existence of diverse people, diverse knowledge backgrounds and skills, and organic becomes the cognitive space of a collective work of knowledge on production systems, where social cognition, the cultivation of social and communicative skills, appears central for the reconfiguration of an alternative agro-food knowledge space resistant to the socio-spatial separation of production and consumption (Buttel, 2005). These aspects have been particularly significant in Manchester's community initiatives, where permaculture has been imagined as an alternative to the commercialisation of the agro-food system. According to the Permaculture Association's description, '*permaculture is about creating sustainable human habitats by following nature's patterns... It is based on the philosophy of co-operation with nature and caring for the earth and its people*' (Permaculture Association, 2009). In this context, permaculture could be considered as an alternative 'scientific model' based on the design of natural ecosystems. It is a 'learning by doing' model, where the science stems from personal experiences, knowledges and observations within a particular locale; a new local knowledge patrimony beyond scientific knowledge (Fonte, 2008).

However, 'local' knowledge within this alternative agro-food paradigm is not only mobilised in the production processes. The alternative agro-food knowledge paradigm also contributes to the creation of an alternative 'social cognitive' space, stemming

from shared experiences and public participation. Thus, the alternative knowledge system appears to be not only restricted to the producers'; lay people can also be seen as producers themselves. This is well-illustrated in the Manchester allotments' citizens' initiatives, where lay knowledge is claimed to have a central role in the construction of a participatory agricultural system based on '*...working with nature...not man controlling nature*' (Interview JM260808). The system aims at the re-acquisition of the practical knowledges and skills that have been lost through the industrialization processes. As one of the interviewees identify, '*a lot of people have no clue how to grow food. It's a mixture of getting people to rediscover lost skills through generations*' (Interview CR090908).

However, a mixture and exchange of old and new knowledges appears to be significant in the construction of an alternative agro-food system. The production of a 'new knowledge' model becomes embedded in the practices and experiences of the younger generations, with, a dialectical relationship and interaction with older generations and the techniques, knowledges and skills embedded in them. One of the interviewees stresses the role of the intergenerational interaction:

*'...it seems ridiculous to me that I am running workshops about food growing when I have only been doing it 3 years. It's like the blind leading the blind almost. You have this whole load of people that have been doing it for years and got a lot of knowledge but there is no kind of forum for them to be able to teach people about it...'*(Interview HSK020908)

This statement also raises an important aspect in the construction of an alternative agro-food model. Awareness and educational campaigns have been considered as important aspects of social skills and knowledges which needed to be cultivated by the practitioners of an alternative agro-food network. Therefore, organisational and communicative skills appear to enter the arena of an alternative agro-food system; and this aspect has been revealed in both localities. In Cumbria, new support bodies have been set up in order to 'break down the isolation of the farmers' (CFN Interview150808), enhance the co-operative and collective marketing skills. Therefore, 'know who', the social skills of the practitioners, appear to become significantly important in an attempt to gain access to the 'know how' of the others. Knowledge production becomes an ongoing process of learning embedded in the

communication of the personal experiences and beliefs (Blackler, 1995; Lam, 2000). Skills are not only dependent on the knowledge of the local natural environment but also on the wider context of the social environment, the systems and their rules, as well as knowledge of peer groups and the social interactions between them. In this context, new 'communities of practice' appear (Brown and Duguid, 1991 in Lam, 2000), where a generation and mobilisation of tacit knowledge is used to reconnect the social and the institutional settings. In this framework, the socially embedded and embodied knowledge of the practitioner becomes a tool with which to communicate and to further extend economic and social relations.

In the interviewees' discourse, direct contact with the consumers was recognised as significant, since knowledge transfer is not only restricted to the circle of the directly involved actors, but it refers to the broader social, either spatially specific or not, settings. New sorts of communicative, commercial and managerial skills contribute to a different knowledge production, oriented towards the 'know who' and 'know where' of the consumers. This process does not only increase the profitability of the producers, but also creates new forms of tacit knowledge, embedded within the broader socio-cultural settings of the community. The alternative agro-food networks aim to re-establish tacit forms of knowledge by helping people to re-discover lost knowledges and skills. However, knowledge about food production has not been the only dimension within the alternative agro-food system knowledge production. Diverse skills, including cooking and buying skills have also been considered significant aspects of the re-skilling process. Communication and public awareness campaigns have been organised by the stakeholders in order to achieve a 're-culturation' of consumers through a reconnection with the land and revitalisation of their senses. As one of the stakeholders underlined, '*...there's such a gap between people's actual knowledge of even what a carrot looks like, even what a cabbage looks like. You get teenagers who don't know how a cabbage, where it comes from. And they don't know that milk comes from a cow....*' Therefore, for her, their initiative contributes to '*linking people up with their surroundings...*' (Interview MB160109).

For the stakeholders, extending and deepening 'know what' about nature and its resources will contribute to a change of the people's *habitus*, the tacit knowledges and skills which have become embodied in them due to the socio-cultural setting of a

highly industrialised knowledge society. An example of the de-skilling process is offered by a box-scheme representative in Manchester: *'I think people are sort of trained by the supermarkets to think that things come from over there, somewhere you know....'* (Interview MA160109). In this case, the reskilling process is addressed to the re-acquisition of the lost skills that are still apparent in the practices of the older generations: *'...We have our regular customers, which are mostly actually the older generation of people who are more used to the sort of van that we have'* (Interview MB160109). The importance placed on the older generations' contribution to the reskilling process is also shown by the allotments initiatives' aim to organise new teaching models for the re-establishment of lost and endangered knowledges, but also to enhance the social and communicative skills of the participants.

In this case, the 'know who' knowledge enables acquisition of 'know how'. As already observed, the 'know who' could take two different meanings in this alternative agro-food knowledge production process. First, organisational and social skills are rather significant for engaged actors; agro-food project initiators do not only rely on their knowledge about food production, but also on the organisation of social forums through which an enhancement of both their skills and those of the seminar participants will be achieved. At a second level, the establishment of alternative agro-food practices has also a central role in developing the social capacities and communicative skills of the participants. A re-socialisation process (Marsden et al, 2000) appears to be central in the mobilisation of local forms of knowledge, which may finally contribute to the recreation of a lay knowledge-based patrimony, which goes beyond 'scientific' knowledge (Fonte, 2008).

In the allotments agro-food model, a transfer of knowledge is facilitated through shared experiences and public participation. The public becomes involved with the agro-food production and consumption process, where new experiences through the senses and social and empathetic relations encourage an alternative agro-food paradigm. A perceptual involvement and embeddedness (Ingold, 2000) in the natural and social environment of an alternative agro-food system is envisioned to resist the socio-spatial separation of production and consumption and 'bring a social change, based on the principles of mutuality, reciprocity and equity, embedded in human interaction' (Kloppenberget al, 1996). In this context, increased public participation

and personal experience in agro-food production processes enhances participants' understanding of the agro-food production and consumption processes, which could contribute to an alteration of agro-food system processes.

Local environments appear to become the source of knowledge which expands the limits of the technological and environmental knowledge, in order to include the knowledge of the social environment and the social systems, as well as the knowledge of the peer groups and social interrelations (von Cranach, 1995; Fiske and Taylor, 1991 in Antweiller, 2000). This has been revealed in the food projects and the allotments' initiatives in Manchester. Community engagement becomes an integral part within the current alternative agro-food processes, which exceed the geographical and social proximity (Allen et al. 2003) between the producers and the consumers and includes new kinds of social relations between the engaged actors, which in some examples, fall under the aspiration to create more sustainable communities. In this context, social issues such as social exclusion, food access, socio-economic and health inequalities constitute important factors for the making of an alternative agro-food system. This aspect is well illustrated in one of the interviewee's description:

*'...In an area like Hulme, which is completely dominated by international conglomerates and supermarkets...people are unhealthy unskilled, there is a lot of mental health problems... engaging people in the process -- taking people who didn't work and lived in deprived areas and getting them excited enough about an alternative way of doing things like get them out of the flats and get them working in the field or in the cooperative, growing or distributing food ...'* (Interview RS300708).

Therefore, aim of these agro-food imaginaries is not only to construct a different agro-food model of production, but also to create and establish a different way of living and lifestyle, a new social system, in which social integration and the development of social and communicative skills are an integral part. And alternative, environmentally friendly, agro-food methods of production become important tools in the re-making of the socio-cultural setting.

Overall, a combination of different knowledges and skills, scientific and non-scientific, explicit and tacit, codified, embedded and embodied forms of knowledge co-exist for the construction of an alternative knowledge-based agro-food paradigm. As we have seen, for the creation and the establishment of an alternative agro-food

model, knowledge production exceeds the sphere of the agro-food production level in order to incorporate new spheres of activities and new actors. The cultivation of managerial, educational, communicative and social knowledges and skills both on behalf of the producers and the consumers appear to be necessary for the long-term sustainability of the newly catalysed agro-food system. And the alternative agro-food networks become the 'cognitive' and the 'social cognitive' spaces based on an ongoing learning-by-doing process, where deskilling and re-skilling, 'de-culturation' and re-culturation processes have a central role to play. The agro-food chain is not only focusing on the production process, but it is the space where new ways of interaction and communication, new kinds of socialities emerge, involving knowledge not only about production itself, but also about nature, human interrelationships and the diverse socio-economic and cultural processes. However, if we wanted to talk about an alternative knowledge-based agro-food paradigm, what are the distinctive knowledges and values embedded in it? Could we really talk about an alternative knowledge-based agro-food paradigm and what distinguishes it within the broader agro-food knowledge arena?

#### *Towards an Alternative Knowledge-based Agro-Food Paradigm?*

From the above description we may assume that within the knowledge-production processes of an alternative agro-food system, different forms of knowledge – old/traditional and new, codified, embedded and embodied, tacit and explicit, scientific and local/lay – co-exist, confounding any simple dichotomy between scientific and non-scientific, or tacit and explicit forms of knowledge. It is the explicit form of knowledge which creates a new social space of communication, interaction and exchange of knowledge between different kinds of experts (scientific and local experts) within the complex social and natural environments of the agro-food domain. And, the alternative agro-food domain can be seen as a cognitive and social space, where knowledge production is an ongoing knowing/learning process dependent on the practitioners' direct involvement with the landscape (Ingold, 2000).

However, the landscape does not only appear as the producer and the carrier of the knowledge, but also as a social space where knowledge is generated through the social interactions within it (Turnbull, 1999) based on the deployment of diverse

social and communicative skills. And, this alternative agro-food sector becomes a new cognitive and social space, which expands the socio-spatial limits of the production processes to transform the consumer into a knowledgeable actor about the agro-food production and the socio-economic processes, cultivated not only through a direct connection with the farmer and their land, but also through their direct involvement and their personal knowledge and experience of the agro-food production process. In this sense, food becomes an object of knowledge, as well as a carrier of diverse, social, economic and ecological, values and knowledge properties embedded in it, whereas nature is not only perceived as a natural ecological process, but also as a socio-economic space of combined activities, knowledges and values based on the new socialities embedded in it. Therefore, nature becomes not only the producer of an economic value, but also of a cultural value stemming from the social practices in it and within it.

Therefore, with Alternative Agro-food Networks, knowledge acquires a different meaning. It is not only a factor of production aiming at the increase of productivity. The value of the AAFNs is not only restricted to the production of 'surplus value' for the generation of economic profitability which has been mainly attributed to scientific knowledge and its use in a capitalist mode of production. Within AAFNs, the recombination of different forms of knowledge leads to the production of different, cultural and social kinds of value, which transcend the boundaries of strict economic profitability. Its value is bound with nature and stems from its connectivity with the past social relationships, but also from its detachability from them in order to create new social relationships (Graeber, 2001) and to re-shape the current socio-cultural setting. An alternative agro-food knowledge-based regime thus may offer clues to the nature of an alternative to the current 'informational capitalist' society and the intellectual 'immaterial labour' operating in it (Lazzarato, 1996).

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### **Interviews**

Each code includes the date.

#### Cumbria

- HO140808, Hadrian Organics, Private Farm, Houghton, Carlisle, Cumbria, 14/08/08.
- CFN150808, Cumbria Farmers Network, Private Farm, Ennerdale, Cumbria, 15/08/08.
- HF150808, Howbarrow Farm, Private Farm, Cartmel Cumbria, 15/08/08.
- KG260808, Cumbria Organics Office, Penrith , Redhills Cumbria, 26/008/08.
- GW030908, Growing Well, Oxenholme Lakes Station, Kendal, Cumbria, 03/090/08.

#### Manchester

- RS300708, Private Office, Oxford Road, Manchester, 30/07/08.
- JM260808, Joint Health Unit, Manchester City Council, Manchester, 26/08/08.
- AL080908, Glebelands Market Garden, Manchester, 08/09/08.
- HSK020909, Oxford Road Station, Manchester, 08/09/08.
- CR090908, Joint Health Unit, Manchester City Council, Manchester, 09/09/08.
- MA160109, MERCi Office, Manchester, 16/01/09.
- MB160109, MERCi Office, Manchester, 16/01/09.

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