Sociological Perspectives of Organic Agriculture: from Pioneer to Policy

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Table of Contents

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Preface

The signpost is not the journey (Adapted from Zen saying).

There is now a growing body of literature about organic farming, less about the techniques and philosophy of practice than about the social aspects of the organic movement and its emergence. However, for someone like me, who has played a part in the organic sector since the mid-1970s, a vaguely uncomfortable feeling is generated by reading about decisions and developments that I was party to; largely because I cannot work out which is the more erroneous – historical analysis by non-participants or my own memory!

It is clear though that for a grassroots movement, as the organic movement was, to move into the mainstream in the space of 25 years in the face of opposition from the scientific establishment, ridicule from the farming establishment, and hesitant apathy from the political establishment, is unusual if not unique, and is worthy of sociological and political study – if, in the next 25 years we can build on past experiences.

This book stands apart from the generality of published material on the subject; not least because a number of the contributors have been around the organic movement and sector for some time and they have a degree of knowledge that goes beyond cliché and speculation. Of course each author has their own insight, and each reader too, nevertheless the book is a real step towards sharing an understanding of the significance and dynamics of a farming movement that set out 'to change the world', and might have ended up being completely changed itself.

Organic farming continues to grow in hectares and prominence across the globe and there is no doubt in my mind that this will continue to be a critical consideration for policy makers at every level as more people realise that we do indeed live in a world of finite and diminishing natural resources. Therefore, I view this book as a valuable and timely guide to those activities and trends that underpin the influence of organic farming on, not only agricultural and health policies but also, rural, social and international development.

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1
Sociological Perspectives of Organic Agriculture: an Introduction

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> My subject is food, which concerns everyone; it is health, which concerns everyone; it is the soil, which concerns everyone – even if he does not realise it, and it is the history of certain recent scientific research linking (these) three vital subjects (Balfour, 1943: 9).

> Food as a culturally hybrid entity, becomes unevenly embedded into the fabric of new rural development practices; and new synergies become developed between food, agricultural practice, consumption practices and associational and institutional arrangements (Marsden, 2004: 139).

We should not be surprised that one of the founders of the organic farming and food movement should be focused on food, how it links to health, the environment and recent advances in science. It is noteworthy that an eminent contemporary rural sociologist should find the topic of food to be central to the understanding of the unfolding of much of modern society. Food has been a historical constant in societies, but historically this has revolved around its shortage and the lack of security of its supply. For many of the world's more affluent people, be they in the North or the urban centres of the South of the planet, questions of the qualities of food have taken over these earlier concerns. There are questions around the safety of food in light of Bovine Spongiform Encephalopathy (BSE) and pesticide residues, the environmental sustainability of how it is produced, the ethical treatment of producers, the landscape agriculture creates and the treatment of animals within farming. These concerns have fused into one another, bring food into question in a way that is historically and socially novel. Our cultural anxieties about food have not been removed but have been displaced into other areas.

Equally, for many of those people for whom the supply of food remains a central question in their lives, be they a subsistence farmer or a technologically orientated commercial one, the way in which food is grown, the price they

receive for it and the relationship they have with those who purchase their crops is of vital importance. In a world where the ability to communicate and trade is being revolutionized, where people are linked in new ways, old questions of food are becoming reframed and press on all of our lives in fresh ways. Rural sociology responds to these old questions and the changes in them by searching for both descriptions and explanations. The purpose of this book is to consider the role that rural sociology has in explaining one of the newest, and for some people most challenging, developments in food and farming – organic agriculture.

For the past twenty years organic products have been finding their ways onto the plates of consumers across the western world, supplied by an ever-growing archipelago of organic farms. In the past ten years this food has increasingly be grown and traded across the entire world. For the first time is possible to begin to talk about the global phenomenon that is organic agriculture and to begin to consider what it means for farmers, consumers and more broadly the societies within and between which this new form of food production has emerged. For nearly a century the production of food was dominated by an ever-greater emphasis on particular forms of rationality and technology. From the beginning of this emphasis, which was most obvious as the Green Revolution, there were those who doubted its veracity. This minority were often clustered around the early organic farming movement; they questioned the reliance on chemical technologies, the seeming simplification of the ecosystems around farmland and the sidelining of the health giving benefits of food. As this critique became louder, the problems more pressing and the opportunities for an alternative more apparent, the organic farming movement came to prominence.

There is not a unified or singular explanation of the rise or social meaning of organic agriculture so this book presents the reader with the opportunity to take part in the vital and growing discussion about the different experiences of organic farming and food. Aside from Antarctica, every continent on the planet is featured in this collection, with the various authors discussing the particular experiences that organic agriculture has brought to radically different communities. In analysing and explaining organic agriculture an equally diverse range of approaches are taken representing the full range and diversity of the sociological approach. The authors range from those who are well established in academic careers through to those who are just beginning in professional research. Just as this collection is a primer in the discussions about the planetary diffusion of organic agriculture, it is equally a guide to the contemporary state of the art of rural sociology and its allies.

Organic agriculture has many facets, a considerable number of which are not discussed in this book. This breaks with some of the fundamental objectives of the earliest organic farmers who wanted the farm to be viewed as a whole, as a complex ecology of not just plants, microbes and animals but also its footprint on the society in which it is intimately bound. The collision of vision and pragmatism has meant that for some time a technical literature about organic

farming has been published that has largely ignored the questions raised by the social sciences. In beginning to fill that gap we argue that we are moving towards a point at which the totality of the farm is more likely to be understood and not a moment too soon. As is apparent from the examples discussed in this book the biggest questions that face organic agriculture at present are not about farm management or farming systems but about creating viable businesses, winning over consumers, struggles over policy and the very meaning of organic in a complex and dynamic world.

Before moving to describe in further detail the papers in this collection it is necessary to describe what we mean by organic agriculture and also to a degree rural sociology. These accounts will be by necessity brief but should serve to help the readers orientate themselves as to what is being discussed before becoming involved in the details. These descriptions are intended as points of departure rather than final statements so we signpost readings that could be followed up that are beyond the scope of this work. Once those introductory sections are completed we proceed to map out the structure of the book and how the contributions intertwine. Although it would be possible to read this book from one end to the other in one sitting, we imagine that many readers will peruse the book in their own way, dipping in and out of it. So as to aid that particular pleasure the map will allow the reader to chart their way through the chapters.

Organic Agriculture

> Simplified, and put into a practical context, it is the recognition that – within agriculture, as within Nature – everything affects everything else. One component cannot be changed or taken out of the farming or natural system without positively or adversely affecting other things (Lampkin, 1990: 5).

Frequently people think that as organic agriculture is just farming without artificial fertilizers, insecticides, fungicides, hormones and genetically modified (GM) crops then before the invention of these technologies all farming was organic. The simplicity of this notion is attractive, but it romanticises the past and misses out what many people involved with organic agriculture would see as one of its most important contributions. To understand this clearly it is helpful to know a little of the history of organic agriculture. Although it has only risen to public prominence in the last twenty years, the roots of organic agriculture are in the early twentieth century when it became increasingly apparent that agriculture as practised was struggling to feed people adequately and was causing considerable damage to the environment (Conford, 2001). Widespread soil erosion occurred not only in the USA but also in South Africa and Australia. At the same time the industrial diet that had started to appear and the continued food shortages in many parts of the world, led many to fear the inadequacies of the agricultural systems. Separately several agricultural scientists and rural

thinkers began to look towards solutions to these problems, which they located in understanding the ecology of farms more adequately and devising ways of keeping agricultural practices in line with these biological limits.

These two approaches quickly forked between those who understood these methods in a way that was guided by mystical insight and those who preferred to gain them from a base in more conventional science. Rudolf Steiner and those who followed and later interpreted his teachings took the first path. Based on acute observation, rigorous management of the land and a range of special preparations that enhanced the land and crops, anthroposophical or biodynamic agriculture gained a small but loyal group of adherents. Whilst in the English-speaking parts of the world the work of the British agricultural scientist Albert Howard was more influential. Howard based his work on his experience of working in India, where he was impressed by the efficiency of traditional peasant farming and sought to empower it through the observations of Western science. These insights and arguments became distinctly minority views in the immediate years after the Second World War, as agricultural productivity was prioritized and the technological gains of the Green Revolution were systematically introduced across the planet (Perkins, 1997). In the face of the demands of the Cold War earlier concerns about the sustainability of agriculture were sidelined.

Organic agriculture was global from the very beginning; the first association of organic enthusiasts was formed in 1940 in New Zealand, whilst by the mid-1940s, Ehrenfried Pfeiffer a follower of Steiner, was introducing biodynamics to the USA. Books, journals, lecture tours and personal letters helped spread the word in the early years. The Soil Association, which was formed in London in 1946 aimed deliberately to have a global membership, after all they argued, the entire planet was at peril. In these early years there was a wide diversity of farming practices that counted as organic and indeed even the term was not widely agreed on. People conducted humus, lay, Clifton Park, natural and a variety of other forms of what we would now term organic farming. Equally, as the new pesticides and herbicides became available some organic farmers experimented with them, before they were discarded as incompatible with preserving the soil.

Steps were taken towards standardizing the understanding of what organic farming meant during the 1950s, particularly around the early attempts to sell organic produce to consumers who did not know the farmer. Lady Eve Balfour, the founder of the Soil Association, literally brought these standards back from the USA and fostered a discussion in the Soil Association's journal about what organic meant (Reed, 2004). The importance of the restrictive prescriptions of organic farming at that time – banning the new pesticides and herbicides - was confirmed by Rachel Carson's expose of the environmental damage wrought by these chemicals in *Silent Spring* (Carson, 1963). During the 1960s as antibiotics and synthetic growth hormones were introduced to agriculture the organic movement moved to exclude them from organic farming. By the end of the

1960s organic agriculture was generally known by that term in the English-speaking world and biological in continental Europe. In proscribing most synthetic agrochemicals, and insisting on the protection of the wider environment, organic agriculture was in many ways recognizably the same, as we know it today.

The provenance of organic food has always been of concern to the consumer, and certainly by the early 1950s there was some very small-scale international trade in organic produce. In these first experiments a range of grading systems were introduced by the retailer and these were refined to the first standards agreement, introduced by the Soil Association in 1967. In this agreement the farmer promised to abide by a set of rules that bound them to avoid a set of prohibited substances and practices, all that tied the farmer to this contract was their honour. The early 1970s saw an upsurge in the development of the organic movement. In 1973 the Californian organic movement not only introduced standards but a system of third party inspection as well, and that year the Soil Association did the same. Simultaneously the first international discussions were initiated to form an alliance of organic farming organizations across the world. Eve Balfour had tried this in the early 1950s without success but through the energies of the French movement, and literal offices of the Swedish organic movement, the International Federation of Organic Agricultural Movements (IFOAM) was born. All of this innovation took place years before the labelling schemes and farm assurance systems consumers are familiar with were introduced, and all of it took place without the assistance of the state.

Although the organic movement had created increasingly sophisticated ways of defining what it meant by organic and ensuring that farmers who subscribed to these rules followed them, all of these measures were voluntary. The first move to statutory regulation of organic farming really came with the introduction of European Community (EC) regulations in the early 1980s. In anticipation of this directive member states were to establish their own national systems of organic certification. For many states outside of the EC this also proved the impetus to introduce legal protection for organic production, to protect their valuable exports if not nurture their domestic market. The directive eventually came into force in 1992, along with a raft of other measures to protect the agricultural environment.

Alongside legal protection of its status as a distinct product many states, particularly in Europe, introduced support for organic farming and began to view organic farming as a way of resolving many of the problems the state had with contemporary agriculture. For some it was a way of moving farmers to a position where they followed the market not subsidy provision, for others they hoped that the lower yields of organic agriculture would save them the expense of dealing with agricultural surpluses, others looked to it to lessen environmental pollution. Many farmers were happy to take up what they saw as a market opportunity as it appeared many wealthy, largely Western consumers were clamouring for organic produce. As the twentieth century came to a close the

global organic movement found that despite its great diversity it was unified under one set of global standards from IFOAM and an increasingly integrated global market for organic produce. In many nations it had moved from being the preserve of the sandal wearing health-food faddist to the concerned supermarket shopping soccer mum. Yet, at that moment came a crises of confidence for many, was that what organic farming was all about?

The turn into the twenty-first century saw a range of responses from the various national organic movements, as they faced a range of challenges. The European revolt against the introduction of GM technologies saw the organic movement leading the wider environmental debate for the first time. In different places these protests took different forms, in Germany naked consumers lobbied parliament and in the UK masked activists destroyed GM crops hoping to be arrested. Whilst in the USA a record mobilization of organic supporters lobbied Congress about proposed federal organic regulations that would allow GM crops to be grown as organic. Farmers in Africa began to experiment with organic farming as not only a range of farming practices that are sustainable but may offer access to world markets on favourable terms. At the same time some farmers were beginning to allow their certification to lapse in order to escape its costs and what they saw as the increasingly commercial tenor of organic farming. Success is not universally comfortable or welcome when it brings compromises that had never been envisaged. In thirty years organic farming has been catapulted from the margins to a globalized multi-billion dollar sector entangled with some of the most powerful corporations and complex states on the planet. Small wonder that not everyone was prepared for, or prepared to, work in this new and highly dynamic situation.

Rural Sociology

> Somewhere, it is believed, at the far end of the M4 or A12, there are 'real' country folk living in the midst of 'real' English countryside in – that most elusive of all rustic utopias – 'real' communities (Newby, 1984).

One of the challenges, but also one of the strengths of rural sociology has been that its focus on the rural has often meant that no further sub-specialism has been undertaken. Therefore individual sociologists will examine a wide range of topics under the heading of rural and so develop a body of work informed by a wide reading within sociology and beyond. If we briefly consider the farm, it can be analysed from the perspective of the farm business, or the farm family or the technologies used in food production. By only analysing one facet, important parts of the story may be overlooked, yet considering all simultaneously is a tremendous challenge. Too narrow a focus is not rewarded in rural sociology as it becomes quickly apparent that interconnections, synergies and flows are important. The constant presence of non-human nature, perhaps the defining characteristic of the rural, equally serves to ensure that how connections are

formed and the mutual flows of influence are in the foreground of any discussion. To research and write about these flows and influences has become the central challenge of rural sociology in recent years and one that whilst happily is unresolved, is generating an enormous amount of energy and innovation.

Rural sociology has become a very diverse discipline and the sociology of organic farming and food demonstrates this very clearly. Historically the major client of rural sociology has been government departments and the other organs of the state that have been responsible for managing and improving the national farm. This has meant that often the funding for rural sociology has been provided by governments interested in implementing their policies more effectively than questions defined by rural sociologists themselves. Equally, it has shared with rural people the prejudice that in some way they are less sophisticated than their metropolitan peers. As this collection proves rural sociology is certainly as sophisticated as its urban equivalents and whilst it clearly maintains a strong relationship with rural policy, it transcends those concerns.

Research on organic agriculture is comparatively new in that as outlined above until recently there has not been a great deal to enquire about. Virginia Payne conducted one of the earliest studies in 1970 about the development of the Soil Association. In this work Payne adopted the approach towards organic farming that was informed by the sociology of science. She was broadly interested in why organic farming rejected the combination of plant breeding, chemicals and machinery that had been so whole-heartedly embraced by the rest of agriculture. During the 1970s those considering it around questions of science dominated the sociological discussion of organic farming in the English language. Only in the early 1980s as organic farming began to grow did wider considerations of organic farming appear, principally around the question of the economics of organic farming. At the same time many of those early academic accounts attempted to follow the spirit of organic farming and consider the topic in a holistic manner.

The mid-1990s saw an explosion of sociological literature about organic farming. This took a range of forms, reflecting the different historical experiences of organic movements and the various forms of sociology the researchers favoured. Quickly a number of competing and contrasting approaches were adopted. Political economy inspired approaches were the main font for these discussions, which provoked a lively and ongoing debate. Julie Guthman and her colleagues in California argued, and with modification still do, that organic farming was being subsumed into the dominant forms of agribusiness to be found in that state. That whilst organic farming might once have represented an attempt to adjust the terms of trade and emphasis of conventional agriculture, it had not been able to overcome them and was increasingly being incorporated into them.

> According to this scenario, organic farming is becoming a slightly modified version of modern conventional agriculture, replicating the same history, resulting in many of the same basic social, technical and economic characteristics (Hall and Mogyorody, 2001: 399).

Its attempt to make agriculture more sustainable had been defeated by the power of multi-national agribusinesses. Hugh Campbell and colleagues in New Zealand met this with a rejoinder that attacked the conventionalization argument put forward by Guthman and her collaborators (Buck *et al.*, 1997, Coombes and Campbell, 1998). Arguing that matters were more complex and context specific than Guthman has allowed. As is apparent in this collection the conventionalization thesis still animates discussion and research.

> Without political action, change cannot be institutionalized in complex societies, but movements increasingly act as new media by their very existence. When they escape the risk of pure symbolic counterculture or marginal violence, they fulfil their role and transform themselves into new institutions, providing a new language, new organizational patterns and new personnel (Melucci, 1996: 37).

Simultaneously, Hilary Tovey was advancing an argument that took into consideration the political sociology of organic farming, viewing it as a social movement (Tovey, 1997). Although several authors had previously noted the political intent of the organic movement and even called it a social movement, no one had seriously analysed it as a social movement. It took several more papers for Tovey to fully expand her conception of organic farming as a social movement and in that intervening period the movement had mobilized to challenge the introduction of GM technologies, illustrating the validity of her analysis.

Whilst in some nations the organic movement represented an aspect of social contestation in others it was becoming increasingly interwoven with the state. Tovey noted this in her first paper, suggesting that organic farming had been deliberately embroiled in an agri-environment scheme. The foremost area for this line of argument being developed has been in Scandinavia and particularly Denmark. The papers in this collection demonstrate the vibrancy and development of organic farming in Denmark where the state has played a particular role in developing organic agriculture. This has led to the argument that the organic movement has become institutionalized, that the vigour and outsider status that organic farming had has become eroded. That rather than a challenger to the established way of doing things, it has become an adjunct to the administration of rural areas. Recently this argument has been adapted to view organic farming having been largely captured by the interests of the multiple retailers. Whilst academic Marxism informs the political economy approaches above, the arguments about institutionalization are based on the work of the neo-Weberians.

The early work on the economics of organic farming has been broadened and deepened by a series of European Union (EU) framework projects. These have predominantly focused on increasing the understanding of how the market for organic goods in the EU is expanding. It has also brought into question the workings of the market for organic products and in particular the role of the consumer. In this way a series of studies have mapped the border areas between market research, economics and sociology. These enquiries have drawn on a range of theoretical backgrounds and act as a balance to the largely productivist bias of agricultural economics in general.

Organic researchers have for some time noted the tendency to conventionalize research on the organic sector. There have been calls for the use of more interpretive (post-modern, pluralist and constructivist) methodologies that challenge the purely positivist and/or economic approaches and give greater attention to the distribution of costs and benefits, and differences in perceptions amongst stakeholders (Padel, 2002). A 'social deepening of the logic of market relations' (MacLeod, 2000) has diverted theories of economic development away from productivist neoclassical interest in the hard infrastructures of markets and towards the soft infrastructure of institutions and has revived interest in the temporal dimension of relations and evolutionary frameworks (Marsden *et al.*, 2000). Indeed, the need to diffuse hard economic theory with an assessment of real world problems and situations is increasingly recognized by economists. In a recent economic assessment of the European diet the authors concluded that,

> Challenges for the future include finding ways to lower high consumption levels for livestock products, and define new or find back to old but healthier food consumption patterns. To do this will require a deep understanding of the food choice process and how its parameters can be influenced to change diets. This implies a profound input from several social science disciplines (Schmidhuber and Traill, 2005).

Consequently, methodologies based around a more flexible, context-specific paradigm that are able to examine complex and interdependent relationships and situations involving opportunity costs and trade offs have become popular. In particular, sociological science within the agrifood sector has turned towards the body of ideas, generally described as Actor Network Theory (ANT). This method of analysis makes the social world strange by an act of radical symmetry where it starts from no assumption as to what the most important social actor might be (Latour 1993). Rather than looking immediately to the human it looks to animals, plants and machines and their inter-relations. Whilst ANT may be tremendously intellectually stimulating it has presented considerable problems when attempted as a research project outside of the laboratory or closed technological system. Yet as is apparent in this collection, the challenge it represents has been met head on by several authors.

Historically, agricultural marketing, a branch of agricultural economics, focused on improving returns to producers faced with constraints arising from a) the structure of the agricultural industry, composed of many thousands of small farms, b) the undifferentiated (commodity) nature of agricultural products, and c) the remoteness of farmer from consumer. In the period 1930-60s when large companies dominated manufacturing, the market was driven by price and governed by seasonal availability. Agriculture and food manufacturing controlled which foods were available to retailers with consumers having no direct influence (Wheelock, 1986). Since the 1960s, saturation of food basics and the necessity for value-added products have eroded mass markets and niche marketing has come to the fore (Wardle, 1977).

Most recently, due to the loss of guaranteed markets as Common Agricultural Policy moves away from production-oriented support, producers have been compelled to reconsider agricultural marketing and the need to reconnect with consumer demand. At the same time there are more opportunities than previously for product differentiation at farm level (Padberg *et al.*, 1997). EU policy has begun to recognize the need for farmers to be able to differentiate their product, as demonstrated by the introduction of a controlled designated name for food from a specific geographical region.[1] This has led to a merger of contemporary agricultural marketing with the methods and approach of food marketing.

Just as the EU has had a role in fostering the development of organic standards and to that extent a planetary market in organic products, it has also commissioned research on the development of the organic market. In this, rural sociology has played one of its traditional roles in helping to explain and map the emerging market. The construction of this research effort has led to transdisciplinary pan-European teams of researchers, which has generated a considerable body of research. It is this crossing of boundaries between disciplines and across cultures that has been one of the most distinctive features of the sociology of organic farming.

> Our daily consumption of food fundamentally affects the landscapes, communities and environments from which it originates (Pretty, 2002: xii).

In the shadow of the World Trade Organization and on-going processes of globalization many people have turned to view how their local agriculture shapes not just the food they eat but the landscape and communities around them. The international flows of food and money have started to influence how organic farming and food is viewed. Organic food and farming has not stood outside of this process as questions have been asked about whether organic farming produces social benefits and if it does who enjoys these advantages.

[1] 1992 EU Council Regn. 'on the protection of geographical indication and designations of origin for agricultural products and foodstuffs'.

This unpicking of the costs and benefits of organic food and farming crosses social, economic and ecological boundaries demanding that not only new analyses are conducted but also that new forms of research are devised. At the same time some forms of farming are seen as cultural resources for communities, embodiments of tradition that are inscribed on the landscape and ingested by consumers. Trade and an open market are seen as cultural threats, which raises questions about organic farming and belonging that have long haunted the movement. This has led to an increased interest as to whether organic farming offers a fast route to rural development.

Organic farming has often been characterized as the food of choice of the venial or narcissistic Westerner, able to indulge their whims without regard to hard social realities. In contrast to this jaundiced image organic farming has started to make inroads in the South of the planet and amongst those who are most vulnerable. Organic farming, as writers such as Vandana Shiva passionately argue is pertinent to subsistence farmers or those who are looking for high value access to global markets (Shiva, 1991). Not reliant on expensive and dangerous agrochemicals, based on understanding and improving the local environment, sustainability may be the only option for the global poor. It is as Parrot and Marsden (2002) argue the 'True Green Revolution'. The challenge being taken on by the sociology of organic farming is to understand and inform this process.

The Organization of the Book

This book has five sections, which reflect the continuing development of organic farming and the diversity of the sociological approach to organic food and farming. Each section focuses on a shared theme, discussing it from different perspectives deriving either from using contrasting sociological methods or because they speak from a different part of the planet.

Organic movements in North West Europe

The following three chapters speak of the many shared experiences and interconnectedness of the organic movement in western Europe, but equally to the process of discovering and investigation that goes on within the various national movements about their own activities, either in the present or the past. In Chapter 2 Oliver Moore takes up the contemporary in his analysis of the phenomenon of the farmers' market in Eire. Firmly rooted in post-structuralist theory, Moore describes the immanence of a social movement, how it is always in the process of formulating and re-formulating itself. He conveys the dynamism of the movement but also the controversy that is an inherent part of it. Just as Schmitt conveys the early disagreements (see below), Moore finds organic farmers describing themselves as post-organic. That they have moved past registration and certification to a point where the producers' direct

relationship with the consumer is of primary importance, without the involvement of the wider movement. Moore picks up the theoretical work of Tovey and, leaving the work of Habermas and moving towards that of Melucci and Foucault, follows the formation of identities within the movement, focusing at last on how individuals realize their needs.

Whilst retaining a focus on social movement theory, in Chapter 3 Matthew Reed shifts the emphasis of interest towards political sociology. Through his account of the manner in which the Soil Association mobilized both movement actors and those peripheral to it, Reed depicts a counter-hegemonic contestation of the rationale for GM technology in the UK. During a period of mobilization any social movement becomes publicly visible, as it moves out from the private sphere and often seeks to dramatize the differences it has with the rest of society. Reed investigates how the Soil Association as the main representative body of the British movement has entangled itself in the issue networks around agricultural policy in the UK. In doing so he starts to sketch out the terrain between traditional accounts of movement activity focused on protest and the work of NGOs interested in policy formation, illustrating the often close relationship between the two actors.

Mathilde Schmitt's chapter (Chapter 4) starts with a theoretically informed position to unpack the history of the micro-networks of collaboration and solidarity that underpinned many organic movements but her focus is the German movement. Through an examination of the exchange of letters between various women interested in organic and biodynamic farming they describe the way that relationships were built within the German speaking parts of Europe but also to the English speaking world. Through this microanalysis the authors reveal the important role those women played in diffusing organic agricultural methods in Europe.

Organic food quality and the consumer

Chapters 5, 6, and 7 concentrate on consumer perceptions of organic agriculture and organic food purchasing behaviours. Since the emergence of the 'consumer revolution' in the 1980s (Ritson and Hutchins, 1991) both the markets for food, and the study of demand for these markets have undergone rapid and often surprising changes. Both markets and researches have, of necessity, due on the one hand to a maturing food industry in search of new products and the other to a greater collaboration and search for synergy between academic departments and disciplines, transformed the 'foodscape' into a plethora of markets that link product attributes to consumer 'lifestyles' under the concept of a 'niche'. However, even within this collection of research findings, which the authors hope provides one of the few holistic commentaries on the ideological and geographical nature of the organic sector, the difference in approach to production and consumption becomes apparent. Within consumer research fields there has been an ongoing assessment of consumer preference for several

decades, which is reflected in the level of sophistication of methods currently employed in consumer research, such as means-end chain analysis.

Consumer research provides information on decision-making that allows companies to target specific behaviour groups. The niche market mechanism is based on the development and marketing of products designed to anticipate consumer wants and capture values, behaviours, and preferences of significant minority groups within a culture. Niche products are distinguished from mass markets through product composition and packaging. Market segmentation allows potential market opportunities to be identified and exploited and enables consumer behaviour to be predicted with greater accuracy. Traditional methods of segmentation are based on demographics however marketing approaches in socially complex, plural, societies are increasingly based on the more multi-dimensional concept of consumer lifestyle as a basis for understanding and explaining behaviour (Cowan, 2004).

However, there is no core consumer behaviour research theory. The industrialization of food manufacturing and growth in product differentiation triggered the offshoot of food marketing from the business and management sciences, which focused on finding ways for products to appeal to the consumer. Subsequently, researchers effectively employ quantitative and qualitative methods from other social sciences, including economics and behavioural sciences (psychology, sociology, anthropology), to analyse and interpret market data, predict relationships between price and profit and develop marketing strategies. Increasingly, transdisciplinary methodologies serve to identify key differences between stakeholders in the agrifood systems, including consumers, and areas of potential common ground, through an examination of: values and objectives, resources, influence, authority and power, competing interests, networks and coalitions. Tools for analysis process typically include maps, typologies and matrices delineating 'problems', 'players', 'profiles', 'positions' and 'paths' (Chevalier, 2001).

Problems for organic farmers around the globe

Often the focus of comment about organic agriculture is on the story of unproblematic and massive growth. This section brings together chapters that focus on challenges to organic farmers that reflect the experience of particular nations and communities. Some of these factors are internal to those nations reflecting the policies, preferences and politics of those communities; others are driven by choices made elsewhere on the planet. As is apparent in these discussions the organic farmers and academics are very aware of the global forces that are at work within the organic sector.

Pernille Kaltoft and Marie-Louise Risgaard's chapter (Chapter 8) is about the question of reversion amongst Danish organic farmers (see also Noe's Chapter 13). Not every farmer who converts their farm to organic production makes a success of it or finds that it is as rewarding as they had hoped. Generally during

periods of growth in the organic movement those surrendering their certification have been matched or surpassed by new entrants and the sector has continued to grow. As Kaltoft and Risgaard discuss in this chapter contemporary trends in Denmark suggest that the level at which Danish farmers are giving up formal certification indicates that there may be a net decline in the number of organic farms. They discuss the reasons for farmers giving up organic farming and suggest that the condition of the market in Denmark is leading farmers to stop farming organically. That is not the same as suggesting that they no longer think that organic farming is a better way of farming.

The conventionalization debate has been raging for some years amongst academics and journalists as noted above; Sangeeta Jordan, Hisano and Riichiro take up the argument in Chapter 9 with regard to trade between Australia and Japan. In a incisive manner they summarize the conventionalization debate and apply its analysis to a number of small organic businesses that trade with Japan. In doing so they illuminate the debate which many of the other chapters refer to and offer a localised counterpart of the questions that Kaltoft and Risgaard ask about the organic movement in Denmark. In both chapters the question is discussed of how close to large scale agribusiness organic farming can be and still remain both economically viable and true to its ideals.

This question is approached in Chapter 10 from the new perspective of the relationship between multiple retailers in Europe and those who supply them in New Zealand. Unlike the organic label these standards are not disclosed to the consumer but form part of the retailers quality management standards. As Hugh Campbell *et al.* make clear in the context of New Zealand, these standards are threatening to eclipse organic farming as a choice for export orientated growers. In part this is because these standards offer access to a wider market but also because they discuss areas that are beyond the normal scope of organic certification, covering labour relations and farm management. Whilst the earlier two chapters in this section have focused on the question of economic power, this chapter charts how the intersection of bureaucracy with economic power is conditioning the organic market.

The emergence of a new organic farming sector is exciting and occasionally perilous for those farmers who are using their farms and holdings as the backbone of the attempt. In Chapter 11 Katharina Niemeyer and Jan Lombard analyse the challenges that the emergent sector in South Africa faces. The profile of these pioneering farmers, their motivations and the barriers that the sector faces are carefully dissected. Examples of the emergence of other national sectors are drawn on to provide some comparison, as many of these were surprisingly recent. Ultimately the route followed by the South African sector will be unique and reflect the conditions of that country. Just as the examples of the other chapters in the section have demonstrated there is often a common experience between organic farmers, but equally even in a rapidly globalizing world where you stand on the planet has a profound influence.

Principles and practice of organic farming

As part of the project of trying to understand organic farming and food, social scientists have tried to push their methodology forward, Chapters 12 and 13 are by authors who are attempting just that. Both Chapters 12 and 13 and are firmly routed within very traditional sociological approaches to agriculture but are looking for ways to refresh the approach to the topic.

Hilde Bjørkhaug is considering the female principle in organic farming, that women have a particular affinity and facility toward organics that is missing in other forms of agriculture (see also Chapter 4). Other researchers have pointed to greater participation by women in organic farming or their importance in the decision to convert to organic farming; Bjørkhaug takes this one step further. Through a detailed statistical analysis of Norwegian organic farming she rigorously searches for signs of the feminine principle. In a debate that has been characterized by qualitative research and theorizing this is a fascinating attempt to quantify the prevalence and tendencies of gender in organic farming.

For some years Egon Noe has been working on a way of conceptualizing the organic farm as a system. In Chapter 13 he considers the topic of organic farmers reverting to conventional production. Drawing on nearly ten years of research with organic farmers he considers whether the long term strategy of the organic movement in Denmark is undermining its chances of success. In doing so he is obviously discussing the same issues as Kaltoft and Risgaard but he does so by drawing on both a different perspective, and another body of research.

New directions for organic sector development

As is becoming apparent organic farming and food is highly diverse, and Chapters 14 to 17 in this section describe this and the ways in which it is directed and guided by the needs of a range of social actors. From the public kitchens of Denmark to the church front Farmers' Markets of São Paulo, Brazil by way of the Austrian Tyrol and the Bavarian organic sector, new social imperatives are informing the development of organic food and farming.

The mountains and high valleys of Austria have for several years been some of the most concentrated areas of certified organic land. Markus Schermer's Chapter 14 highlights that with large areas of contiguous land with organic status it is now possible to consider areas larger than individual farms as being organic. He considers how this fact can be used to guide and inform the process of rural development. Whilst the situation in Brazil is radically different to that of the Tyrol the use of a organic farming as a tool of social development remains. In Chapter 15 Stephan Bellon and Lucimar de Abreu analyse the role that organic horticulture can play in developing the livelihoods of farmers in the São Paulo area. This chapter once again raises the question of the role that organic farming could play in creating more cohesive and healthier

communities. As in many discussions of the book, organic farming as a route to community development is brought into the foreground. Unlike in other chapters the authors discuss how this can occur without the intervention of the state. As this section demonstrates organic food is commonly found at the forefront of social innovation that is focused around food and farming.

Astrid Dahl and Niels Kristensen in their discussion in Chapter 16 of the appearance of organic public catering, highlight the importance of state, local or national plays in fostering the Danish organic sector. Providing organic food to young and old has been a long term goal of the organic movement that in Denmark is moving towards realization, at least in some places. Melissa Schafer and her colleagues in Chapter 17 discuss how they are working towards analysing the profound changes that are occurring in German agriculture. The shock of the impact of BSE on the German society has caused a policy and cultural turn to embrace organic farming. What that means in the present and the future for Bavarian farming is what Schafer and her colleagues are attempting to discuss in their chapter.

In the final chapter of the book we take up the twin task of considering the future of organic food and farming as well as research into it, in the light of much of the discussion that takes place in the chapters we have outlined above. At this point we stop our commentary and allow the authors to represent themselves.

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2
What Farmers' Markets Say about the Post-organic Movement in Ireland

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This chapter serves two functions. First, the chapter outlines the way in which the Irish organic movement has responded to the processes of institutionalization and conventionalization. Second, the chapter interprets the movement's refusal to submit to these processes as a 'stepping beyond the gaze' so that the movement's continuous reality has always been and remains, emergent. The chapter uses, in a qualified sense, the term post-organic to outline this dynamic.

Introduction

Tovey's earlier analyses of changes in the organic sector (1997 and 1999) suggested that state and commercial pressures were draining the movement of energy to combat or assimilate social and environmental change. However, a later study by Tovey (2002a) of organic farmer networks and social capital in a specific geographical region of Ireland outlined four case studies. One of these case studies inspired for me the term 'post-organic'. This individual had experienced the process of institutionalization of the movement and faced the same commercial pressures as all organic farmers but despite these challenges she was engaged in practices that could not be explained as institutionalized or solely commercial. She was heavily involved in a food consumers group and teaching producers the benefits of selling locally and importantly, refused to take a grant. These seemed like clear examples of alternative food politics, which were informing the organic discourse but were nevertheless not necessarily organic *per se*.

I have subsequently interviewed this person and found that she is not certified organic. She would not get the certificate despite having family in the organic movement since the 1960s because she preferred to use local rather than

certified organic sources of manure. She felt that this helped her achieve local embeddedness and this decision appears to be a local food economy argument informing organics. The woman is also involved in the slow food movement, which focuses on local, artisan 'quality' produce, and she contributes to policy development on farming for the Green Party. Her aim is to move the focus of green farm and food policy away from exclusively certified organic and towards local, chemical-free, direct sales to the consumer. She also takes WWOOF (Working Weekends On Organic Farms) volunteers, hosts farm walks, and engages in barter, activities which have been part of the organic movement's *modus operandi* in Ireland since the late 1970s. Overall, to me, she seemed to be a microcosm of what I now call the post-organic; a full time grower and market stall holder carrying with her both longstanding organic discourses, such as WWOOF, barter and farm walks, and (re)new(ed) discourses, such as local food economy, farmers' markets, consumer groups, non-certification and non-state support.

This initial idea that there is some ongoing and creative resistance to state and commercial pressures in the organic movement was to become more complex. One of the factors that confused the term post-organic was the historical existence of four previous post-organic movements in Ireland (Moore, 2003). From 1936-1991 four stages were unearthed: spiritual / solitary, self-sufficient, selling, and split/bifurcated. So it seems that organic as a descriptive term has always referred to emergent beliefs and behaviours. The value of learning and doing history is thus highlighted. It is easy in the here and now to see new ideas and practices in the movement when in fact the movement in Ireland has been in a transformative dialogue with itself for at least eight decades.

It seems incredible that there is such a yawning historical gap in the literature on organic movements worldwide. While there has been some scholarly work done on the recent history of the organic movement in the UK (Frost and Wacher, 2003; Holt, 2004), with the exceptions of Reed's (2001) sociological analysis and Conford's (1988 and 2001) historical analysis, few attempts have been made to examine the organic movement in the era before the environmental movement of the 1970s. Much scholarly work on the organic movement has focused on conventionalization and this will be examined in section two. In the first section I outline the theoretical basis for the analysis and in the second section I apply this framework to understanding the most recent advances in the organic movement, the current form of emergence, farmers' markets. Through this analysis I attempt to define and delineate the organic movement in Ireland today and the institutional and commercial pressures it faces, and to map out the resistances to these pressures. I discuss whether the term post-organic has both descriptive and explanatory power for understanding the organic movement in Ireland, and ultimately conclude that in an historical context the concept of the post-organic is discovered to be an ongoing dynamic of power-resistance.

Theoretical Groundwork

Moore (2003) examined the history of the organic movement in Ireland and those findings, from 31 interviews with 28 informants, combined with follow-up interviews with these same informants and 12 additional interviews with other organic stakeholders, form the basis for this analysis. These stakeholders included organizers and producers involved with farmer's markets and artisan food production, and subscribers to the slow food movement. In addition, much informal dialogue and observation took place at food fairs and farmers' markets and these activities also informed the analysis. Discussion and analysis was further supplemented through comprehensive readings of academic and grey literature (such as the media) on both the organic sector and alternative food networks (AFN).

Theoretically, this chapter uses Foucault's later writings on power and resistance (1978 and 1982) along with Melucci's social movement theory (1980, 1984, 1989 and 1996) to structure interpretation. Foucault's concept of governmentality has been used recently in social theories of power (Van Kricken, 1996; Clegg, 2000), consumption (Rose and Miller, 1992) and rural development (Lockie, 2002). I however, employ Foucault's writings on power and resistance, in particular the notions of discursive field and biopower, as more suited to the objectives for analysis. These objectives are to define the internal dialogical parameters, map emergent resistance to the perceived forces of industrialization, bureaucratization, and deradicalization of the organic movement, and outline the interplay and reciprocity between power and resistance.

For Foucault, power is a positive, productive and constructive force, which creates rather than oppresses, and is expressed rather than possessed. The more it is expressed, the more real it becomes. Foucault developed the concept of the discursive field as a method of relating social institutions, language, subjectivity and power to each other. Contending and conflicting discourses exist in discursive fields, moulding social institutions and processes. To better understand how this power process operates in a particular discursive field, it is worth outlining a research area Foucault himself examined.

Foucault (1978) examined the emergence of disciplinary over sovereign power and outlined the way in which power, through an explosion of discourse in the Victorian era, encroached upon the body and pleasure. This biopower is an ever subtle, deeply penetrative embodiment of a highly rationalized form of self-discipline emerged in the era of the panoptic gaze. Following Bentham, Foucault suggested that the panoptic gaze led to permanent visibility and the internalization of discipline. For Foucault however, this was not just a prison structure but a new mode of social ordering that also produced diverse, polymorphic perversities, which were both enabled and constrained by discourse on sexuality, medicalization and institutionalization. The body became a site of inscription where the truths of the soul were written. Pastoral power, a divinely

sanctioned expert knowledge manifest through the confessional, went forth and multiplied in the age of reason. Contrary to preconceptions, pastoral power did not die out, it simply transferred across to many, mostly public sector professions including medicine, education, psychiatry and law, thereby manifesting salvation tendencies in this world rather than the next. There was now no escape from power; there was no dark dungeon to fear but instead an all-invasive ubiquitous power over docile bodies that are both the subject (individualized) and subject to (totalized).

According to Foucault, there were always places beyond the gaze where power has not reached; resistance always accompanies power. In fact, resistance leads the dynamic. Resistance provides the next port of call for power to envelop. The tension between power and resistance leads to fertile resistances, permanent provocations and an ever-emergent dynamic. Following McNay (1994: 106), it is suggested that the theoretical outlining of power and resistance, and how they interact with each other, is more radical than the actual substance of the book. Foucault in fact writes about docile bodies being inscripted, while theorizing about permanent resistance. For this reason, the theory rather than the substance of the book will be used, along with Foucault (1982).

In 'The subject and power' (Foucault, 1982), Foucault suggests a series of oppositions or transversal struggles as a starting point. These oppositions are aimed immediately at power effects, concerning the status and identity of the individual and the privileging of knowledge. In short, across a whole range of areas, a technique of power is being opposed. The difference this and what has been already outlined is best encapsulated in the following quote:

> Maybe the target nowadays is not to discover what you are, but to refuse what you are. We have to imagine and to build up what we could be to get rid of this kind of political double bind, which is the simultaneous individualization and totalization of modern power structures. The conclusion would be that the political, ethical, social, philosophical problem of our days is not to try to liberate the individual from the state and the state's institutions but to liberate us both from the state and from the type of individualization, which is linked to the state. We have to promote new forms of subjectivity through the refusal of this kind of individuality, which has been imposed on us for several centuries (Foucault, 1982: 785).

Arguably the above quote is in keeping with the notion of Foucault's own life as text. To reiterate: we are considering the construction of discursive fields, the internalization of discipline, new forms of subjectivity, and the resistance that is an inevitable part of the power dynamic.

Foucault and Melucci

In discussing the field of contemporary movements, Melucci makes explicit reference to Foucault (1984: 826-828). Melucci notes that society has political

and cultural, as well as the traditional economic, structures. An inevitable corollary of this results in a new terrain for social conflicts. The individual, identity and the everyday become sites of contestation. This idea parallels Foucault's notion that power has subtle depth; that it works on and through the body, as a microphysical force (Foucault, 1978, cited in Melucci, 1984: 827). Melucci again follows Foucault in suggesting that people are both individualized and totalized in society:

> People are automonized; the ever complex system of power we are engaged in offers up numerous options for individualization, for self-realization for an autonomous building of personal and collective identities (because) the system must improve the autonomy of individuals and groups and their capacity for becoming effective terminals of complex informational networks' (Melucci, 1984: 827).

In essence, power today engages with many aspects of existence. Of course, to exist as power as opposed to objective freedom, power must, not just autonomize/individualize but also, totalize. Systems forging integration:

> Extend their control over the same fundamental resources which allow their functioning...power must affect everyday life, the deep motivation of individual action must be manipulated, the process by which people give meaning to things and their own action must be under control (Melucci, 1984: 828).

For Melucci, social movements exist in cultural networks, as a continuing cultural laboratory, where new lifestyles and forms of social relations can be developed. Indeed, 'the form of the movement is a message', and the movement *as* medium is also the message (Melucci, 1984: 830). These messages are every bit as important as political goals. In this context, the formation of a collective identity, through modes of behaviour, objects and stories is central to social movements. The symbolic way the movement represents itself to both itself and the outside world is also central; even the form that the collective identity takes is symbolic.

Social movements, defined as networks or areas, have a loose, *ad hoc* structure and operate on both latent (submerged, subtle, everyday) and visible (apparent, goal-oriented displays of unity) levels. These two poles are in dynamic and reciprocal interaction; movements aim to change lifeworld practices so that regular, routinized activities on a submerged level are part victory, part foundation stone and part reinforcement. This mirrors Foucault's notion that power is positive and productive. Visible moments are bonding moments that foster solidarity whilst at the same time attracting new militants. New participants then flow into the submerged network (Moore, 2003). Melucci (1989) specifically refers to new food movements, which he sees as neo-tribes that are visible in farmers' markets, community food circles, alternative food stores, animal rights groups and organic supermarkets. Whilst useful, the notion

of latent and visible needs to be nuanced. In a network of relations, a latent everyday activity such as shopping in an organic food cooperative could be construed as visible, whereas cooking organic meals in the home is always latent. Compared to a pro-environment or civil rights demonstration, the weekly shop may seem latent but there are both latent and visible dimensions to a range of network activities.

Melucci (1996) describes collective identity in terms of a process. In that collective identity is not a static given, but is rather produced, Melucci's notion of collective action, collective identity with action and field (the how and where of social movements), works well with the elements of Foucauldian theory that I have outlined. Collective action is inseparable from the production of the meaning of collective identity; there is a relational reciprocity between actor and system. Action, constructed by social relationships within a system of constraints and opportunities, works on and through ends, means and fields. Melucci's field represents the environment or terrain and this resonates with Foucault's notion of discursive field. Movements delineate themselves from their opponents: We are for You, the You that You are for Us (Melucci, 1996: 48).

But movements rely, as does Foucault's notion of power, on a dialectic principle; on the constructive, dynamic tension between self-definition and definitions imposed on them by society. Indeed, Melucci (1996) seems to define field as both within the domain of the movement and coming from outside, which contradictory notion can be resolved by applying the discursive field to the narrower Meluccian field (Melucci, 1996: 50). Making this application is in keeping with the deconstruction of modernist terms such as identity, state, civic, public, and private, and also with broader terms such as coherence, boundary and maintenance. Melucci recommends using these conflicts of meaning to understand the terrain and formation of social movements. The subject as a coherent actor is also similar to both Foucault and Melucci. For Melucci, the subject is defined by and through the movement, which we can see in Foucauldian terms as a form of self and collective discipline. 'You' are acting both autonomously and gainfully through memberships of a collective, which resonates with notions of individualization and totalization in the definition of the new subjectivity postulated by Foucault (1982).

An Organic or Post-organic Movement?

There is little doubt that with the growth in popularity of organic food, there have been strong pressures on the organic movement. Interviews and available literature both suggest that the movement in Ireland was a broad, alternative, environmentally oriented, living and homesteading movement in the 1970s and early 1980s (Moore, 2003). Whereas, some of the key players in the movement in the 1980s and early 1990s aimed to drop the alternative living badge and baggage and focus exclusively on increasing sales of organic food. This meant

engaging with economies of scale, competition from imports, opportunities for export, and trading with the multiple retailers.

At the same time there was growing public sector interest in organic agriculture and consumer demand for organic food. In particular, Ireland's presidency of the EC (under Haughey, himself an organic farmer) was seen as a turning point when for the first time funding became available for the Irish Organic Farmers and Growers Association (IOFGA), the national organic body officially recognized by the state. Some in the movement claimed that government was only interested in organics because it was an easy source of European money, and that as a result the government would weaken organic standards. Notwithstanding the fact that organic supplements were obtainable through the Rural Environmental Protection Scheme, the only thing that this funding incentivized was growing or farming. None of the broader cosmology of the movement was funded. In other words, technological praxis was supported over and above organizational or cosmological cognitive praxis (Tovey, 2002b).

Following Lockie (2002), I suggest that there has been an attempt, involving for the most part supermarket retailers but also corporate importers, processors and farmers, to mobilize the middle class organic consumer. There has been and will continue to be a concerted effort to supply high profit, value added foods, including processed convenience foods and readymade meals. Year round availability of globally sourced, fresh fruit and vegetables is also aimed for, despite the environmental impact. While a broad range of consumers are interested in organic food, these products are aimed specifically at consumers with a high disposable income. These products, through long distance distribution and plastic packaging, attack the organic environmental discourse. Much literature on organic demand suggests that there has been a shift from environmental to health concerns as the main driver (Miele, 2001). However, Makatouni (2002) suggests that the multiplicity of characteristics that organic food embodies, including health, environment and animal welfare, is the main incentivizer for consumption. So there appears to be tension between the objectives of corporate retailers and agribusinesses and those of the movement, including small-scale producers, artisan processors and conscious consumers as actors.

In the sociological literature, there has been ongoing debate about conventionalization of the organic movement. It is possible to see two schools of thought emerging: the conventionalization thesis and the post-organic thesis. On the one hand, authors inspired by political economy suggest an inevitable incorporation of organics into mainstream capitalist accumulation (Buck *et al.*, 1997; Guthman, 1998; Jordon and Shuji, 2004). Partly in response to this idea, numerous authors have suggested that broader cosmological aims and fertile resistances are still apparent in the organic movement. In essence, these authors suggest that mere economic determinism cannot adequately account for the myriad of relations and reactions inherent in a dynamic and vibrant social movement (Pugliese, 2001; Bellon and de Abreu, 2004; Hauser, 2004;

Kratochvil, 2004; Reed, 2004; Schermer, 2004). In many ways, this debate mirrors the political (conventionalization) and cultural (post-organic) debate over social movements. Following from this, it has been suggested that a bifurcated organic movement is emerging (Campbell and Liepins, 2001; Lockie *et al.*, 2002; Hall and Mogyorody, 2001), whereby a more ideological movement remains, which counterpoised against the nascent though rapidly enlarging organic industrial sector pursues socio-environmental practices.

However, the concept of bifurcation needs nuance. Allen and Kovach (2000) suggest that in times of crisis the organic industry acts like a movement by mobilizing support to protect standards. Moore (2003) suggests that representative organizations and certification bodies can be a hybrid of both movement and industry. In the Irish case, although IOFGA was responsible for the representation of alternative living and societal transformation, at the same time, an increasing number of non-ideologically driven farmers and growers were being accepted as members. The Organic Trust, despite certifying 80% of produce and representing the largest farms and import businesses, failed initially to gain state recognition, while claiming that IOFGA standards and procedures were not strict enough to be considered certified organic. These competing arguments suggest that different geographical areas experience different organic movement to industry dynamics. Indeed, this latter point is one that Guthman (2004) emphasizes in addressing her critics. She suggests that her focus was always California, which is a specific case; for example in California family farming is almost irrelevant and migrant labour is ever present. That said, Guthman points out that California is important to the national US organic sector and unlike in Europe, subsidies in the USA work against organic farming because price premium is paramount and is continuously commodified. Those committed to organic ideologies suffer from this cost-price squeeze and many small-scale producers have been forced out of the market.

Many of these points are irrelevant to the Irish case; subsidies do exist as does pluriactivity (Kinsell *et al.*, 2000) and the (however embattled) family farm (Tovey, 2001). However, the point that economic processes pressurize the movement's ideology remains salient. But examples of intensification and conventionalization are precisely what the post-organic movement uses to define itself. Guthman's approach defines organic in a stagnant way, and it becomes impossible to see emergent trends. The point of this chapter is to demonstrate a need to apply social movement theory to understanding the processes of conventionalization in order to provide a less dualistic, more dialectic, interpretation of the contemporary organic movement and its activities.

Organics in Ireland: Cultural or Political?

The contrast between Tovey (1997 and 1999) and Tovey (2002b) potentially represents a sociological microcosm of the conventionalization debate. Tovey (1997) notes the process of institutionalization of alternative food movements, in

particular when they engage with the state and conventional agricultural sector. Tovey (1999) considers political and cultural readings of the movement before settling on a political reading. While suggesting contra to Cohen (1996), that these movements are internally aware of cultural and political tension and not just alternate research positions, she remains of the opinion that institutionalization is a dominant and essentially unstoppable force.

Tovey (2002b) however, presents a turning point. A perhaps small and less representative movement seems capable of carrying on in spite of or perhaps because of processes of institutionalization. Tovey (2002b) uses Eyerman and Jamison's (1991) notion of movements as cognitive actors, engaged in the dissemination of alternative and innovative knowledges. Cosmological, technological and organizational dimensions of cognitive praxis are identified. One of the main pressures facing the organic movement is the fact that state and commercial pressures are only interested in the technological. Tovey points out that the interaction between all three can be both fruitful and cause tension in the movement. As regards cosmology, Tovey suggests that cosmology taken for granted by organic practitioners, 'prevents them from considering techniques of production in isolation from their effects on both nature and social relations (so that they are engaged in) innovatory forms of livelihood connected with food' (Tovey, 2002b: 5-6).

For Tovey's interviewees, nature and society emerge as intertwined organizational forms, and rural development and organic farming are seen as inseparable. Tovey points out that, 'involvement in broader developmental activities and organizations...was a pronounced characteristic' (Tovey, 2002b: 7). Currency exchange schemes, cooperatives, state funded rural development agencies, community gardening, composting and recycling initiatives represent just some of these broader activities. A desire for highly individualized activists to come to consensus-based solutions was also a characteristic.

Considering its content, it is noteworthy that the 2002 chapter was written after the 1997 and 1999 chapters. This in itself suggests that stage/lifecycle models of movement trajectories are overly crude (Cohen, 1996). Movements can and do carry on irrespective of, or in the face of, general organizational trends, or commercial pressures. Case 4, noted in the introduction, was interviewed in the intervening period between Tovey's political and cultural phases. Case 4 demonstrates complicity, the existence of innovative forms of adaptation to the forces of conventionalization; by refusing certification, Case 4 is expressly post-organic.

Post-organic moves: farmers' markets

The emergence of farmers' markets in Ireland has recently been rapid. From a handful of general markets in the 1990s, there are presently 50-80 dedicated farmers' markets throughout Ireland appearing on a monthly basis. These markets have been promoted as an easy, low cost and sometimes sole way for

artisan businesses to start up, or for existing producers to avoid the middleman and regain control over their product. In contrast to the globalized food system, the connection between producers and consumers in local markets is re-established on a basis of trust, and product attributes such as seasonal, natural and traditional are prioritized. The local economy benefits from the rise of farmers' markets directly, through product sales, and indirectly through their value associated with the tourism sector (Slee, 2003: 9). Food shopping is promoted as a pleasurable experience (Interviews 28, 30 and 35).

All the above factors have been posited by interviewees as antonyms, or resistances to the worst excesses of the conventional food system and in the literature, constituting factors such as welfare, sustainability and locality are delineated through the use of related and overlapping concepts - quality, nature, and embeddedness (Murdoch *et al.*, 2000), and shared relations of regard (Sage, 2003). There has been some debate over whether alternative food networks, despite an obvious willingness to place a boundary around them, present evidence for a paradigm shift of the political economy (Goodman, 2004; Van Der Plong and Renting, 2004). What can be said with some authority however is that organic farmers and growers have invested in farmers' markets because of their interest in organizational cognitive praxis in addition to technological and cosmological cognitive praxes (Tovey (2002b). In the following subsections I present a preliminary typology, which offers for consideration three ideal types of farmers' markets in Ireland, the: pioneering, private and participatory.

Pioneering farmers' markets

Pioneering markets became established in the late 1990s, mostly in the southwest of Ireland. It is perhaps no surprise that Sage and Tovey's recent work found thriving food activism since their interviewees were drawn from this region. In pioneering markets, various forms of regulation relating to the catchment area (only taking products from within a specified radius), and production and processing methods, are used to maintain market standards. Relations between these markets' governing bodies/stallholders and local authorities have occasionally been acrimonious.

Interviewee 31, a professional chef involved in artisan manufacture of patés, established her business through a pioneering market and found that because of the small scale, and low risk and investment involved, she was able to respond to consumer demand through trial and error, and experiment with marketing techniques and product development:

> You get fantastic feedback...it encourages you to produce top quality stuff, 'cause you're surrounded by other good stuff and the customers are right there in front of you, and you can say in a very proud sort of way, 'no, my principles are organic, or free range or...and that's what makes a sale at the end of the day...its such a small community that people know if you are fibbing (Interviewee 31).

While she firmly believes in the value of reconnecting with the consumer, the rewards she has thus reaped mean that she is now faced with the decisions that have to be made as economies of scale become a reality. Her business activity has grown from one to three days a week and she now employs a knowledgeable relative to assist with selling. Like some of the professional growers at the private markets in the next section, she faces the prospect of needing to employ yet more staff, and deal with issues around the concentration of power also mentioned by Interviewee 28, that expansion entails. Both 28 and 31 are now engaged in consultancy work on farmers' markets, thereby emerging as an expert class. Interviewee 31 is also in the process of organizing a private farmers' market business. Some stated aspirations of pioneering markets are not regulated or enforced yet the image of artisan product quality, and pleasing shopping experience remains intact.

Privately run farmers' markets

More recently, privately run markets have been established along the densely populated east coast, in particular around Dublin city. Interviewee 28 had established a number of privately run markets. These were described as artisan markets where local crafts and fresh and prepared foods are sold through a shopping experience that contrasts with the supermarket. All of these markets except one, which has only one vegetable stall, only sell certified organic fruit and vegetables. This initiative is innovative because Interviewee 28 is running a private company essentially as a benevolent dictator, in contrast to previous findings (Tovey, 2002b). In theory, the producer becomes retailer, thereby regaining power from the supermarkets but in practice stallholders suffer from insecurity of tenure. While Interviewee 28 claimed that this caused no problems, Interviewee 31 claimed that some producers left private markets because there was oversupply of some products, stalls were moved without notice, or there was undue regard for the realities of farming and growing.

In some regions of Ireland, there is now a critical mass of markets such that some producers have no other marketing options. Interviewee 28 was dismissive of project-based initiatives, whether community or state funded, because he believed that the logic of supply and demand should be able to support farmer livelihoods. His stall rentals are clearly lower than shop rental but considerably higher than at other farmers' markets (40 Euros per day compared with 5-15 Euros per day). However, at least a proportion of the rental goes towards promotion of the markets (a marketing assistant is employed part time to maintain the media profile), and being based mainly on the east coast, customer throughput is high.

What Kirwin (2004; following Janes, 2002) refers to, as integrity versus variety, has lead to compromising on stated aims. Imported foods are sold on the markets to achieve year-round availability and these by definition are not produced locally. The influx of agricultural imports has been cited as a reason

for the decrease in both certified organic and conventional horticultural production in Ireland (Interviewee 30). Some former growers on the market have now transferred over to the sale of imported produce (Interviewee 32). Interviewee 30 also criticized the fact that a small number of large business growers dominate private markets and this is in effect relengthening the supply chain. Overall therefore, private markets are first, *food* markets and only second, *farmers'* markets.

Participatory farmers' markets

More recently again, participatory farmers' markets have been established throughout rural Ireland, some of which are supported by the public sector and local authorities. This source of funding implies the need for negotiation and arbitration but there are fewer doubts about the concentration of power than in privately run markets. Interviewees 29 and 35 promote rural development and initiatives to support low-income farmers, and have set up a producer-run farmers' market. Longford, another recently established market was set up by another rural development worker, who had previously been the chair of IOFGA. In Clare in the mid-west, LEADER rural development funds (Liaison Entre Actions de Développement de l'Économie Rurale) are being used to establish five markets in the county under the social inclusion programme. These markets have reproduced and embellished the written charter of the pioneering model. Organizers have, despite the advice of pioneers, enrolled local councils in project governance:

> I was at the first meeting of the new market traders' association in Cashel...the general vibe was 'oh don't go near the council, they're nothing but trouble'...it's not an easy relationship, the traders have had huge problems...but I'm trying to draw the council in, to see the market as their project as well (Interviewee 35).

The markets are run by a committee, with written rules (on distance, imports, processing etc.), an AGM, and a quorum for meetings that accept new members or deal with market issues. In the sense that these markets are more democratic, accountable and producer-oriented than private markets, they fit into Tovey's notion that in the organic movement highly motivated individuals attempt to solve problems collectively. Costs are very low (5 Euros per week rental plus 20 Euros per year membership), and an elected committee drawn from traders in the market makes decisions. Indeed, an organic horticulturalist (Interviewee 30) involved in a different, longer-established market held out more optimism for this model. In general, organic farmers and growers have been substantially involved in establishing and maintaining farmers' markets: 'you get the feeling that they're the backbone of the market in some ways, out of all the people, they would stick with the market even if things were inclined to get a bit tough' (Interviewee 35).

Summary: ideal or real?

Overall, the development of farmers' markets reflects Tovey's notion of organizational cognitive praxis in the organic movement. Indeed, that organic growers and producers are willing to work (organize) with conventional producers in local food markets for cosmological reasons is noteworthy. These three ideal types of market are crude entry points to further research and discussion. Already, cases have emerged where the organizational and cosmological praxes of a benevolent market dictator have led producers to leave and set up markets in competition. Likewise, at participatory markets, uncomfortable decisions have been taken regarding the sale of imports in winter in relation to the realistic economic viability of the market without them. Also, council support has at times seemed superficial (Interviewee 34); one council attempted to relocate a successful market despite the express wishes of stallholders. Indeed, how power plays out over time between committees and councils will be interesting.

For all farmers' markets a range of institutional and regulatory pressures are entering the fold: insurance for both markets and stallholders, rates, regulations for using domestic rather than commercial kitchens, and policies for stall allocation, are all either present or on their way. Many artisan producers face costly and time-consuming safety regimes that they consider to be ridiculous (Tovey, 2003: 9), and do not fairly engage with the reality of their production techniques (Desmond and Sage, 2003; Tovey, 2003). These regulations act as a barrier to market entry by small producers.

Many of the pressures outlined above echo Kirwin (2004), who examined the UK experience. Kirwin defined the internal pressures faced by farmers' markets as problems related to distance, food processing, and lack of knowledge and service of vendors. External pressures include appropriation, market forces and economic evaluation, viability and valorization, 'of local products through providing high capacity outlets' (i.e. supermarkets) (Kirwin, 2004: 408). In a preliminary sense, the above three ideal types add colour to our understanding of the Irish situation and participatory markets at least offer some creative solutions to the problems outlined by Kirwin. In the next section I examine the regulation of the organic concept.

Discussion

Post-organic farmers' markets: certification and confrontation

Interviewee 28 advertised his private markets sometimes as gourmet and sometimes as organic (Taylor, 2003). Indeed, many interviewees expressed concerns over the verifiability of producer claims, whether at established, new or private markets. Interviewee 30 explained that it is up to the consumer to follow up claims of authenticity made by stall operators at farmers' markets, and while

many stallholders make this process as easy as possible, it would be naïve to assume that all stallholders tell the truth all the time. For at least some stallholders sales come first and truth second. It is especially difficult for the occasional visitor to a farmers' market to gain access to the submerged circuits of verification that exist. A search for the truth can lead a curious visitor to fall victim to personal animosities that may or may not arise from commercial competition. For at least some customers, the semi-confrontational nature of these interactions is an added enjoyment of shopping. However, other customers may find confrontational conversations are not compatible with the pleasure of attending a farmers' market and may be put off re-visiting.

Some farmers' market promoters believe that local produce sold on local markets can be superior to certified organic produce. Case 4 gained considerable respect within both the organic and slow food movements (Interviewees 26, 31, 32), despite subscribing to chemical free rather than organic. This was due to the high quality of her produce, and her embededness in local activities, and perhaps her local lineage too. Other farmers' market promoters included organic produce with vacuous, weakly regulated labels such as farm fresh, free-range, and guaranteed Irish, but 'do we know what these labels on our supermarket shelves really mean?' (McKenna, 2004: 4). Yet other market promoters criticized the baseline certified organic standards. Interviewee 32 believed that the cheese producers at farmers' markets could be trusted not to use chemicals but complained that industrial organic cheese makers use chemicals to clean milk containers. Trust over and above certification is clearly of primary concern. Some organic producers use stricter standards than baseline legislation. Interviewee 14, a certified organic producer, said that she uses far fewer chemicals for making organic bread than the EU standards allow (and also uses sustainable energies to power the bakery and compostable plastic for wrapping bread). She specifically blamed pressure from the corporate bakeries for weakening standards.

The use of the word organic however, is highly contentious. Some interviewees expressed anger at those sympathetic to, but not certified organic. I have already referred to the fact that conventional producers might opportunistically claim to be organic when confronted by a naïve customer. Indeed, this has become such a problem that since 2004 it became illegal to claim that uncertified produce is organic with fines up to 3000 Euros and/or a prison sentence. Representatives of organic certification organizations, the consumers' association and the Green Party were instrumental in bringing in this new regulation (Storey, 2004: 13), but where the legislation leaves our post-organic producers remains to be seen.

What this means theoretically

Theoretically, farmers' markets are a fascinating example of power-resistance reciprocity, and of how the movement is in tension with itself. Farmers' markets

offer a space beyond the gaze, where established truths, experts and power relations are weaker. There is a dialogical process of verification going on in farmers' markets, which allows space for small, locally oriented, self-defined chemical-free producers to exist. Here, the costs of certification and contingent bureaucracy can be avoided and claims to superiority over technically organic produce can be made. Here too, economies of scale can be challenged or at best avoided. In Meluccian terms, actors can (re) produce themselves as movement participants, in a collective manner, as producers, distributors and consumers operating within a field of action. The everyday expression of identity, both for subjects and collective actors is enabled by and through action in a particular field. Without doubt, the truth of farmers' markets is produced and constructed in a constantly negotiated space. Without farmers' markets it would be ever harder for the organic movement in Ireland to stand in defiance of the processes of conventionalization. While there is tension between local and organic ideologies, tension is an inevitable part of the process of forming collective identity. As with all cases of resistance, power reinvades, and a panoptic gaze envelops. The state and the EU support many of the highly communitarian examples outlined above.

More players and processes are involved in the participatory ideal type but overall, the discursive field for farmers' markets hovers around contested issues and ideologies concerning state versus trust-based regulation, institutions and labels, qualities of the product and the experience, and the personalities involved throughout. It seems that the initial power of the supermarkets ultimately created the resistance that is now embodied by farmers' markets. Power, in a variety of guises, has reinvaded. While not without tensions, interaction between the organic movement and farmers' markets expresses cosmological, organizational and technological cognitive praxes in a variety of subtle ways, and it is this very process that recharges the dynamo that propels the movement.

This recharging process has been ongoing. It has occurred in distinct phases over the last eight decades in Ireland. The migrants who began arriving in the early 1970s were not the original organic farmers in Ireland. In fact, an organic movement already existed in Ireland to greet them. As early as 1936 a biodynamic farm and stud had been established, while the Soil Association had been set up in Ireland in the 1950s. This original group of organic practitioners were in the main a landed, Anglo-Irish gentry, born and bred into Irish rural life, though culturally self-contained. The migrants of the 1970s were different. They abandoned urban European cities, and were young, university-educated environmentalists. They were in fact the first post-organic farmers. Unlike the previous group, they settled on small holdings in the poorest places, as regards both soil and standard-of-living. They were also politically motivated towards homesteading and alternative living. The practitioners who began in the 1980s were different again. Commercial-scale organic farming along with the emergence of native-born Irish organic farmers defined this era. Supermarket sales, plastic-wrapping and longer-distance transportation of foods emerged,

along with less focus on broader questions of alternative living and environmental concerns. However, values and practices were in such tension between the various strands of the organic movement in Ireland that a split occurred in 1991. As has been mentioned earlier in what we described as the nuance of Campbell and Liepins (2001) notion of bifurcation, this split contained convoluted tendencies. So, while the above-outlined history was linear in it's trajectory, competing cultural and political values and practices operated in tandem within the overall organic movement in Ireland. Each of the phases from the 1970s on, outlined in Moore (2003), have been post-organic phases. The perpetual ability of the organic movement to react to circumstance and to partly reinvent itself is noteworthy. Recognizing this in the past allows us to see and understand change in the present (Moore, 2003).

Conclusions

In blending Foucault's ideas on power and Melucci's ideas on social movements, I have attempted to outline a productive process at play, whereby the organic movement has continuously constructed and reinvented itself in a temporal, emergent and moving discursive field. In attempting to define themselves in static and conflictual terms, while existing in a fluidity in part of their own making, movements as defined by Melucci harness power relations. Through notions like collective action and identity, the flatness of a discursive field can be challenged. Or perhaps more prosaically, the flow of power can be re-channelled and re-routed by collective actors. While biopower inscripts truths and meanings onto the body of subjects, the field of collective identity also exists as terrain for subjects to act in, both on visible and submerged levels. Of course, subjective identity is in part collective identity, so processes of individualization and totalization are never far away. But through refusing, through resisting, the personage of the movement can sometimes, in the here and now, seek out new spaces beyond the gaze, beyond already established power relations. I initially outlined the move towards farmers' markets as an example of this process. In innovatively adapting to the present, in this case in organizational terms, the organic movement has shown itself to be dynamic. The dynamic tension at play in the (discursive) field, between conventionalization and movement cosmology has in this case spawned a post-organic phase of the organic movement in Ireland. This phase builds upon, though it is distinct from the previous phase. So in the here and now, in the moment, the movement has adapted to conditions. That power is reinvading is as inevitable as the next response to this reinvasion will be. However, this is an ongoing process. The process of collective identity is constructive, relational and emergent. The organic movement has always been on the move, it has always had discursive fields filled with dynamic tension and it has always been, to paraphrase Foucault, tacitly refusing what it is. Post-organicness is in fact an always emergent inevitably. The post-organic movement in Ireland is perpetual.

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3
Turf Wars: the Organic Movement's Veto of GM in UK Agriculture

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The announcement in November of 2003 that the UK had become the 3rd largest market for organic food in the world and that the biotech multinational Monsanto was selling its research farms in the UK as part of its withdrawal from Europe were not unconnected. After several years of controversy, protest and public discussion the climate for the new genetically modified (GM) crops that Monsanto was promoting looked bleak (Soil Association, 2003; Uhlig, 2003). Paradoxically, despite the best efforts of those opposed to the new crops, it appeared that the government would be likely to license the growing of such crops although they would have no immediate market and be subject to close legal scrutiny. Agricultural underwriters indicated that they were not prepared to insure the liabilities that such crops might occasion. Whilst 98% of the public who took part in the government backed consultation stated they would not buy crops based on GM products. The rejection of this new agricultural technology was not just the reversal of a multinational company, and in part the rejection of the system of agriculture they were seeking to establish, but also a change in the governance of UK agriculture.

The veto that the organic farming movement hoped to achieve over the deployment of GM technology sought to bring a form of democratic populism to the public management of farmed land. The UK organic movement came into the governance structure of UK agriculture as an outsider. Only through the mobilisation of a range of groups was it able to not only effectively block the introduction of the technology for a time, but also to assert its own role in the government's plans for the future of UK agriculture. In doing so it has changed the contours of how agriculture is governed, the consequences of which have yet to cohere. It has left the organic movement rather than diminishing as a fading consumer fad, becoming a stronger actor in policy formation in the UK.

This chapter explores how the organic movement was able to mobilise a diverse range of actors to not only oppose the introduction of GM but to tacitly accept that organic food had a right to exist in both the countryside and the consumer's shopping basket. In being able to construct the debate around a dichotomy between GM technology and organic farming, the organic movement has been able to not only reinforce its position but also to strengthen and extend it. Unlike previous governance arrangements around food production and the use of agricultural land, this new modality directly links farm level production to the organic retail market. A market that has been created by the combined efforts of highly motivated organic consumers and oligopolistic multiple retailers, each party eager to buy and sell certified organic produce. To understand how this has come to pass the trajectory and dynamics of the UK organic movement need to be mapped and the changing dynamics of governance around rural space outlined.

Research on the impact of the organic movement on the development of food and agriculture in the UK has been a project that has taken only limited steps (Lampkin *et al.*, 1999). In part this is because of the rapid rise of the sector (see below) and the division of labour between academic disciplines but in no small part due to the disposition of the organic movement itself. Until recently those involved in organic agriculture have not moved beyond the generally private spheres of their farms or sectoral bodies. In mobilizing to confront the new GM technologies they have for the first time displayed, and inevitably transformed, the breadth and size of their movement. Analytically this has raised a number of issues about how to conceptualise their activities and status, with many of the tools necessary for such a study spread across several academic disciplines. In bringing them together, along with new data, this chapter seeks to open new avenues for consideration particularly the spatial aspects of policy formulation.

This chapter begins with a consideration of the methodology adopted to collect and analyse the evidence used later in the chapter. Following this is a discussion of the forms of the policy forums in which the organic movement has been involved and how these can be related to the theory of social movement studies. Through this analysis of how these tools can be interwoven, it extends to a consideration of the spatial aspects of the processes of protest and policy formation. From this point it moves to relate a narrative of the organic movements' involvement in the GM crop trials and how it acted to ensure that it achieved a new degree of power within UK agriculture. In testing the new crops through a series of outdoor test plots, the companies producing them hoped to assuage public anxieties and the government hoped to gain legitimacy for their introduction. Instead they managed to cede the control of this aspect of agricultural practice to a social movement.

Communities, Networks and Movements

As Murdoch argues the concept of *networks* has become the new paradigm for rural studies (Murdoch, 2000). Leaving to one side whether such a polisemic concept could be paradigmatic, it is one that has spread comprehensively throughout the social sciences and beyond. As with any iconic metaphor how it is deployed in any particular context shows huge variety, which in this instance requires careful elucidation to prevent the analysis becoming entangled in its own nets. It is important to pick through policy networks, issues networks, the personal socio-spatial networks of protest groups, networks of businesses and social movement organisations, to arrive at how this network of interaction and iteration segues with (inevitably) other networks. Invariably in such a discussion some facets are not treated in the detail that they deserve, but more than the contours of the argument are presented here.

The novelty of the organic movement is that it is just that, a social movement. Although this definition is not universally agreed on, it certainly conforms to the conceptualisation of a social movement as advanced by della Porta and Diani (della Porta and Diani, 1999). It is based on informal interaction networks, which exist between individuals, organisations and groups; these networks share both physical resources and discursive ones. It is characterised by a set of shared beliefs and solidarity, at the lowest common denominator all in the movement agree that organic agriculture is important, but more importantly this belief is part of a wider collective identity. Those engaged in the movement are involved in collective action focusing on conflicts, which are arranged around an oppositional contest over a particular social stake, in this instance food, and farming. The final element of the movement is the use of protest, which can be more or less unconventional depending on the circumstances of the conflict and the stage of the movement. Although a distinct movement in its own right it is also a subsection of the wider environmental movement, a facet of its activities explored later (Diani and Donati, 1999). As a social movement it is unusually balanced as being in parts necessarily a rural social movement but one that must also have a considerable urban membership. The particular modality this introduces to its actions is discussed below.

Policy and issue networks are of particular note for this chapter as much of the later discussion traverses the territory between a policy network and an issue network as well as the interaction between these and a social movement. Following Marsh, Smith and Toke this chapter adopts the model of understanding policy networks using a decentred, dialectical approach and in doing so draws a distinction between such arrangements and issue networks (Marsh and Smith, 2000; Toke, 2000).

In Table 3.1 the institutional differences between the two networks are set out with the policy network being obviously more closely bound, more likely to share a common culture and to be based on collaboration rather than conflict. In contrast the issue network is equally more likely to gravitate around conflict,

temporarility and monologue. Policy networks argue Marsh and Smith 'result from repeated behaviour and, consequently, they relieve decision makers of taking difficult decisions; they help routinize behaviour' (Marsh and Smith, 2000: 6). In comparison issue networks would appear to provide an arena for the expression of opinions rather a forum for achieving consensus. Although analytically distinct in practice these networks, both tight and amorphous, overlap.

Table 3.1. Characterising policy communities and issue networks.

Characteristic	Policy communities	Issue networks
Position rule	Members	Affected interests
Boundary rule	Mutual recognition	Free entry and exit
Scope rule	Policy	Policy
Authority rule	Cooperation	Intrusion
Aggregation rule	Unanimity	Unilateral decisions by dominant
Information rule	Exchange of expertise and judgements	Expressions of interest
Pay-off rule	Influence	Being heard

Source: Toke and Marsh, 2003.

Governance has many interpretations, which as Bevir and Rhodes argue is important to note as a corrective to essentialist definitions because it highlights the diversity of the discursive definitions of governance (Bevir *et al.*, 2003; Rose, 1999). The importance of the concept is that: 'Governance signals how the informal authority of networks supplements and supplants the formal authority of the government' (Bevir *et al.*, 2003: 42). In this instance the debate at hand is about how the power of the state has been supplanted by another actor, as the boundaries between the state and civil society are in flux. Debates about governance draw our attention towards mechanisms of control, coordination and allocation through which various forms of power operate. Power is conceptualised in a Foucauldian manner as not being something that is possessed by individual actors – people or organizations, but is derived from a set of discursive relations. As such, power is decentred, not to be found in a particular locale, but in the interstitial spaces in the network, where the discursive formations underpinning the networks operate. It is not possible to disassociate power from discourse or knowledge, requiring that analytically the means of communication need to be taken seriously throughout the following analysis.

The data for this chapter have been collected through semi-structured interviews with key actors in the debates, whom remain anonymous. To that end interviews were held with an activist who coordinated an early protest group, an activist

who took part in the public consultation and a policy advisor who was close to relevant government ministers. This was combined with observation of both pro-GM and anti-GM speakers over several years, as well as a protest which involved the destruction of a test site. The bulk of the data is derived from reports, articles, Internet discussions and technical documents that have overwhelmingly been collected from the Internet. All of this information has been triangulated wherever possible to ensure its factual validity.

The organic movement, industry and policy community

The UK organic movement formed in the 1930s but did not take a distinct shape and any formal institutional form until the mid-1940s (Conford, 2001; Reed, 2001). Its principal organisation 'The Soil Association' was formed in 1946 and it is this body, which has had a central role in the development of the whole movement, to date. Over the next fifty years the movement waxed and waned, entering a period of latency during the 1950s from which slowly grew to greater prominence in the 1960s before again falling from view during the 1970s (Payne 1972). During the 1980s the movement grew again in prominence, with the Soil Association leading this resurgence as both the number of organic farms and the market for organic food grew rapidly (Clunies-Ross, 1990; Reed, 2004). During the early 1990s the main organisations of the movement adopted the configuration that they currently hold.

The Soil Association (SA) remains the predominant organisation with not only a large membership base but also control of the formulation of the major standards that govern organic food production and processing in the UK. Alongside them are the Elm Farm Research Centre (EFRC) and the Henry Doubleday Research Association (HDRA), both of which are concerned with advancing the practice of organic farming and horticulture respectively. The Organic Farmers and Growers (OF&G), originally a breakaway from the Soil Association, offers farmers and growers an alternative system of accreditation, as does the British Biodynamic Association (BBDA), along with a comprehensive system of beliefs. These organisations do have formal membership systems, with the SA now having a membership in excess of 20,000 and 1500 registered producers (Soil Association, 2001). Perhaps more importantly are those who purchase organic food, who may eschew formal membership but identify strongly with the cause. Within the movement, organic consumption has consistently been constructed as an act of solidarity and opposition to the dominant food culture. This means that the formal organisations have the potential support of not just casual consumers but a committed cadre of shopper-activists.

The rapid growth in the sales of organic food in the last two decades has led to the creation of a separate, but largely dependent organic industry. The production, processing and retailing of organic products has become the business of many not deeply embedded in the movement (Dabbert *et al.*, 2004;

Dudley, 1991). Some principals in these businesses were early risers in the movement but others have been attracted by the financial opportunities. In the UK the most prominent of those solely attracted by the profits of organic foods have been the multiple retailers. The relationship between the movement and the new industry has often been characterised by discussions about the degree of congruity between the goals of the movement and the practices of the organic industry. This discussion has often been held at the level of ideological debate on both sides, rather than an analytical one. Although in most instances the movement's organisations are careful not to make direct demands of the industry, they exercise a considerable range of powers over it. In turn the industry through its retail outlets, and in some cases policy influence, can act as an extension of the organic movement.

Organic production is governed by a set of standards that have been formulated and codified within the movement in the last forty years. These standards were originally constructed within the organic movement and were only morally binding. This situation was transformed in the 1980s, as EU legislation required that organic was legally defined and defended (Reed, 2004). The Thatcherite response to this was to establish in 1992 a UK Register of Organic Food Standards (UKROFS), which would define and enforce a legally binding set of standards (Clunies-Ross and Cox, 1994). The panel controlling the standards would license bodies to inspect to minimum standards or above, effectively creating a market in organic accreditation. Theoretically in this market producers could shop between standard setting bodies for their accreditation whilst consumers selected between the different symbols of quality. The formation of UKROFS was potentially a deep challenge to the organic movement threatening to remove control of the standards and lead to a proliferation of standard setting bodies.

In response to the needs to formulate a UK policy with regard to organic farming, the Ministry of Agriculture, Fisheries and Food (MAFF) effectively sponsored the formulation of a policy network around the setting of organic standards (Greer, 2002). The panel comprised of academics, industry body representatives, representatives of retailers and movement organisations. By adopting essentially the Soil Association standards, with amendments in several areas, most existing producers did not need to change their certifying agency. A community of interest quickly formed between those formulating the standards, as there was no interest in lowering the standards or necessarily seeing a proliferation in standard setting bodies. Retailers argued that consumers wanted a limited range of easily recognisable symbols of accreditation and most producers preferred to pay for their whole farm to be certified rather than individual crops. The trajectory of these flows meant that it favoured the Soil Association and more generally a limited number of certifying agencies. As the Association rose in prominence they became the symbol of choice for retailers and consumers, as their campaigning and marketing became intertwined.

The techniques through which the movement governs the industry are diverse, ranging from the technical and bureaucratic, through to the direct and conflictual. Although the state provides legal legitimacy to the organic standards, the ability to codify and change their organic standards remains with the Soil Association. This delimits the areas of which can be commercially negotiated or over which the more powerful retailers can exert control. The second area is the collection of statistics about the organic sector. Until 2003 the Soil Association held this as a near monopoly, their annual report on the state of the organic sector has been the only data available apart from that privately commissioned. Recently MAFF's successor, the Department for Environment, Food and Rural Affairs (DEFRA), has embarked on attempting to gather more statistics about the sector, but these remain far less detailed than those available to the organic certification agencies or even those available to university centres (DEFRA, 2003). The control of this tool of governance ensures that the organisations of the movement remain obligatory passage points and that the planning of policy is highly reliant on the data that is provided by the movement.

The final resource is also the ultimate sanction of the organic movement – its discursive resources. Arguments for organic food and farming are generated from within the movement, which is quite separate from the marketing efforts of the retailers as it is not just about the creation of the desire to purchase but potentially to take collective action. These discursive resources seek to engage a wide range of actors, from celebrity chefs to highly committed environmental activists and a mass of interested consumers. As was demonstrated by the Brent Spar protests, in combination these groups can be mobilised to take highly effective and coordinated actions (Tsoukas, 1999; Dickson and McCulloch, 1996). The very dynamism and ideological commitment that has boosted the organic sector to its current level of prominence could be directed against those who have benefited from it. Organic retailers, in particular, have to be very aware of the alliance between producers and consumers that is the generative basis of the organic movement. Although this ultimate threat has never been used, and if it were it would be damaging to the organic movement, but not as financially fatal as it could be for an individual business.

Taking to the field

The organic movement had been waiting for the deployment of GM technology for several years before anyone suggested that it would be introduced in the UK (Dudley, 1991). Within the movement there had been some debate about whether GM technology could be used in alliance with organic practices but this had been sidelined. By the early 1990s the organic movement had rehearsed its arguments and prepared its positions of opposition to a technology that did not yet exist in a form that could be planted. Similarly the organic movement had begun to take its place in the wider environmental movement, settling its arguments with groups such as the Royal Society for the Protection of Birds

(RSPB) and building bridges with the more campaigning organizations such as Greenpeace and Friends of the Earth (Condon, 1996). These organisational dispositions were set in the early 1990s but the organic movement did not yet have the popular support it was able to call on later but this was to arise through the conjoining of different repertoires of protest.

The debacle of BSE did not allow for public protest, but it created a public discussion that focused on the risks associated with the technological intervention into the food chain (Miller, 1999). Whilst the avoidance of beef products was not an act of boycott, it spurred the development of the habit of being selective about shopping habits. At the same time the protests against road building schemes, the live export of animals, and the Brent Spar introduced a new relationship between direct action protests and the spectating public (Doherty, 1999). Non-violent direct action became a legitimate, if not legal, form of demonstrating opposition. The challenge of the GM debate was how the organic movement could create a narrative that could encode the range of possible responses to GM foods into a coherent argument that could prevent the widespread planting of GM crops.

Publicising the arguments of the organic movement against GM technologies was simply deploying the tactics that the Soil Association, in particular, had used for years. The Prince of Wales and his friend Jonathan Porritt kick started a public debate with broad-spectrum arguments against GM technology. Porritt led in 1997 by outlining the arguments not just against the technology but also against the multinational corporations that were developing and promoting them (Porritt, 1998). Prince Charles in January of 1998 followed with an article that covered all aspects of the opposition; from scientific doubts about how the technologies would operate in the field through to his spiritual concerns about genetic science (Prince Charles, 1998). During the summer of that year a leading organic farmer, with the backing of the Soil Association sought a judicial review of the government's policy of allowing field scale trials of the GM crops (Reed, 2002). It conformed to an elite led view of protest where the leadership of the movement would offer resistance on behalf of the membership. As a strategy it had never worked for the organic movement, the final proof of this was that the farmer became a prisoner of his own rhetoric. He had argued that his organic crops would be contaminated by pollen from the neighbouring test crop and he would lose his organic status. The Judge backed the legality of the test crop and the Soil Association was in danger of having its bluff called. They were saved by a local group of demonstrators who pulled the crop up and turned themselves into the police before the disputed maize plants flowered.

The rhetorical charge of the arguments against GM technology was itself beginning to endanger the organic movement. If GM contamination was not allowed under organic standards and the wide scale testing of GM crops continued, then the Soil Association could be forced to act against the industry it certified. The organic movement was raising the stakes and rapidly the conflict between them and the biotech companies was becoming suitably millennial. In

the discursive construction of the conflict the organic movement was making it a zero sum game. Some close to the government thought that they would retreat (policy advisor interview), whilst others sought to use the opportunity to damage the organic movement. The organic movement had no record of successfully opposing technologies it did not agree with, nitrogen fertilisers, pesticides, prophylactic antibiotics, factory farming and herbicides were all opposed by the organic movement and were in routine use. Certainly they had raised public awareness but they had not been able to stop a new introduction. The exhaustion of their repertoire of protest was demonstrated by the summer of 1998 and the combat had only just been opened.

Allies of the organic movement opened new areas of activity and protest, securing for the organic movement a breathing space. Iceland, the multiple retailer specialising in frozen foods, had been the first to announce it would remove all GM products from its own-brand products in April 1998 and during the summer of 1998 most of the major multiple retailers followed suit. Malcolm Walker, the founder and then chair of Iceland, was a passionate convert to organic foods and moved not only to secure what he saw as a market opportunity but also his personal beliefs (Iceland, 2001; Walker, 2001). The organic industry and the consumers took on the cause outside of policy circles, protecting themselves respectively against purchaser anxiety and potentially unknown risks. Any market that may have existed for GM products was effectively closed during the summer of 1998, as supermarkets used their supply chain controls to remove all GM products, mostly from North America, from their shelves. Although it did not stop the field scale tests or change government policy, it removed the argument that there was a public demand for the new crops. Frequently the protests of the organic movement had boosted the organic industry; in this instance the flow was reversed.

Despite being aggressive in their arguments and prepared to use shocking images in publicity material, the organic movement had been tactically genteel. In part this had been the appeal of the organic movement; the world could be changed through tending plants and nurturing animals and then dining well. The organic movement offered a gourmet route to environmental salvation. Direct non-violent action entered the repertoire of the organic movement through many of those who had engaged previously in more radical forms of protest becoming involved in organic farming. High profile organic holdings such as 'Tinkers Bubble', partly formed by road protestors, were influential in initiating direct action protests and brokering the alliance between radical environmentalists and the organic movement (Fairlie, 2000/01). Again these actions did not change the government's policies toward GM crops but it provided a persistent dramatic reminder of the issue and prevented the Soil Association from having to remove accreditation from any organic farm.

Reluctant volunteers

The pressure against the commercialisation of GM crops continued to grow during 1998 because consumers and retailers, as well as those charged with providing the government with advice, also had doubts. English Nature, the statutory advisors about terrestrial ecology, called for a three-year moratorium on the commercial planting of GM crops in 1999. Several new varieties were in the final stages of approval and would be cleared for commercial planting in 1999. Michael Meacher and Jeff Rooker as the responsible ministers at MAFF struck a unique deal with those looking to introduce the plants. In collaboration with SCIMAC (Supply Chain Initiative on Modified Agricultural Crops), the body representing the industry, there would be a series of Field Scale Evaluations (FSEs) investigating the impact of these crops on the flora and fauna of the UK countryside. Independent researchers would pilot the trials during 1999 and then move to full-scale trials until autumn 2002, reporting their findings in 2003. Overseeing these trials would be a scientific committee drawn from NGOs, academics and industry scientists. All of the research would be peer-reviewed before being published, as part of a wider debate about the role of the new crops.

A moratorium on commercial planting had been forced on the industry, but this would be a scientific investigation and would not consider the wider implications of the technology that so many opponents focused on. Not all those who had been vocal were invited to take a place on the Scientific Steering Committee (SSC), as they opposed the basic premise of the trials. Greenpeace, Friends of the Earth and the Soil Association, argued that GM crops were so untested that they should not be assessed out of doors (Toke, 2002; Greenpeace and The Soil Association, 1999). Other groups such as the RSPB were prepared to take part in the SSC. This gave the FSE a degree of credibility; the RSPB has the largest membership of any UK conservation organization with over a million members. With a large staff, many dedicated to policy work, they are policy insiders but also retain links with more radical environmental groups.

The FSEs focused on the impacts of the agro-ecology of GM crops on wildlife. Without large expanses of wilderness UK wildlife has co-evolved with agriculture and farmed land plays an important role in the ecology of the UK. With the greater efficiency of contemporary agriculture those species not deliberately cultivated for food have declined and with them the insects, birds and plants dependent on them. This challenge, whilst taken seriously by many of those opposed to GM, was not central to their criticisms, as the Soil Association emphasised in January 1999 by releasing a scientific report on the distance that pollen could travel. They had returned to the theme that GM and organic could not co-exist in the UK countryside, and that GM was an attack on the freedom of organic farmers and consumers alike.

The Ryton plot?

A curious twist in the spatial politics of the debate around the FSE programme was the tussle that emerged over the location of the sites and their proximity to organic farms. There were 104 large-scale trial sites in 2001, 30 of which argued that the Soil Association and Greenpeace were near organic farms (Soil Association, 1999). Those opposed to the FSE process were noticeably suspicious that these trial sites had been chosen partly because of their proximity to organic farms and that in some way the biotech companies were looking to force unpalatable decisions on the organic movement. Organic farming in the UK is mostly in the south and west of England (Ilbery *et al.*, 1999; Reed and Lobley, unpublished). That so many of the trials based around maize, sugar beet and oil seed rape should be deliberately close to organic farms appears unlikely, but what is pertinent to understanding the rivalry is that this scenario was imaginable.

The zenith of this conflict over the locations of the FSE sites was in May 2001 when the organic movement wrest some control of the process from the agenda of the government and biotech companies. Aventis was planning to plant a trial plot of its maize in Warwickshire, within a few miles of the Henry Doubleday Research Association's (HDRA) gardens and trials. The HDRA as well as operating the Ryton organic demonstration gardens, is also amongst the foremost research institutions into organic horticulture and operates a seed bank of older plant varieties particularly suitable for organic production. Contamination from the pollen was an obvious concern for the HDRA who feared cross-pollination with their maize trials as well as general contamination from the pollen. Although sanctioned by ACRE[2] and MAFF neither of these bodies appeared to be aware that the site was only a few miles away from the HDRA, despite MAFF funded trials being conducted at Ryton. In the run up to a general election the dispute had once again found a symbolic test.

Aventis argued that an independent expert had chosen the site on scientific merit alone and those who opposed it were seeking to involve politics in the debate. The Minister, Michael Meacher, described the choice of site as highly provocative, and Patrick Holden, Director of the Soil Association, viewing the choice in a global context suggested: 'This is the worst example so far of a programme of insidious pollution of the world's food crops by the GM industry' (Brown and Lean, 2001). Meacher wrote to SCIMAC and the SSC asking for the trial to be withdrawn, whilst Aventis authorised the farmer to plant the seeds. The first crop produced at the site was acrimony. Chris Pollock, Chair of the SSC emailed five other members of the panel threatening to refuse to stop the trial and describing the motivation for the request as being political and concerned with public relations. Unfortunately one of the five selected was not in agreement with Pollock and showed the email to the press. DEFRA confirmed

[2] Advisory Council for Releases into the Environment, a government backed committee that verifies that a GM organism is suitable for outdoor release.

that the Minister could not stop the trial, which was legal under EU law. If Professor Pollock persisted then the trial would go ahead. The HDRA were telling the press that they were considering going to law and SCIMAC remained silent on the issue. Then on the 11th May SCIMAC announced it would defy the Minister, and the organic movement, and continue with the experiment. The growing opposition to the site was denounced as a political and emotional reaction (Brown, 2001). In more measured tones, the official response was:

> SCIMAC recognises and understands the significance of both issues, and would certainly consider withdrawing the site at Wolston if there were sound scientific or regulatory reasons for doing so, or if the site was not considered suitable to meet the criteria set by the Scientific Steering Committee. None of these conditions were referenced in Mr Meacher's letter (SCIMAC, 2001).

The consensus built through the SSC and FSE looked likely to collapse when the press reported that this tactic was intended to undermine credibility of the Minister. A response came from the most unlikely quarters: the RSPB threatened to quit the SSC and effectively bring the FSEs to an end. Individual members of the SSC were supposedly not allowed to speak to the press but the RSPB Director of Conservation set out their case directly:

> If SCIMAC wants the RSPB to remain associated with the farm scale evaluations then they must ensure that this GM crop is not planted at Wolston. If it is planted we quit (Brown, 2001).

He accused SCIMAC of 'bungling' the trials and of seeking conflict with organic farmers and undermining public confidence in the process. In the week before the 2001 general election, the second biggest conservation group in the UK were poised to destroy a key policy tool for reaching consensus. Patrick Holden, added to the pressure in his description of the actions of SCIMAC:

> This is the forces of darkness deliberately trying to wreck organic agriculture by growing GM crops next to a centre for organic excellence. It is particularly scandalous that a body that has a vested interest in destroying organic agriculture should behave in this way (Brown, 2001).

The spokesman for SCIMAC hardly defused the tension by claiming that 'Just because this is a Labour marginal seat we are not giving into pressure. Mr Meacher is wanting to say, "I stopped the trial vote for us"' (Brown, 2001). No other group had mentioned the general election and with this particular faux pas SCIMAC took the FSE to the edge of collapse.

Toke argues persuasively that it was the intervention of the RSPB that stopped both the crop being planted and the FSE programme collapsing (Toke, 2002). The role of the Soil Association appears to be central in the decision of SCIMAC to stop the trial. In their letter of the 21st May they reported that they

would respond to a letter from the Soil Association confirming that there would be no need to review the organic status of Ryton.

> This latest statement by the Soil Association has enabled SCIMAC, without prejudice, to discontinue the site in direct response to a request from Mr Meacher, the Minister responsible for the Government's trials programme (SCIMAC, 2001).

Unless there had been a release of GM pollen from a flowering maize crop the organic status of Ryton would not have been threatened, so the inclusion of the Soil Association in the debate obscured the poor judgement made by SCIMAC. That the SA was involved, after being explicitly excluded because they opposed the FSE, is testament to their importance in the organic sector and of the organic movement in the debate about the GM trials. In a curious way the statement by SCIMAC acknowledged that the SA was part of the process. To analyse the importance of this it is necessary to understand the links between those inside the policy community and those excluded from it.

Because of their opposition to the FSEs, the Soil Association had been excluded from the putative policy community represented by the SSC, along with other radical environmental groups in the issue network. The Association had been able to disrupt the SSC because of the unity of their policy community around the setting of organic standards. The presence of organic farms limited the operation of the trials and the FSE process was not even addressing the arguments that caused this limitation. If the evaluations had in part been intended to create a consensus or at the least a dialogue, then it was failing as both sides used it as a way to pursue their conflict by other means. The behaviour of some of the members of the SSC conformed to the narratives of their opponents, as they failed to acknowledge the validity of their opponent's anxieties. Although the RSPB's behaviour could be interpreted as one of solidarity with the organic movement, it was also a shrewd piece of self-protection, as they did not want to be involved in a process that was widely viewed as devalued.

Pulling hair and eating dirt

The FSE process did not defuse the public anxiety about GM technologies and in many ways it provided a focus for radical protest. As part of the transparency of the trials their exact location was publicly available, so providing a point for opponents to mobilize around. Throughout 1999 the evaluation plots were destroyed by activists trying to prevent the crops from flowering and releasing their pollen. This was exacerbated in the summer of 1999 when it became apparent that some seed, which was being imported from North America, was already contaminated with GM material. In the resulting melee trial plots were destroyed, along with plots near to the evaluations as protestors' enthusiasm

overran or their map reading failed. The damage by protestors was in some instances less than that caused by the police arresting them and pantomime reached its zenith when Peter Melchett head of Greenpeace UK was arrested (Tasker, 1999). He and his co-defendants got their day in court, and along with many others arrested for such damage, found that their legal punishments were very lenient.

Rather than allow the FSE to be ruined by the self-appointed defenders of agricultural diversity, the SSC resorted to not disclosing all of the test sites to ensure that they had the data to continue with the process. In doing so they damaged the claims to openness that the government had frequently espoused. These were further eroded when it was revealed that Aventis had been conducting 'secret' trials of the GM maize, possibly since 1995, and certainly during the summer of 2000. Aventis argued that they were only conducting trials, which they were legally entitled to do, to test GM maize that already had EU approval. The trials were not as such secret but rather a continuation of their normal private business. Ministers could only attempt to negotiate that the locations be released but Aventis declined to do so because of the 'intimidation' faced by the farmers. The FSE continued towards its culmination, providing a focus for protest and an arena in which the antagonists could exercise their mistrust of one another.

GM nation?

As the results of the FSE approached it became increasingly apparent that the results would not end the controversy. In September 2001 the Agricultural and Environment Biotechnology Commission (AEBC) recommended that a public discussion should be instigated. This would be far more broadly based than a standard public consultation, allowing for a dialogue with experts and the gathering of information. In May 2002 this was approved by DEFRA along with a report to the Prime Minister's Strategy Unit about the economic profile of the crops and a review of the science by the Government's chief scientific advisor. The debate was launched on the 3rd June 2003, leading to a series of public debates framed around questions drawn from earlier workshops of those actively involved in the issue and the general public. Through a website, packs were made available to allow smaller debates to take place and for those participating in them to be able to make their opinions known. In order to ensure that those who regularly take part in public discussions did not dominate the debate the steering committee also commissioned a more in-depth study with groups drawn as a typical cross-section of the public. The initial aims of the project were dashed when it was announced that the FSE results would not be available until after the debate had ended.

Unsurprisingly, the results of the debate were that the public was uneasy about GM technology and did not wish to see it commercialised in the near future. More importantly, the more they knew about the debate the harder their

opposition to GM technology became. When this opposition was analysed more closely the structure of the argument became more apparent. According to the report of the debate the first reason for opposition was the risk of contamination, more specifically, 'People argue that in a small island, with mixed farming, co-existence of GM and organic is impossible' (AEBC, 2003: 19). This directly linked to the second most frequently advanced argument that it would 'destroy freedom of choice', the consumers freedom of choice would be eroded: 'People who use the arguments about contamination, or freedom of choice, make no distinction between different GM crops: they regard them all as incompatible with organic and other possibilities for farming and food' (AEBC, 2003:19). The third most common argument was the risk to the environment. Public attitudes, as measured in the public consultation, mirrored the arguments of the organic movement and not those surrounding the FSE.

The results of the FSE when they were released in the autumn of 2003 were not as crucial to the public debate as they might have been because the controversy was largely around other issues. The findings were even handed in that GM crops that were herbicide tolerant had both advantageous and disadvantageous impacts on wildlife. The oil seed rape and beet crops led to declines in the flora and fauna, whilst the maize crops benefited wildlife. This neat symmetry would be of course more complex if the crops were commercialised, as the size of the plots, the rotations and specific location of the crops would have differential impacts. The only unalloyed finding of the research was that UK field ecologists are now the world leaders in this form of field scale evaluations that are required by EU regulation.

The last laugh belonged to the organic movement, although it became increasingly apparent that the government would authorize commercialisation despite the public's opposition and the lack of a market for the produce. It was revealed that anyone growing such crops would not be able to obtain insurance; the lobby group 'Farm' conducted a survey of the five main underwriters, all of whom would decline to insure those growing such crops. The AEBC in their report advised that compensation should be available for those who lose money due to GM contamination and the law changed to allow compensation for rectification of any harm regardless of the absence of criminal liability. Although the government approved GM commercialisation, it proved a pyrrhic victory for the biotech companies, with the crops being mired in compensation schemes and legal claims, and with no domestic market. Whilst the organic movement cannot claim a complete victory they have hedged the new technology into a very small field of possibilities. GM crops without commercial insurance, a market, and subject to constant contestation, will be unlikely to become a very attractive option for farmers.

Conclusions

The governance of UK agriculture has been transformed in the last five years, with the ramifications of agricultural restructuring (Lobley and Potter, 2004), the foot and mouth disease outbreak, but also importantly the controversy over GM crops. The cosy corporatist arrangements that characterised the governance of agriculture twenty years ago have been pulled apart by a new range of actors. Agricultural policy-making and formerly archaic topics such as the approval of seed varieties have been thrown open to public scrutiny and controversy in a radically new manner. This reconfiguration reflect shifts in the political power held by the various groups involved in the process, many of whom have brought a new democratic populism in their wake.

The sidelining of the biotech companies has been a remarkable aspect of the conflict around the policy making process. Whilst arguably food retailers have cemented their role as central actors in policy networks, the 'life science' corporations have found themselves expelled to the margins. In their aggressive tactics and utopian rhetoric they made themselves almost cartoonish targets for their opponents, confident of their access to politicians and their role in policy, they over-played their hand. The valuation of their stock has declined precipitously and the example of their failure in Europe has emboldened their opponents in areas where previously they were successful. Although this reversal may only be temporary it will condition their behaviour in the policy networks, as they will no longer have the assurity that their twentieth century successes generated.

The organised voice of farmers has become less dominant as the organisations representing the consumers of rurality have become more central. The National Farmers Union (NFU) is conspicuous in this debate by its absence. This in part reflects their declining importance amongst farmers but also their increasingly marginal position within the policy network. Conventional agricultural producers found it difficult to establish a voice of their own, as the biotech companies increasingly spoke on what they presumed was the producers' behalf. The consumers of rurality, represented by various conservation and lobby groups, were central to the policy community emerging around the topic of GM crops. Although without a direct economic value the importance of a diverse, environmentally sustainable agro-ecosystem was presumed not only to be good in environmental terms but also important for visitors and other users of rural space. Organic farming's conservation credentials were important in allowing the organic movement to ally itself with the conservation groups, as demonstrated above. Farmers, whether they are organic or not, are no longer able to dominate the agricultural policy community as they once did, now they need to enter into alliances with other groups. The debate about the public management of agricultural land now includes a range of actors not financially or industrially linked to the productive processes that take place on it.

The public has been called on to take a part in the management of agricultural land as never before. Each actor appeared to be calling on a different, often ill-defined, constituency. The early mobilisation of opposition to GM products meant that often the public invited to take part were activists in the dispute, as the 'GM Nation' debate demonstrated. Most importantly the mobilisation had reached further and changed the discursive contours of the debate, so those not previously engaged when informed about the details – took to the positions prepared by the opponents of GM crops. This may be indicative of the deeper cultural anxiety about technology and modernity as suggested by Eder and Hajer, or it may be a reaction to the still recent 'scare' of BSE/new variant Creutzfeldt-Jakob disease (Eder, 1996; Hajer, 1996). Certainly in the UK, one of the most urbanised western societies, anxieties about food production disposes most people to become more concerned about a process the more they become aware of the technological practices underpinning it.

The organic food movement has emerged as an effective and organised group in the formation of agricultural policy, just as their oppositional arguments have been joined by those arguing for the importance of local food. What Winter describes as 'defensive localism' has provided for many an oppositional narrative that has eclipsed the more ideologically charged arguments of the organic movement (Winter, 2003). At the moment when many turned away from organic agriculture, believing it to be compromised, it achieved its most important victory yet. With a robust set of organisations, matched by support from a wider public, the stridency of the opposition mounted by the organic movement has not only for the first time allowed it to achieve its tactical goals, but also secured a new role for it in the governance of UK agricultural space.

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4
Fertile Minds and Friendly Pens: Early Women Pioneers

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Gender is part of social history. In the search of answers to the question what role does the organic movement play in contemporary society? The contribution made by women to the history of organic farming is significant both in the conversion of farms and spread of knowledge (Inhetveen, 1998).

Natural, biodynamic and organic or biological farming can be traced to the life reform movement at the beginning of the 20th century. The development of organic farming was always crucially marked by the social conditions. Organic farming must be regarded at least until the 1990s as a social movement that operated on the periphery of society. An animated worldwide discussion concerning sustainability arose following the UN conference in Rio in 1992. Since then, organic farming has received new recognition from society and science.

Research on women pioneers in organic farming has pointed to the elementary significance of networks in the lives and work of these women. This signifies that analyses of networks are necessary in order to understand the role of the organic movement within contemporary society. This chapter provides insights that make possible the deconstruction of the specific significance of women pioneers in the creation of new institutions. The analyses demonstrate their extensive correspondence, characterized by a broad spectrum of addressees that transcends ideological and national boundaries. These networks were of global significance but, whereas Lady Eve Balfour embarked on a series of world lecture tours, others, like Mina Hofstetter, drew people from all over the world to the sites of their efforts. These networks were of existential importance when women such as Lili Kolisko were forced to emigrate - an involuntary, but nonetheless efficient form of spreading organic farming concepts. Focus on women in organic farming confirms that gender issues are part of social history and that it is necessary to ascertain their role in order to understand the organic movement.

Women Pioneers in Organic Agriculture: a Research Project

In history books and society's memory, it is seldom reflected that the history of organic farming is strongly influenced by women. They obviously played, and still play a very important role in the conversion of farms from traditional forms to those demanded by organic farming. Furthermore, women were decisive in spreading ideas, leading to social reforms and the production and dissemination of knowledge (Inhetveen, 1998). It is hence necessary to ascertain their contributions and point out the social conditions and the range of possibilities that the various generations of women have had and the constraints that frequently hindered their activities. The crystallization of organic farming is considered to be a paradigm change that will be investigated under gender-specific aspects (Beus and Dunlap, 1990 and 1994; Kloppenburg, 1991 and 1992; Flora, 1992; Kaltoft, 2001).

In 2002 the framework for the research: Passion and Profession: Women Pioneers of Organic Agriculture, was initiated at the University of Goettingen, Germany, with key objectives to trace, evaluate and reveal the achievements of women during the phases in which organic agriculture crystallized, and to chronicle their contributions to the theory and practice of organic farming. We use the term pioneers to denote those women who have contributed to the advancement of the various trends and directions in organic agriculture through their research, writing, experiments or organizational talents (Inhetveen and Schmitt, 2000).

The epistemological basis for the research derives from recent research into gender and science (Keller, 1983 and 1986; Schiebinger, 1989; Harding, 1994; Orland and Roessler, 1995; Langenheim, 1996) that integrates sociology and history of knowledge. Employing Latour's actor network theory (1995 and 1996) our analysis of the networks in which women pioneers were involved encompasses, not only people but also places, documents and events. In this respect an actor network differs from a social network since it 'does not limit itself to human individual actors, but extends the word actor - or actant - to non-human, non-individual entities' (Latour, 1996: 369). Social networks are included in the description, but they have no privilege or prominence. These heterogeneous networks are like seamless webs in which a lot of different mutual effects can occur. They are defined as collectives, as opposed to societies that focus only on social networks. In an actor network, not only humans are able to act but also things, events, places and institutions are accepted as the source of action. Moreover, the network acts with all its elements as an entity.

The multi-methodology for the project combined empirical social research and secondary analysis of existing statistical data with archival research on historical material. Thus from primary and secondary literature and in particular the interpretation of correspondence between women working in the same field, the lives and work of the early women pioneers in organic farming unfolded for us to record.

The Networks of Early Women Pioneers

Sister Laurentia Dombrowski

Laurentia Dombrowski (1888-1979) was a nun at the abbey, zur Heiligen Maria, in Fulda, Germany. In 1950, while translating the annual chronicle of the English Benedictine Abbey Stanbrook, she became interested in Maye E. Bruce and the Quick-Return-Preparation she had invented, which was a quick compost preparation. Sister Laurentia recognized that the compost provided a possible means to make the abbey self-sufficient during the economically difficult post-war years. She had the preparation sent to her from England and began to experiment with it in the convent garden. At 63 years of age, she began gardening. In 1953, once she was convinced of its effectiveness, Laurentia Dombrowski obtained Maye Bruce's permission to organize the production and sale of the preparation in Germany under the name Humofix. Later she translated the book *Common Sense Compost Making* into German and, hence, guaranteed that Maye Bruce and Laurentia Dombrowski's ideas would spread. The small journal *Winke*, which appeared three times a year, described in each issue the latest horticultural experiences from Humofix experiments (Fulda, 1976; Koelling, 2000: 87-90 cited in Inhetveen and Schmitt, 2000).

Laurentia Dombrowski knew how to very cleverly take advantage of the liberty she had behind the walls of the convent which offered her refuge. She carefully chose women that engaged in the movement in order to increase her knowledge and pass it on to others. She was a mediator par excellence. She did not let herself be impressed by voluntary limits. She maintained correspondence both with representatives of organic as well as biodynamic farming, carried over knowledge from farming to horticulture and upheld contact with many members of the ecology movement in Great Britain. Sister Laurentia was a member of the Soil Association that had been founded by Lady Eve Balfour in England in 1946 and received their membership journal *Mother Earth*. Her knowledge of English made it possible for her to observe the developments and discussions in the bio-scene in the English speaking countries, to discuss the subject with friends there and not only employ the knowledge usefully in the convent garden but also make it available via the journal *Winke* to many alternative gardeners, both female and male, in Germany. In this way Sister Laurentia contributed tremendously to the development of the organic agriculture and horticulture.

Correspondence between Laurentia Dombrowski and Erika Riese

An experienced teacher in the field of horticulture, Erika Riese received letters from Laurentia Dombrowski, the elderly garden apprentice, asking her for advice. Erika Riese (1893-1959) was a trained horticulturist who began work at the Forschungslaboratorium am Goetheanum research laboratory in Dornach, Switzerland in 1925. Under her direction, experiments were conducted to

understand biodynamic preparations and cereal archetypes. Riese was also Director of the Information Centre for Biodynamic Farming and Horticulture in Dornach where she ran courses. We have sixteen letters from the period between 1953-1958. One particular excerpt, from the seventh letter, provides precious details about what these women had in common with each other (Box 4.1).

Box 4.1. Excerpt from a letter to Erika Riese from Laurentia Dombrowski.

Fulda, July 7th 1954

Dear Miss Riese,

Whenever such a wonderful letter from you arrives, I would love to sit down right away and answer it with a warm echo. But there are the daily 'duties' that return each day and leave hardly any room for such spontaneous desires...Today I would like to fulfil my obligation and write back to you. A person like myself with so little knowledge cannot get by without questions, but there is no hurry. You wanted to Germanize a few English terms for me...

In order to not always put you under pressure - I feel very close to you by way of Mrs Stellwag - I have already turned to Stuttgart with questions. But there it is not possible to speak person to person as I can with you. If you can put up with my questions, and me I would really prefer to speak to you about everything. Furthermore, you always answer so promptly. Stuttgart is also different in that sense. Therefore I can understand your heartfelt sigh: if only my dear German brothers would not waste so much time with 'Waerweisen' (what is that?)!...

Miss Bruce alleges in her book that ferns are an effective insecticide. In two volumes of *Mother Earth*, I read about their use in connection with growing potatoes. The experiments with plant lice have been very successful...I would like to know what kind of experience you have had with ferns...I would also like to know your opinion of the journal *Organic Gardening & Farming* by Rodale. I received three issues from an English acquaintance. With my great desire to learn, I also found a lot in them that one could use, not taking into account the American peculiarities...

Thank you very much and best regards,
Yours sincerely,

Laurentia Dombrowski

The example clearly shows that Laurentia Dombrowski repeatedly turned to women as her correspondents, advisors and mediators. The correspondence with Erika Riese is in itself a proof par excellence of her preference for women that she hinted at over and over again in her other letters as well. In contrast, a great deal of the contact she had with men that was mentioned in her letters has

negative connotations. Sister Dombrowski, for example, complained about unpunctuality, by which she meant the weeklong waiting periods when she wrote to the biodynamic information centre in Stuttgart to ask questions - as well as the rude tone with which she was confronted when she was there. Her complaints were well understood by Erika Riese who also experienced lack of openness or cooperative spirit amongst her male biodynamic colleagues at the Research Circle in Stuttgart, particularly in deciding the objectives for and direction of collaborative ventures. One could receive the impression that the two women joined forces against the men. As a result, Laurentia Dombrowski bypassed the official structures of the biodynamic network in Germany and instead turned to the nearest national biodynamic information centre to Stuttgart, which was Dornach in Switzerland. At the same time, she remained in touch with Maye E. Bruce in England and was a member of the Soil Association that had been established by Lady Eve Balfour.

In order to learn more about the network in which Laurentia Dombrowski enjoyed a central position, I would like to turn to the actor network theory by Latour. In the relationship between Sister Laurentia and Miss Riese, the letters were very central non-human actants, and even more the atmosphere conveyed by the words, as Laurentia herself mentioned: 'whenever such a wonderful letter from you arrives, I would love to sit down right away and answer it with a warm echo'. From the first more formal letters, the language of the two correspondents increasingly took up a figurative style and special combination of practical and emotional affairs, objective and subjective aspects, which might have been instrumental in stimulating the women to continue in the exchange of their ideas.

On the other hand, letters to the biodynamic information centre in Stuttgart often remained unanswered and, in Mrs Dombrowski's case (although unmarried, the title Mrs was nevertheless used by the nuns of this abbey), when she did receive an answer, the prosaic style of the men's answers contributed to her preference to communicate, learn and work with women. So, we can see that the women established networks not only because they wanted to be on their own but also as a response to their male colleague's behaviour, which was of course influenced by the dominant gender roles prescribed by the rigidly patriarchal society of the time.

The women's exchange intensified through a second failure to be acknowledged: Erika Riese and Ehrenfried Pfeiffer's book, *Der erfreuliche Pflanzgarten* (*The Fair Garden Plot*; Pfeiffer and Riese, 1940), fell out of print. This was problematic because there was almost no literature on organic horticulture and photocopying was not yet possible. As long as the book was out of print Sister Laurentia had to approach experts like Erika Riese and put her questions to her directly. Substantial parts of Laurentia's letters are questions about gardening, plant protection, and treatment methods for plant disease. When Miss Riese loaned Mrs Dombrowski her own copy of *Der erfreuliche Pflanzgarten*, Laurentia intended to type it out for circulating to interested colleagues. Besides other arguments, this should have encouraged Miss Riese to

request another edition of the book, which followed a bit later. After this time the correspondence between the two women moved onto other topics. Mrs Dombrowski used the opportunity to discuss the correct German translation of English terms from the organic literature. Summarizing one can highlight three aspects of Sister Laurentia's network preferences:

- Between women;
- International; and
- Tolerance towards people with different opinions, especially in relation to the border between biodynamic and organic methods.

Erika Riese and the Biodynamic Association

Erika Riese who was the Director of the Information Centre in Dornach, and one of the official representatives of the biodynamic farming method, faced quite a different situation compared to Laurentia Dombrowski. On the basis of anthroposophy in general and the biodynamic movement in particular, Miss Riese was able to gradually discover horticultural methods through research and breeding activities over a period of three decades. But at the same time, Erika remained loyal to the Anthroposophic Society.

This loyalty is reflected in her reaction when Sister Laurentia mentioned in a letter that Maye E. Bruce was one of her advisors and in the following letter asked her to show understanding for Bruce's behaviour. In 1937 there was a quarrel between Maye E. Bruce and the representatives of the Anthroposophic Society in England because Miss Bruce used the same herbs that were specially prepared for biodynamic preparations and combined them in a simpler method in her Quick-Return-Preparation, which she then sold. For Erika Riese this conduct was inexcusable, as we know from a handwritten note on Dombrowski's letter: 'Maye Bruce's behaviour is hardly fair and she does not understand the preparation. Incidentally, we also appreciate collaboration!' With we, Erika Riese clearly shows her affiliation to the biodynamic movement and, thus, the Anthroposophic Society. It shows that Miss Riese felt solidarity with the anthroposophist movement over her solidarity with women. Perhaps, under certain circumstances she would have joined forces with men against women.

Without a question, however, women were offered better chances to develop themselves during the beginnings of the anthroposophist movement than otherwise in society at the commencement of the 20th century. In spite of the impression that the history of the development of alternative agriculture is a success story of great men (Klemm, 1992), deeper insights into the history of biodynamic and organic farming show us that women played a very important role in the field. Unpublished lists in the archives clearly demonstrate that women were an essential base for the development of biodynamic farming. The Landwirtschaftliche Kurs course in agriculture held by Rudolf Steiner on

Whitsunday 1924 in Koberwitz near Breslau is generally considered to be the birth of biodynamic farming. But it is far less well known that one third of participants on the course were women, or that a quarter of the reprints of course material, which had to be applied for, was granted to women. Also, 16 of the 64 members of the Association of Farmers of the Anthroposophic Society (Gemeinschaft der Landwirte der Anthroposophischen Gesellschaft), who experimented in the following years with what they had heard and made their farms available for biodynamic experiments, were also women. But who really knows how many wives, such as Lore von Heynitz (Witzenhausen, 1982) convinced their husbands to study and employ biodynamic farming methods in farming and horticulture? We do not know how committed these supporters of the biodynamic movement really were or what responsibility they bore in the various circles. Thus it is difficult to determine the position that women had in mixed gender networks.

The position of women who were active in research is more differentiated. An astonishing number of female researchers contributed to the advancement of alternative agricultural science in the first generation of biodynamic and organic agriculture. The reason for this intensive participation of women during the initial phases of the organic agricultural research process was presumably based on the relative simplicity of requirements. The fact that at the beginning, the level of professionalism with respect to teaching, research and consulting activities in the field was quite low made it possible for women (and men) without formal qualifications to participate in various fields. During that stage it was possible to achieve developments in the advancement of knowledge and research in organic agriculture at home. It was therefore, perhaps also easier in comparison with today to reconcile occupational activities with the demands of family and domestic duties (Inhetveen *et al.*, 2003).

In the biodynamic research circles, the prevalent pattern seems to be that the men studied either agricultural science or one of the natural sciences and women trained as gardeners. That was, for example, true in the case of the research duos: Erika Riese and Ehrenfried Pfeiffer, Brunhild Erika Windeck and Immanuel Voegele, Martha Kuenzel and Hans Heinze and Ilsabe Mutzenbecher and Martin Schmidt. In all probability, they knew each other; there are a few unpublished documents, which show that at times the women worked together. In the summer of 1934, Brunhild Erika Windeck went to Switzerland to help out in Dornach. She and Marie Wundt took stock of the wild grass species that Erika Riese grew at Goetheanum. Later on, Erika Riese sent samples from her common spelt culture to Martha Kuenzel in Loverendale, Holland, and to Brunhild Erika Windeck in Pilgramshain, in Silesia, Germany, so that they could breed it under other climatic conditions. Both women sent annual progress reports to Dornach. In one of Windeck's accompanying letters from 1940 there are additional references to contact between women in the biodynamic scene: 'How is your work coming along? How is Miss Kuentzel? Where is Miss Castellitz? I have not heard anything from Marie Wundt for a long time either.'

Erika Riese had a leading role in this supra-regional women's network. This could be due to, among other things, the fact that Ehrenfried Pfeiffer, whose co-worker she had been, had moved to the USA in 1938 and taken over responsibility for the production of biodynamic preparations, plant experiments and breeding seeds, which they had begun together in 1926.

Despite the gender-specific hierarchy, which was based on education, during the initial stages of organic farming research, women presumably were as highly esteemed as men with their theoretical knowledge, because of their practical skills and experiential know-how. Hence, Ehrenfried Pfeiffer, for example, praised Erika Riese's talent for drawing, and her ability 'to carry out an idea, i.e. to realize it, no matter how new, or how seemingly far fetched or unusual it is - if it could serve as an experiment, she experimented with it' (Pfeiffer, 1999: 128, translated by Ken Muller). Pfeiffer also valued the work of his lifelong laboratory co-worker Erica Sabarth very highly:

> Mrs Sabarth had the unusual gift to 'touch' the right thing, a natural instinct or intuition that was even more valuable and important as the field of research we had embarked upon was absolutely new...It was a crucial factor in our joint work that was overlooked, misunderstood or falsely judged by many other colleagues, even very close co-workers. It was this harmony between thinking, rationality and fantasy or imagination (if one may use the expression here) together with her unwavering loyalty and dedication when following an idea on the basis of experiments, that led us to successful results (Pfieffer, 1999: 127).

The women thus enjoyed great esteem in their immediate surroundings in mixed gender networks. It seems they possessed an equal, respected position. However over the decades since, this recognition has been lost. The significance of these women, and their contributions to the development of ideas and achievements in research on organic farming methods, have gradually been filtered out of history, mainly by male authors. What remains if anything are their names and a brief description of their activities but as a rule, these women are described as having fulfilled only an inferior or subordinate position (Witzenhausen, 1982; Vogt, 2000; Koepf and Plato, 2001; Schaumann *et al.*, 2002).

Women pioneers as individualistic researchers

An exception to the work pattern of men in positions of authority and women doing routine and preparatory work, can be found in the case of Lili Kolisko (1889-1976), who was a real pioneer woman (Gisbert Husemann, 1978 and 1997). Lili founded the Biodynamic Research Laboratory in Stuttgart where she worked with various assistants. She was personally urged by Rudolf Steiner to study the formative forces. In comparative experiments she studied crystallization and growth promotion of hundreds of substances. Among other things, she was able to prove scientifically that that there is a relationship

between the planets and as predicted by ancient traditions (Kolisko 1922, 1929 and 1947).

Women also played an important role in leading circles during the initial phases of natural farming. Mina Hofstetter (1883-1967) from Switzerland became a farmwoman out of necessity. During a life filled with physical and mental suffering, she turned to the life reform movement. In the mid-1920s, she radically changed her way of eating, farming and gardening. She advocated agriculture without animals. Besides working on the farm, she researched, taught and published on this topic (Hofstetter, 1942). Furthermore, she founded a school for biological farming called Seeblick (Lakeview). The school's guest book reflects the impressive radius of Mina Hofstetter's realm; people from more than 25 countries came to this Seeblick to learn and discuss (Spieker, 2004).

Almost at the same time and not far from where Mina Hofstetter lived, Maria Mueller (1894-1969) began, also after she had experienced serious illness, to engage in the peasants' vernacular movement in Switzerland and to research in the fields of alternative nutrition and sustainable horticulture. Whereas Hans Mueller, who she married in 1914, represented the organic agricultural movement in public, Maria Mueller studied all the available agricultural and nutritional scientific literature and experimented with it in her domestic garden. She published her results in minor journals published by the Hausmuetterschule, a kind of adult education class for farmwomen, of which she was the managing director from 1933-1968. Her speeches and papers became the bible of organic farming for many farmers, both men and women (Mueller, 1974).

As far as we know, the three women did not have any contact with one another. But we do not know how much these women knew about each other or other women pioneers. Each of them had an extensive network. However, no proof has been discovered until now that they exchanged information about their research. How was it possible for these women to maintain a leading role at that time in such isolation? These are issues that still need to be researched as well research that is already being carried out into the situation of women active in research and teaching in the field of organic agriculture in public institutions today.

Discussion

The significance of the first women pioneers got lost over the decades. Their contributions to the development and history of organic farming and gardening became gradually forgotten. Historians often argue that, in general they have only discovered books and articles published under men's names, which is true not only in the case of these publications but quite often also with respect to documented papers presented at congresses and workshops. As far as we have discovered to date, there are very few articles or books with the names of both members of the mixed gender couples that worked together in former times,

such as Ehrenfried Pfeiffer and Erika Riese. This male-oriented publishing practice could be due to the fact that men were privileged in their education. Or it could be proof of a gendered hierarchy that was accepted by both men and women. Even Marie Curie refrained from speaking in Stockholm when she received the Nobel Prize for physics with her husband Pierre in 1903 (Foelsing, 1999). If women had authorized themselves as researchers and authors at this time, they quite often published in small booklets. These publications were not recorded in official bibliographies and run the risk of being transient. Analogous with Douglas (1991), one can speak of examples of socially structured overlooking or ignoring. Referring to the actor network theory, it is possible to ask whether the increasing loss of recognition for the women's achievements was and is the result of the gender-specific hierarchy's acting. And further, one can conclude that, 'the notion of network allows us to think of a global entity - a highly connected one - which nevertheless remains continuously local' (Latour, 1996: 372).

A culture of correspondence opened up new possibilities for self-confirmation for women who had scarce other opportunities, and offered them a legitimate way to write when writing as a profession was closed to women. It was expected that women articulated anecdotes, feelings, hopes and wishes that were excluded from man's rational professional world. Correspondence between experts was seen as a sign for publicity, and this was an unintended sphere for women in this context (Hahn, 1988; Runge and Steinbruegge, 1991).

Letters are fragile, transient and vulnerable, and their preservation is at the mercy of future generations. Therefore, the now discovered correspondence between Laurentia Dombrowski and Erika Riese is a remarkable and rare example of a professional exchange between women. In the literature there are very few women's letters documented that are based on questions and answers about a special field like the development of organic agriculture. Questions are accepted as a positive method for learning and an important part of communication (Laschke, 1988). The corresponding women who were both professionally engaged and often in a hurry, showed their motivation to maintain a regular dialogue. Caring for their relationship seems to have been as important as learning from each other or spreading knowledge about organic gardening. As well as exchanging scientific information, Laurentia Dombrowski and Erika Riese courted respect for each other, for instance by offering their apologies for a tardy reply.

Both women emphasized their pleasure about corresponding with each other. After analysing the founding letters I would like to state that Laurentia Dombrowski especially preferred women as correspondents, advisors and mediators. It is possible to establish the following reasons explaining Sister Laurentia's preference for women:

- She discovered punctuality and reliability primarily in her dealings with women. She mentioned her experience not only with the men at the Research

Ring in Stuttgart but with other men as well as a contrast to her dealings with Erika Riese.

- Women disappointed Sister Laurentia less frequently than men. Hence, she trusted women more when she turned to them for information on their experience or as authorities.
- When dealing with women, Laurentia Dombrowski felt a certain human affinity even in professional contexts. Her correspondence with women did not only treat technical topics but was also filled with empathy.
- The hypothesis that her dealings with (unmarried) women were affected by her social environment, a convent, was not derived from her letters but is based on her surroundings. Hence, she was much more used to relations with women than with men. According to the social environment hypothesis, she wanted to uphold the pattern that she was comfortable with outside the walls of the convent.

If one thinks about the era in which the letters were written, they clearly reflect the low esteem that women in public life experienced in the 1950s. Only single women without children such as Laurentia Dombrowski or Erika Riese could avoid the pressures, from both church ideology and the post war labour market, to concentrate on domestic duties. Nevertheless, stumbling blocks were put in the way of exceptional women who were active in the public domain, such as Sister Laurentia who confidently and independently accelerated the progress of organic farming and horticulture. In addition, the women pioneers' experiences with male colleagues contributed to their preference for the special dynamic of a women only network. The gender relationship as an institution can also be seen as an actant of Miss Dombrowksi's and Miss Riese's network. Using actor network theory I have highlighted the importance of non-human actants, letters and relationships, in the founding of the organic movement.

Regarding the networks of women pioneers in general it can be accentuated that they were not exclusively restricted to women even at such places as Loheland, the first anthroposophist settlement of women in the 1920s dedicated to physical training, crafts and agriculture (Inhetveen *et al.*, 2005). Women only working groups such as Loheland were seldom recorded in research about organic agriculture and horticulture. Consequently, it is rare to find articles and books from two or more women authors and this remains so today (Inhetveen *et al.*, 2003).

A gendered pattern of labour, with well educated men in professional and managerial positions and less well educated women performing routine activities in supportive roles, is still found in the context of organic farming. At a time in which education was only possible for socially better-situated women, this hierarchic gender-specific division of labour may have been justified, or appropriate to the social conditions of the period. Today however, when more than 50% of biology students and 33% of agricultural students are female, a gendered hierarchy in organic institutions is testimony to a continuing and outdated patriarchal value system. More than ever, women in organic agriculture

must learn from their foremothers that self-organization is necessary to guarantee their influence in policy and research institutions.

Concluding Remarks

The findings derived from our studies to date show that by identifying gender relations as part of social history and including them in our observations and research on networks in the field of organic agriculture and horticulture, it is possible to add valuable insights into the history and development of the organic movement. In order to encourage young women who are committed and involved in the movement to develop the courage to strive for and obtain scientific and political recognition, it is necessary to provide role models of women from the past and the present. Many such examples as I have discussed can be found if one takes the time to 'look behind the curtains'. At the same time, new impulses will strengthen the process of mainstreaming gender in organic agricultural institutions. During recent years, mainstreaming gender has been demanded in all the social sciences. This chapter therefore, not only broadens the discussion on rural women and gender research but also, contributes to a concept of a sociology of organic agriculture that has yet to be developed.

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5
Motivations and Values: a Means-end Chain Study of French Consumers

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The aims of this study were to investigate consumer expectations, attitudes and behaviour intentions with regard to organic food in France, with particular emphasis on quality, distribution channels, environmental and health aspects. Additionally the research aimed to identify specific needs and wants that can be met by organic products, as well as barriers to purchase. Based on means-end chain analysis (or laddering interviews), maps of consumer motivation are presented. The data was collected through qualitative interviews with 100 regular and occasional consumers of organic food in four regions of France. Many studies show that the main motivation for buying organic products is, not primarily the environment but, own health and enjoyment. This means-end chain study demonstrates that for organic consumers in France, the importance of egocentric values in the purchase of organic food is attenuated by respect for tradition, family health and well-being, specifically that of children, and a sense of wanting to sustain or protect the environment. In the final analysis, the difference between consumer concerns is depicted as, not a polarized debate in terms of egocentric vs. universal values but rather, a series of concentric spheres of influence ranging from the individual to the familial to the societal/global. Thus, the wider the circle of persons that the consumer considers when buying organic food products, the broader will be his/her motivation to purchase. This study also raises interesting questions relating to emerging approaches to the study of organic consumer demand, such as particular consumption situations or eating events and the experience of purchasing in terms of shop location, image and atmosphere as defined in food anthropology, and factors that contribute to consumer trust in organic foods. These topics are now ripe for further study.

Background

Despite the persistently small scale of organic food consumption in Europe, the phenomenon has nevertheless become a key theme for research in rural sociology and agri-food marketing. Recent studies have tried to identify consumers' motives for buying organic food, and to compare the relative importance of environmental concern with health-related and other motivating factors. However, when studies are based on direct questions such as 'How concerned are you about environmental problems?', answers are likely to be biased by respondents' willingness to conform to a perceived sense that they should be concerned (Herrmann *et al.*, 1998). Most studies thus use attitudinal scales such as the Socially Responsible Consumer Behaviour scale, which deals specifically with environmental concern (SRCB - Antil and Bennett, 1979). Such Likert scales generally comprise three types of question, to which respondents are asked to indicate their level of agreement from agree strongly to disagree strongly on a 5, 7 or 9 point numerical scale. For the SRCB, the three types of question are as follows:

- General statements show attitudes to the abstract environment, such as - Pollution is presently one of the most critical problems facing this nation;
- Personal statements show attitudes to the personal environment, such as - I rarely worry about the effects of pollution on myself or my family; and
- Societal statements show attitudes about the behaviour of particular groups in relation to the environment (e.g. manufacturers, the government), such as - commercial advertising should be forced to mention the environmental disadvantages of products.

However, the usefulness of these studies is limited by the poor consistency found between reported attitudes and actual purchasing behaviour. Hence, research findings to date regarding the relationship between environmental concern and consumer behaviour have been equivocal (Roberts and Bacon, 1997). More recent studies have attempted instead to measure the relative importance of ethical and environmental concerns in comparison with other motivational factors. Results of these studies indicate that the majority of consumers do not feel concerned about the environment (Steptoe *et al.*, 1995; Henson and Traill, 2000). Nevertheless, consumer concerns and motivational factors are linked through the consumer's value system. There is widespread agreement in the literature regarding the definition of values based on five conceptual precepts (Schwartz, 1992):

- A value is a belief
- Pertaining to the achievement of desirable end states or modes of conduct,
- That transcends specific situations,

- Guides selection or evaluation of behaviour, people and events, and
- Is ordered by importance relative to other values to form a system of value priorities.

Schwartz distinguishes 10 distinct types of value according to two dimensions: first the contrast between openness to change and tendency to conservatism, and second, the opposition presented by self-prioritization vs. altruism. Openness to change includes such values as autonomy, stimulation, and hedonism. Tendency to conservatism is defined by values such as security, conformity, and tradition. Self-prioritisation corresponds to values such as power and self-realization, whilst altruism is marked by such values as benevolence and universalism. Linking consumer motivations to value systems therefore, increases understanding of consumer purchasing behaviour. In this chapter, the authors use a probing technique, known as means-end chain theory to delve beneath more superficial motivations previously reported. According to means-end chain theory, consumers are motivated to buy a product to the extent that, in the mind of the consumer, it is linked with personal consequences, and contributes to the fulfilment of personal goals.

Studying the motivations of consumers who buy organic products and the values embedded in these motivations, reveals that values associated with organic products are heterogeneous. Some studies have shown that organic food consumers are environmentally conscious (Storstad and Bjorkhaug, 2003), but many studies confirm that organic food is more likely to be purchased as a result of egocentric values, such as health or pleasure (Schifferstein and Oude Ophuis, 1998), or health and taste (Sirieix and Schaer, 1999; Zanoli and Naspetti, 2001). It is timely therefore to conduct further in-depth study of the values associated with consuming organic foods. In this chapter, we try to uncover the value orientations that motivate and/or de-motivate consumers to buy organic food products. More precisely, the study's objectives were to (1) identify specific needs and wants that can be met by organic products, with particular emphasis on quality, environment and health; (2) examine barriers to purchase, including the purchasing and consumption environments and experiences of these, such as levels of trust and the perception of the retail outlet's image; and (3) uncover attitudes to and attributes of specific food sectors (in this chapter, organic dairy and cereal products).

Methodology

Much previous research relied on the use of pre-established questionnaires. This is problematic due to the poor correlation obtained between reported attitudes and observed behaviours. Means-end chain analysis circumvents this problem because participants are encouraged to express their motivations and values relatively spontaneously and without reference to an explicit goal. More

precisely, means-end theory focuses on the linkages between product attributes, the consequences of these attributes, and the personal values or desired states that these consequences reinforce (Gutman, 1982; Reynolds and Gutman, 1988). Concrete attributes (e.g. fewer additives) lead to abstract attributes (e.g. naturally produced), with functional consequences (e.g. eating healthily), and psychological consequences (e.g. feeling good), and instrumental values (e.g. food as enjoyment) and terminal values (e.g. enjoyment).

The interview technique used to reveal an individual's means-end chain, underpinning product choice, is called laddering (Reynolds and Gutman, 1984 and 1988). From the interview data hierarchical value maps were constructed based on an aggregation of individual ladders. Means-end chain analysis is useful in understanding consumer motivation but can lead to too few conceptual statements and for this reason the laddering interviews were supported by a series of focus groups.

Laddering takes place in two stages. First, perceived product attributes are elicited. Second, the respondent is encouraged to identify connections between these attributes and their consequences and values. This constitutes laddering for each elicited attribute, which is achieved through the continuous questioning of the respondent as follows:

- What is your preferred place to shop for organic products? Open markets
- Why? Because in open markets you can talk with the producer
- Why is it important for you to talk with the producer?

For this research, laddered data was collected by means of qualitative interviews, subcategorized into regular (55%) and occasional consumers of organic food, in rural (55%) and urban areas. Most (74%) interviews were conducted on a weekday. Three investigators in four geographically disparate areas conducted a total of 100 interviews. Four categories of food were used as the focus for interviews: dairy products, cereals, fruits & vegetables, and meat. The results presented here relate to the first and second of these categories and hierarchical maps are presented for these sectors based on the responses of interviewees who consumed these products (Table 5.1).

Table 5.1. Regional distribution and organic purchasing frequency of participants (Totals = 100).

Region	No. of participants	Retail outlet	Purchasing frequency
1. South	33	Direct markets	24
2. West	41	Organic specialty shops	34
3. East	23	Supermarkets	42
4. Paris	3		

Constructing a hierarchical value map

Following transcription of the interviews, a database of cognitive means-end-chains for each consumer was maintained using purpose-designed Laddermap software, and this enabled the automatic creation of aggregated hierarchical value maps. Hierarchical value maps show the linkages between attributes, consequences and values. The percentage coverage of a map is an indication of the extent to which the map explains the thought patterns reported in the interviews. Maps were constructed for consumer subgroups but the maps presented here illustrate the main findings from the analysis. In the maps it is possible to observe complete chains and subsidiary linkages. Complete chains consist of linkages between concrete and abstract attributes, functional and psychological consequences and instrumental and terminal values. Chains are made up of nodes (boxes).

Nodes are depicted at different levels to represent their relationship to the ladder from bottom to top: concrete attributes, abstract attributes, functional consequences, psychological consequences, instrumental values, terminal values, except where space is restricted. Linkages are of varying strengths depending on the number of interviewees mentioning the concept; this figure is shown in the node box. For each map, N is the total sample size for interviews depicted by the map and the figure for percentage linkages provides a measure of the explanatory power of the map, the extent to which the map explains the full set of responses from the interviews. Numbers interviewed are also indicated in the text in brackets. The map cut-off number refers to the least number of statements that had to be made about the node for that node to appear on the map. Preliminary analyses used low cut-off points to gain insight into the broader world of motivation from the spread of nodes, in order to provide contextual information, such as chains, clustering effects and other patterns, for the more detailed analyses.

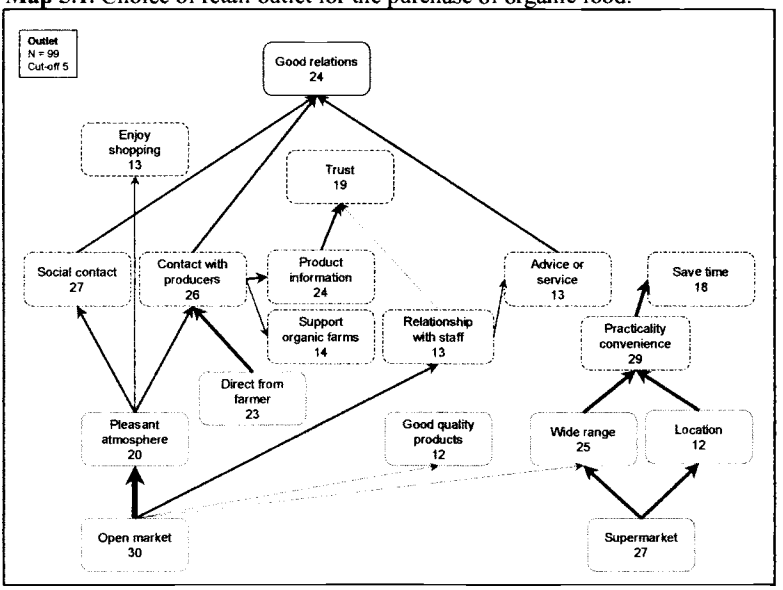
Analysis 1: the Market for Organic Food

Buying organic food (shopping habits)

The conceptual map (Map 5.1) for preferred points of sale was based on 99 interviews. This was the largest sample of all maps constructed from the data and explained 33.9% of linkages reported in interviews. Respondents were asked what their preferred place to shop would be and why. The first map (cut-off 5) depicted associations to three points of sale; open markets, supermarkets, and direct from the farmer. Open markets are common in most areas of France and are frequented by many people. These markets cannot be compared with farmers' markets as seen in the UK because French markets are long established and have not emerged in response to the perceived domination of the multiple retailers. The ladders for shopping in open markets were much richer than for

supermarket shopping. Open markets were mentioned in 30 interviews, and the outlet was connected in the initial map to 8 nodes: 6 abstract attributes, 1 functional consequence and 1 terminal value. These nodes suggested that shopping at a market is an enjoyable outdoor experience where food on sale is fresh and both the quality of the food and the service is good.

Map 5.1. Choice of retail outlet for the purchase of organic food.



For supermarkets the paths are not rich. A bifurcated ladder starts from the concrete attribute, Supermarket and is linked via Wide range and Good location to Convenience. The latter functional consequence is in turn linked to another functional consequence Save time, which is in turn linked to a further functional consequence, Leisure time. These links were particularly important for regular consumers. However, the ladder ends there, in other words, these consequences of shopping appear to be unconnected with consumer values.

The pathways from local markets are much richer. The map shows that complete pathways run from open markets and the farmer to the terminal value, Good relations, via three functional consequences of these choices of outlet, Social contact, Contact with producers, and Advice or service. Contact with producers is a central node where complete pathways for shopping at open markets and direct from the farmer intersect. Thus Contact with producers can be seen to be integral to short organic supply chains (direct and local markets). But, whereas buying from the farmer connects to value only through Contact with producers, shopping in the open market connects to value via Relationship with staff - Advice, and an abstract attribute, Pleasant atmosphere that is linked to both Contact with producers and Social contact. Thus, three main paths can be

identified for buying organic foods at the open market. Two of these relate to the pleasant atmosphere of the market, the market as a social institution. The third chain relates to receiving good service and having a two-way relationship with traders; being something more than an anonymous consumer. All three chains culminate in a desire to have good relations with other people in general, to get on well with people when shopping as when socialising.

On consumer subgroup maps can be seen a greater a tendency for regular than non-regular consumers, and consumers with children, or not working, to cite Contact with producers as a consequence of buying from the farmer. For some consumers supporting organic farming was an additional consequence of buying from the farmer. Contact with producers also leads to an interesting cluster of nodes that form a bridge between information and advice, each building trust. The sub-chain Contact with producers - Product information - Trust, demonstrates the perceived role of farmers in establishing trust-based trading relationships by providing information. However, the psychological consequence Trust, is the end of the chain, there is no associated value. Good relations therefore appear to be established through contact and especially service, and not just trust. An apparent difference was that for regular consumers, atmosphere and social contacts were of prime importance, and the node Advice did not appear in the map, whereas, for non-regular consumers, Advice was the more important route to good relations.

When the nodes, Cooperative and Organic shop were initially merged a chain for organic shop attributes appeared (19) comprising a range of minority views such as, Small (4), Trust (4), Pleasant atmosphere (3), Social contact (2), Relationship with staff (2), Food location (2), and Wide range (2). These links were not evident in subsequent refinements of the map so there appeared to be no clear focus or shared goal for shopping in organic shops. For most consumers, organic shops do not have a clear image and are not perceived to be sufficiently superior to other retail outlets to frequent.

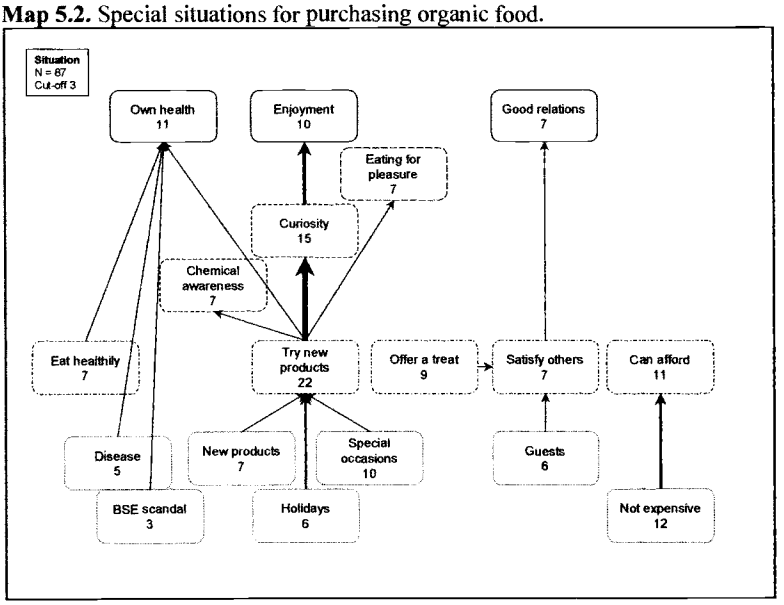
An additional map (not shown) was constructed to examine reasons for not using certain retail outlets and was based on 59 interviews. This analysis explains why supermarkets, organic shops, mail order and/or Internet shopping were rejected. The most strongly rejected of these was the supermarket (19), which was associated with 5 negative consequences, the strongest link being to Size/oversized. An interesting ladder was seen from Size/oversized to Mass products and No trust. This seems to lie in direct opposition to the chain discernable for shopping in direct markets, which was perceived to confer trust on the transaction. The node Size/oversized was also connected with the negative attribute Cannot support organic farmers, and the negative psychological consequence, Feel bad. Interviewees talked of supermarkets making them feel nervous and of getting lost. Conversely, organic shops were rejected for several reasons including, Not available, Small range, Poor quality and Not convenient and the node was also strongly associated with the psychological consequence Feel bad. In this instance, Feel bad referred to

feeling uncomfortable and/or targeted. Feel bad in these examples can be seen to lie in direct opposition to the pleasant feelings of atmosphere and ambient experience in open markets. Mail order and Internet were mentioned and rejected by only 3 and 4 interviewees, respectively, but this was not surprising since in France these markets have not yet emerged with any significance.

Organic situations (food habits)

Interviewees were asked about situations, eating occasions, for which they buy organic foods. The original map at cut-off 3 explained 34.3% of linkages from 87 interviews (Map 5.2). Individual, economic and social motivations linking specific situations were observed to predispose towards the purchase of organic products. Individual motivation was demonstrated by the central role of the functional consequence, Try new products. Trying new products is pivotal to the two main chains culminating in terminal values, Own health and Enjoyment. Some consumers showed a predisposition towards trying new products in general, others were motivated by gaps in daily routine such as holidays. A third discernible chain related, less egocentrically, to the act of satisfying people rather than curiosity, of using organic food to fulfil a social function by Offering something special. Preparing a particular recipe for example, contributed to perceptions of making guests happy and giving pleasure to the family and organic food was part of that process.

Map 5.2. Special situations for purchasing organic food.



Nevertheless, price was a significant factor in deterring would-be purchasers of organic food - 12 interviewees had the concrete attribute, Not expensive, as a special situation for purchase, and 11 others had the functional consequence, Can afford, as a result of the special situation. For many consumers organic purchase becomes possible when there are product price offers; interviewees reported a willingness to pay a premium of less than 20%, 5-10% was considered more reasonable because otherwise 'the budget doesn't allow it'. All consumer subgroup maps mentioned price as the attribute most closely associated with organic food. In summary, the map shows that consumers expressed an active interest in eating and giving organic food to stay healthy and enjoy life. Curiosity, novelty value, staying healthy, enjoying food and price-awareness are depicted through the interviews as the defining elements of a strategy to stay in touch with the market and to use market trends to effect in the social sphere.

Two further dimensions of the organic eating situation were examined - foods that consumers did not buy as part of their normal shopping routine and conversely, situations for which they would not buy the organic food products that they normally bought. Interviewees were asked to describe the situation and the products that they would buy for the situation. Perceptions of product characteristics were also ascertained. From the analysis of 54 interviews, four themes governing consumer hesitation to purchase organic food emerged:

- Awareness of scandals (17): if a scandal occurred in organic farming consumers would no longer trust organic farming to be safe. Consumers would feel cheated and betrayed (psychological consequences);
- Poor product quality: organic fresh produce that contained no more vitamins than conventional, was not fresh or had low visual appeal, would not be perceived as healthy and would deter consumers from purchasing organic;
- Lack of availability: consumers found it impractical and inconvenient to shop for organic regularly because this entailed driving to retailers that stocked organic products;
- Price: consumers were highly price sensitive. Some consumers perceived the purchase of organic food to be a waste of money whilst others felt that the high premium on organic was simply unjustified.

Organic food labels (building trust)

The map for quality sign (not shown) was based on 98 interviews, and statements that occurred at least 5 times. The map accounted for 55% of linkages. This represents a good overview of the interviews. Although no complete chain emerged from the map, the importance of the psychological consequence Trust (78) is clear. Three dominant paths lead from the central node Trust to the terminal value, Safety. The principal route to Trust starts from Existing labels. This node refers mostly to the AB label (Agriculture Biologique,

the national label for EU organic food standards) but Demeter and Ecocert were also mentioned. This result is perceived to be a sign of success for the national certification system. Consumer confidence in the label comes via three routes:

- Existing labels links to the functional consequence, Information about the product/mode of production (28) e.g. Non-GM, No chemicals, The pesticides used, and also to the psychological consequence Convincing quality (9), such as: Fresher products and Better than normal.
- Existing labels also connects to Clearly defined standards (20) e.g. Strict rules for all phases of the process.
- Existing labels links to functional consequence Strict controls e.g. There is a serious control process, and leads to psychological consequence Less fraud (16) e.g. A guarantee that there is no fraud.

The other nodes leading to Trust are dispersed across the map and are less strongly connected, but they appear to be evidence of consumer need for improvements in information (such as on labelling, controls and standards, place of origin, and producer), packaging (convenience and visual attractiveness as well as clarity of labelling), and governance systems of the different certification bodies (transparency, independent inspection and monitoring, and personal verification). Many expectations appear to be focused on the relationship between producer and consumer, attribute, Lack of intermediary was linked to Reliability and Personal verification, and consumer comments indicated a preference for the farmer to retain responsibility for the product up to retail - from A to Z.

The subgroup maps showed significant differences between regular and occasional consumers. The regular consumers' map contained more concrete attributes (6 compared to 2) and pathways were more complex at cut-off 4 compared with 3 for non-regular consumers. Regular consumers had specific ideas about packaging design, symbolism and text: A cow with a flower in its mouth on the label, and pointed out the importance of independent inspection and monitoring of certification. Another path for regular consumers from Information about origin links via Transparency and Trust to Avoid being cheated, and Reduced risk. This is interpreted as a perceived need for greater traceability, To know how it is made and That it is really organic. Furthermore, the abstract attribute, Reliable, and functional consequences Personal verification and Avoid being cheated appear only for regular consumers, and also Transparency is more strongly linked to the central node Trust than in the non-regular consumer's map. This suggests that regular consumers, Don't like being tricked, because, It is a question of honesty. At the same time, non-regular consumers are more interested in understanding the certification system. For example the node, Easy to understand appears only in the regular consumers map.

There were also significant differences between rural and urban consumers' maps. The rural consumers' map revealed a profile of mistrust, with the presence

of the following nodes at cut-off 4, Reliable, Personal verification, Avoid being cheated, and Transparency. Furthermore, the nodes Clearly defined standards, and Less fraud were strongly connected in the chain. By contrast, concrete attributes Design symbolizes organic, Marked as organic, and Unique standard, appeared only in the urban consumers' map (cut-off 3) indicating a need to understand the system of organic certification and recognize organic product labels.

Analysis 2: Purchasing Motivation Within Product Sectors

Dairy products

The initial hierarchical value map for dairy products was based on 67 interviews in which the purchase of dairy products was mentioned and explained 38.6% of linkages. Respondents were asked what attributes they considered when buying organic dairy products and which of these attributes were critical to their decision to purchase. Examination of the preliminary map, cut-off 4, showed two complete chains and several nearly complete chains leading from the concrete attributes Less chemicals and Less hormones, to three terminal values, Own health, Family health, and Enjoyment, with a complex network of routes between.

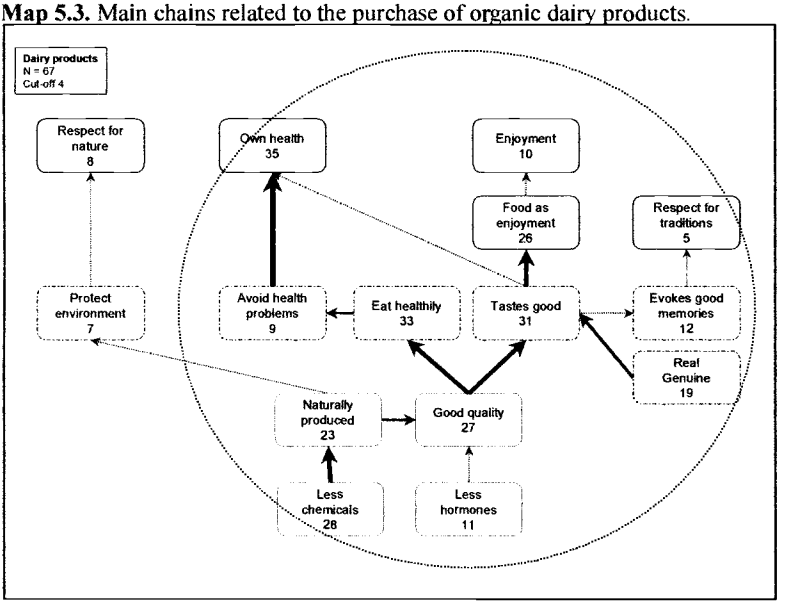
The concrete attribute Children (8) had some positive impact on attitudes to organic food but there was only a weak link to abstract consequence, Family health and this did not form a complete chain and was not connected with the main pathways in the map. The consequences, Trust and Feel secure in the urban consumers' map were connected with the attribute, Information about origin, and with the values, Own health, and Quality of life, whereas, in the map for all consumers, these nodes were not connected to any values. This could indicate that urban consumers, since they have relatively less day-to-day contact with nature than rural consumers, are more likely to seek information about organic food and farming.

There is one main bifurcated pathway in the middle of the map (Map 5.3). Two dominant paths lead to the terminal values, Own health, and Enjoyment. Of these, Own health is the dominant value (35) reached via Eating healthily and Good quality. The abstract attribute Good quality thus acts as a central node for both these paths. Enjoyment is the second most important value of the bifurcated chain and is linked with an instrumental value, Food as enjoyment (or Eating for pleasure). People buy organic dairy products because they think they taste better and are healthier. These food qualities are mostly expressed by consumers as Less chemicals, in turn defined as more natural. These are not new findings but the analysis confirms established associations with some very clear evidence.

In the initial map, Good quality was described by 2 concrete attributes Less hormones and Natural fodder and one abstract attribute, Naturally produced. The strong association with Naturally produced suggests that consumers make a

conceptual leap from nature to product quality, even though common sense would dictate that natural is not necessarily better. Good quality leads strongly to two functional consequences, Eating healthily and Tastes good. This is logical and not a new finding, nevertheless the map provides useful representation of these associations. However no connection is observed between Tastes good and Eat healthily or Avoid health problems, although there is weak link between Tastes good and the value Own health, providing evidence for lay beliefs - if it tastes good it must be good for you.

Map 5.3. Main chains related to the purchase of organic dairy products.



Environmental values were also an important chain in the purchase of organic dairy products, although this was a weaker chain than for the egocentric values. The abstract attribute, Naturally produced is more weakly connected to Sustain the environment than to Less chemicals or Good quality and the terminal value, Respect for nature came from only 8 interviews. Nevertheless this is a complete chain demonstrating a coherent strategy to purchase organic foods due to environmental principles. At cut-off 2 the urban consumers' map showed a complete ladder: Less chemicals - Naturally produced - Good quality - Support organic farming - Protect the environment - Respect for nature. But this ladder disappeared at cut-off 3. For rural consumers, environmental concern did not appear in the map, consistent with a frequent comment during interviews that; Organic products are for urban consumers.

Finally, an interesting path goes from Tastes good to Evokes good memories and Respect for traditions, linked with Nostalgia and Authenticity at a lower cut-off. Comments during interviews suggest that good memories are related to

childhood: I rediscovered the taste from childhood, It reminds me of my grandparents. Thus, there are four significant chains leading to values, which relate to four respects: nature, body, mind, and culture. This fits well with the framework model. Nature and culture are in the outer sphere of the model, and body and mind are in the inner sphere. Likewise, the connection between Good quality and Less hormones (animals' bodies, outer sphere), is weaker than to Less chemicals (human ingestion). Nature and culture are both weaker connections than the egocentric pathways.

Price was a main barrier (map not shown) to the purchase of organic dairy products. The attribute Too expensive (23) strongly connected to Cannot afford and, less strongly to Not willing to pay more. Lack of convenience due to lack of availability in shops was the second highest barrier to purchase. Three less important barriers resulted from comparison with conventional products: Smaller range, Good quality of conventional products, and No difference. A final node Lack of trust was mentioned in only 3 interviews.

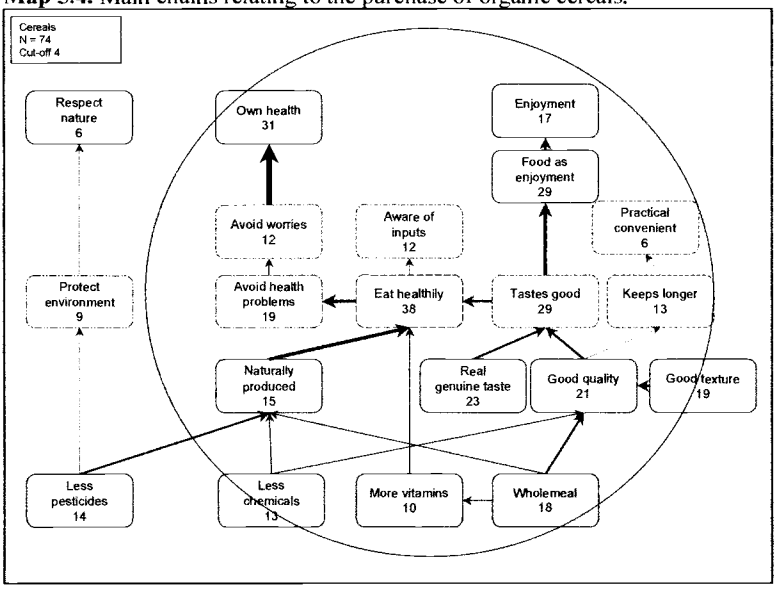
Cereals

The map for cereals is based on 74 interviews and explains 45.9% of linkages (Map 5.4). The map at cut-off 4, indicated a complexity of cross-linked and complete chains suggesting a high level of motivation to purchase organic cereals particularly bread, which is an important part of the French diet and was mentioned in most interviews. The initial map confirmed that, as for dairy products, general motivation to purchase organic cereals centres on egocentric values, Own health and Enjoyment. The map shows two, dominant pathways leading to these terminal values via two central nodes (as for dairy products), Naturally produced and Good quality. However these nodes are more complexly linked with other attributes than for dairy purchase. Naturally produced was described by 3 concrete attributes (Less pesticides/fertilizers, Less chemicals and Wholemeal), and Good quality by two concrete and one abstract attribute (Less chemicals, Wholemeal and Good texture). Quality was associated with storage and texture and, though not linked to traditions as dairy products were, seemed related to authenticity.

Own health is linked with the consequence Eat healthily, which is strongly connected with Naturally produced, and also with Tastes good. In particular, there seems to be a specific motivational pathway relating to the health value of the higher vitamin content of wholemeal cereals. Enjoyment is the second most important value (17) and is linked with Food as enjoyment as an instrumental value. At cut-off 4, a causal pathway was observed from Eat healthily to Family health showing again that health concerns are not only self-oriented. The environment was shown to be as important to the purchase of cereals as it was to the purchase of dairy products; the concrete attribute, Less pesticides connected to Protect the environment and Respect for nature (6), interview transcripts

indicated that French consumers are motivated in buying organic cereals by the low level of pesticides in whole grains (husks).

Map 5.4. Main chains relating to the purchase of organic cereals.



The main barrier to the purchase of organic cereals were hedonic elements, price appeared as a barrier only at cut-off 2, whereas the value, Food as enjoyment was connected with the negative psychological consequence, Bad taste at a higher level. Some consumers reported no difference between organic and conventional cereal products, mainly due to the perceived Good quality of conventional products, which were trusted as much as organic cereal products, and this can be explained by the dynamism of the cereals sector and the wide range of high quality conventional breads on the market. Poor availability of organic cereals (11) also presented a barrier, as did small range of products in retail outlets.

Discussion

This means-end chain analysis confirms the central importance of egocentric values to buying organic food. Like most French consumers, consumers of organic products pay close attention to taste and food quality, and place a high priority on eating and enjoying food. Consumers are concerned with price too but they are nevertheless also motivated to respect traditions. In the French consumer's mind organic products have a story: they create a link between urban consumers and a rural past. Consumers make a conceptual leap from nature to

product quality (Rozin *et al.*, 2004), and organic products are preferred because they are seen as natural and stand in opposition to modern industrial products. Urban consumers in this study, with decreasing contact with the countryside actively seek information about organic food and farming. Trust was important, even if not the overriding determinant of purchase (Sirieix and Schaer, 1999). However, results were also consistent with previous studies that show that many consumers find conventionally produced food products good enough (Storstad and Bjorkhaug, 2003).

Studying the motivations of consumers who buy organic dairy products and/or cereals confirms the importance of two main values: health and pleasure. Causal thought paths extend from less chemicals to naturally produced to quality and taste to health in both product sectors. These two values are often considered self-oriented but the full scope of the analysis shows that health concerns can be other-oriented. Consumers are concerned about their children and families. Concerns motivating the purchase of organic products are not only directly linked with the person who buys them, but also with the health of his (her) relatives. These hidden motives make up the benevolence field described by Schwartz (1992). Enjoyment derives principally from taste but in the map of situations, enjoyment is seen to be the result of a basic drive to do something special, different, to have a break from routine, to try new things, but also to make guests happy or give pleasure to the family.

There is also an ethical dimension to the purchase of organic food. Some consumers, mainly regular consumers, do want to protect the environment and for them a respect for nature is an important value. These consumers think that organic products and organic farming could contribute to higher standards for agriculture, animal welfare, and food, and to a fairer trading system. As a secondary concern to health of the family, consumers are willing to make changes in their lives to adapt to an organic lifestyle as well as consuming organic products. These values belong to the field of universalism (Schwartz, 1992). Equally, however, in the cereals map, the abstract attribute, Naturally produced sits ambivalently at the junction of the egocentric and eco-centric spheres, as if this conception of nature is somehow not quite in the domain of the environment.

Inquiry about points of sale showed that organic food consumers like being something more than an anonymous consumer when shopping, and they value markets, and appear to attach no particular value to the acknowledged greater convenience of shopping in supermarkets. Regular organic consumers wished to support organic producers but personal contacts with producers were important in building trust in the organic food chain. Trust was mentioned in 78% of interviews and was linked by three dominant paths to safety. Feelings of trust were built from personal knowledge of the producer or from external factors such as labels (Sirieix, 2001). Trust and producers were both means to reassure urban and occasional consumers through reliable information. Regular consumers are sensitive to different standards used by producers and non-regular

consumers are interested in understanding the certification system. Distrust was a greater influence than either price or availability on the choice not to buy products from a particular outlet but not on the decision to purchase organic food *per se*.

Meta analysis of terminal values depicted in the maps shows that, in the two product sector maps pathways led to the egocentric values Own health, and Enjoyment and to a lesser extent to Respect for nature, whereas in the retail outlets map, pathways led only to Good relations. However in the situational map, egocentric values are brought together with social values, and the high value placed on social elements of buying organic food is clearly seen to encompass the consumption experience also, by offering something special organic food was part of a process of making guests happy and giving pleasure to the family. This demonstrates the importance of understanding the organic food sector from an holistic, anthropological perspective in which an ideology about social and economic contexts is played out through consumption behaviour.

Conclusion

This study of values associated with the consumption of organic products presents a deeper insight into consumers' motives for buying organic food. Both means-end chain and focus group analyses underlined the same elements in the results adding validity to the findings presented. Previous research has shown that the main motivation for buying organic products is sometimes concern for the environment, but more often concern for the consumer's own health. This is clearly confirmed by this study. French consumers pay particular attention to a healthy and balanced diet; they choose organic products because they perceive that a lack of pesticides, hormones and genetically modified organisms (GMO) used in production, and of chemical food additives in processing, are better for health, and the wholeness of organic foods, lack of processing, is considered to be a defining element of organic-ness. This health motive is in addition observed to link directly with the concept of enjoyment or pleasure. However, this study shows that social and environmental concerns are of some importance to consumers. The analysis demonstrates a dynamic between self-oriented and other-oriented motives. The difference between individual consumer motives does not rely on a mere opposition of egocentric and universal values, rather spheres radiate out from the person; himself or herself, family and relatives, society, and the consumer will, depending on the breadth and depth of these spheres, think about these influences when shopping.

This has implications for the promotion and advertising of organic foods. The well trusted French AB organic label is based on environmental standards but is associated in the consumer mind with health and pleasure for self, family and friends. To increase demand for organic products, it might be necessary to communicate a mixture of self-oriented and other-oriented values. However,

whilst environmental benefits of organic agriculture are enshrined in EU agri-environment policy, health policy has yet to support organic production. In addition, such a strategy risks conferring a negative image on conventional products, and this situation would not be acceptable to industry. Finally, a major factor in the consumption of organic products is trust. Due to the high levels of value invested in organic purchasing by consumers, demand is extremely sensitive to any form of fraud or food scare and there is an expressed need for urban consumers and occasional consumers to understand the system of organic certification and recognize organic product labels.

Acknowledgements
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6
A Conceptual Model Of Willingness to Pay for Organic Food in the UK

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In the 1980s, the consumer revolution began a process whereby food consumerism has since transformed the foodscape into a plethora of niche markets that link product attributes to consumer lifestyle preferences (Wheelock, 1986; Ritson and Hutchins, 1991). Within this process, environmental food markets, and in particular organic products, have come to the fore as the food supply chain increasingly responds to concerns about the impact of industrialized agriculture on nature: as expressed through product quality, livestock, wildlife, and the landscape. This chapter presents findings from a series of focus group discussions that formed the first stage of a Europe-wide questionnaire survey of willingness to pay for organic food.

The focus group method is typically utilized prior to questionnaire-based surveys of consumer behaviour in large populations. The focus group is generally used to generate qualitative data in the form of attitudinal statements that are then translated into numerical measures for statistical analysis, usually via the Likert scale. Due to the greater kudos attributed to quantitative analysis, relatively few text-based analyses of focus groups are published, and this may be indicative of a poor understanding of the value of textual data in consumer research in general (Fade, 2003).

Willingness to pay (WTP) methodology has a long association with consumer research and is the foundation for economic welfare measurement. WTP for an increment (e.g. premium) captures total economic value but does not purport to capture total value (Randall, 2002). In order to broaden the insight into consumer behaviour provided by the WTP concept, this analysis draws on a range of theories from within consumer research, concepts from economics, marketing and interpretive sciences, to build, through multiple readings of text on reported consumer food preferences and behaviours, a model of the process that consumers go through prior to and during purchase of organic foods within

a given purchasing environment. The model portrays a cyclical process surrounding WTP that begins with information received by the consumer in the widest context, tracks consumer decision-making through to the much narrower information context of the marketplace, and culminates in the concept of consumer involvement in the product. Thus, the building of this conceptual model contributes to a growing body of transdisciplinary approaches to the food system in general (Fonte, 2002) and to current debate on the role of economic theory within food related consumer behaviour research in particular (EAAE, 2003).

Underlying Demand For Environmental Foods

The parent project's focus was the marketing of products produced during the organic conversion period. These quasi-organic products face competition from environmental foods produced at low intensity and with reduced chemical inputs. Average willingness to pay for environmental foods is currently only around 5% (Johnston *et al.*, 2001; Holt, 2003) and consumers show variation in WTP by nationality, product specification (e.g. lamb versus beef), certification, and individual values (Loureiro *et al.*, 2002; Thogersen and Olander, 2002). However, several papers recently have noted the difficulty of obtaining a real measure of consumer preference for environmental foods, pointing to the growing dislocation between people and policy (Henson and Traill, 2000; Hamilton *et al.*, 2003). Policy is a means to regulate the level of premium attached to products (Kanis *et al.*, 2003), improve market transparency (Birner *et al.*, 2002), and provide a value orientation to guide public debate. One manifestation of the dislocation of policy and markets from underlying consumer values is the debate surrounding the term consumer itself, and its replacement with the more empowering or rights based terms, citizen and sovereignty (Korthals, 2001).

Willingness to pay is intrinsically related to quality perception. Quality is defined as intrinsic, such as colour, freshness and nutrient content, or extrinsic, referring to such attributes as price, promotion, origin and presentation. Consumers form expectations of quality before and after purchase and expected quality is a partial predictor of experienced quality (Acebron and Dopico, 2000; Grunert, 2002). Consumers differ in their quality expectations, and this is especially true for fresh unbranded foods (Grunert and Valli, 2001). Brands and labels can increase predictability of product quality but, where labelling relates not to individual lifestyle benefits but to the responsibility of consumers within the market, it is unlikely to influence purchasing behaviour. Where consumers lack autonomy, policy intervention may be required to ensure that underlying demand is met (Brom, 2000).

WTP for environmental foods is associated with consumer concerns relating to health and safety, 'reflecting the overall difficulty of garnering a premium based on environmentally sound practices' (Baker, 1999). Consumer concerns is

a container notion covering health and safety, ethics and environmental issues that signifies both perceived risk and loss of trust. There is a tendency to view the consumer as technophobe but consumer concerns about agricultural industrialization may well indicate a rational caution.

Post-structuralism illuminates the basis for western conceptions of science and economic development; the desire to control through technological intervention (Bourdieu, 1984), and the power structures that are inherently bound up with such knowledge and technology (Foucault, 1980). The influence of post-structuralism has been a rising dissent over the inseparability of science from politics and a divergence of expert and lay opinion (Maguire and McKelvey, 1999; Knox, 2000). Lack of trust in science-based evidence is embedded in the concept of the post-modern consumer society (Beck, 1992). Consumer perception in late modernity is mediated by lack of trust in both government policy and scientific information (Grobe *et al.*, 1999; Bocker, 2002). Where trust has been eroded, reassurance cannot be provided nor confidence re-established through science alone (Brom, 2000). Conversely, because the concept of organic is judged by the scientific rationality of modernity, which ecological science rejects, this has to some extent led to a failure of the organic view of 'the interplay between man and nature as reflected in technology' (Michelson, 2001), to realize a political and economic breakthrough.

Thus, whilst government and industry support high technologies, the consumer questions the underlying need for them. But if, contrary to the assumption that post-modern consumer society implies a transition from constraining norms to a situation in which individuals are free to select an identity through product choice and purchase, consumers are in actuality, despite the proliferation of niche markets, embedded in both historical and social relationships. This is not least because the invisible hand of the market place also socializes consumer perceptions, so the post-modern consumer may be an optimistic construct (Clarke, 1998; Scholderer *et al.*, 2002).

Part of the problem of exposing underlying consumer demand, lies in the growing food illiteracy in Europe (Oltersdorf, 2003). The role of information is vital therefore to ensure that the consumer is connected with his/her preferred products. Consumers are highly influenced by industry and media information but government has an important responsibility to shape the information environment in which consumers make choices, through the endorsement or otherwise of scientific evidence (Ippolito, 1999).

Methodology

The objectives of the focus groups were to assess:

- Purchasing behaviour with respect to organic foods;
- Attitudes to food and farming; and

- Knowledge and beliefs regarding food related health and environment issues.

Female primary household shoppers were recruited in the Reading area, a conurbation in southeast England, UK, of approx. 400,000 inhabitants corresponding to a major town/minor city. Consumers were recruited by Sensory Dimensions (Whiteknights Campus, Reading), into four groups of eight to twelve women (as suggested as optimal in Kitzinger, 1995), according to age and frequency of purchase of organic foods: Core consumers (purchasing at least a few organic food items every week/shop) 18-40 years and 41-65 years; and Peripheral consumers (purchasing organic food less than every week/shop) 18-40 years and 41-65 years. Each group had a 50% quota for socioeconomic groups ABC1, based on the UK Registrar's Classification A, B, C1, C2, D, E.

Group discussions were moderated by the author and were stimulated through a range of visual prompts: photographs of farming, countryside, and farmers' markets, and product packaging showing brands, labels, standards and certification. The use of direct questions was avoided since these tend to elicit responses related to functional attributes and restrict discussion to the known problematic. Also, indirect questions reduce bias between researcher or moderator and participants, and are more likely to reveal 'consumption motivations such as social positioning and the approval of others' (Fisher, 1993). Discussions were recorded and transcripts were analysed using NVIVO software.

First level coding followed the constant comparative method in which a coding framework is expanded and collapsed to allow patterns and analytical themes to emerge inductively from the data (Strauss and Corbin, 1990). This enabled familiarization with the text and its reduction to statements of opinion; either verbatim or where these were cumbersome, reported. At the second level, codes were further aggregated and disaggregated to produce codes of a more abstract nature. Structural fluidity during second level coding followed the dialectic of interpretative research that, in highly structured systems nothing new can emerge whilst overly random systems are formless. The food consumer and market research literature was divided into three broad theoretical perspectives: food economics (willingness to pay and nature of goods), marketing or cognitive psychology (theory of planned behaviour and information processing), and post-structuralism (interpretive approaches such as discourse analysis).

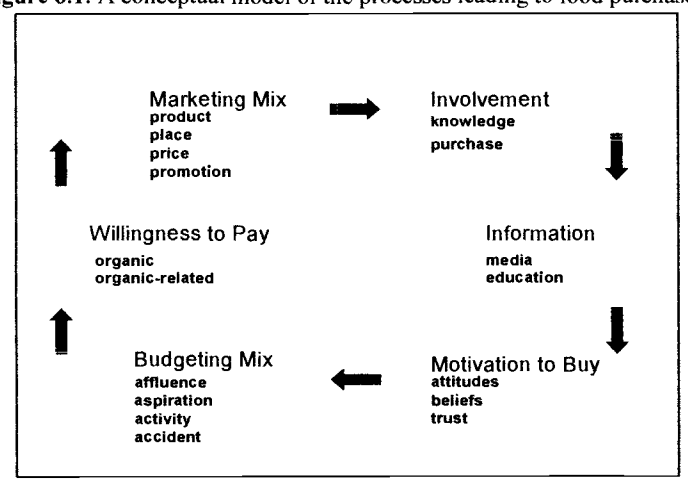
On this basis, textual data was structured through a process of iteration between data readings and research literature, which provided the basis for deriving cognitive maps, or collages of consciousness (Modelmog, 1998). Cognitive mapping developed from information processing theory in cognitive psychology but the idea that cognition itself may be social in origin allows the depiction of underlying thought processes as a function of groups as well as of individuals (Ward and Reingen, 1990). On this basis, transcripts were treated as the product of the group, and cognitive maps were used to provide a holistic understanding of preferences and values of the groups whilst at the same time

noting within the map the range of consensus and conflict amongst group members.

Due to the lack of distinct demarcation in attitudes and values of participants in the four age and organic consumption-related focus groups, the four cognitive maps were distilled into one cognitive map depicting the interplay of abstract systems of beliefs (cultural meanings) with experientially-real consumer activities. The final stage of the analysis was the conversion of the cognitive map into a conceptual model of the processes surrounding the purchasing decision, and the concept of willingness to pay (Figure 6.1). The model was therefore neither fully deduced nor induced; it evolved from an understanding of accepted theory as applied to the interpretation of the phenomenological insights of focus group participants (Thompson and Hirschman, 1995).

A Conceptual Model of Willingness to Pay for Organic Food

Figure 6.1. A conceptual model of the processes leading to food purchase.



The model's constructs

Information deriving from both public and private sectors can be seen as an immediate precursor to motivation to buy. Information is defined as general information arising from educational and media influences (i.e. not including in-store information which is integral to the marketing mix). In contemporary western society, perceptions are shaped by forms of social guidance ranging from culturally sanctioned expert opinion to more subtle influences of fashions and the mass media plays a major role in this normalization process (Thompson and Hirschman, 1995). But equally, research shows that consumers filter, or judge, government health education messages through their own observations (Rose, 1985).

Motivation to Buy (MTB) differs from WTP because MTB is a predisposition towards purchase that is then influenced by the economic considerations of the budgeting mix. MTB uses the structure of the theory of planned behaviour as a framework for interpretive analysis of text.

The theory of planned behaviour (TPB), or theory of reasoned action, has been widely applied to explore the cognitive decision-making processes of different social groups such as consumers and farmers. Although most variables and assumptions of the model have been questioned, there remains confidence in the TPB as a standardized tool for explaining behaviour (Beedell and Rehman, 1999; Brendl *et al.*, 2003), by providing 'a consistent conceptual scheme with theoretical links from beliefs to actions' (Ajzen and Driver, 1991). Like WTP, the TPB assumes that people are essentially rational. TPB also assumes that, intention is the immediate precursor to behaviour, but although the model has been adapted and refined considerably, the exact nature of the link between intention and behaviour remains unresolved; consequently attitudes to e.g. a brand must be distinguished from attitudes to using the brand in a specific context (Foxall, 1983). In the TPB model, intention is derived from attitudes, or predispositions to behave in a certain way, as affected by norms of conformity, whilst attitudes and norms are formed from beliefs about the functional benefits of behaviours, the likelihood of benefits occurring following a behaviour, and the social desirability of behaviours.

Post-structuralism theories address the covert influences on food purchase and provide further insight into the belief structures underlying lifestyle behaviours (Vincent, 1996; Dynan, 2000; Ackerman and Tellis, 2001). Rather than explain external actions in terms of inner mental processes such as attitudes, interpretive methods highlight shared cultural meanings that underlie the understandings expressed by individuals, and investigate the processes by which belief systems create and propagate power. Interpretive methods explain people's views in terms of socially shared symbolic or linguistic constructs or discourses (Antaki *et al.*, 2002; Thompson and Hirschman, 1995). The central tenet of post-structuralism is that understanding cannot take place without communication (Fairclough, 1995). Language is a central issue in many real world problems and is indicative of ideology (Brumfit, 1995). Discursive psychology treats mental constructs as hypothetical constructs inferred through the use of language (Edwards and Potter, 1992). Language can be used as a qualitative measure (Fox and Irwin, 1998). During coding, verbal expressions of WTP were specifically recorded (Antaki *et al.*, 2002).

The **Budgeting Mix** is a hypothesized process determining the available food budget prior to entering the retail outlet, segregated into four nominal components mirroring the structure of the marketing mix, to provide symmetry to the model:

- Affluence: refers to the level of disposable income available and may vary from week to week depending on the nature and sources of income.
- Aspiration: refers to food versus non-food consumption preferences and includes attitudes to money such as frugality/extravagance.
- Activity: refers to ongoing, lifestyle and lifecycle related activities, sport and leisure. festive occasions and entertaining that create demands on food and non-food budgets in any given week.
- Accident: refers to unforeseen or acute demands on the budget, such as the cost of illness or house repairs.

Willingness to Pay methods include conjoint analysis and experimental methods and contingent valuation. Conjoint analysis and auctions simulate a face-to-face market interaction whilst contingent valuation, the stated preference method, involves direct questioning to elicit valuations of a particular good or service by posing hypothetical markets (Bennett and Tranter, 1998). Performance in the hypothetical market situation is often correlated with previously reported attitudes. WTP surveys have proliferated but can be biased by the warm glow that respondents feel when offering higher prices. This effect increases with perceived desirability of the good. In the model, WTP follows the budgeting mix. WTP as measured in most surveys represents the outcome of an average or hypothetical budgeting mix.

In this model, WTP is not the final outcome because the shop environment can affect willingness through the marketing mix. Thus, the consumer approaches purchase with a predetermined (but potentially unconscious) WTP that can be influenced at the time of purchase. The model does not however account for deviations from WTP on the basis of mood or emotion and it is likely that emotion affects consumer interaction with the marketing mix. Although no effect on brand preference has been observed, low emotional stability has been correlated with high information needs (Verbeke, 2002).

The **Marketing Mix** is a situation specific construct adapted from classical marketing theory. Although the importance of the environment is increasingly stressed in both marketing and communication research (Fox and Irwin, 1998), the theory of planned behaviour, and willingness to pay, largely fail to reflect the dynamism of the environment in terms of the momentary impact of in-store information or other stimuli, such as product sampling that are integral to the translation of intention and willingness into involvement. In economic theory, the market denotes a set of rational relationships in an abstract space; the hidden hand of market forces should not be affected by location. However, in the original (common) sense of the word the market is a culturally meaningful event situated in time and space, 'the market is the (bustling) town square on the first Saturday of each month' (Slater, 2002). Likewise consumers are influenced by

the atmosphere and animation of the shop environment, eye-catching packaging and displays that entice. The marketing mix is made up of four elements:

- Product: based on nature of goods theory, the appeal of the product depends on: search attributes perceived prior to purchase e.g. visual and olfactory; experience attributes, such as flavour and texture that are evident only after purchase; and credence attributes, meaning qualities that may never be established with certainty, such as food safety and environmental attributes. The appeal of credence goods largely depends on assurances provided through certification and labelling (Liebi, 2002).
- Price: the cost of product including special offers and other influences on price not anticipated during the budgeting mix.
- Place: the positioning of organic foods in-store and in relation to other products.
- Promotion: any inducement to purchase including non-price offers, leaflets, and demonstrations.

Involvement is defined as the sum of knowledge of organic products, farming practices and standards, and behaviour (in terms of the frequency of purchase and products purchased). In the literature, the construct can refer to either product or personal involvement. Personal involvement is particularly pertinent to the study of complex consumer concerns such as ethics and the environment (Weatherell *et al.*, 2003). High personal involvement implies product knowledge and the ability to discriminate between test samples in both affective and perceptive judgements (Bell and Marshall, 2003). A prime marketing objective is to increase personal involvement through product information, specifically about functional attributes (Grunert and Beckmann, 1999).

A consumer's involvement with product thus represents both the end point of the cycle and the starting point of the subsequent willingness to pay cycle. By adopting a continuous improvement mode for understanding food purchase, new experiences and information can be seen to build and reinforce consumer behaviour.

A model of willingness to pay for organic food in the UK

Combining theory of the processes surrounding willingness to pay with the conceptual map, led to the following interpretative model for organic food purchase in southeast England. The model begins with the outcome of purchase, involvement, and traces this level of attachment to or engagement with organic food back through the model's constructs from willingness to pay to motivation and beliefs.

Involvement

Focus group participants were urban consumers who shopped in supermarkets. Rural consumers were viewed as a separate body of consumers. Purchasing frequency varied between individuals but not markedly between Core and Peripheral groups and consisted of trial and repeat purchase.

Products purchased: There was a tendency to shop for fresh organic fruit and vegetables, and processed foods of known quality identified through brand affiliation. Eggs were purchased free range and meat was purchased from a butcher or through retailer (less intensively reared) premium labels.

Product knowledge: Product knowledge was similar between the groups. Product range was perceived to be increasing, with the exception of meat, whilst fresh fruit and vegetables in supermarkets appear to be increasingly uniform in appearance. Both Core and Peripheral groups experienced poor storage quality of organic fruit and vegetables and this was attributed to the lack of preservatives.

Knowledge of organic standards: Understanding and awareness of organic food standards and regulations was limited to an association of organic with chemical free. Issues which participants had some knowledge of included the Soil Association, a conversion period, and an EU Regulation with controversial poultry housing standards. Participants were aware that there was more to know but whereas the Peripheral groups felt that they knew 'enough' about organic standards and farming to purchase the products, Core groups felt that consumers had a right to be better informed or educated. Knowledge of the less intensive production systems behind retailer premium meat ranges such as Taste the Difference, about which information is provided on food packets, was lower than for organic, despite the purchase of these products rather than organic meats.

The Marketing Mix

Price: Organic food was considered to be very expensive and the 'ordinary consumer will never be able to afford organic' although premium was perceived to vary by product.

Product: Consumers identified strongly with brands although this was to some extent felt to be a failure, necessary in the face of time constraints and uncertainty about product attributes. Most participants used brand as an indicator of organic quality and value for money. Known brands were repeat-purchased. Retailers' own organic labels were considered to be brandards because like brands they have easily recognizable packaging, but represent a comprehensible standard (organic) rather than a product formulation. There was confusion surrounding the concept of organic free range.

Placement: There was mixed preference for organic food stocked in a dedicated aisle in the supermarket or alongside conventional products.

Consumers felt that an aisle was for people who buy organic food normally and the aisle is useful for finding specific organic products but generally, for their level of consumption these consumers felt that it was more appropriate to be able to make individual, product-based choices about organic or conventional.

Promotion: There was some suspicion of labelling and the value of labelling information was considered to be low. Consumers were time-poor and felt guilty but could not spend time reading labels, except for the purpose of finding vegetarian and diet foods. The link between soil health and human health, as illustrated on the Soil Association logo, was not understood, although concepts such as the good earth were well received. Participants felt that there was a need for informed shop assistants to provide personal assistance, demonstrations and tasting sessions, in-store, particularly for festive occasions and seasonal foods. There was a perceived need to market agri-environment standards and environmental food quality within a framework of comprehensive scale assessments and codes for different production and processing methods, a system similar to that for coding gift cards.

Willingness to Pay

Organic: Some participants endorsed premiums of around 25% however WTP was strongly related to unit cost. Thus a cucumber for 50 cents at a 25% premium was acceptable but a 25% premium on meat at 6 Euros per kilo was not. The additional association of organic with fair trade e.g. bananas, increased participants' WTP for organic. Consumers in the Peripheral foods group were WTP for frozen organic vegetables.

Organic-related: Environmental foods, including products in conversion to full organic status would justify 50% of the organic premium. The groups did not think that an environmental market would detract from the organic market because committed consumers would purchase organic at any premium. Consumers would be drawn however from the conventional market. WTP 'a little bit' was reported for 'a lot better' taste of fresh vegetables, also for British or English or Little Red Tractor, which was the second choice label for vegetable purchase after organic for some of the older consumers. Some participants felt that it would also be worth paying 'a few pennies' for agricultural policies that were fair to farmers.

The Budgeting Mix

Affluence: Despite the recruitment protocol, there was little evidence that participants were affluent. General observations about the economy included the high rate of tax the British public pays compared to Europe, and better food was perceived to be 'too expensive for ordinary folk'.

Aspiration: Participants felt that they were 'maybe just swayed a bit' by food issues and acknowledged that whilst money was the bottom line, the way they

evaluated their food budgets and interpreted cost was in part determined by deeper underlying evaluations. For example, many junk foods such as crisps are expensive in terms of their food value but were understood to be purchased for their non-food benefits. Participants' understandings of the organic premium were that increased demand should lower price; food without chemicals should be cheaper; and for some, that government support should lower the price artificially so that organic foods could be affordable to the majority public.

Activity: Consumers were unashamedly urban dwellers. Peripheral groups perceived farmers' markets as a leisure activity whilst some Core group members made an effort to frequent markets as part of their usual shopping routine.

Accident: Consumers talked of disposable income both affectively, 'if I'm feeling rich', and fatalistically, shopping 'on a rich day', but also spoke of actual and unexpected windfalls and additional expenses that occur during a week, illustrating the variability of disposable income with which consumers approach the shopping experience.

Motivation to Buy

Attitudes to food and organic: Consumers were generally confident in the food industry and quality of food. Primary motivation for buying organic food was the perceived health benefit from reduced pesticides and taste was a close second motivating factor. However affordability was the bottom line for all participants. The Peripheral groups were not convinced about a superior organic taste even though this seemed to be against popular opinion, 'I know it's heresy'. Texture of fresh organic fruit and vegetables was also perceived to be poor by some participants but there was an acceptance that they had become habituated to conventional foods such as 'good old frozen vegetables' and this affected their appreciation of fresh organic vegetables. These consumers were likely to purchase organic food for a dinner party. Core groups were more appreciative of the environmental benefits of organic agriculture and were more likely to perceive a superior organic taste and texture. Participants had positive attitudes to environmental brands and perceived conversion as halfway organic. The taste of retailers' own label quality meats such as Taste the Difference range was highly regarded.

Health beliefs: Agrochemicals were perceived as a food safety rather than food quality issue. All four groups had a conception of super or over cleanliness, which is destroying natural defence mechanisms and immunity in humans and farm livestock. The Core group was slightly more concerned about the effect of chemicals on health and the connection between organic and health. The Peripheral group was slightly more sceptical, perceiving agrochemical-related health hazards to be very long term and potentially 'diluted' within the growing crop/animal. Participants' beliefs about the quality of food were centered on the quality of ingredients. Beliefs about health focused on the concept of freshness.

Freshness was believed to guarantee flavour and nutritional value and visual appearance was the most valued indicator of freshness leading to the following attribute string: Appearance → Freshness → Taste → Nutrition.

Beliefs about the environment: There was a recognized need for an environmental control strategy. Wilderness was associated with lack of control and idleness; nature needs to be managed and farming plays an important role in this but should not maintain the same level of tidiness as domestic gardens. Although there was a preference for lack of chemicals in agriculture, older participants with experience of home vegetable gardening empathized with farmers using some chemical control.

Trust: Some comments relating to trust were explicit, e.g. I don't trust the government, whilst other indications came from the interpretation of statements revealing perceptions of power such as, supermarkets make vast profits. Despite some evidence of loss of trust in both public and private sectors, nevertheless there was a recognition that consumers are 'demanding' in terms of lobbying for increased welfare, safety and nutrition standards. There was a vein of nationalism and anti-Europeanism. French agricultural policy was considered more supportive of farmers and this was perceived as both a direct attack on the English, because 'they've never forgiven us for Agincourt', and as illegal, and therefore EC law should be changed to allow the British government to support farmers too. There was some controversy as to whether the French no slaughter policy for controlling foot and mouth disease was better or not than the UK policy based on safety issues. Younger participants tended to view farmers as more autonomous in the current agricultural economic crisis whereas older participants were more critical of agricultural policy. Attitudes to supermarkets were mixed. On one hand supermarkets were perceived to hold considerable market power whilst on the other hand they were spoken of with pride, 'good old Marks', and supermarket standards were trusted, 'Waitrose quality'.

Information

Media: Participants felt that they only get 'snippets' of information about the benefits or otherwise of organic food consumption but that media drives the perception that organic food is 'better'. Public sector policy was not perceived as supportive. It was felt that the amount of information required for full explanation exceeds the available space on packaging.

Education: There was a perceived lack of education about food and farming at home and school but more food and nutrition science in the school curriculum now, in particular hygiene and safety. Schooling is also driving environmental concern amongst children and parents feel pressure to consider the environmental aspects of food.

Summary

The four groups were similar in both their attitudes and organic food consumption levels, and did not see themselves as being 'into' organic. Points of contrast in discussion occurred as often between the age groups as between Core and Peripheral groups. The typical food purchase pattern consisted of organic fresh fruit and vegetables, some branded, processed organic foods, free-range eggs and meat from the butcher, or retailer own label premium ranges.

Overall, confidence in food was high but consumers were aware that they lacked information that they needed to make food choices. There was clearly a willingness to comply with nutrition and safety advice, consumers with children had a strong desire to provide good food for the family. But most participants expressed a degree of confusion about the messages being sent out regarding food consumption and mothers experienced this as guilt.

Generally, organic eating-quality was perceived as superior although there were dissenters, but keeping-quality of fresh organic produce was considered inferior to conventional. Organic food was perceived as very expensive but some participants endorsed a premium up to around 25%. However, their understanding of supply and demand led them to believe that either as demand grows the price of organic food should fall or to a lesser extent that the price should be lowered (including through government support) to allow latent demand to be expressed. Premium of one or two pence were readily endorsed for many other aspects of food consumption including Britishness, small-scale and less intensive agriculture, and higher standards of livestock welfare.

Environmental food quality was perceived in terms of a scale from intensive through extensive to organic. Participants believed that conversion grade foods could exist within an environmental sector and would be a useful source of income for converting farmers. Older groups were more opinionated about policy, trade and the economy, and agricultural policies were generally viewed negatively, although there was a distinct pride in Britishness and Englishness. Younger groups were more inclined to view farmers as complicit in environmental degradation rather than simply subject to regulations. Overall, the attitude to the agri-environment was one of responsibility for controlling nature so that it provides food, supports wildlife, especially bird populations, and strives to be picturesque. Farmers keep nature under control and manufacture countryside.

Participants felt that the formal education system (schooling) has a role to play in increasing general awareness of food and farming. Older participants also saw the home environment as information poor with respect to food handling. Organic standards were not well understood and labelling does not appear to have reduced consumer confusion about what the organic label actually means. Participants were vaguely aware that some body somewhere was regulating organic production to some specified standards. There was a

perceived need for information beyond the capacity of labelling; more leaflets in-store and mail shots were both suggested.

Conclusions

In the UK, organic consumer markets have relied heavily on urban AB consumers, however this analysis demonstrates that consumers in lower income groups are also purchasing organic foods and are actively seeking to assess both information about and eating quality of organic foods. However, even though consumers were recruited on the basis of purchase frequency, there appeared to be no qualitative difference between the Core and Peripheral consumption groups in their approach to organic agriculture. There was an overriding sense that these consumers perceived organic as something different, that there was something extra about organic that they themselves did not buy into. Even consumers classified as regular purchasers of organic foods professed to be not into *it*, implying the existence of a group of organic consumers who purchase organic food for ideological as well as quality, safety or even ethical reasons.

The analysis suggests that there is a strong underlying demand for environmental foods. There was clearly a widespread feeling amongst all four groups that animal welfare of farm livestock needs to be improved. There was also a groundswell of belief that both agricultural product quality and countryside outputs would benefit from more environmentally benign methods. And there was a willingness to pay a little bit for improvements in these directions. But the concept of organic was not well understood. There was little awareness of the link between agricultural cycles, nutrient-recycling processes such as composting, and the maintenance of the environment. And, although consumers were aware of the growth in farmers' markets over recent years, there was no understanding of the association between organic and local.

All respondents were urban consumers from the south of England and this cultural boundary represents the population to which findings should have the highest degree of generalization. Reconnection with the producer was not a major priority for these consumers. Farmers' markets and other initiatives were considered interesting but part of a rural lifestyle rather than an urban lifestyle. In this assertion there was no sense of loss of connection with producers or of resignation to some inferior mode of existence. It is entirely possible therefore that for urban supermarket customers, reconnection to producers in the form of high quality and comprehensible standards and labels, and perhaps photographic evidence in store, of farm environments as is now provided by quality multiple retailers, would suffice. The emerging local organic market is potentially therefore a more rural market. Acknowledging the existence of dual markets may be necessary to further understand the organic sector as an evolving entity rather than as pieces of a linear chain. With respect to product quality on the other hand, participants were keen to be connected with organic foods through in-store information and sampling.

The marketing of credence goods, such as organic foods, which have product attributes that are not apparent at the time of purchase, namely environment, safety and ethics, depends on assurances provided through the processes of inspection, certification and labelling. Organic certification creates a bounded product that can be differentiated in the marketplace and sold at a premium. However, although organic certification has enabled the growth of a bounded market with added value, organic standards have not reduced consumer confusion, and labelling is subject to mistrust. Consumers seem to rely on brands as a symbol of predictable quality, in particular, for foods embodying credence attributes. Participants placed considerable trust in own label organic brands and the easily identifiable logos and packaging on retailer own labels reportedly reduced search time. Thus the retailer own label organic could be termed a *brandard* in that it combines reliable product formulation with a regulated standard. The older participants also placed high levels of trust in concepts such as Britishness.

Currently the premium for organic is considered to be too high for the ordinary consumer but many consumers do report experiencing superior quality of organic products, in particular a small range of branded goods, which were popular amongst consumers in all groups. The stated willingness to pay a premium of around 25% for organic food falls short of the existing premium on many organic foods (usually 50-100%). However willingness to pay appears to rise with added qualities such as fair trade and quality of ingredients. This has important implications for marketing. Rather than promoting organic on the basis of an inclusive philosophy it may be more advantageous to emphasize the multiple aspects of the organic ethos where these are embedded in the product, such as trading standards and food miles.

Agricultural policy under Common Agricultural Policy reform increasingly promotes new forms of agriculture, which has implications for the quality of products reaching the market. Specifically, in the area of food environmental quality, in order for consumers to operate with full information in a free market and to appreciate the food value of different agricultural systems, effective information systems are needed. Marketing and education perform two key functions informing the consumer about product availability and healthy choices. However, on the one hand there is a reported deficiency of information and education about food and farming in general, both at home and at school, and on the other hand health issues have tended to become blurred by media and marketing influences. The result is confusion about what health goals the consumer should be pursuing and what products actually best meet these goals, with consumers purchasing organic food out of a sense of guilt or blind faith.

Consumers feel alienated from policy and though understanding of EU regulations is limited, participants in these focus groups were motivated to learn more about policy and to be involved in the policy process. This is demonstrated by participants' belief that the public sector should subsidize organic food production, at least to the point at which a critical mass of organic food

consumers is able to bring down the premium on organic food through market forces. Therefore, rather than asking what consumers are willing to pay for organic food, perhaps the question should be: what policies will support a price for organic food that meets underlying consumer demand?

So-called deliberative inclusionary processes, such as citizen's juries, provide policy makers with a valuable consumer stakeholder perspective and allow consumer learning to take place through interaction with policy makers and other stakeholders. Citizen's juries have been used with some degree of success in the context of conservation and environmental management. Studies such as this add weight to a growing body of opinion that the complexities of environmental management are equally present in debates surrounding food production and public health. In the final analysis, in order to obtain in-depth information about consumer perceptions and preferences in relation to policy arenas such as food production, quality and health, it is recommended that stakeholder forums be held to raise awareness of issues pertaining to food and the environment, such as ecology and organic production costs. Furthermore, such activities should reflect gender, age, rurality and ethnicity of the UK population to a far greater extent than has been possible in these focus groups. But whether such forums would ultimately shift consumer demand towards fully certified organic products or increase demand for the growing range of environmental foods produced according to a more subtle interpretation of ecological standards, remains to be seen.

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7
Motorcyclists in the USA and the UK: Risk Perception of Local and Organic Food

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While patterns are emerging in the global trends of organic food consumption, such as the association of upper income and education levels with organic demand, relatively less is known on the micro-scale of everyday practices such as shopping by different types of consumers in different countries (Raynolds, 2004; Willer and Yussefi, 2004). This chapter attempts to bring risk theory into discussion of organic agriculture, and its theoretical touchstone is the risk society thesis of Beck (1992), which portrays a world threatened by nuclear waste, atmospheric pollution, and genetic modification (GM). Beck's global critique of risk was so persuasive, in the context of agricultural intensification in Europe and Germany in the 1980s that it was taken up by British theorists Giddens and Lash. However, just as knowledge of global organic trends tells us little about individual shoppers, Beck's risk society thesis has been criticized by Tulloch and Lupton (2003: 16) as too sweeping, and for ignoring the ways people see risk in different places.

Theory and a Chronology of Risk

Central to this section is a comparison of how different types of consumers react to various risks. First we continue with theory. Beck (1992: 36) claims 'smog is democratic', affecting rich and poor alike. Yet, it does not necessarily follow that foods will inevitably become as polluted by reckless biotechnologies as the atmosphere is by noxious gases. Anti-GM protesters claim that pollen from outdoor GM experiments endangers the genetic integrity of ancient seed varieties. Such experiments may not be best practice, but their negative externalities might be local or regional, not necessarily global. Furthermore, if such anthropogenic dangers threaten nature, in a telos of risk, human actions

may counter the dangers through activities such as establishing seed banks, and incorporating some of these varieties into organic agriculture.

Tulloch and Lupton (2003: 2) claim that Beck's approach to risk varies, between an empirical realist perspective of pollution and environmental degradation, and a constructionist approach in which risk is culturally constructed. Beck's shifting perspective is not unlike many consumers who perceive oil spills as objective risks to the environment but, compared to deep ecologists, are uncertain about the invisible dangers of nuclear power or biotechnology. Many consumers depend on experts such as scientists to assess invisible dangers, but Lupton and Tulloch note they also ask the opinions of friends and family in assessing risk. Phillimore and Bell (2005) find that safety training and knowledge about the technology of chemical works in Germany tended to ease workers' fears of accidents.

This social process among chemical workers is reflected in my motorcyclist survey. Many bikers enjoy studying the technical aspects of motorcycles, as well as riding techniques. Motorcyclists often ride their machines for simple transport. But many ride bikes largely for the thrill of wind in the face, and greater exposure to nature than they experience when safely cocooned in a car. Cohen and Taylor (1992, cited in Lupton, 1999) describe such risk-takers as attempting escape from everyday life. It is fascinating to probe bikers' perception of long-term food risks since they routinely risk instant injury while biking.

That education on risks can enhance consumers' trust in chemical technologies, and even lower the risk of accidents, may comfort policy makers. The same is true of motorcycling, where safety training reduces accidents. But, if policy makers are to make successful choices in the circumstances of health and agro-environmental issues, it is not enough to determine which risks exist ontologically. It is also essential for policy makers to determine how relevant sub-cultures perceive risk and consumption. A case in point is Denmark, where the organic food promoted by the government and supermarkets in the 1990s outpaced consumption. This anomaly recently marked its organic sector with reversion by late entrants back to conventional farming (Noe, Chapter 13 this book).

Differences in risk construction were revealed in a comparison of beef consumption in London and in a village in Wales by Caplan (2000; Tulloch and Lupton, 2003). Caplan shows how different information networks evoked varied consumer responses to bovine spongiform encephalopathy (BSE appears as variant Creutzfeldt-Jakob Disease (vCJD) in humans). Commonly known as mad cow disease, BSE is an archetypal food scare, resulting from the 'intensive feeding regime of the industrial cow' according to Whatmore (2002: 163). BSE is a useful lens for viewing consumption. After the British government admitted a link between BSE and vCJD in 1996, many London consumers cut beef from their diets, switched to other meats, or even vegetarian diets. This urban phenomenon was enough to depress the beef market, yet within a few years,

British beef consumption had regained 1996 levels. In a village in Wales, the chronology had some underlying similarities to London, yet they were expressed more quickly.

Caplan relates that, like Londoners, Welsh villagers immediately recognized the risk of BSE to their own health. But instead of abandoning beef, their local knowledge allowed a more sophisticated response. Local butchers displayed signs and labels informing them of the origin of different cuts of meat, and since many Welsh customers had individual or hearsay knowledge of the relevant farmers, it increased their trust in beef. Common to both London and Welsh experiences was an initial search for a strategy to counter the BSE risk. The Welsh quickly decided that to spurn beef would not only remove a customary food, but threaten local beef farmers and retailers, some of whom were their friends. Defending local communities in the BSE crisis by buying products from trustworthy farmers in the community was also observed by Winter (2003).

By contrast, urban Londoners who were part of a globalized, rather than local food chain, were content for a longer period with switches to alternative meats or even foreign beef. Nevertheless, most of the Londoners eventually did return to British beef, as evidenced by recovery of the national market. Lupton (1999) notes that reflection on risk changes constantly according to expert knowledges, local knowledge networks and personal experience. In the London case, some consumers renounced beef permanently. But others switched to beef products perceived as less risky, whether it was labelled organic, from other countries, or traced to regional farmers. Others returned to conventional beef, when human deaths did not become an epidemic.

In Germany, the pattern was slightly different after BSE was found in 2000. Though Germany had many thousands fewer cases of the disease than Britain, it took years for its beef market to approach recovery (German Farmers Union, 2004). This similarity is not enough to assume the pattern was replicated when the epizootic was discovered in the USA in 2003.

In sum, the BSE chronology of risk may be described as the following: Official confirmation of it in the food chain is followed by sharp drops in consumption of conventional beef, and rises in demand for organic beef. After this, the food scare recedes. Other risks, from job losses in the local economy, to terrorism alerts, begin to push beef down consumers' hierarchy of risks. Occasions such as barbecues or Sunday dinners appear lacking without it. Many consumers return to beef when they see others doing so. Nevertheless, growth in sales of organic or locally traceable beef and dairy products shows that significant changes are occurring in the food system.

Research Questions and Context

Now we can move discussion from totalizing theories of risk toward preference for local or organic food. While organics may protect health from BSE, rejection of local in favour of organic-industrial products, shipped many food miles from

where they are grown, may worsen local risks of farm and retail unemployment. One Seattle motorcyclist, Murph (pseudonyms were given all respondents), who does not eat organic regularly, but is an avid hunter and angler, succinctly said he prefers local food 'for economic benefits to the community and freshness'.

Sage (2003: 47) notes that 'Research on the emergence and development of alternative food (or agro-food) networks (AFNs) in recent years has highlighted the significance of quality, locality and ecology as establishing the embedded character of food derived from this.' Participants in AFNs may privilege different types of embeddedness. The quality of certain products may lie in traditional methods rather than origin. Local or regional origin has higher priority with others (Ilbery and Kneafsey, 1999). Ecology, or nature, epitomized in organic production, may attract others. Often, AFNs are embodied in local box schemes, farmers' markets, farm shops and community supported agriculture (CSA); the food is often, but not always organic. Thus, consumers who insist on organic over local food may bypass local farmers and retailers, threatening AFN survival.

This suggests that different geodemographics give different priorities to the health and to the social ramifications of BSE. Goodman (2003) writes that AFN literature emanating from Europe tends to privilege food safety, while that from North America reflects an obsession with wresting control from agribusiness, in favour of family farms and local networks. Thus, Murdoch and Miele (1999) describe a flight from BSE back to nature, while Pollan (2001a, b) and Guthman (2004) scrutinize the industrialization of organics, allowing multinational corporations to meet certification content rules on inputs but ignore local socio-environmental processes traditionally identified with organics.

That some writers emphasize a link between organics and health, and others stress the social benefits of local food networks, leads to an obvious question: Can the trajectories of local and organic food be reconciled? In Newcastle and Seattle, food co-operative officers and grassroots activists argue that much more food can be local and organic, as it was a century ago. However, they say that food labelling must first be improved. They maintain that after public awareness of environmental, health, and political-economic issues is improved, there will be greater demand for local food that is also organic (The Campaign to Label GM Foods, 2003; Goodman and DuPuis, 2002; PCC, 2004; Willer and Yussefi, 2004: 26). But that goal is probably far away, and we are left with our query of whether specific groups of consumers prefer local or organic food.

As mentioned above, several studies have found a correlation between high levels of educational attainment and higher income levels, with a propensity to consume organics (Hartman, 1997; Willer and Yussefi, 2004). But simple interpretation of this correlation is a mistake. While one may be less surprised to find organic food on the dinner table of well-paid professors, organics are also found on the tables of motorcyclists. In order to avoid the ecological fallacy, it is important to question individual consumers, first to determine whether or not they consume organics, and then to determine whether their consumption is a

reaction to food scares, to support local organic farmers, or perhaps to display their social capital (Bourdieu, 1984).

Geodemographic classifications can help predict organic consumption. Tregear *et al.* (1994) found nearly 50% of professional and clerical respondents in Edinburgh and Lothian, Scotland, bought organics, against just 15% of manual workers. Below we will discuss how that pattern loosely fits the results of this motorcycle study, but here it is vital to note that not all motorcyclists in this study are workers in the motorcycle industry. But those who are, from cycle mechanics to accountants, have on average lower educational and income levels than most academics or firefighters (personal communication from a prominent US motorcycle dealer). Ultimately, motorcyclists' food preferences may have more significant environmental and societal outcomes than those of academics or firefighters because they are more numerous, and inhabit all bands of income in their populations.

High income and educational levels mark northern California and the San Francisco Bay Area, which Buck *et al.* (1997) call one of the most important centres of organic production and consumption in the USA. My study claims that Seattle's role, as an organic growth pole is similar to that of San Francisco. *The Seattle Times* (Vinh, 2005) reports that the area's farmers' markets have proliferated from a handful after the millennium to a planned 24 in 2005. It is difficult to find another city with global aspirations that also is situated in such a dramatic grouping of mountain ranges, lakes and a saltwater harbour. Its population is multiethnic; 53% of adults have college degrees, and many are fluent in food issues 'demanding localised, differentiated, or natural food' (Murdoch and Miele, 1999: 469). Seattle is landmarked by 4392-m Mt. Rainier, and the 184-m Space Needle, which serve on official city logos. For decades the city's economy has been buoyed by innovation in aviation, computer software, music, and food (Starbucks). Seattle may well be the greenest node on the west coast between California and British Columbia, as affluent baby boomers flock to its farmers' markets like they did rock festivals 30 years before.

Newcastle was a crucible of innovation in the industrial revolution, with mining, shipbuilding and armaments, before Seattle was founded. The Tyne Bridge was distinctive enough to be replicated in Australia. Its countryside is regaining its natural beauty as reforestation covers mining slag heaps. Newcastle's transition to a post-industrial society is hindered by its rustbelt legacy of coal, ships and steel. Nonetheless, farmers' markets and other AFN schemes are being re-established in the city and throughout the region.

Globally, Europe and North America consumed 97% of certified organic sales of US$23 billion in 2002 (Willer and Yussefi, 2004), and the UK ($1.5 b) is the third largest market, behind Germany ($3.06 b) and the USA ($10 b). Mad cow disease benchmarked turns to nature and quality (Murdoch *et al.*, 2000; Goodman, 2003), often via social relations (Jarosz, 2000) in alternative networks emphasizing trust to cut risks. More and more Northern consumers eat an organic cornucopia grown partly in the South. But the closer that one examines

organic cornucopia grown partly in the South. But the closer that one examines UK and US organic networks, the clearer are signs of contestation, notably the scorn AFN pioneers heap on agribusiness for misappropriating the vision of natural harmony, local distribution and biodiversity they preserved in the productivist era.

In the UK, the government's admission of a BSE and vCJD link in 1996, and the organic movement's opposition to GM fostered a turn to nature with organic sales rising about 10% annually (Miller, 1999; Soil Association, 2003b; Reed, Chapter 3 this book). Yet consumer understandings of organic practices remain unclear compared to local food. Despite an organic boom in the USA, vendors in farmers' markets whisper their movement is getting over organic via local networks resisting the USDA-certified organic-industrial complex (Pollan, 2001a; Scholten, 2002). The local/organic dichotomy is at the heart of debates, not least political economy questions of who writes rules and controls profits.

In the background of my study of Newcastle and Seattle consumers are larger perspectives linked to the themes of this book. Particularly interesting are the politics of local microactors vis-à-vis globalized organic-industrial macroactors. Class (Fussell, 1983; Bourdieu, 1984), individualization (Bauman, 2001), snobbery (Downey, 2002) and reflexivity (Beck *et al.*, 1994) are also factors. International data suggest that as food scares ebb, consumers manifest what Caplan found in Wales, or what Winter calls defensive localism. This prioritizes household and community local economics over nature, or its proxy organic food, eroding the impact of BSE and enhancing the lure of local food. My studies around Newcastle (pop. 266,200) and larger Seattle (pop. 575,000) provide data to test organic assumptions on urban density, class, education, and income, suggesting,

- In both Newcastle and Seattle, organic movements have made some changes to the dominant agro food system away from undifferentiated, generic food; equally, it can be argued, organics are being incorporated into the dominant systems of capitalism (IRSA, 2004). In between is my view of a dual system in which local resistance to agribusiness inhabits a globalized dialectic in which neither small farms nor agribusiness eradicate the other completely. This view is bolstered by evidence that family farms in Washington state survive not only by self-exploitation and migrant labour, but also through flexible labour relations incorporating apprentices, interns and volunteers (Qazi and Scholten, 2005). This view also seems compatible with Wilson and Rigg's (2003) observation that even organic farming differs from place to place.

- Whether or not the future is post-organic is partly a question of nomenclature (see below, USDA National Organic Programme). More precisely, as food miles and local control enter public debate, UK and US organic movements are no longer governed by simple binaries such as Organic = Good, GM = Bad.

- Organic futures increasingly involve questions on markets and sustainability linking to local political and economic control of institutions and markets, in the form of university appointments, agricultural extension, conversion subsidies, city subsidization of farmers' markets, and labelling.

While global and national estimates of organic sales and area are available from the International Federation of Organic Agricultrual Movements and other sources (Willer and Yussefi, 2004; Raynolds, 2004), consumption data on individuals remain sparse. That is why the aim of research is to improve understanding of how individuals' knowledges, attitudes and behaviours affect geo-spatial development of food networks.

Pioneers' organic dream

Before forecasting organic futures, a sketch of the pioneering movement is useful. Pollan, whose *New York Times* (2001a) article, attacking agribusiness for appropriating organics in an organic-industrial complex, ignited national debate, gives one. More recently, he argues (2003) the choice for consumers is no longer organic or conventional, but local or organic. He claims the original organic dream shunned paradoxes such as the organic factory farm and organic TV dinners because the movement rested on three sustainable legs:

- Harmony with nature - a non-industrial way...treating animals humanely...and did not use chemical pesticides;
- Food co-ops, farmers' markets, and community supported agriculture could replace the national agricultural system;
- We should be eating ten different kinds of apples because biodiversity in the apple tart means biodiversity in the orchard (Pollan, 2003).

Pollan condemns agribusiness appropriation of organics on all points. He admits organic TV dinners mean more organic hectares than conventional fare, but lauds a shorter food chain that brings the consumer and producer together. Critical to discussion of organic futures is Pollan's claim that when USDA (2002b) published federal standards, small farmers lost control of the niche. Not only is it a major loss of livelihood for organic smallholders to lose a $10 billion (8.3 b Euros; see Sahota, 2004: 21) niche, but also the loss is compounded if the market they pioneered is captured by agribusiness, which, arguably, is an industrialized free rider on their organic dream. Pollan deplores a dichotomy between the social goals of pioneers and the profit goals of the organic industry that bodes ill for the sustainability of pioneers. On the other hand, Guthman (2004) observes that organic-industrialization in California was initiated by organic farmers not agribusiness.

In France and most European countries, supermarket multiples sell over 75% of organic produce (Willer and Yussefi, 2004). However, Germany's bespoke organic distribution system competes better against the multiples, conceding them just 20-30% of fruit and vegetable sales (Ferguson, 2004). The UK Soil Association (2003b) notes that for the first time in five years the supermarkets' share of organic sales actually fell, 'from 82% to 81% – although the overall value of organic sales through supermarkets still grew by 8.7%'. British

supermarkets' share fell partly because more organic food was being grown domestically and sold in re-emerging farmers' markets.

The trend is opposite in America, a land of thousands of farmers' markets, but where for the first time in 2000, more organics were sold in supermarkets than direct sales (USDA, 2002a). Retail giants Wal-Mart, Sam's Club, and Target have joined Whole Foods and Trader Joe's supermarkets in competing for organic dollars against local food chains (Haumann, 2004: 151). Unlike Germany's agricultural ministry, which after discovery of mad cow disease fostered organics for health reasons, the USDA promotes organics mainly as a growing economic sector, in line with Reagan administration policy setting biotechnology and GM as competitive champions (Scholten, 1990). So it was not surprising when Monsanto's GM dairy hormone rBST went on sale in America in 1994, a historic Green defeat.

Yet, Goodman and DuPuis (2002) claim rBST was not an utter Green rout, because organic politics thrived in West Coast health food shops, spawning 275,000 protests to the USDA on its 1997 proposal to allow GM, sewage sludge, and irradiation in organics. Final rules (USDA, 2002b) prohibiting these were a Green victory. So it was surprising, in interviews in Seattle and Puget Sound's thriving farmers' markets, to hear complaints not just that certification is costly and time-consuming, but also that the new logo repels some shoppers who conflate it with agribusiness.

It is doubtful that Seattle organic microactors will ever have as much affection for the National Organic Programme (NOP) begun in 2002 as for Washington state certification superseded by it. Suspicion is rife that the programme favours agribusiness and, like a mantra, some pioneers repeat the title of a populist film: *Beyond Organic* (de Graaf, 2000). In the end, Greens fear the NOP will corrupt rules on fodder, seeds, pesticides, non-food products, antibiotics and hormones (Ostrander, 2004; USDA, 2004).

It remains to be seen how leading firms such as Cascadian Organic Farms-Small Planet, which began in 1970s' counter-culture near Seattle, but is now owned by multinational General Mills (Pollan, 2001b, 2003), affect this agribusiness vs. smallholder debate. Although organics are high profile in Seattle, this is not so everywhere in the USA. One can search hundreds of stands in outdoor markets in affluent Palm Springs, California before sighting organic labels.

Across the Atlantic, Nicholson-Lord (2003) argues that British organic farm conversion slowed to 3% in 2002-2003, while 10% of organic farms reverted to conventional status because their organic premium was lost in a maturing market. In response, the Soil Association (2003a) hoped to introduce ethical trade certification in 2004, for small and medium-scale British farmers and processors, similar to global Fair Trade schemes.

If such a Soil Association initiative attracted enough consumers, it would represent merger of organic and local food trajectories harmonious with the goals of the Curry Commission (Curry, 2002: 88, 104), and Pollan's organic

dream of a *Botany of Desire* (2001a; b: 243). Meanwhile, Newcastle and Seattle shoppers still express uncertainty on definitions of organic food, and unfamiliarity with certifying bodies such as the Soil Association and USDA. These observations show the need to understand consumers' willingness to pay (Holt, Chapter 6 this book) for local or organic food.

Methodology

My overall study of food and risk uses multiple methods to identify trends around Seattle and its comparison site of Newcastle. Qualitative methods included ethnographic research in consumption nodes such as farmers' markets, shops and direct marketing schemes, and more than a dozen focus groups with academics, firefighters, motorcyclists and other respondents. Some of the most practical research tools are 'snowball strategies' in 'chain referral' which Atkinson and Flint (2001: 2) see useful in 'obtaining respondents where they are few in number or...trust is required to initiate contact'. From over 400 questionnaires, 58 UK and 40 US motorcyclists totalling 98 are considered below (some of whom joined focus groups).

By themselves, these numbers are perhaps too low for quantitative representation of all bikers in Newcastle or Seattle. However, survey validity was enhanced by the triangulation of quantitative questionnaire analysis with qualitative data, some of which was ethnographic. Cook and Crang (1995) say that the qualitative tools of ethnography help interpret data, and theoretical saturation is reached when stories are repeated from multiple perspectives. Representativeness was improved by sampling geographically diverse sites around Newcastle and Seattle. Gatekeepers and individuals were approached in bike shops, clubs, email groups, cafes, pubs, on the street and at semi-pro road racing events. Respondents returned surveys by hand, post and email.

In the study as a whole, 30-55 year-olds were especially sought on the assumption that most had household partners or children with whom they negotiated food risks and risky sports. These groups were targeted for a range of responses:

- Academics: stereotypically risk-averse, informed on risk, undergraduates to professors, school teachers and other educators;
- Firefighters: variably risk-embracing, or apt to manage risk in a 'strategy for career advancement' (Lupton, 1999: 156);
- Motorcyclists: risk-embracing 'edgeworkers' justifying risk in work or hobbies (Lyng, 1990: 859);
- Others: not fitting above groups, e.g. academic bikers, or motorcyclists with higher degrees if they were also teachers.

Groups were chosen to represent a range of stereotyped relationships to risk, and because their gatekeepers helped facilitate access. In other experiments, clergy

might substitute for academics; police for firefighters; dancers or jockeys for motorcyclists. Similar methods were used for all groups.

Atkinson and Flint (2001: 3) note 'Much of snowball sampling rests on the assumption that social networks consist of groups with relatively homogenous social traits.' My expectation was that UK and US surveys would find parallel attitudes to physical risks such as crashing between counterparts (i.e. Newcastle bikers feel more in common with Seattle bikers than Newcastle professors). My expectation on food risks was that what Makatouni (2002: 346) calls 'discrepancy between positive attitude and behaviour' is less in Seattle than Newcastle. In other words more Seattle bikers attracted to organic food actually buy it. Atkinson and Flint (2001) cite Avico *et al.* (1988) on snowballing's ability to elicit internationally comparable data. Fieldwork revealed the complexity of how consumers distinguish organic from conventional, local, traditional, and GM products. Data on awareness of food pathogens, media, environmental regulation, politics and economics were gleaned in surveys. First, all surveys in Newcastle and Seattle asked, Do you eat organic food?

Further questioning revealed consumers often have more interest in local food than organic. In Newcastle in 2002, a day's street poll found over 75% of 30 people preferred local to organic. Anomalies exist. AFN literature bundles alternative consumption with alternative distribution, however some people eat organic, but patronize no farmers' markets, CSAs or box schemes. Darren says that organics account for over two-thirds of the cost and calories of his diet, but he shops in Newcastle supermarkets not local farmers' markets. In its primary questions this research began as an imagined contest between organic and GM foods. But ethnographic encounters revealed local food often had attributes better representing the means and values to desired ends of food safety, trust in its traceability, and family and community economic security than organic (see Makatouni, 2002; Winter, 2003, on defensive-localism; and Sirieix *et al.* on means-end theory, Chapter 5 this book). Therefore, Food and Risk Survey questionnaires asked a second question central to this chapter, Are you more attracted to food labelled local or organic?

Inevitably, some respondents misunderstood or skipped that question. For this reason, redundancies were built into the questionnaire, and formulae devised to qualitatively determine local or organic preference, as well as additional consumption attitudes and behaviours.

Data, Illustrations and Analysis

Table 7.1 and Figure 7.1 are derived from data collected through snowball sampling in motorcyclist communities of Newcastle and Seattle. These are broad samples of motorcyclists or their close relatives, engaged as commuters, hobbyists or professionals in sales, management, accounts, repair, racing, and touring, comprising a social group constructing its own discourses on food and risk. Motorcyclists *per se* are those sharing physical risks, thrills and even

enhanced feelings of 'personal agency' (Lyng, 1990: 860, in Lupton, 1999: 152-154) as drivers or pillion riders. Over two-thirds of respondents have driven their own bikes, and virtually all have ridden pillion.

The first of two main questions in this chapter asked whether respondents ate organic food (Figure 7.1). Linguistically, the question is in the present-indicative verb tense, implying that an affirmative answer characterizes regular or occasional organic consumption; answers given were straightforward. The second question seeks preference for local or organic food. This preference binary is becoming crucial as, Greens claim, agribusiness encroaches on their niche, and lobbies regulators on labelling, conventions for trade, intellectual property, etc. (Beck, 1992; Whatmore, 2002). Many questions about the food economy now pivot around the local/organic nexus.

To the first question, results show more Seattle motorcyclists (68%) consume organics than their counterparts in Newcastle (38%). These samples (UK 58 + USA 40 = 98) are not enormous, so the actual consumption gap may be somewhat more or less than 30%. However, the 30% gap is wide enough to support the hypothesis that Seattle motorcyclists have greater organic consumption. It may be said that the shorter growing season of Newcastle (55.00°N) discourages an organic turn compared to Seattle (47.62°N). On the other hand Newcastle's familiarity with BSE since 1986 is an organic impetus. Evidence that BSE spurred demand-led domestic organic farming is provided in a Soil Association report (2004) that states in 2003 the UK imported only 56% of its organic consumption, down from 70% in the 1990s.

The second question on preference for local or organic food was more difficult to determine. Initially, preference was estimated from surveys, when many respondents were also interviewed. For those not interviewed, survey questions helped crosscheck ambiguities for firmer estimates. Respondents with no clear preference were listed as equal. Estimates of motorcyclists in Seattle (USA 40) were that 25% prefer local, 55% organic, and about 20% show no preference. Estimates of motorcyclists in Newcastle (UK 58) were that 64% prefer local, 16% organic, and about 20% no preference.

During 2004-5, telephone and email follow-ups were made, when possible, with those who had not clearly stated preference. They were asked:

> When food products cost and appear similar, but one's labelled local and the other's organic, which do you buy if you have money for just one?

This established a solid sample (UK 29 + USA 26 = 55), reducing the percentage with equal or no preference, while meeting the expectation of higher organic preference in Seattle than Newcastle. The caveat is that these are not vast samples. But, triangulated with additional interviews on the street or racetrack, the results came as no surprise.

Table 7.1 and Figure 7.1 below illustrate that in our Seattle motorcyclist follow-ups about 42% stated local preference, 54% organic, and 4% showed no

preference. Newcastle follow-ups approach 66% local, 28% organic, and 7% no preference.

Among the UK 29 follow-ups, more (48%) admitted eating organics than the UK 58 on questionnaires (38%). The Newcastle follow-ups' 17% greater familiarity with organics underlines their strong preference for local (66%) over organics (28%). In Seattle by contrast, triangulating questionnaire results with comments written on the questionnaires, along with interview quotes, suggests Seattle shoppers are more ready to walk the organic aisle than those in Newcastle. But that gap may be narrowing.

Despite individual exceptions, follow-ups reinforced the reliability of qualitative judgements estimated from survey answers. But there may have been some movement over time. For example, a few mid-50s Seattle men's eco- and nutrition-related answers indicated organic preference, until the post-BSE follow-up when they declared allegiance to local Washington products. This resonated with Winter's (2003) defensive localism. It is possible the mad cow scare of 2003 hardened risk constructions of some Seattleites. For instance Chad, a university-educated, middle-aged, occasional organic consumer, who formerly rode his massive trike-bike in 4th of July parades, stated a preference for local over organic, placing BSE in this everyday hierarchy of risks:

> I made no changes. My attitude is that the risk of my being injured by mad cow meat was less than the risk I take daily when I drive on the freeway. It seems...other people may have changed their consumption habits of beef, but I never talked to anyone about it, or heard them mention that they had quit eating beef or changing the amount.

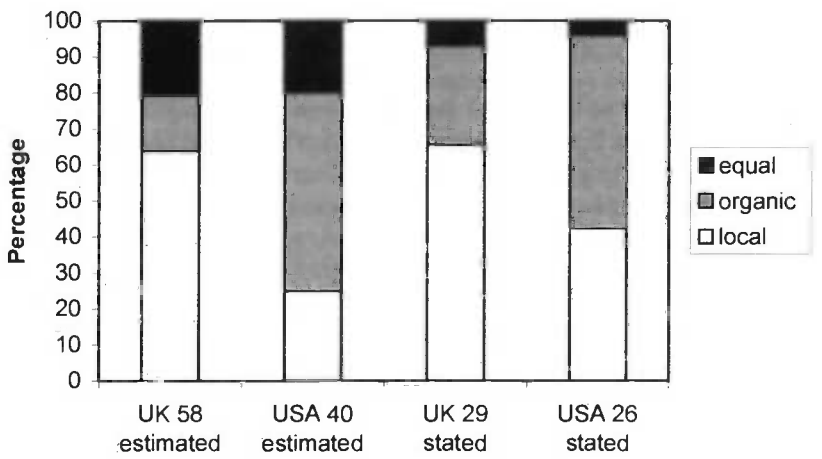
But follow-ups unearthed pro-organic movement too. Jan, a mechanic in Newcastle respected for fast, safe sport riding skills, has never been an organic consumer. He smokes tobacco but risk-awareness of BSE, revealed by a survey question asking respondents to rate risks in the food system, helps explain his follow-up comment: 'I still don't eat organic...but I might if it was the same price as local.'

A salon owner near Newcastle, Dionne, who has pillioned her partner's fast sport bikes for two decades, said she is more organic-friendly since the initial survey. High consumption by her partner's parents is influencing her opinions. Follow-up statements generally validated earlier qualitative estimates on local and organic preference. These later contacts also increased appreciation for the subjective nature of consumer attitudes, the complexity of the market, and the raw contingency of events. Ironically, timing of this motorcycle study is propitious, in that the questionnaires were completed before the discovery of a BSE-stricken cow in the rural town of Mabton, 200 km east of Seattle, at Christmas 2003.

Table 7.1. Local and organic food preferences in the motorcyclist survey.

	UK 58		USA 40	
Questionnaires	Number	Percentage	Number	Percentage
Eat organic stated				
Male & female	22/58	37.93	27/40	67.50
Male	19/41	46.34	16/28	57.14
Female	4/17	23.53	11/12	91.67
Local pref. est.				
Male & female	37/58	63.79	10/40	25.00
Organic pref. est.				
Male & female	9/58	15.52	22/40	55.00
Equal pref. est.				
Male & female	12/58	20.69	8/40	20.00
Follow-ups	UK 29		USA 26	
Eat organic stated				
Male & female	14/29	48.28	17/26	65.38
Male	12/21	57.14	10/19	52.63
Female	2/8	25.00	7/7	100.00
Local pref. stated				
Male & female	19/29	65.52	11/26	42.31
Organic pref. stated				
Male & female	8/29	27.59	14/26	53.87
Equal pref. stated				
Male & female	2/29	6.90	1/26	3.85

Figure 7.1. Local and organic food preferences in the motorcyclist survey.



Gender and Food Preference

When data samples are disaggregated, statistical reliability is reduced. Thus, small numbers, 17 women in the Newcastle group of 58, and 12 women in the Seattle group of 40, may account for the biggest surprise. Disaggregating totals into male and female categories shows a lower proportion of women (24%) respondents in the Newcastle motorcycling community admitted eating organic than men (46%). The pattern was even stronger in follow-ups.

This violates the stereotype that women are more organic-aware than men are. Makatouni (2001) cites Tregear *et al.* (1994), and Mintel (1997) in profiling the main organic user as 'female...with higher education and children... considered as a green/ethical consumer', although this profile seems less clear in a later, similar paper (2002). But even if the stereotype is accurate in the UK, it may not apply in Australia, where Willer and Yussefi (2004: 81) cite a study finding 'some positive correlation between income and the demand for organic food', but not necessarily with gender or education. Tulloch and Lupton (2003) hint such women may be challenging restrictive gender stereotypes. The Newcastle statistics (24%) of women consuming organics also contrast inversely with the Seattle sample in which 92% of women, predictably, eat organics (Table 7.1). Peculiar findings invite analysis. Perhaps in Seattle, more than Newcastle, even women risk-takers perceive organics as part of what Lupton (1999: 161) calls 'performance of femininity'. Are Newcastle women genuinely more organic-averse than men are? More likely, they think organics, however attractive, are too costly for everyday use. Kay, a rock-climber and snowboarder, who works as a motorcycle helmet and leathers salesperson in Newcastle, was suspicious of companies promoting GM food. She wrote on her survey: 'All multinational corporations should be closed down.'

Nevertheless, Kay's preference was local not organic. Her answers to survey questions on the affordability of organics, or their alleged health, economic or environmental benefits were ambivalent. Perhaps her experience is like that of other Newcastle women in the motorcycle survey, of whom 24% ate organic, compared to 46% of the men. One explanation for their low organic consumption may be 'related to time experiences' which Warde and Martens (2000: 101) discuss in regard to women who work full-time or cook for children. Women in the Newcastle motorcyclist survey may regard organics as inconvenient, requiring too much preparation in everyday routines. Low organic attraction can also be explained partly by BSE, which drove many young British females and some males from meat. In interviews Cher said she prefers:

> Local, even if organic price is the same. BSE doesn't affect me cos I'm vegetarian. Others? My husband still eats meat, but he tries to avoid rubbish like sausage and just eats whole meat.

Conclusion

First, this study shows that a larger proportion of Seattle motorcyclists (68%) eat organic food than do Newcastle motorcyclists (38%). Second, Seattle motorcyclists (54%) show greater preference for organics than Newcastle (28%) bikers who prefer local sourcing, given the chance. Data from the mixed methodolologies deepens the consumption picture of both sites. P.J. Atkins (Durham, 2004, personal communication) suggests Seattle's turn to organics is simply further along than Newcastle's. This may be true, as a virtuous circle of higher demand inciting better supply and prices seems established. Further, Bauman's (2001) theories, on expression of individual freedom in consumption, may be more apt to Seattle bikers' preference for organic over local food, than to Newcastle bikers.

Will Newcastle ever reach Seattle's position as a green node? The prospect is distant. Despite an architectural renaissance in the city, its industrial legacy is too visible to be forgotten. Bourdieu's (1984) habitus remains apposite Newcastle's working class past. Local is the frequent preference for consumers thinking of safer food, but not yet steeped in AFN discourses. Local can also be the preference of those defying BSE. The messy bits of qualitative research fit awkwardly in tables. When following-up UK and US respondents to check estimates, test bias seemed to spin their statements to local. This may stem from peer pressure, local patriotism (Tuan, 1974 cited in Bell and Valentine, 1997) or defensive localism (Winter, 2003). Asking people to choose between local or organic food carries the embedded baggage of mom and apple pie. Loyalty to their communities requires that they answer local, even if they are attracted to organic.

But those dipped in alternative discourses on food and risk seemed to harden. When Van, a pro-organic motorcyclist, was asked if his preference changed after BSE was found near Seattle he retorted: 'Why is beef from a local factory farm any better than one from far away?' Meanwhile, these socio-spatial scenarios can be forecast. First, Newcastle can see an organic boom-let if prices fall. Northeast England is noteworthy for helping create the Fair Trade movement, and the alternative supermarket mini-chain, Out of this World. Its organic footprint is widening with AFN growth in farmers' markets and CSAs. Although this study indicates local preference is higher in working class Newcastle than Seattle, reflecting local identity and price sensitivity, it is significant that 46% of Newcastle men admitted eating at least some organic food, compared to 57% in Seattle, not a huge gap. The hard man attitudes of Newcastle are fading with Fordism, as the Northeast restructures itself in global knowledge and service networks. Stan, a sport biker who sells helmets and safety kit, says his family eats traditional chips, beans and pasta but that diet can change just as motorcycling had changed with, 'a completely different generation from the grease monkeys who only wore black leather. Now there's more colour and style...Everyone wears armour, spine protectors. Now it's all about safety.'

The 20-30% UK and US organic gaps could further narrow if supermarkets improve availability and prices. Atkins and Bowler (2001: 195) note a 'philosophy shared by many producers and consumers that organic food is both kinder to the environment and healthier to eat'. Estimates (Reuters, 2004) that 3800 Britons would test positive for vCJD could spur organic meat consumption. Darren, whose preference switched from local to organic after 2002, says organic prices have fallen at the Wal-Mart-owned Asda supermarket where he shops, 'it all comes down to price, though it seems to be coming down, if it did people'd go organic'.

In the second scenario, Seattle AFNs will not threaten the status quo unless BSE worsens. Local co-op PCC Natural Markets (PCC, 2004) raised the organic profile for five decades before national natural food chains Whole Foods and Trader Joe's opened in Seattle. Demographics fit organic consumer profiles for high education and income. Market structures almost guarantee the long-term survival of robust organic niches. Greens are better supplied around Puget Sound than in most of the country. Yet most Seattleites still treat food as fuel, oblivious, at times hostile to organic and alternatively sourced food. BSE, six months after its dark cloud rose near Seattle, was less a silver lining to organics than Greens hoped. A few celebrated cheaper conventional beef with barbecues (HistoryLink, 2005). Nobody died, yet. But Howard, a pro-organic motorcyclist, said that, 'as long as BSE is still contained to one cow and blamed on Canada, people won't change'.

Post-BSE barbecues support Lupton's (1999: 108-112) observation that contrary to the claims of Beck and Giddens, consumers rely less on 'expert knowledge' than their own 'lay' or 'situated knowledge' in risk perception. Akin to Douglas (1966/69, cited in Lupton, 1999) who sees risk as culturally constructed, Lupton suggests that such behaviour builds 'social cohesion' in areas of 'high risk'. Such defiance is understandable while experts disagree and the USDA maintains the safety of beef, just as the UK government did until 1996.

The USDA is testing over 200,000 cattle brains for BSE, but it had reported only a second diseased cow by mid-June, 2005. Its methods seem designed to prevent panic and bolster trust in agribusiness (UPI, 2004). Surprisingly stable beef consumption in post-BSE Seattle mirrors the rapid return in Britain to pre-1996 levels, testifying to the global resilience of conventional agribusiness. Altogether, this suggests that despite evidence in this chapter of higher organic consumption and preference in Seattle than Newcastle, both of their organic futures entail (alongside conventional industrialized agribusiness, from factory farms to hypermarkets) dual AFN systems of:

- Increasing economic appropriation by the organic-industrial complex; but
- Survival of small, local, perhaps uncertified post-organic networks, partly due to political economic support for their social benefits to communities.

Future papers, incorporating focus group data with surveys, will further explore how academics, firefighters, motorcyclists and others in the UK and USA perceive risk, and offer more definitive perspectives on consumption and risk. But it appears that, as long as the mad cow is held at bay, trajectories of local and organic food remain apart. The dream of organic pioneers is far from public policy.

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8
Has Organic Farming Modernized Itself out of Business? Reverting to Conventional Methods in Denmark

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In Western industrialized societies, organic farming as a phenomenon arose initially as a counter reaction to the industrialization of agriculture, but in several European countries a process of modernization, or institutionalization, of organic farming has taken place over the last decade (Tovey, 1997; Kristensen and Nielsen, 1997; Christensen, 1998; Lyons and Lawrence, 1999; Kaltoft, 2001; Campbell and Liepins, 2001). The modernization of agriculture has many aspects and consequences but in general it is a process of farms continuously growing in scale and becoming more specialized. Primary production is, to a large extent, intertwined with the agro industrial complex, which defines the conditions for the farming. During modernization the role of the farm-family has moved away from that of an autonomous production unit, towards that of the typical modern family structure with two wage earners, although the position of the farmer remains significantly different from that of the wage earner.

The pioneers of organic farming were well aware of this development and wanted to reintroduce diversity into agriculture, create working farming communities, and re-establish the traditionally close relationship between food production and consumption. These pioneers succeeded in placing organic farming on the political agenda in many countries in Western Europe, mainly as a tool for environmental policy. The pioneers succeeded in institutionalizing an alternative mode of agricultural production, namely organic farming through the

provision of various agricultural subsidies, regulations and labelling schemes, and this created a premium for producers. Since the early days of pioneer activity, many conventional, and modern, farmers have converted to the organic mode of production and it is these farmers who, through high volume output, are largely responsible for the size of the organic sector today. In Denmark for example, organic food can now be found in most supermarkets, and certain organic products, such as fresh milk, have attained a significant share of the product market. The question arises therefore as to why conventional farmers convert, and what mode of organic farming their production represents. This chapter focuses on the first element of this question, which was investigated via a critical case study, although in the final discussion evidence is also presented to shed light on the mode of organic production employed by these farmers.

Since the passing of the pioneer phase, the motives of more recent converting farmers have been a topic of discussion among organic farmers, extension workers, scientists, and citizens. For example, do conventional farmers convert to the organic mode of production mainly for a chance of higher income (Vestergaard *et al.*, unpublished; Regouin, 2003)? Certainly, there have been times during which the economic prospects for organic farming were good. Or, do conventional farmers convert because they are sympathetic to aspects of the organic mode (Jensen, 1996; Michelsen, 1997; Rigby *et al.*, 2001)? Even though these questions can nearly always be answered as first, yes and second, no, this dichotomized discussion concerning the motives amongst organic farmers continues. Thus, to advance these hypotheses further, the authors conducted a case study of organic farmers who have reverted to conventional farming, in selected regions of Denmark.

Background to the Case Study

Existing studies of farmer motives to convert to organic farming

A recent study provided a review of multiple studies that attempted to explain motivation for conversion to organic agriculture (Rigby *et al.*, 2001). However, although embracing studies from many countries including the UK, Canada, New Zealand, Spain, Germany, the USA, and some countries in South America, the review does not include studies conducted in the Nordic countries of north Europe. The studies reviewed varied in methodology and theoretical background, but many were based on the theory of innovation. In the Nordic countries, a number of studies on organic farmers have been concerned with motives for conversion as a main issue or as a secondary issue (Blekesaune and Vartdal, 1992; Fostved, 1993; Kaltoft, 1997 and 1999; Østergaard, 1998; Noe, 1999; Lindholm, 2001; Lund *et al.*, 2002; Michelsen and Rasmussen, 2003; Vestergaard *et al.*, unpublished), and these also have been reviewed (e.g. Lund *et al.*, 2002). In this chapter therefore, the authors will highlight and discuss only

those elements of these studies bearing direct relevance to the aims of this analysis.

Several studies reported a primary distinction within organic farmers between pioneer and non-pioneer farmers (Blekesaune and Vartdal, 1992; Kaltoft, 1997 and 1999; Lund *et al.*, 2002). The motives of the pioneers were found to be far broader, in terms of political, environmental, ethical and philosophical intent, than the motives of organic former conventional farmers. Pioneers' motives addressed the structural and global development of agriculture and included opinions on nature and the global distribution of goods. Pioneer organic farmers are thus opposed to the process of organic modernization and similar views have been reported amongst persons associated with organic farming through organizational or political work who can likewise be denoted as pioneers for the organic movement (Lund *et al.*, 2002). Many pioneer organic farmers had not previously practised agriculture (Michelsen and Rasmussen, 2003) whereas the majority of organic farmers in Denmark today are conventional farmers who have converted to organic farming. The dichotomy apparent in organic farming in Nordic countries is seen elsewhere also, for example in New Zealand a distinction has been drawn between committed and pragmatic organic farmers (Fairweather and Campbell, 1996).

The authors' assert therefore that a large proportion of organic farmers today, in Denmark the majority, do not share the worldview and goals of the organic farming movement as defined by the pioneers. This assertion is partly disputed by another Danish study (Michelsen and Rasmussen, 2003). The aim of the study by Michelsen and Rasmussen was to provide an investigation of whether or not new entrants to organic farming in the years 1995-1998, a period of economic prosperity for organic farming, differed from their more established colleagues. Questionnaires were used as the method of investigation and the same questions were asked as in earlier surveys. Michelsen and Rasmussen generally conclude that new entrants support the values surrounding organic farming equally as longer established organic farmers, thus disputing the authors' hypothesis. The questions posed in the survey by Michelsen and Rasmussen relate mostly to specific modes of farm management and less to the wider social goals of organic farming, and in relation to the more general goals of organic farming these met less support amongst the newcomers, confirming the authors' hypothesis.

The questionnaire, modified from Bager and Søgaard (1995), whose questionnaire was in turn inspired by Beus and Dunlap (1990 and 1991), included attitudinal statements, to reveal values associated with organic farming scored on a Likert scale. Beus and Dunlap's questionnaire identified six aspects that underpin either a conventional or alternative attitude to agriculture whereas, Michelsen and Rasmussen explored in greater detail just one aspect, nature and environment, and only touched on the four remaining aspects about centralization vs. decentralization, competition vs. community, specialization vs. diversity, and exploitation vs. restraint, in agriculture and society.

Another survey similar to Beus and Dunlaps' study, on the attitudes of students and faculty members in the only dedicated agricultural university in Denmark, revealed that alternative values regarding the environment were widespread across all respondents (Rasmussen and Kaltoft, 2003). According to Beus and Dunlap (1991), alternative values based on only one of the six aspects do not constitute an alternative attitude or paradigm. Certain attitudes regarding the structural aspects of society and rural development also form part of what Beus and Dunlap define as an alternative worldview akin to that shared by organic pioneers (whether farmers or personnel associated with organic farming through various support bodies). By using Beus and Dunlap to criticize Michelsen and Rasmussen's study, which is relevant as they themselves use a modified version of Beus and Dunlaps' paradigm measurement scale, the authors conclude that the five remaining factors could be critical in identifying differences between new entrants to organic farming and the long established organic farmers. The focus of this analysis therefore is the significant number of organic farmers who started as conventional and subsequently converted, the same focus as in Michelsen and Rasmussens' survey. The analysis aims to establish whether these farmers are attracted to organic farming due to negative feelings towards the modernization or industrialization of agriculture, even if they do not support the broader aims of the organic farming movement, or whether organic farming, at least in Denmark, should now be seen as a specialized mode of production comparable to specialized potato or pig production.

Existing studies on farmer motives to revert to conventional farming

Only a few studies on reverting organic farmers exist to date. In one study (Rigby and Young, 2000; Rigby *et al.*, 2001), the sample interviewed consisted of 35 out of 204 farmers who had left the organic scheme between 1990 and 1998. These farms were all relatively small horticultural holdings. The survey did not distinguish between farmers who reverted and those who had ceased farming altogether:

> There appeared to be two main types of producers in the sample, those motivated by economic considerations, who reverted primarily because they either could not sell their produce or could not get a premium sufficient to cover the additional costs of production, and those who, motivated by lifestyle choice or other ideals, started organic production with little experience and knowledge and subsequently failed to make a sufficient living (Rigby *et al.*, 2001: 606-607).

It might be reasonable to suppose also, although Rigby *et al.* do not make this distinction explicit, that farmers belonging to the latter group were also amongst the group that ceased farming altogether. However, Rigby *et al.* do identify four

main categories of reasons for ceasing organic production. The first and second of these, marketing and cost issues, relate strongly to each other.

Farmers experienced problems selling their produce or obtaining the premium necessary to cover the increased costs of organic production, including expenses for inspection and investment. There was also wide geographical variation in problems experienced. The third category of reasons, agronomic problems, included control of weeds, maintenance of soil quality, and access to technical information. The fourth category, other or miscellaneous, included changes in personal circumstances. The survey included a statistical logit analysis to identify factors that either increase or decrease the likelihood of reversion (Rigby and Young, 2000: 5-7; Rigby *et al.*, 2001: 608). Two results of particular relevance to this case study are worth mentioning. First, when the motive for converting was cost reduction the likelihood of reversion increased, and conversely when motives centred on consumer health or the image of agriculture the likelihood of reversion decreased, a finding that is entirely concordant with the hypothesis for this study. Similarly, in the Dutch situation:

> Low market price differences linked to low yields were mentioned by many of the interviewed organic farmers that had returned to non-organic production systems (Regouin, 2003: 232).

More recent studies of reversion have been carried out in Austria, where a rapid growth in organic farming was witnessed during the 1990s but the sector is now, as in Denmark, in recession (Darnhofer *et al.*, 2005). A questionnaire was used to investigate the reasons for reverting to conventional production amongst a sample of 334 farmers. The five most important reasons given for reverting were:

- Organic feed was too expensive: 69%
- There was no price premium for organic products: 59%
- The organic regulations change too often: 58%
- The farmer no longer wanted the inspections: 38%
- The administrative burden (documentation) was too heavy: 37%.

In another recent analysis of reversion, in the mountainous Austrian Tyrol region (Schermer, 2005), similar results were obtained.

Reverting Organic Farmers: Presentation of the Case

Until the end of 2003, organic farming in Denmark was expanding, in some years very rapidly, but by the end of 2003, 266 organic farmers, out of a national total of approx. 3500, had ceased organic production, compared with only 62

farmers that newly registered that year. This was almost a complete reversal of the previous year in which 241 farmers took up organic production and only 52 withdrew. Actually, the anticipated extent of the reversal had been far greater; this study was funded under the expectation that as many as 500 farmers would leave the organic sector in 2003. National statistics on the number leaving the organic production sector to revert to conventional production are not available. In September 2003, all extension centres in the country were asked to estimate the number of farmers reverting, resulting in a national figure of 165 for the year. According to this prognosis, around 40 farmers in Southern Jutland, an area where much organic farming in Denmark is concentrated (in some districts up to 30% of farmers are organic), would revert. The prevalence of organic farming in this area can be traced to the presence of a large minority German population that remained after the border between Denmark and Germany was moved further south after a referendum in 1920, and led conversion to organic in the area. Active cooperation developed between a number of parties: pioneer farmers, municipalities, a special commercial unit (to initiate commercial growth in a marginal area of Denmark), and a German extension service, Landwirtschaftlicher Hauptverein für Nordschleswig (LHN), and in particular one exceptional advisor (Oldrup, 1999). Several studies indicate that an important barrier for the first conventional farmers converting to organic was the nexus of relationships with the local farming community, including other family members, neighbours, farmers' organisations and agricultural companies - all of which were built up around modern industrial agricultural practices (Christensen, 1998; Blekesaune and Vartdal, 1992; Lund *et al.*, 2002). The impact of the German minority in the area was twofold. First, farmers belonging to the German minority were already set apart from the surrounding Danish community and this is seen as an important reason why it was easier for the German farmers to break with conventional practices and become the frontrunners, en masse, to conversion in the 1990s (Oldrup, 1999). Second, their Danish neighbours, many of whom subsequently felt able to convert also, closely watched the progress of the German farmers.

The organic farming pioneers in Southern Jutland have another characteristic besides belonging to the German minority. A local farmer with a background in conventional agriculture became a biodynamic farmer early on. This man joined forces with other former conventional farmers, all with relatively large farms, to establish a local organic dairy, which exists to this day despite having been through several crises over the years. This is one of a very few independent dairies in Denmark in a sector that is almost completely monopolized by Arla Foods. In 1999, an organic fresh food terminal was established in Southern Jutland by some of the people behind the dairy, in order to increase consumption and production of organic food in the region and, with the fresh food terminal as a meeting point, to create a stronger link between consumers and producers (Oldrup, 1999). The terminal however was never a success and closed after some years leaving a significant financial loss for the individuals involved

(Kjeldsen, 2004). Farmers and advisors reported that there was and is no organic consumption, and no way to create organic consumption, in this region. The same group of pioneers now attempt, on a much less ambitious level, to cooperate in efforts to market out of the region, especially grain to north Germany.

There is of course both agricultural and environmental political interest in Denmark regarding the reasons for recent developments in organic farming. With respect to the main question about the motives of conventional farmers, the issue of reversion may well be critical (Flyvbjerg, 1991: 149). One might expect that the farmers who revert are the least organic in their mindset and most motivated by economic prospects. It is vital therefore to understand why these farmers converted in the first place, what expectations of organic farming they may have had, and what they learned from the experience. If, for instance, these farmers are found to have gained useful knowledge from farming organically, and/or to have, despite their decision to revert, negative attitudes towards the agricultural modernization process, then their experiences can be used to aid understanding of other non-pioneer organic farmers' motives.

Why Do Danish Organic Farmers Revert?

The following results are drawn from two qualitative studies of the phenomenon of reversion to conventional agriculture in Denmark. Both studies are part of the project: Localization of Organic Agriculture, which is part of a programme of research: Nature Quality in Organic Agriculture financed by The Danish Research Centre for Organic Farming (DARCOF II). The first is a case study carried out in Southern Jutland. Four agricultural extension workers from different centres in the area and five farmers, of whom three had reverted, were interviewed. Of the two farmers who continued to farm organically, both were considering reversion, one seriously. The second study is a project dealing with farmers who converted between 1997-1998 and who were doubtful about their future as organic farmers. These farmers were identified through a comprehensive series of interviews with 10% of all organic farmers in Denmark. The farmers interviewed were located in three regions – Southern Jutland, Western Jutland and North Zealand. Interviews were conducted with seven agricultural advisors and eight organic farmers who had either reverted or were considering reversion. In total the two case studies include eight interviews with agricultural advisors and 11 farmer interviews (some of which contributed to both studies) conducted between November and December 2003. The interviews were semi-structured and were recorded and transcribed for analysis.

Reverting in general

First, it is worth noting that all the agricultural advisors reported, notwithstanding their different opinions about other subjects, that only very few

organic farmers would chose to revert if there were no economic problems. A few farmers wanted to take up a whole new line of agricultural business but the majority preferred to continue as organic farmers. Thus, the situation overall is that the causal connection between converting and reverting is the strength of the farm budget.

Likewise, both advisors and farmers indicated that nobody, bar a few exceptions, wanted to start spraying with pesticides again. Some farmers, once they started farming conventionally again, even hired outside help to apply pesticides to avoid doing it themselves. This is potentially also a reflection of the ongoing specialization of labour within agriculture as farm equipment becomes increasingly effective and precise, and also much more expensive, thus forcing farmers to pay for services. Additionally, dairy farmers usually do not have much land that requires spraying.

One agricultural advisor described the reversion trend as a 'hangover' in the sense that it was 'bound to happen' because changes in the 1990s, when many farmers converted especially in Southern Jutland, were rapid. Therefore, it is not unexpected that some farmers found that they were not in the right place for them. Also, a number of the farmers and advisors interviewed found it appropriate that those without the proper commitment towards organic agriculture should leave the sector.

The above mentioned agricultural advisor divided those reverting, or considering reversion, into three groups: one group considers reversion to be a defeat, another group is indifferent, and the rest simply want to do something new. The defeatist group consists of farmers who hope to be the last to revert. In this group, there is a small sub-group who will exit farming if they are not able to survive by farming organically. The indifferent group, having been told by their advisor that they shall revert if they want to optimize their economic situation, follows expert advice. It is this group in particular that the advisor believes should revert, in order to improve market conditions for committed farmers. Listed below are a number of reasons for reverting, but for the individual farmer, reasons are complex and almost always intertwined with personal views about organic agriculture.

Few marketing opportunities

Low grain prices are a direct cause for organic farm reversion. Both farmers and advisors reported that the Danish Cooperative Farm Supply refused to collect small quantities of grain and/or to collect grain from farm in distant locations, thus forcing farmers to sell organic product as conventional. Moreover, reportedly there have been many disputes with the Cooperative. Most advisors pointed out that a much greater effort is needed to market organic than conventional products. Many of the previously conventional organic farmers had become used to leaving their marketing to others but this out-sourcing is not appropriate for selling into the organic market.

Letting of land is more profitable

For many part time farmers it is simply not profitable to cultivate their own land. They could make the same or higher income by letting their land. Therefore, it is interesting to understand why they continue to farm the land themselves; some of them farm because they are enthusiastic, others because they had bought their small farm in realization of a lifelong dream. But, as the farmer grows older or the farm becomes economically unviable it becomes harder to hang on to such aspirations.

Expansion or organic agriculture

Amongst dairy farmers, lack of land is a specific cause for returning to conventional farming. To increase milk production it is necessary to expand the size of the dairy herd and under organic regulations this requires more land. In some areas of Denmark, especially Southern and Western Jutland, the density of animals is so high that, even if there is land to buy, prices have become exceptionally high. Hence, some organic farmers have to choose between expanding their herd and buying milk quota and returning to conventional dairying or continuing to farm organically without expanding. This issue is moreover apparently connected to the ownership of barns that were financed by subsidy and built with the intention to expand herd size and quota.

The compulsory five-year period

All of the farmers and advisors interviewed said that the compulsory five-year period under the EU Regulations on organic farming (Commission Regulation, 1999) was a significant hurdle, mainly due to unpredictable and unstable market prices. The farmers thought that the first five-year period was necessary and thus acceptable, but all would prefer one-year commitments thereafter. This inflexibility of the regulatory system can be seen to constitute a considerable problem although it was not clear if this was a primary reason for reverting.

The subsidy bureaucracy

Likewise, the subsidy bureaucracy can be problematic, and was explicitly a significant motive to quit, 'They [the farmers] cannot stand the subsidy bureaucracy' (an advisor). The constant changing of regulations frustrated both farmers and advisors. Some farmers had experienced being caught in the system due to mistakes made either by themselves, their advisor or the Danish Plant Directorate. In general, the actual inspection of farms was not the reason why some farmers ceased farming organically. In one area, there have been a

significant number of reversions due to a particular inspector's rigid adherence to administrative requirements of the regulations.

Weed problems

Some farmers said they had lost control because their fields were overgrown with weeds. The advisors acknowledged that this has happened occasionally but to a much lesser extent than expected. Weed problems was cited as a reason for ceasing organic production for some farmers but in a broader perspective, this issue is a sub-phenomenon that could be managed within favourable socioeconomic conditions for organic farming.

Why go organic in the first place?

The above findings based on a small sample of qualitative data have produced more differentiated reasons for reversion among Danish organic farmers than a previous larger scale statistical analysis (Rigby and Young, 2000). But, neither do these two studies contradict each other. With respect to the Austrian findings (Darnhofer *et al.*, 2005; Schermer, 2005) there seems to be a high degree of similarity between the reasons mentioned by Austrian farmers and Danish farmers, and this warrants further investigation.

Some of the dairy farmers converted because they aimed for a high degree of animal welfare and needed to build new barns for loose housing if they were to continue farming at all. To them, organic agriculture constituted an opportunity to achieve higher subsidies for developing their farm and nothing more. These farmers never planned to continue farming organically on termination of the compulsory five-year period.

Analysis of Reverters as Critical Case

The farmers did not leave organic farming because they disliked this mode of production. On the contrary, they left because of economic problems and trouble with regulatory bureaucracy and inspection, even though the pioneers faced and largely overcame these same problems. So what did organic farming mean to the sample of farmers? None of the interviewed organic farmers leaving the sector consumed organic products themselves, with the exception of the milk they produced. Several farmers interviewed found little difference between organic and conventional modes of farming and reversion was not regarded a big issue. All of the farmers, with whom we discussed the general development in agriculture, considered structural development inevitable or natural. In the following section the authors discuss, using data from interview transcripts, these three themes: farmer lifestyle, the difference between organic and conventional production practices, and attitudes to structural development.

Lifestyle

Both full time and part time farmers interviewed had a high standard of living, as do the majority of the Danish population. Researchers visited large houses with modern bathrooms and kitchens, and the farm household's cars were of a certain size. This high standard of living is achieved even though the proportion of taxable farm income is relatively low and such visible signs of affluence can surprise and annoy a farmer's neighbours. Despite a high standard of living, none of the reverting organic farmers were organic consumers. When asked why they did not buy organic food they often said:

> We are not that goody-goody, religious *or* My wife has no interest in it.

The latter quote typifies the division of production and reproduction, which is typical for modern farming; the farmer manages production whilst the farmer's wife manages the household as a separate and distinct activity. One farming family from which both the farmer and his wife participated in the interview explained:

> We don't exactly display that we have become organic...just because we have gone organic we don't want to differ from the others by buying organic products in the shops.

The husband had decided to quit organic farming due to marketing problems, but his wife, even though she said that they did not want to separate themselves locally by changing their shopping habits, seemed to be against his decision. Others of those reverting, though not in Southern Jutland, reported that their friends and neighbours teased them. People said to them:

> Now, we do not dare to invite you for coffee, because we don't know if you'll drink it any longer unless it is organic.

These remarks suggest that, apart from Southern Jutland, there is still a social barrier to conversion to organic farming, even though the barrier is of less importance nowadays. The interviews also make it very clear that none of the motivation behind farming organically derives from the attitudes of the family towards either their own eating habits or ideas about the quality, origin and distribution of their own food. Many of those interviewed appeared to feel uneasy when talking about their non-organic consumption habits. It appears to be their understanding that they produce organic products for crazy, and maybe sentimental, townspeople.

Ideas about the difference between organic and conventional production

Several of those farmers reverting emphasized that they find the difference between the two kinds of production rather small. One of those interviewed had a very ambivalent view of this issue; throughout the interview he repeated several times that the difference between the way he practised conventional production and the organic mode was almost non-existent. He was an unusual farmer; operating full time as a farmer but with a herd of only 33 cows. He had farmed organically for five years and was in the process of reverting, indeed that may have been his plan. A couple of times during the interview he said, 'The young farmers should all try a period of farming organically before they get too many ideas...Yes, for example as part of the farmer education.' This reveals that he believed that there is something interesting and different about organic farming, even though he resisted further attempts to deconstruct this difference by claiming that organic and conventional modes were essentially the same. In other parts of the interview he talked a great deal about the large number of farms that had been abandoned and about how life used to be in the local area in earlier times. As he talked of agricultural developments in general, his tone and manner indisputably depicted a sense of loss. The researcher consensus interpretation of his ambivalent attitude to organic farming was to connect his vaguely positive attitude towards his own experience of practising organic farming with the scepticism that he expressed towards modern developments in agriculture.

Attitudes towards the structural development of agriculture

Indeed, many of the farmers interviewed expressed scepticism towards the ongoing structural changes in agriculture. In interviews in Southern Jutland this theme was explored as far as was possible in each interview. The farmers were asked if they had ideas for an alternative development pathway for agriculture and about their ideas for policies, regulation, taxation, and subsidies. Farmers were also asked about other factors such as changes in consumer behaviour, which could stop or divert development away from modernization. None of the farmers seemed to believe in any means to change the development process; intensification was seen as the only possible outcome. In this sense the existing structural development was considered a law of nature. This would seem to contrast directly with the aims of the organic pioneers and the contemporary organic movement who want to radically alter the agricultural intensification trajectory; to redefine relations between consumers and producers, to act against liberal market philosophy, and to create viable local rural life without increasing farm size or rationalizing agricultural labour.

After much discussion of the causes and impacts of the current mode of structural development, the connection between structural development and the

farmer's own current increasing standard of living was raised by either themselves or the interviewer and clearly their increasing material standard of living was valued positively.

Discussion

We have seen that the farmers reverting from organic back to conventional farming are primarily motivated by economic reasons. Most farmers did not have clear ideas about an alternative agricultural development pathway or to have adopted an alternative lifestyle with regard to food consumption or materialism as the pioneers of organic farming did and still do. The same or comparable economic pressures can result in different decisions and behaviours depending on the attitudes and values of the farmer. Mainstream values in 21st Century Europe are arguably materialistic and growth-oriented, and from this perspective the decision to cease farming organically at the current time is completely rational for many farmers. So why then do these reverting farmers feel sorry to make the decision to revert? Why do many of them say that they would have preferred to continue? That is the real interesting question. One obvious explanation is their dislike of spraying, which they mentioned a great deal. A number of them appreciated that as organic farmers they had a responsibility to plan cultivation long term and found that in this and many other ways there was a definite craft or artisan element to farming organically, which they did not experience when farming conventionally. But not all the interviewed farmers agree on these aspects, many of them are more like the earlier mentioned ambivalent farmer who finds the two modes very alike. The authors argue therefore that the sympathetic feelings towards organic agriculture expressed amongst those farmers reverting to conventional methods arise from their experience of the negative consequences of agricultural modernization. Some of the frustration around organic farming might potentially be related to that, in spite of what it promises, organic farming simply turns out to be 'the same'.

The relationship of organic farming to processes of modernization is complex (Kaltoft, 2001) and a subject for further investigation. The authors have described the study farmers as modern, which from a general and superficial point of view means that they employ a rational farming style and are relatively free of local tradition and community. Despite the presence of different farming styles (Noe, 1999), the overriding wish expressed by farmers was for a simple production system and a better quality of life. But when conventional farmers exercised this modern option to choose their own way of life, by converting to organic farming, they experienced social problems in the local community – hence in the world of reality, they are not that modern at all!

In Southern Jutland, which is unique in Denmark for the high number of organic farmers, social obstacles to conversion to organic farming were not reported. In the two other regions, where the number of organic farmers is also

higher than the national average, conversion still poses a social problem, although probably less severe than in earlier times. At the same time, another interesting feature can be observed. In Southern Jutland organic foods are scarce in supermarkets compared with the rest of Denmark and organic producers in Southern Jutland consumed virtually no organic food. It seems reasonable to suggest therefore that the lack of availability of organic food in shops removes the social barrier for farmers converting to organic production. Farm households in Southern Jutland face less pressure to make the decision confronting farmers in the rest of the country as to whether or not, or to what extent, their own shopping habits should form part of their new identity as organic farmers.

Concluding Remarks

Finally, the authors return to the primary research question as to whether or not organic farming has modernized itself out of business as posed in the title of the chapter: Yes, it seems like organic farming has modernized itself out of business. Or no! It depends on what we mean by organic farming, and not least what the consumers imagine and associate with organic farming. Organic farming as an alternative agricultural development is not what actual organic farming is about. It has become a certain mode of production which is probably more environmentally friendly than conventional agriculture but that is also questionable. Organic farming is comparable to other niche productions. Whether organic farming as a niche production will lose market-share depends on consumer attitudes, which have not been the focus of this chapter, but it seems to be a tough task and certainly unstable in the long run if organic products basically are purchased and consumed because of perceived anti-modern and anti-industrialized characteristics. Within organic farming as a concept, the visions and ideas about an alternative agriculture still exist, as experiments with community-supported agriculture, biodynamic agriculture, and the like, but these visions and practices are absolutely not mainstream amongst organic farmers, or in the aims of the regulations.

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9
Conventionalization in the Australian Organic Industry: a Case Study of the Darling Downs Region

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This chapter presents the results of a small preliminary study of large scale Australian organic producers of grain and legume products, with reference to the influence of off-farm capital on this sector through domination over the marketing and processing nodes of the organic agro food commodity chains in question. We have included a case study of a proprietary limited company referred to under the alias of Magic Pudding Pty Ltd, a private company which, through contract farming, has been influential in establishing trends towards consolidation of production, processing and marketing of grain and legume products in the Australian organic sector.

The Darling Downs was chosen as the focus of this study, as this region is one of the most important regions of organic grain and legume production in Australia. This study, which focuses on organic grain and legume commodity chains, is based on interviews conducted in May 2003 with three growers and one processor. The interviews were formulated to investigate the production, marketing and distribution nodes of grain and legume commodity chains.

Conventional and Organic Agro Food Chains

While capitalist transformation of non-farm industrial sectors has occurred with the demise of artisan petty commodity production, and the ongoing concentration of ownership and control over production in the hands of a relatively few and ever larger financial and industrial capitalist corporations, the nature of the farming process itself is posited as impeding the ability of capital to

transform agricultural production in the manner of the industrial model. Consequently, capital penetration of the farm sector is regarded as having taken place via the reconfiguring of farm processes as inputs easily produced in the factory, a process referred to as appropriation and by the capture of profits in the processing, distributing and marketing links of the agro food system, substitution in the lexicon of Goodman (Goodman *et al.*, 1987). In this way, farms frequently retain formal independence as sites of petty commodity production, while being integrated vertically into commodity chains where dominance is exercised by non-farm agribusiness capital.

At the same time, as vertical integration of agro food commodity chains has provided a mechanism for off-farm capital to appropriate a growing share of the profits in the agricultural sector, the scale of operations at each stage of the agro food commodity chain has grown, with trends towards increased farm sizes and the horizontal integration of the operations of agribusiness firms within each non-farm link of an agro food commodity chain (Heffernan, 2000). Thus capital penetration of a particular agricultural commodity sector may manifest itself directly through the industrialization of the off-farm links of the agro food chain in question, and somewhat more indirectly on the farm, through the adoption of increasingly standardized farming practices reliant on capital and energy intensive material inputs, including seeds, chemicals and machinery, the provision of which falls to off-farm industrial capital.

Though the conventional agro food system described in outline above has successfully raised yields by comparison with the early or pre-capitalist eras when local social units effectively exercised seed-to-plate control over their food systems, and has ensured an abundance of low-cost food for the global north at least, the reliance of productivist agriculture on non-renewable off-farm inputs, and its alienation of the consumer of agro food commodities from the production process, has created significant social and environmental imbalances (Magdoff *et al.*, 2000). Following Marsden (Marsden *et al.*, 1987), Lawrence (1996) identifies critical aspects of the late capitalist penetration and transformation of the rural economy; these include:

- Increased yields and productivity, corresponding to the adoption of new technology by farmers, in the face of falling or stagnant effective demand, leading to intensified competition among producers whose future viability depends on the adoption of yet further capital intensive inputs supplied by off-farm capital, and where possible, an increase in size of holdings.
- A growing polarization between a relatively small number of large farms - often linked to agribusiness processing networks through producer contracts - and smaller farms which contribute little to the total output.
- A disparity between the stagnant or falling market prices paid for farm produce relative to the environmental costs accrued by input-intensive farming practices.

The rise of the organic farming movement may be situated in a broader social context of attempts to redress imbalances inherent to the productivist model of agricultural production: smaller or marginalized agricultural producers sought to attenuate the technological, financial and market linked dependencies that subordinate the farming sector to the economic goals of agribusiness capital, as identified by Marsden (Marsden *et al.*, 1987) above; a relatively small but growing and influential body of well to do consumers in the global north with concerns about the quality and safety of conventionally farmed foodstuffs sought safe and healthy and food; the rise to prominence of the environment as an issue of public concern and political importance. The organic farming movement thus envisioned alternate integrated socially and environmentally sustainable agro food production systems which would incorporate such measures as the provision of local products for local consumption, and the use of farm-derived renewable resources and the cycling of farm products and by-products to reduce dependence on non-renewable and off-farm inputs; these measures were envisioned as allowing farmers to reassert control over commodity chain vis-à-vis off-farm capital, and to redress the more egregious environmental imbalances associated with industrialized agro food systems. At the heart of the conventionalization debate lies the question of how these expectations for the organic sector have been realized in practice (Buck *et al.*, 1997; Guthman, 2004 and Hall and Mogyorody, 2001).

Conventionalization

The study by Buck (Buck *et al.*, 1997) and other contributions (Clunies-Ross, 1990; Clunies-Ross and Cox, 1994; Campbell, 1996) were among the first to consider the organic sector from the point of view of agribusiness and off-farm capital on 'organic production, in rule-setting, inter sectoral dynamics and agronomic practices' (Guthman, 2004). The term conventionalization is used to describe the dynamics by which an organic farming sector reproduces the most salient features of the conventional modes of farming or is to a degree subsumed into conventional agro food commodity chains. There has been much debate about the conventionalization process and the extent of agribusiness capital involvement in the organic sector (Campbell and Liepins, 2001; Hall and Mogyorody, 2001). Perhaps the most detailed studies of the conventionalization processes have been provided by Buck (Buck *et al.*, 1997) and subsequently Guthman (2004). These studies examined the evolution of organic vegetable production in Northern California, with particular reference to the production, distribution and marketing nodes of this food commodity chain. Their studies indicate a bifurcation in the industry between large operations specialized in the mass production of a few high growth, high profit crops and artisan producers who continue to diversify their strategies, growing a variety of crops sold through direct marketing channels such as farmers' markets or by subscription farming. Buck *et al.*, found that it was in the marketing and distribution nodes of

the commodity chain in which the organic sector most closely resembled the conventional farming sector.

Organic standards and certification

A growing public perception that organic farming represents a more palatable social and environmental alternative to the conventional productivist modes of agricultural production has resulted an array of niche markets in which labelled organic produce is afforded significant price premiums over conventionally farmed produce (Lockie *et al.*, 2000). To overtly distinguish organic from conventional products, thereby protecting consumers from spurious claims and maintaining the price premiums afforded to organic products in their burgeoning niche markets, organic producers were compelled to support the implementation of certification regimes for organic produce and, with the passage of time, these early *ad hoc* organic certification regimes have increasingly become more institutionalized, through the creation of third party certification bodies, and a degree of state involvement in the regulatory processes (Buck *et al.*, 1997).

Organic standards and certification regimes have influenced the trajectory of the sector in ways probably not expected at the outset. Firstly, when implemented, formal organic certification procedures and standards have generally taken the form of regulations delineating prohibited and allowable farm inputs, and ensuring that organic produce is separated from both conventional produce and proscribed materials at each point in the commodity chain in question. This codification of organic standards is posited as having opened the door to more reductionist definitions of organic produce in terms of input substitution, where organic produce is differentiated from conventionally farmed produce largely, or even wholly, in terms of the material inputs used, with diminished reference to the overall agro-ecological sustainability of the organic agro food commodity chain in question (Buck *et al.*, 1997). Furthermore as noted by Bird (1988) and subsequently Allen and Kovach (2000), the dominant conventional agro food system is biased towards the more reductionist definitions of 'organic' in terms of input-substitution, for such definitions present opportunities for an array of new and expensive and commodifiable organic off-farm inputs including pesticides, compost, beneficial insects and soil amendments. Thus 'solutions which can be profitably manufactured and sold are the ones most likely to be developed, marketed and used' (Bird, 1988).

Secondly, the regulatory regime imposes significant costs on farmers during the period of conversion from conventional to organic farming. Our field survey of organic wheat and legume producers in the Darling Downs region of Australia suggests that farmers with higher capitalization are more likely to be in a position to carry the cost imposed by the minimum three year conversion period stipulated by the certification regime, during which time the farm yield is reduced but the price premium afforded to certified organic produce is not available to the farmer (see also Buck *et al.*, 1997).

Thirdly, 'the legal right to market produce as organic has become a form of economic rent itself, which is reflected in higher prices' (Buck *et al.*, 1997). The price premium afforded to produce certified organic is much like a brand name, frequently value added rather than demonstrably cost based.

Agribusiness capital and the organic sector

Certification standards, which first arose in response to the need of the early, largely artisan organic producers to differentiate their products from conventionally farmed produce, have created conditions which tend to favour entry into the sector by more highly capitalized and large scale producers, and lead to greater opportunities for agribusiness capital to convert organic off-farm inputs into marketable commodities. As suggested by Magdoff *et al.* (2000), once the niche markets are developed and grow into large scale operations, organic producers can increasingly expect to face new pressures from agribusiness which tends to penetrate and then monopolize all large scale lucrative markets. Thus segments of the organic sector are likely to become increasingly embedded into vertically integrated commodity chains parallel to the existing conventional agro food chains. A recent survey on the organic industry in the USA has shown that five agribusiness corporations control half of California's organic produce market (Baker, 2002). Horizon Organic illustrates the penetration of the organic sector by agro-industrial capital and its attendant farming methods. As of 2002, this company controlled more than 70% of the national organic milk market, and more than 30% of its milk is produced at two industrial sized diaries, each of which milks up to 5000 cows. The process of consolidation in the organic industry in general, in the USA is apparent from Table 9.1.

As noted by Buck and colleagues although organic farming was initially envisioned as providing local produce for local markets, the geographical reach of the sector has become quite extensive, with a large spatial separation between the farm and the sources of off-farm inputs and between the farm and the final consumers of farm products. Our field study of Australian organic grain and legume farming shows that this sector reproduces to a great degree the spatial dislocations, which are a prevalent feature of conventional agro food commodity chains. While the process of conventionalization has assumed different forms according to regional or national settings, the trend towards a bifurcation between artisan and large-scale organic producers, and the incorporation of the latter into vertically integrated food commodity chains as observed by Buck (Buck *et al.*, 1997) in Northern California and Campbell (Campbell *et al.*, 2001), in New Zealand are visibly present in the Australian organic sector. In this chapter we hope to draw on Buck and Guthman's argument and show how the trend towards conventionalization of the organic industry observed in the USA is also occurring among large-scale organic producers of grains and other durable commodities in Australia.

Table 9.1. Consolidation of the US organic industry under off-farm capital.

Corporation	Organic subsidiaries or trade names
Heinz	Hain, Breadshop, Arrowhead Mills, Garden of Eatin, Farm Foods, Imagine Rice (and Soy) Dream, Health Valley, DeBoles, Nile Spice, Celestial Seasonings, Westbrae, Westsoy, Little Bear, Walnut Acres, Shari Ann's, Mountain Sun, Casbah, Millina's Feast
M&M Mars	Seeds of Change
Coca-Cola	Odwalla
Kellogs	Kashi, Mornigstar Farms, Sunrise Organic
Phillip Morris	Boca Foods, Back to Nature
Tyson	Nature's Farm Organic
ConAgra	Light Life
Danone	Stonyfield Farm
Dean	White Wave Silk, Alta Dena, Horizon, The Organic Cow of Vermont

Source: Compiled from data from Cienfuegos (2004).

The Australian Organic Sector

The growth in the Australian organic industry (1990-2003) is summarized in Table 9.2 and Table 9.3. Exports account for 30% of the dollar value of Australian organic production. Organic grains and processed products constitute 66% and 12% respectively of the value of Australian organic exports. Japan is a major market for Australian organic produce, absorbing 12% of the value of Australian organic exports, or approximately 5000 tonnes per annum (Austrade, 2004). According to the Five Year Research and Development Plan for Organic Produce 2001-2006, a report prepared for the Australian Department of Primary Industries, the value of organic production is expected to rise to AU$ 350 million by 2008. In the same report, it is estimated that one in ten primary producers will be farming organically by the year 2020.

Research suggests that in the Australian organic sector, a bifurcation exists between artisan producers and large-scale producer-processors. The artisan producers primarily rely on local and informal marketing networks such as farmers' markets and community supported agriculture (CSA) and supply gourmet products to locally based specialty outlets. Production in this sector includes such items as macadamia nut butter, fruit preserves and olive oil. The large-scale organic producers are frequently integrated into agro food commodity chains supplying supermarkets chains, and food processors linked to export markets in Japan, the European Union and the USA.

Table 9.2. Organic farming statistics for Australia.

Description	1990	1995	2000	2003
Organic producers (no.)	1,260	1,429	1,657	1,920
Total producers (no.)	464,000	456,000	445,000	439,000
Organic producers (%)	0.27	0.31	0.37	0.44
Ave. organic farm size (ha)	296	783	1,048	1,403
Total organic area (ha)	150	336	546	887
Total farmed area (ha)	44,081	46,348	50,600	N/A
Organic area (%)	0.31	0.72	1.08	N/A

Source: FAOSTAT (2004).

Table 9.3. Australian Organic Exports.

Commodity (tonnes/kilolitres)	1999	2000	2001
Wheat	156	7,842	20,777
Noodles	0	19	927
Flour	119	2,735	2,627
Barley	0	7	1
Oats	42	108	104
Rye	1	13	19
Buckwheat	0	7	1
Rice	42	108	104
Millet	3	121	195
Canola	0	478	170,000
Sunflower oil	800	1,.449	2,577
Sunflower seed	0	126	283
Linseed	0	6	10
Lupins	0	25	48
Chickpeas	8	15	15
Soybeans	31	516	62
Beef	0.03	102	390

Source: Australian Quarantine Inspection Service (2004).

The Australian Quarantine Inspection Service (AQIS) introduced national organic standards, in 1992 to regulate the export of organic produce, and have by default become the organic standard used as a baseline in Australia. Certification procedures, government grants and subsidies have created opportunities for the large-scale production and export of organic produce to overseas markets in Japan and the European Union.

Darling Downs and Australian wheat production

Wheat farming in Australia occurs in a geographically non-contiguous area, commonly referred to as the wheat belt, incorporating parts of central Queensland, through New South Wales, Victoria, South Australia and parts of Western Australia. In global terms, Australia is a relatively minor wheat producer, accounting for 3% of total world production. Yet within Australia, the largest enterprise in the Australian grain industry is wheat production. The Darling Downs, a significant part of the Australian wheat belt, is a rich agricultural region located in South East Queensland. Typically, farms in the Darling Downs remain family run concerns which, before the neo-liberal restructuring of the Australian economy in the 1980s, relied on statutory marketing authorities such as the Wheat Board and the Wool Board to provide assured outlets and price support regimes for their produce. Deregulation and the diminished role of state authorities in agriculture has meant a correspondingly increased role for the corporate food sector through control of inputs, lines of credit, processing and marketing. At the same time there has been a move away from the production of mass undifferentiated products, as handled by statutory authorities such as the Wheat Board, and a corresponding growth in the production of specialized high value products for niche markets, particularly in the Asia-Pacific region (Lawrence, 1996). Magic Pudding Pty Ltd and the producers under contract to the company provide evidence of both trends, namely the integration of independent family farmers into agribusiness dominated marketing and processing chains, and the move towards specialized value added products aimed at niche markets domestically, and to a greater degree in the Asia-Pacific region.

Magic Pudding Pty Ltd

Of the four largest organic grain processors in Australia, Magic Pudding Pty Ltd is the only processor specializing entirely in the production of certified organic milled grain and legume products. Magic Pudding Pty Ltd is a proprietary limited company, which has antecedents in a family property on 1300 hectares of farmland in the Darling Downs. The farm, established in the 1980s, was a medium-sized concern, producing organic beef, grains and legumes. In 1988, the farm was incorporated as Magic Pudding Pty Ltd, creating a vertically integrated grain processor with the capacity to handle and market quantities of grains and legumes in excess of the total product of the original farm holdings. At the same time as Magic Pudding Pty Ltd reduced its own land holdings, and therefore the extent and scale of its farming operations, the company has expanded the capacity of its grain and legume processing infrastructure and its domestic and international marketing networks. Magic Pudding's international markets include Singapore, Malaysia, Japan, the USA, New Zealand and Italy. The company currently out sources the production of raw materials to a network of

approximately 250 contract farmers located in a wide area between Rockhampton in Central Queensland, and the Victoria-New South Wales state border. As of 2003, Magic Pudding has an approximate annual turnover of AU$ 8 million.

Processing and distribution

At the time of writing, Magic Pudding maintains an infrastructure necessary to process, store, package and transport up to 19 different types of grain and legumes, which it processes, and markets up to 150 distinct products. The company operates on its site, a state of the art facility where cereal grains are milled, classified and stored in the company's silo complex. Stored grains are treated with carbon dioxide to prevent insect infestation while processed and packaged products are stored in cold rooms prior to dispatch. It is estimated that the company's processing, distributing and marketing networks together handle an annual throughput of up to 12,000 tonnes.

Table 9.4. Magic Pudding Contracts with downstream processors.

Company	Products
Japan Rail Tokai (Japan)	Buckwheat flour
My Kitchen (Japan)	Wheat flour
Crops Australia (Australia)	Wheat flour
Haku Baku (Japan)	Buckwheat flour
Nisho Iwai (Japan)	Buckwheat flour, Spelt
American Health and Nutrition Inc. (USA)	All products
Ogura Trading Co. Ltd. (Japan)	Spelt
Heinz Wattie (New Zealand)	Wheat Flour, Chickpeas
Supermarkets (Australia)	Wheat Flour

Source: Data collected from 2004 survey.

While the company markets grain and legume products under its own brand name, the bulk of the output is sold as raw material to domestic and international downstream food processors and to domestic processors and retail outlets. The company's products are also repackaged and sold by downstream processors and distributors under their own brand names. For instance, Merriam, an Australian food wholesaler and distributor, packages and markets Magic Pudding produce under the Soland brand name. Grain and legume products handled by Magic Pudding are used as ingredients in a wide range of processed foodstuffs including breakfast cereals, snack foods and baby foods. Large-scale international food processors that purchase Magic Pudding grain and legume products include Heinz Wattie, American Health and Nutrition Inc., Japan Rail Tokai (JR Tokai) and Haku Baku (Table 9.4).

American Health and Nutrition Inc. is a supplier to 200 organic manufacturers and distributors worldwide. Haku Baku is a Japan-based organic noodle processor, supplying the Australian and Japanese markets, currently holding the largest share of the Japanese organic noodle market. Haku Baku maintains a noodle plant in the Australian state of Victoria, which processes locally farmed and organic grains.

Magic Pudding's expansion into organic livestock feed

An expansion of Magic Pudding into the processing and supply of organic off-farm inputs and outputs has been supported by a 2003 Australian Federal Government New Industries Development Grant of AU$ 110,000. The Federal Government's New Industries Development Grant provides financial assistance to agribusiness to support its commercialization of new products. The New Industries Development Grant enabled Magic Pudding to build a mill specialized in the processing of certified organic livestock feed. The government grant and the concomitant expansion of the company's infrastructure is significant in a number of respects. Firstly, given the growing international demand for lean, high quality and BSE free beef products, and Australia's position as an exporter of beef products and livestock feed, it is reasonable to expect domestic and international demand for organic livestock feeds to continue to match or outstrip supply for the foreseeable future. The New Industries Development grant is indicative of a certain level of material support at the official level for continued expansion of an export-oriented, large-scale model of organic agro food commodity production. Further evidence for support at the state level for this large-scale, export-oriented model of organic farming is the award to Magic Pudding of two Australian Federal Government Export Market Development Grants, each worth an estimated value of AU$ 37,000. The grants were intended to support the expansion of Magic Pudding organic products to markets in Japan and the European Union. The extension of Magic Pudding into the supply of certified organic livestock feed suggests a trend towards the commodification of organic farm inputs and marks a consolidation of two previously independent off-farm nodes of the organic agro food commodity chain, that is manufacture and supply of newly commodified farm inputs and the downstream processing and marketing of organic farm produce, in the hands of a single corporate entity. As noted in our introductory remarks, the vertical integration of the manufacture, processing and distribution of off-farm inputs and the processing and marketing of farm produce is a prevalent characteristic of conventional agro food commodity chains.

Producer contracts

Raw materials processed by Magic Pudding are typically obtained through arrangements under which farmers are contracted to produce a pre-negotiated

tonnage of a particular product or to cultivate a pre-negotiated acreage of a given crop. Farmers who enter into contracts to supply the company with a pre-negotiated quantity of a given crop suffer penalty clauses should they fail to meet the contracted amount of produce, while farmers who enter into contracts to cultivate a pre-negotiated area of particular crops are protected by a risk of god clause under which the farmer is exempted from liability in case drought, flood or other natural disaster should render the yield of the area cultivated under the contract worthless. Producer contracts typically include clauses stipulating the variety of crop to be planted, and determining the grade or quality of the material required by the company. For instance, a contract may specify the variety of wheat to be planted by the farmer and the protein content of wheat to be received by the company. Wheat failing to meet the grade specified in the contract may be purchased at a lower price than agreed under the contract, for conversion to animal feed for instance.

In general, whenever Magic Pudding has a fixed-term contract to supply a downstream processor with a given product over one or more planting seasons, the company manages the risks associated with climatic or other factors that may adversely affect the crop yield by contracting out the cultivation of the crop to a number of different contract farmers. Additionally, in order to protect itself from fluctuations in the price of a given product in the period between the planting and harvesting of the crop, the company does not contract out the entirety of its requirements for the year at the beginning of the planting season. Rather, it contracts a percentage of the estimated demand before the planting season, and staggers the contracts for the remaining portion of its requirements over the growing season. Thus the annual income received by a farmer under contract to Magic Pudding may not be determined in whole at the beginning of a season, since under the company's risk management strategy, the terms of the contracts entered into later in the growing season are influenced by such factors as fluctuation in market prices and expected yields in the growing season. On the other hand however, it is not uncommon for contract farmers who consistently provide produce of sufficient grade and quantity and considered by the company to be dependable to be offered longer-term producer contracts for a portion of their production. It appears that from the company's perspective, the ideal farmer is one specialized in the production of a limited number of crops over large acreages.

Case Studies

Our case study included a sample of three organic producers farming under contract to Magic Pudding. The farms studied are dispersed over a wide area in the Darling Downs, the mean distance between each producer being 150 km. There was a relatively minor variation in the extent to which each of the producers surveyed in the case study depended on Magic Pudding as an outlet for their farm produce (Table 9.5).

Table 9.5. Percentage of production under contract to Magic Pudding for three producers.

	Wheat	Soya	Buck.	Barley	Chick.	Corn	Rye	Linseed
P1	100	100	100	100	100	100	100	100
P2	100	15	N/A	0	N/A	100	N/A	N/A
P3	0	100	100	100	100	100	100	100

Source: Survey data (2003).

Producer number one, who farms solely under contract to Magic Pudding, cited the distance between producer number one's farm and alternative organic grain processing facilities as the main reason to contract the entirety of the farm's produce to Magic Pudding. Producer number two produces corn and wheat solely under contract to Magic Pudding while also supplying barley to Country Heritage Feeds for processing as stock feed. Producer number two also supplies soybeans to Magic Pudding, to Vita-soy and to Phillip Rodey Grains a private export group. Wheat accounts for 20% of Producer number three's total cultivated area. However, producer number three presently stores the farm's wheat production with the intention of marketing it independently for use as organic poultry feed, while cultivating the remaining 80% of the farm area under contract to Magic Pudding.

Table 9.6. Variation in price paid by Magic Pudding for specialty organic wheat varieties.

	Variety					
AU$ per tonne	Harthog	Likeheart	Spelt	Sunco	Rosella	Tallow
Price	300	300	450	300	280	280

Source: Survey data (2003).

Table 9.7. Variation in price paid for wheat by protein content.

	Protein content		
AU$ per tonne	More than 13%	11.5-13%	Less than 11.5%
Price	300	280	210

Source: Survey data (2003).

Our case studies suggest that the decision as to what crops the contract farmers plant in a given season are greatly influenced by external factors which are beyond any farmer's control. Farmer's decisions regarding crop varieties and acreages to be planted in a given season are directly related to contracts entered into with Magic Pudding. In turn, Magic Pudding requirements for raw materials to be procured under producer contracts are determined by the company's contracts with further downstream international and domestic processing and marketing entities. Prior to planting, contract farmers enter into negotiations

with Magic Pudding to determine which products are likely to provide the contract farmer with greatest returns. Through price differentials (Tables 9.6 and 9.7), producers are encouraged to grow varieties of wheat with high protein contents. Ancient varieties of wheat, such as spelt and kamult wheat, contain easily digestible forms of gluten and are consequently in high demand on the Japanese and other Asian markets. High premiums are attached to these specialty products on the world markets.

Organic contract farmers in Australia are strongly influenced by the internationalization of food markets and by the increasing financialization of the international economy as a whole since the collapse of the Bretton Woods structures in the 1970s. For instance, due to fluctuations during 2003-2004 of the value of the Australian dollar, Magic Pudding called for a decrease in the price of wheat paid to farmers to allow it to maintain its rate of profit.

At the time this survey was carried out the potential for an over supply of organic wheat had become of concern to some of the producers. The comparatively high premiums for organic wheat have lead to an increase in the acreage of Australian farmland devoted to organic wheat production, a potential outcome of which is an oversupply of organic wheat and a drop in the premium value of the product. Large-scale organic farmers with infrastructure to store grain may be better positioned to withstand a decline in wheat prices by storing the wheat in silos until the price of wheat becomes more favourable to the farmer. Alternatively, as observed by Lyons (1999), organic wheat farmers faced with a situation where there were too few buyers relative to the amount of grain available, have attempted to sell their produce on the conventional market, add value to their produce or find markets for their products overseas.

Conclusion

Australia's organic trajectory reproduces several of the most prominent features of the large-scale export-oriented model of agricultural production. Our case study indicates that non-farm capital is playing a large role in shaping the direction of the organic sector, at least as far as the production of durable grains and legumes are concerned and that organic farmers in the sector are becoming 'more aligned to the activities and economic goals of corporate capital, via input industries, financial institutions and processing firms', as Marsden (Marsden *et al.*, 1987) and Lawrence (1996) observe of farmers in the conventional agricultural sector. In some contexts, for example production of broilers under contract to Tyson Chickens (USA), contract farming leaves the farmers proletarianized, with no control over the production process; farmers producing under contract to Magic Pudding Pty Ltd retain some of their autonomy over production, while being integrated into commodity chains of global reach. A further study is necessary to examine whether the process of conventionalization described in this chapter is visible in other segments of the organic sector, such as in the production of perishable produce and livestock.

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10
Auditing Sustainability: the Impact of EurepGAP in New Zealand

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This chapter follows a parallel set of developments that links the greening of New Zealand's food exporters to developments in the European food market. New Zealand is a country that exports the vast majority of its food, with much fresh fruit and vegetables going to the European market. Consequently, the activities of food export industries are strongly influenced by initiatives in the European market. The chapter traces the transition of New Zealand's food sector from two-tier greening, organic plus integrated systems, to a predominant focus on integrated systems. This transition is then explained by linking it to shifts in agro food governance in Europe and the emergence of food audit cultures - as exemplified by EurepGAP driven by European retailers. Two effects can be observed with consequences for the broader politics of 'greening' foods: first, organic food exports have slowed and are falling outside the powerful new audit cultures like EurepGAP; second, new food audit cultures are potentially going to dominate how sustainable management practices are both described and measured.

Sustainable Agriculture in the New Zealand Context

Events leading to the emergence of the two-tier greening strategy

Campbell and Fairweather (1998) used the term 'two-tier' greening to refer to positive synergies and the linked development of organic and integrated production systems in New Zealand. In a subsequent article, Campbell and Coombes (1999a) described the particular configuration of organic food exporting from New Zealand as having stabilized around the two-tier greening pattern. This pattern was strongly influenced by both external trade politics and

internal development issues around sustainable agriculture. In the context of this chapter, five key points merit restating:

- New Zealand went through a period of sudden increase in green food exporting in the 1990s. From an almost non-existent base in 1990, New Zealand had achieved around 30-35 million Euros of organic food exports by 2000, mainly in apples, kiwifruit, and processed vegetables (Campbell and Coombes, 1999a and 1999b);
- At the same time, horticultural industries began to invest heavily in integrated systems of pest control to dramatically reduce chemical residues on export fruit;
- By 2000, New Zealand was demonstrating a strategy of two-tier greening with numerous useful synergies between organic and integrated systems of production. The key case is the kiwifruit industry, of which 95% of production was operating under an integrated system called KiwiGreen by 1999 and the remaining 5% had been certified organic (Campbell and Fairweather, 1998; Campbell and Coombes, 1999a, 1999b);
- Export industries argued that this development had little to do with incipient environmental philosophy among food exporters but rather was driven by twin factors: lucrative new markets for organic produce, and increasing levels of difficulty in obtaining access in the highest value markets like the EU, USA and Japan;
- Campbell and Coombes (1999a) argued that these new market access issues were part of a broader strategy of green protectionism in Europe and Japan that had emerged as a strategic political response to free trade initiatives in the World Trade Organization's (WTO) General Agreement on Tariffs and Trade (GATT) negotiations in, and subsequent to, Uruguay.

The term green protectionism describes the broad shifting of agricultural support from price and tariffs to agri-environmental measures. Thus, rather than supporting agricultural production (blue box policies), green box polices provide direct support for the farmed landscape. Green protectionism provides a meeting point for political interests in Europe, at which the need for protection from imports from the heavily subsidized US farm sector has become aligned with the growing food quality concerns of urban European consumers with respect to food safety and the environmental impacts of industrialized agriculture. Green box support for agriculture, and specific encouragement of organic production in the early to mid-1990s, has since evolved into a powerful set of regulatory initiatives that includes:

- Contesting WTO Sanitary and Phytosanitary Standards for certain agro food imports, such as bovine Growth Hormone (bGH) in beef, and genetic modification (GM) of crops;
- A broadly articulated countryside policy supporting the evolution of a multifunctional landscape model, which allows national governments to support culturally, as well as agriculturally, defined land use;

- Although contested within the WTO, in 1992 the European Community, as part of its food quality policy, set up certification systems - Protected Designation of Origin (PDO), Protected Geographical Indication (PGI), and Traditional Specialty Guaranteed (TSG) - to encourage farm diversification by providing an opportunity for added value, and to offer legal protection for traditional national and regional food products, for example through the French AOC (Appellation d'Origin Controller).

While these policy and regulatory initiatives have encouraged environmental protection and the greening of agricultural production in Europe, a parallel set of developments has taken place among food retailers. Driven by, on the one hand food safety scares and on the other, a sentiment for green foods, since the 1990s the multiple retailers have begun positioning their food products to address these consumer concerns and stated preferences. While EU policy has moved agricultural production towards greener forms (with attendant measures to avoid unfair competition from cheaper more industrial agricultural imports), retail chains have progressively increased the level of externally validated and verified audits, in order to monitor and manage potential hazards along the food supply chain.

While the key arguments in this chapter directly relate dynamics within New Zealand's export sectors to the above list of regulatory, governance and audit initiatives in Europe, it is useful to note that these European phenomena are not taking place in complete isolation from wider trends in the global food system. Busch and Bain (2004) and Burch and Lawrence (2004) both provide evidence of a more global shift towards the empowerment of retailers within agro food systems. The core argument of Busch and Bain (2004) is that an unintended consequence of the installation of WTO regulation at a global level has been the emergence of complex systems of private regulation driven by retail chains in First World countries. Seen in this light, the European experiments in supply chain audit and 'green protectionism' must be understood as being potentially linked to such wider dynamics in the WTO era of global (private) regulation.

Since 1997, supply chain audits have led to a convergence of political interests in the concept and practice of risk management with the ideas and aspirations of sustainable agriculture. Most significantly, the Euro Retailers Working Group Produce (EUREP) initiative has since evolved into a partnership between producers and retailers, EurepGAP, with a mission statement to 'develop widely accepted standards and procedures for the global certification of Good Agricultural Practices (GAP)'. Essentially, EurepGAP is a technical standard accredited to internationally recognized certification criteria including ISO 65, which provides, 'a robust and challenging but nonetheless achievable protocol which farmers around the world can use' (EurepGAP, 2003).

EurepGAP has been successful in assimilating various systems of production that claim sustainability benefits, under one umbrella standard. Consequently, European producers have begun to diverge along two principle pathways to *sustainable* production: organic and EurepGAP. The following sections provide evidence to show that the impact of changes in the European retail and

regulatory environment on producers in New Zealand has largely been to undermine the stability of the previously successful two-tier strategy.

The fate of organic exports from New Zealand

Campbell and Liepins (2001) documented the emergence of a unified organic certification movement in 1983, at which time the first organic standard, Bio-Gro, was agreed by a council of organic organizations. In 1991, two export organizations, the NZ Kiwifruit Marketing Board and Heinz-Wattie NZ Ltd, began to export organic products to Europe and Japan under the Bio-Gro label (Campbell and Fairweather, 1998). This first organic export activity signalled an important growth phase for the organic sector; the number of growers converting to organic production subsequently increased significantly. At the same time, industries promoting organic production for export also invested in the development of integrated systems. Research and development activities within these industries thus tended to focus on pest control strategies that benefited both systems. For example, ZESPRI's investment in integrated management enabled the company to project a cleaner and greener image for kiwifruit growers who were unwilling to forgo the use of agrochemicals, an image that has since been reinforced through accreditation to EurepGAP.

Similarly, industry developments and marketing activities have led to a close link between organic and residue-free products in export markets. By 2000, two-tier greening had stabilized over a period of five to six years and become the new dynamic configuration for New Zealand's horticultural exporters to such an extent that industry-level strategies to support the development of both organic and integrated systems of production were rapidly introduced for wine, kiwifruit and apple production (Campbell and Fairweather, 1998; Campbell and Coombes, 1999a and 1999b). Thus, a pattern developed among horticultural exporters of having a low-volume tier for certified organic product with a much higher volume tier for residue or chemical free product supplied from integrated systems (Table 10.1).

Table 10.1. Value of food exports from organic and integrated systems 2000-2001.

Greening export sectors	Value of exports (million Euros)
Kiwifruit under Integrated Pest Management, Kiwigreen	233
Pipfruit under Integrated Fruit Production	130
Wine under Integrated Winegrape Production	48
Certified organic exports	30
Total	441

Source: Campbell and Fitzgerald (2000).

However, the situation in 2005 has changed again and in several significant ways, which are examined in the following sections.

Organic exports have slowed

Organic exports rose fastest between 1999 and 2000. Since then, however, the growth of exports has slowed dramatically (Table 10.2).

Table 10.2. Value of total organic exports from New Zealand 1995-2004

Year	Value of organic exports (million Euros)	Growth rate (%)
1995	3	-
1996	5	67
1997	12	140
1998	15	25
1999	20	33
2000	30	50
2001	35	17
2002	36	3
2003	40	11

Source: OPENZ (2005).

A key reason for this change in fortunes has been the loss of access to the Japanese organic squash and kiwifruit markets (personal communication ZESPRI staff, 2004). Since 2001, to ensure compliance with Sanitary and Phytosanitary regulations, the Japanese authorities have insisted on strict quarantine inspection and fumigation, using methyl bromide, of organic fruit from New Zealand. But, since pest control measures in integrated systems result in fewer insects appearing during quarantine inspections, fruit from integrated management systems is not fumigated as frequently. Although the Japanese regulations are being formally contested through the WTO, in the meantime New Zealand's organic horticulture export industry has been devastated by the requirements placed on it.

This barrier for access to the organic market in Japan is not insuperable and may well be overcome in the near future. However, clearly the coincidence of the Japanese regulations with a range of measures around integrated production (which will be discussed later) have resulted in New Zealand's monopoly kiwifruit exporter, ZESPRI International Ltd. (ZESPRI, 2003), deciding to reduce the level of investment in organic exports.

Ironically, the same green protectionist measures that made organic exporting attractive in the early 1990s have made organic exporting less attractive since

2001. Plus, because of dependence on the Japanese market for a limited number of organic products, the impact of green protectionist measures has been more acute for New Zealand organic farmers than for many other organic producers around the globe. The slowing of organic export growth in New Zealand is not reflected by the growth of organic markets on a global scale.

The emergence of New Zealand's domestic organic market

Despite the decrease in exports, there has actually been ongoing growth in the organic sector, but the dynamism has shifted to the domestic market (Table 10.3). During the period from 2000-2004 a number of New Zealand supermarket retailers introduced organic product lines and, while traditional organic retailers struggled to compete (and a number went out of business), the overall trend has been a growth in the level of organic produce consumed in New Zealand.

Table 10.3. Organic domestic sales in New Zealand.

Year	Domestic sales (million Euros)
1990	0.3
1997	2.6
2000	8.0
2002	36.0

Source: Ritchie and Campbell (2002).

Traditional, dedicated organic retail stores struggled to compete on two sides. First, the New Zealand supermarkets mainstreamed organic product – often importing large consignments of organic products like pasta. While on the other side, New Zealand has experienced strong growth in the number of farmers' markets in urban centres. These have proved popular as a site for direct sales by small organic producers.

The situation in New Zealand's domestic organic market is not unique. Raynolds (2004), in her analysis of the commercialization of organics and the rise of a global market for certified organic product, notes that in many countries there is a bifurcation between domestic and export markets. While export markets are more clearly standards and market driven, in domestic markets: 'organic civic and domestic values are also thriving, as evidenced in the proliferation of alternative organic retail outlets, in the rising number of conscientious consumers purchasing organics, and in the small-scale producers which continue to dominate many organic commodity areas' (Raynolds 2004: 738).

After two-tier greening: the rise of environmental management systems (EMS)

The shifting fortunes of the organic sector are interesting but are becoming a less significant contribution to the political and economic configuration of New Zealand's activities as an environmental food exporter. This section of the chapter moves beyond organics to look at the sudden appearance and proliferation of environmental management systems (EMS) as they converge with the existing quality assurance (QA) programmes operated by exporters. The following account demonstrates a revolution from two-tier greening to EMS/QA greening of food production in New Zealand (SAMSN, 2004).

Although certified organic production commenced in the 1980s and was fully professional by 1994 (Campbell and Liepins, 2001), during the early 1990s there were virtually no other certification or audit schemes that provided assurance regarding the environmental qualities of a production system. At this time, Heinz-Wattie NZ Ltd was a strong sponsor of Growsafe, a code of practice for responsible handling and use of agri-chemicals. However, the lead developer of the new style of audited environmental performance was the kiwifruit industry with the establishment (after many years of trials for pest control protocols) of KiwiGreen in 1996 (Campbell *et al.*, 1997). KiwiGreen was designed as an integrated pest management system for reducing chemical residues in kiwifruit production. Since then, the scheme has addressed broader aspects of the orchard environment, and new practices such as water and energy management have been added to the scheme. In technical terms, the KiwiGreen scheme has evolved from a food safety management system to a food safety and environmental management system. Other industry sectors readily imitated the kiwifruit model, for example the New Zealand Apple and Pear Marketing Board (ENZA) scheme for integrated fruit production, which had initially comprised both an organic and an integrated management tier. After 2000, a confusing trend emerged in food export industries resulting from two internal pressures, convergence and proliferation.

Convergence. All export industries had adopted complex QA programmes as a mandatory minimum for retaining access to high value markets. Le Heron (2003) outlined how QA and contracting schemes became the norm across all New Zealand's food export sectors. After 2000, emerging EMS and existing QA schemes began to converge and overlap, eventually integrating into each other. Again, the best example is kiwifruit: KiwiGreen was integrated with branding, visual quality, size, taste and texture QA programmes. Eventually, the entire crop converged under the ZESPRI label, which simply indicated that all these qualities were guaranteed.

Proliferation. After 2000, the number of EMS, (convergent) QA, sustainable management systems, integrated management systems, environmental Standards, and environmental Codes of Practice started to proliferate dramatically (SAMSN, 2004). The neo-liberal character of the New Zealand

state saw very little activity at a government level to integrate or harmonize any of these schemes. Rather, single industry sectors were left to generate their own audit cultures (Le Heron, 2003).

In an attempt to create coherence out of the startling array of emerging audit options, industry received government funding to establish the Sustainable Agriculture Management Systems Network (SAMSN) project. In 2004, SAMSN conducted a review of the content, style of audit, scope and potential harmonization across New Zealand's food export sector. SAMSN identified 13 schemes that claimed to operate and audit either sustainable or environmental management systems, the difference between which remains obscure. As well as this, seven QA schemes have converged and now contain some food safety issues that were originally part of an EMS or integrated system, although some programmes were already defunct by 2004. Three industry sectors had specific integrated management systems and there are also some pre-existing codes of practice (Figure 10.1).

While SAMSN did not calculate a monetary value for exports under these schemes, one consultant to SAMSN estimated that such exports in 2004 amounted to between €1.3-1.5 billion (personal communication Manhire, 2004). When compared to the value of organic exports in 2004, around €35-40million, it becomes apparent that the industry has shifted away from overtly supporting organic *plus* integrated, towards a marked focus on these audit schemes; thereby signalling the end of the two-tier greening strategy.

The evident intent of the SAMSN project was to achieve some harmonization and integration across the schemes. While SAMSN (2004) begins these processes in New Zealand, significantly the report points to the integration of larger more powerful environmental and food audit cultures that are underway. In particular, the report identifies EurepGAP as a powerful new player in the world fruit and vegetable market:

> EurepGAP is a powerful initiative that will require compliance by New Zealand producers to gain access into typically high value European supermarkets. Potentially, it could assist in the standardizing and harmonizing of programmes in New Zealand (SAMSN, 2004: 3.10).

Typically, the fastest New Zealand entrant into the EurepGAP network was the kiwifruit industry, followed by the apple industry. In pointing towards EurepGAP, the SAMSN project clearly links the development of new environmental audit cultures in New Zealand back to developments in Europe. The next sections of this chapter will sketch the parameters of the EurepGAP initiative.

Figure 10.1. New Zealand audit programmes in 2004.

Sustainable or environmental management schemes:
Organic Standards (three certifiers), Green Tick, Project Green, SmartPlan, Sustainable Winegrowing, Market Focused (Dairy), NOSLaM, The Living Wine Group, Merino Benchmarking Group, Eco-Profit, Sustainable Agriculture, Enviro-Mark, Green Globe, KiwiGreen (under EurepGAP).
Converging quality assurance programmes:
NZ Fresh Produce Approved Supplier Programme, DeerQA, AFFCO Select, FarmPride, FernMark Quality Programme, Olive Care.
Integrated management systems:
KiwiGreen (pre-EurepGAP), Integrated Fruit Production – Pipfruit, AVO Green, SummerGreen.

Source: SAMSN, (2004).

The Emergence of EurepGAP

The following is a brief introduction to the emerging audit alliance called EurepGAP. Even though SAMSN identified EurepGAP as a powerful force in New Zealand, the origins and control of EurepGAP are European.

During the 1990s, when New Zealand's food exporters were first negotiating the emerging array of food safety and environmental standards needed to gain access to European markets, the difficulties of gaining access were compounded by the bewildering range of systems being introduced by different retail chains. From 1997, however, the formation of the Euro Retailers Working Group Produce (EUREP) resulted in a harmonization of food safety and environmental standards. By 1999, the launch of EUREP Good Agricultural Practice (EurepGAP) protocols significantly simplified the task of gaining access to Europe's leading retail chains. This made entry into the EurepGAP alliance particularly appealing for food exporters in countries like New Zealand.

Another attraction for organizations aligning with EurepGAP was that the system was designed as a business-to-business audit. The system regulated entry to markets, instead of branding, and hence there are no EurepGAP labels on any consumer products. This appealed to exporters like ZESPRI who could retain their investment in the KiwiGreen label. The system also appealed to supermarket chains that had invested many years of development into brand recognition of in-house labels claiming environmental and food safety qualities (Le Strat, 2004). For both purchasing managers of food retailers and export managers of exporting organizations, the arrival of EurepGAP provided a one-stop compliance system, which dramatically simplified their activities in securing reliable audit trails and market access requirements.

A further area of attraction for these businesses was that EurepGAP offered much more than a new system of rationalized and consolidated audit. In addition, the new alliance pro-actively promoted a vision for sustainable agriculture. This vision was based around triple bottom line criteria for sustainability, integrated systems and a consensus approach to decision making

that involved multiple stakeholders in the food system (see Figure 10.2). Alongside the retailers, these stakeholders included: scientists, government agencies, consumer groups, producer organizations, agri-chemical and input technology companies, and environmental NGOs. This broad alliance of supporters, and the positive tone of the EurepGAP vision, encouraged exporters and retailers to adopt EurepGAP participation in order to underwrite their own advertising claims about sustainability and food safety. A case in point is the McDonald's chain in Germany which entered EurepGAP and now uses claims about agricultural sustainability in its advertising.

Figure 10.2. The EurepGAP terms of reference.

Respond to consumer concerns on food safety, animal welfare, environmental protection and worker welfare by:
Encouraging adoption of commercially viable farm assurance schemes, which promote the minimization of agrochemical inputs, within Europe and worldwide.
Developing a Good Agricultural Practice (GAP) framework for benchmarking existing assurance schemes and standards including traceability.
Providing guidance for continuous improvement and the development and understanding of best practice.
Establishing a single, recognized framework for independent verification.
Communicating and consulting openly with consumers and key partners, including producers, exporters and importers

Source: EurepGAP (2005).

When EUREP held its annual conference in 2003, they used the opportunity to document the growth of the organization. In the four years from 1999, when the EurepGAP protocols were released, 12,000 growers had signed up to produce under the new system. This placed 394,000 hectares of fruit and vegetable production under EurepGAP protocols and included every major supermarket and food cooperative chain in Europe in the alliance. At the market end, over 200 companies were members of the alliance and this included every major supermarket and food cooperative chain in Europe.

EurepGAP plainly demarcates the new site of governance for structures around food safety and risk that were previously the province of green protectionism at EU and national level. Publicity material from the 2003 EurepGAP conference portrays the alliance's major success in integrating and subsuming the European food system. As the number of participants in EurepGAP increases, participation on steering groups, technical committees and consultative organizations to EurepGAP are becoming crucial arbiters of a dramatic (and dense) experiment in what comprises triple bottom line sustainability for agriculture at the global level. The rise of EurepGAP clearly demonstrates how success breeds success, with companies, auditors and growers, in fruit, vegetable and cut flower production, now carefully considering if they can survive outside EurepGAP.

Having established the importance of EurepGAP in food audit systems in Europe, we return to investigate more closely the influence of EurepGAP protocols on food export strategies in New Zealand. Of particular interest is that, while there is potential for the retailer-led audit culture to encourage two-tier greening within the European agricultural sector, it holds the parallel potential to overwhelm a similar strategy already established in New Zealand. The possible emergence of two-tier greening in Europe does not automatically correspond to reinforcement of two-tier greening in New Zealand. In the process, EurepGAP may prove to be at least partially responsible for the decline in New Zealand's organic exports.

Preliminary insights into the impact of EurepGAP on the kiwifruit industry

The premier sector of organic and integrated fruit production in New Zealand is the kiwifruit industry. In the kiwifruit industry, innovation with organic and integrated systems was early and rapid. In only four years, the entire industry transferred from intensive conventional production to two-tier greening (Campbell *et al.*, 1997), including in relation to the greening of New Zealand food exports. The following sections show how much EurepGAP has since impacted on the strategic direction of kiwifruit production in New Zealand.

The incorporative power of EurepGAP is evident in kiwifruit production in New Zealand. In fact, ZESPRI became one of the first organizations to pass the highest levels of integrative audit into EurepGAP and now is able to operate its own version of EurepGAP protocols. As of 2004, it had signed a contract with EurepGAP to form a Technical Working Group with the objectives listed in Figure 10.3. ZESPRI envisages this working group as including all significant horticultural exporters with the goal of rapidly harmonizing integrated production standards across New Zealand fruit and vegetable exports. This proposed expansion of the presence of EurepGAP in New Zealand prompted speculation in SAMSN (2004) that the European organization, via ZESPRI, would actually complete the task of harmonization and integration that SAMSN was originally set up to achieve.

Figure 10.3. EurepGAP Technical Working Group objectives for New Zealand.

Facilitate the implementation of EurepGAP
Assist in translation and interpretation
Develop national interpretation guidelines to be suggested to the Technical Standards Committee (TSC)
Provide input to the continuous development and improvement of the EurepGAP reference standards

Source: EurepGAP (2005).

As a result of ZESPRI's dominance in the kiwifruit industry, it has been able to capture the whole of the production and export process and thereby reap the rewards of engaging with EurepGAP. These rewards involve more than just guaranteed market access. The wide acceptance of EurepGAP standards has vastly simplified the process of compliance with export protocols. One ZESPRI manager commented that he had identified 49 sets of compliance documents and protocols with which ZESPRI had previously needed to comply in order to export kiwifruit to Europe. By 2004, EurepGAP had absorbed and integrated over half of these (personal communication Kay, 2004).

While the benefits to ZESPRI as a corporate entity, of participation in EurepGAP, are entirely in line with the previous section's discussion, it is interesting to see how the growers in the industry have responded to this new audit system. During 2004, 35 farm households (12 organic and 23 integrated) in the kiwifruit sector were interviewed about a range of sustainability and environment issues. While EurepGAP was not included as a part of the planned interview schedule, the extent to which growers were aware of EurepGAP is demonstrated by the fact that 15 of the 35 growers could list the standards by name and did so unprompted in response to general questions about the environmental impact of their management practices. This group of growers clearly identified EurepGAP as part of their understanding of sustainability and environmental management in the kiwifruit industry.

Analysing these responses in more detail reveals something of how growers position themselves around EurepGAP and how they see it operating within their production system. While these growers most often recognized EurepGAP as an administrative burden, many growers also perceived benefits in the record keeping necessitated by the standard. The most commonly stated benefit involves raising the grower's awareness of conditions that affect the sustainability of their management. For example, one grower indicated that compliance with regulations assured him that management practices on the orchard were protecting the environment on the farm:

> Because we know through, you know, regulation...another way we know, too...things like the EurepGAP certification and the Vegfed certification (KiwiGreen-assured grower, May 2004).

Some farmers also claimed that compliance encourages them to pursue what they view as more sustainable management practices, especially in regard to the storage and disposal of agri-chemicals and the assurance of improved food safety for consumers. Here, a grower describes the influence of EurepGAP on his handling and use of pesticides:

> I think as long as you're cautious and you use the right protective gear when you're spraying, and you don't slack off in any way...You've gotta make sure you don't leave them lying around...it's another good thing

> about this EurepGAP thing. It's made us pull our head in, you know (KiwiGreen-assured grower, November 2004).

Growers, who hired labour to assist with pruning and harvesting, identified EurepGAP as a principal guideline for increasing social responsibility of labour relations as reflected in greater attention to documentation of employment on the farm:

> [EurepGAP's there] to ensure that they're getting safe food, grown in an environmentally friendly way, a sustainable way. And to show that people aren't exploited in the production of it (KiwiGreen-assured grower, May 2004).

EurepGAP, therefore, was the source of ideas and practices that the growers adopted as a means of promoting sustainability on their properties. This observation was indicative of approximately one third of the 35 growers interviewed and raises important questions about how EurepGAP is understood by these farmers in relation to organic production. In the past, the kiwifruit industry was characterized by strong discourses of sustainability around organic and a rather more amorphous and disorganized body of ideas around KiwiGreen, which was initially restricted to residue-free fruit production and only later embraced wider notions of sustainability (Campbell and Liepins, 2001). The growers' adoption of EurepGAP as good environmental and social practice suggests that the EurepGAP standard may be replacing the organic standard as a baseline for sustainability even though EurepGAP does not act for the prohibition of agri-chemicals. Evidence of this heightened status of integrated production can be seen in the statements of growers who, when asked about sustainability, list EurepGAP and organic standards in the same response:

> I mean, if we didn't have [EurepGAP and BioGro] then we wouldn't have sustainability. These are in place to try and achieve some sort of sustainability. Without them, we'd just keep on going the way we've been (organic kiwifruit grower, July 2004).

Some growers also suggested that EurepGAP has higher standards than organic audits in regard to labour and waste management practices. Thus, compliance with EurepGAP standards was perceived as more than just a means to access European and other markets. For some of these growers, EurepGAP is providing a pathway to sustainable production that they argue is superior to organic in some of its criteria.

Despite positive perceptions of the ability of EurepGAP to promote more sustainable management practices in kiwifruit production, there is also evidence of more negative sentiments towards EurepGAP; particularly the inhibitive effects of the standard. Impediments to specific practices, which are commonly considered to be more sustainable, occur in both environmental and social

aspects of production. For example, one grower who employed integrated production methods claimed that EurepGAP specifically discouraged the use of compost on the farm:

> We transported horse manure for a long time because we were told that was a good medium to spread around underneath the sick lemon trees we had. But [in] the EurepGAP recommendations there were so many things to do with how you made compost, we thought, right, well we're not doing those, we'd better leave it alone. So we've stopped (KiwiGreen-assured grower, May 2004).

Another grower suggested that the increased monitoring of labour relations had, in an effort to avoid compliance issues, led to an increased use of migrant contract labour and deskilling of the labour force:

> Skilled labour is a challenge. We, as an industry have to have, I believe, a quantum shift in our thinking about how we manage our staff if we expect to bring people through the ranks with the abilities to be managers. As long as we're employing Thais or Singaporeans or Vietnam migrants to do our pruning we're not going to be doing much towards building our skills base. But we are hiring migrant labour to survive in the business; it's a way to get around [EurepGAP] compliance and demands (KiwiGreen-assured grower, November 2004).

In these instances, EurepGAP was not considered to be an impediment to sustainable management in general, but rather to delineate certain practices as too complex for partial engagement, and this potentially limits the progressive adoption of unfamiliar production methods. The capacity for EurepGAP to restrict the range of management options, such as through the density of management detail in the protocols, is also evident in the frequent complaints made about the limited applicability of the myriad of protocols to local conditions of kiwifruit production.

The actions of ZESPRI and the response of kiwifruit growers to the industry's adoption of EurepGAP management standards demonstrate two things. First, EurepGAP has rapidly developed a high level of influence in both industry strategy and the actions of some growers at the orchard level. The rewards of access to market and uniform and measurable standards increase its attraction for a dominant exporter such as ZESPRI in New Zealand kiwifruit. These standards are readily imposed on growers who have enjoyed relative economic success, but have limited market outlets beyond ZESPRI. Growers appear to identify a similar appeal in EurepGAP standards, which, despite the onerous demands of paperwork, establish an attainable measure of sustainable practice.

Second, the EurepGAP standards are not just a new system of audit and compliance for some growers. Under the two-tier greening strategy, organic unquestionably held the high moral ground when making claims of

sustainability. In contrast, KiwiGreen's integrated approach seemed more of a middle way to sustainability. Now, some growers have taken up EurepGAP's triple bottom line approach to sustainability as an improvement on the narrower focus of organic production. EurepGAP is being positioned as part of a wider discourse of sustainability and favourably compared to organic production. For a number of growers, EurepGAP's standards are no longer the middle way; they are equal, or even superior, to organic production.

While the industry has not become antagonistic towards organic production, the old synergies between organic and integrated that were operating within the two-tier greening strategy have been diminished. EurepGAP has become the key strategy around sustainable production, and the promulgation and enforcement of these protocols have come strongly to influence integrated production in the kiwifruit industry. Similarly, it is possible to suggest that part of EurepGAP's appeal is the scale and efficiencies of the alliance. If EurepGAP appeals as a means of vastly simplifying the complexities of market entry into Europe then, by contrast, organic remains a messy small-scale, fragmented venture that suffers much by comparison.

Conclusion

In conclusion, this chapter has sought to explain why organic exports out of New Zealand have slowed and why the stable configuration of two-tier greening is collapsing in favour of integrated systems. The answer is revealing, and leads to many further observations of regulatory trends transforming world trade in environmentally audited food products. The work of Busch and Bain (2004) argues for recognition of a global shift in food systems regulation arising as an ironic consequence of the new era of WTO regulation. At the heart of their argument is evidence of the emerging power of retail chains in creating sets of private standards for food commodities – even citing EurepGAP as an important example of such trends. Clearly, the New Zealand evidence does nothing to contradict this broader analysis.

As with earlier arguments about green protectionism, the fate of New Zealand's environmental food exports is inextricably linked to Europe. Prior to the launch of EurepGAP in 1999, there were multiple competing pathways through regulatory gateways to the market and an even greater array of retailer specific standards and systems of audit around sustainable food production. Faced with such a variety of potential strategies for entry into Europe, New Zealand's sustainable food exporters found the two-tier strategy to be beneficial, using synergies between organic and integrated and also supporting the diversity of approaches within this strategy. The integrating force of EurepGAP has subsumed many of these systems of audit and collapsed much of this diversity of pathways into the European market. By contrast, the European market in fruit and vegetables is becoming increasingly integrated into two pathways: organic and EurepGAP. While this appears to vindicate the two-tier greening strategy of

the New Zealand exporters, the orchard level experience of EurepGAP, as well as the enormous efficiencies available to industries joining the new alliance, means that much of the impetus has gone out of organic exporting from New Zealand. The value and volume of organic exports has slowed while those industries joining the EurepGAP alliance have dramatically increased the volume of fruit entering Europe under integrated protocols.

While this chapter has shown how these long distance supply chain dynamics influence a food export zone like New Zealand, two important strategic questions remain for European readers. First, despite considerable diplomatic silence around a potential conflict between EurepGAP and certified organic production, these two competing versions of sustainable agriculture are likely to come into some form of conflict in Europe. Second, EurepGAP only covers fruit and vegetables and currently has no implications for exports from the USA to Europe. But with the promulgation and adoption of EurepGAP standards for livestock production imminent, there is potential for conflict with the USA over restricted access to European retailers to emerge. In both of these potential conflicts, the positioning of European regulators in relation to the rapidly increasing alternative to organic production will be extremely interesting. While the collapse of the two-tier greening strategy in New Zealand is significant for that country, the process may have even more significance as in indicator of food system conflict looming on the horizon of far larger food markets and agricultural production sectors.

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11
Emerging Scared: an Analysis of Socioeconomic Data on Conversion in South Africa

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In South Africa, as in most African countries, organic farming is, despite the strong global growth, still a very young and small industry. During the last few years however, more and more farmers have started the process of conversion to organic farming. It is seen as a rewarding alternative to the increasingly difficult situation in conventional agriculture. Particularly for the Province of the Western Cape that is located in the southwestern part of the country and is a net exporter of agricultural products (mainly fruit, wine and table grapes), organic farming is a lucrative option and one way to respond to the direction that export markets seem to be taking at present.

However, the lack of experience in organic farming in South Africa leads to several problems. One of them is the assumption that the conversion to organic farming follows similar patterns as in other developed countries. A result was that the regulations for organic farming, which were started to be developed by the government, were in fact a one-to-one copy of the EU Regulation No. 2092/91. Especially farmers, who were involved in the development process, criticised the missing adoption to the South African situations and constraints, mainly caused by missing information. Against this background several questions need to be answered to reduce those problem areas: Who is converting to organic farming and what are their motivations? Which are the structural differences between conventional and organic farmers and farms? And finally, which problems do organic farmers experience during the conversion process, also in comparison to other countries? The South African experience, and also the experience from around the world show that bottlenecks and a lack of information can hamper the establishment of organic farming as an alternative to conventional agriculture. In the discussed case such bottlenecks are expected to be not only natural factors but especially socioeconomic and structural factors.

To answer the above-mentioned questions this chapter intends to investigate the socioeconomic aspects of the organic farming movement in South Africa. Those features, together with the problems associated with the conversion from conventional to organic farming, are then used to identify potential means to support this movement, taking into consideration the structural background for agriculture in South Africa.

Background

The situation of South African agriculture

South Africa is not well endowed with areas of high agricultural potential. With a mean annual rainfall of 497 mm it is a semi-arid region with regular drought problems. There are three main rainfall areas: the winter rainfall area in the Western Cape; an all year round rainfall area along the Southern Cape coast; and a summer rainfall area that covers the remainder of the country.

Eighty-two percent of the 122.3 million hectares total land area is farmland (Abstracts, 2001). Commercial agriculture occupies 86.2 million hectares while developing subsistence agriculture comes to 14.5 million hectares. Total potential arable land in South Africa is only 14.2 million hectares compared to 72 million hectares of grazing land.

Land-use patterns in commercial agriculture

About 22% of the arable land in commercial agriculture is high potential land, 90% of which is found in KwaZulu-Natal and Mpumalanga (Meyer, 1998). Medium potential arable land accounts for 29% of the total arable land, 75% of which is found in the Western Cape, Free State, Limpopo and North West (Fényes and Meyer, 2003). Only 1.1% of the total surface of South Africa can be irrigated. However, almost three-quarters of this potential area, which is found in KwaZulu-Natal and the Eastern Cape consists of deep valleys which are uneconomic to develop.

Land-use patterns in developing farming areas

Thirteen point nine percent of the 17.1 million hectares of the total surface of South Africa is used for developing subsistence farming. An estimated 11.1 to 16.6% of the total area is potential arable land. Due to the social structure of those areas, which are mostly located in the former homelands, only 40 to 80% of this land is cultivated in any given year (Fényes and Meyer, 2003). Furthermore it appears that although some of the developing areas are situated in the moist eastern parts of South Africa, steep terrain limits the amount of available arable land and increases the soil erosion potential (Meyer, 1998). This is fostered by overgrazing due to stocking rates, which exceed the carrying

capacity nearly everywhere and affect the quality of the arable land in such a way that it is no longer suitable for crop production in many areas (Fényes and Meyer, 2003).

Agriculture's role in South Africa's economy

Although South Africa's agriculture has a contribution of only 3.1% to the countries Gross Domestic Product (GDP) in 2001, it plays an important role in the economy as a whole due to its backward and forward linkages (Abstract, 2000; Vink and Kirsten, 2003). Available evidence lends strong support to the close relationship between agricultural development and overall development. Economists generally agree that the sector's contribution could be as high as 20 to 30% if one considers the linkages with other sectors of the economy (Meyer, 1998).

Agriculture is a net earner of foreign exchange. The growing rate of export earnings, which is faster than the rate of import expenditure, has helped the country to meet its foreign dept obligations under extremely difficult circumstances. This is mainly as a result of South Africa's deciduous fruit, citrus, wool mohair, groundnuts, cut flowers and bulbs, subtropical fruit and wine being highly in demand in foreign countries (Fenyes and Meyer, 2003).

Additional to the above mentioned features of South African agriculture three important economic features have to be taken into account when discussing new ways of farming: the dualistic structure with commercial and subsistence farming, the process of deregulation of commercial agriculture that has taken place over the past two decades, and the attempts to 'deracialise' the sector since 1994 (Vink and Kirsten, 2003). Thus, the agricultural sector is receiving less support from the state, commodity control boards were abolished and the government's focus is put on issues like the Land Reform to speed up the equal distribution of agricultural land.

Organic farming in South Africa: state of the art

According to Moffet (2001) in 1999 only 35 farms were certified in South Africa, whereas in 2000 this number had increased to approximately 150. According to the latest statistics, 240 farms with a total area of 43,620 hectare (including pastures and in-conversion land) were certified in 2002 (Grolink, 2002). The main products under certification were vegetables, wine and table grapes and other fruit, while the number of organic livestock farms is still very small. The largest percentage of farms was located in the Western Cape (46%), followed by KwaZulu-Natal with 18%. The other provinces had only a relatively small percentage of the certified farms, with 3 to 9%.

Six certification bodies were active in South Africa in 2002 (Kupka, 2002). At that stage, Ecocert, a certification body from Germany with local inspectors available in South Africa, certified 52.1% of the farms. It was one of the first

organisations active in South Africa, which explains the high number of Ecocert certified farms. The Société Générale de Surveillance (SGS), an international inspection authority based in Switzerland, had 15.5% of all certified farmers under contract. This percentage excluded the farms, which were still in conversion. Kupka (2002) referred to between 90 and 95 certified farms under SGS in South Africa. SGS has been active in South Africa since 1999 and also does other audits such as Hazard Analysis and Critical Control Point (HACCP). The certification is accepted in South Africa, the EU and the USA.

As a local certification body, Afrisco has grown since its establishment in June 2001, and held in 2002 15.1% of the certified farmers in the country (Callear, 2002; Kupka, 2002). Certification is recognised only in South Africa so far, but a recent joined venture with Ecocert will open international markets for Afrisco's producers.

The BioDynamic & Organic Certification Authority (BDOCA) belongs to the BioDynamic Agriculture Association of South Africa and performs organic and biodynamic certification. 29 farmers were certified with this organisation at the beginning of 2002. Another certification body, represented by a small number making up 4.1% of the total, is the British Soil Association. This certification body is based in the UK and recognised in South Africa as well as in the EU.

As discussed by Mahlanza *et al.* (2003) and Troskie (2001), changing consumer preferences towards more health and environmental awareness led to an increase in the demand for products from sustainable production. According to Grolink (2002), South Africa has, contrary to other sub-Saharan countries, a substantial domestic market for organic products. This indicates that the potential for organic farming in South Africa is not only based on the access to export market in Europe and the USA but also on local demand.

Prior research

Several studies conducted in Europe, the USA and New Zealand evaluated socio-demographic characteristics of converting and organic farmers and examined the process that led to the decision to convert to organic farming. An overview of the findings is given here as background for the later discussion of the South African situation.

Socio-demographic characteristics of organic farmers

Fisher (1989) and Egri (1999) found no differences in age between organic and conventional farmers in New Zealand and Canada, while Schulze Pals (1994) discovered that organic farmers in Germany were significantly younger than conventional farmers. The latter is supported by Duram (1997), who documented an age difference of over 10 years on average in the USA. Lockeretz (1995) came across similar results in a study also done in the USA. Several reasons can be responsible for this difference in age:

- Young farmers are not as strongly involved in the farming community due to the absence from the farm for education purposes. The decision to convert can be made on a more rational base (Rantzau *et al.*, 1990; Schulze Pals, 1994);
- Young farmers are often better educated than older farmers and therefore have a better knowledge of the risk they are taking (Schulze Pals, 1994);
- Young farmers could be more conscious about the environment;
- Younger farmers are more likely to have the physical ability to accept a higher working load during and after conversion (Fischer, 1989).

Fisher (1989), Rantzau *et al.* (1990), Schulze Pals (1994) Lockeretz (1995), Lockeretz (1997) and Egri (1999) all found higher levels of education among organically certified farmers in their studies, which were carried out in New Zealand, Germany, the USA and Canada. Although it cannot be agreed that organic farming is restricted to well educated farmers, the higher level of education meets the demand for detailed and specific information especially during the conversion period (Rantzau *et al.*, 1990). Schulze Pals (1994) also saw a higher level of education as support, when the farmer evaluates the risk she or he is taking.

A higher level of education also corresponds with the theory of innovations, which states that innovators are better educated than later adopters (Padel, 2001). Furthermore Lockeretz and Wernick (1980) confirmed a positive relationship between education level and the adoption of environmentally beneficial agricultural practices, which is supported by Fisher (1989) and Egri (1999). A higher level of education among organic farmers compared to their conventional counterparts will also be tested in this study.

Farm sizes and labour input

Several studies have supported the hypothesis that organic farms in the USA, Canada and New Zealand are smaller in scale than conventional ones (Alteri *et al.*, 1983; Egri, 1999; Fisher, 1989; Lockeretz, 1995; MacRae *et al.*, 1990). Lockeretz (1995) and Egri (1999) found a sharp difference both in sales and in the amount of land cultivated in the USA, while Lockeretz and Wernick (1980) found no difference in size in an early study conducted in the USA. Egri (1999) documented that conventional farms in British Columbia, Canada were on average 61 acres larger than organic farms. Reasons for this could be that risks and problems associated with the conversion process frighten large scale farmers, as they see difficulties in implementing organic methods on a large sized farm (Egri, 1999). A further aspect could be due to financial pressure owners of smaller farms often have to face. Thus they are forced to consider high value agricultural activities such as organic farming.

Offermann and Nieberg (2000) discovered in a newer study that organic farms in the EU are larger than their conventional counterparts. According to the

authors a shift took place in the EU as early as the late 1980s and in Germany in the early 1990s, when the size of organic holdings overtook that of conventional ones. Padel (2001) hypothesised that this increase occurred during the process of diffusion of innovation, but could also be related to structural changes in agriculture. Despite the findings of Offermann and Nieberg (2000), the hypothesis for this study was that organic farms are smaller than conventional farms, since organic farming is still in an early stage of development in South Africa.

On most farms labour demand increases during conversion. Rantzau *et al.* (1990) identified different reasons for the increase in the amount of work. The changes in weed control or seedbed preparation are examples where more intensive labour is needed. A change in crops, especially to vegetables and root crops, also increases the work drastically, as does the introduction of direct marketing. Lampkin (1994) also saw diversification into new high value and labour intensive enterprises, such as fodder beet and thatching straw, as well as new marketing initiatives, as reasons for the higher labour requirements. Padel and Lampkin (1994) identified on-farm cleaning, grading, processing, small-scale experimentation and increases in farm size as further reasons for the increase.

The farmer level decision-making process

During the information phase the farmer must try to accumulate as much knowledge as possible. Talks with colleagues, visits to other farms, seminars about organic agriculture and specific books are most often used as sources of information (Schulze Pals, 1994). These findings were confirmed by Fisher (1989), who found books, seminars and talks with individuals in the organic movement to be the most useful sources for practising and prospective organic farmers. Other sources could be journals for organic and conventional agriculture, training courses, contact with consumer and environmental groups and other media like television, radio and newspapers.

Negative experiences with conventional farming systems are often reasons for converting to organic farming. According to Freyer *et al.* (1994) a survey of 63 farms in Germany found the following reasons: decline in farm income (32%); soil exhaustion and soil erosion (14%); increase in animal diseases (32%); increase in pesticide costs and aversion to the use of pesticides (19%). Financial reasons are especially at the forefront (Lockeretz and Wernick, 1980 and Padel, 2001), although a change to organic farming does, 'not intend to be a solution for the structural problems of farming in general' (Freyer *et al.*, 1994: 245). An important issue is also nature conservation and environmental protection (Lockeretz and Wernick, 1980; Michelsen, 2001; Padel, 2001). The focus is put on maintaining and protecting nature instead of achieving high yields. Other concerns such as sustaining a traditional agricultural structure based on small family farms, enhancing relationships between producers and

consumers or supporting the Third World, show that conversion is not focused on the farming situation alone, but also on wider issues (Rantzau *et al.*, 1990; Freyer *et al.*, 1994; Padel, 2001).

Methodology

Questionnaire design and survey implementation

A survey method was applied in this study, which gave a broad overview of the organic farming industry and the problems of the conversion process in South Africa. The data were collected by means of postal questionnaires. Contact details were obtained from the different certification organisations that are active in South Africa as well as from the Cape Organic Producer Association (COPA) and the Organic Agriculture Association of South Africa (OAASA).

Twenty-nine out of 93 questionnaires were satisfactorily completed and included in the study. Sixteen questions, qualitative as well as quantitative, about the decision process that led to the start of the conversion process, the farming situation before and after/during conversion as well as socio-demographic factors were included in the questionnaire. Special focus was placed on the problems experienced during the conversion process as well as on the most important changes that took place during this time.

Data analysis

Where possible, survey results were compared to similar data for all farmers/farms (including conventional and organic farmers/farms) in South Africa. This reference data was obtained from the Abstracts of Agricultural Statistics (Abstract, 2001), an extensive study of the Buro vir Markte en Media (1997) and Van der Westhuizen and Viljoen (1999). The latter was used, although not representative for South African farmers, since no recent data were available from the Statistics South Africa. The most recent data from the Agricultural Census dated back to the 1980s and was thus not expedient. It is therefore limited in its representativeness for the whole of South Africa.

To estimate the differences in farm size between organic and commercial farms in South Africa, the organic farms were divided into two groups. The first group consisted of farms with horticulture as their main business and the second group included farms with mixed farming operations. Farm sizes for the Western Cape were displayed separately since they were mainly of horticultural nature and thus interesting to consider. Since no knowledge about the farm income of the surveyed farms existed, a classification into production groups could not be made according to the percentage of the gross income generated by the farming operation, but only on a hectare base. The corresponding data for commercial (conventional and organic) farms (Abstract, 2001) were used to analyse the differences.

To determine whether the organic farmers in South Africa differed in their motivations from farmers in other countries, a chi-square test was applied on data from Fisher (1989), who evaluated the motivations of New Zealand farmers. The null-hypothesis stated that no differences in motivational factors exist between the South African organic farmers and the reference group.

Concerning the changes in labour input during the conversion process a paired difference *t*-test was applied on the Western Cape data. The null-hypothesis stated that the number of farm workers per hectare remained stable before, during and after conversion to organic farming.

A chi-square test was also applied to test the problems arising from the conversion process dependent on the intensity level of farming before conversion. The questionnaires were divided into three categories, namely 'rather intensive', 'rather extensive' and 'virgin'. The null-hypothesis stated that no difference existed between the different farming levels over the categories before conversion.

Beside the lack of national literature, some other problems were encountered which set limitations to the methods used and the representativeness of the findings. The low number of farmers' addresses obtained and thus the low number of questionnaires completed was the main problem. In addition, not all the respondents completed the open-ended questions satisfactorily.

Results

In the following the results of the survey are presented. This concerns socio-demographic characteristics of organic farmers (the term 'organic farmers' includes converting farmers and fully certified organic farmers) as well as an identification of the features of the decision process and problems connected with the conversion process.

Socio-demographic characteristics of organic farmers

In order to compare age and education of the organic farmers with a reference group consisting of commercial farmers, the farmers were grouped according to the age categories shown in Table 11.1. These categories were chosen to be able to compare the data of the organic farmers with the data of the reference group since the grouping of the two sources differed.

The two groups of farmers differed strongly in the two personal characteristics, namely age and education. On average, the organic farmers were younger and better educated. More organic farmers belonged to the age group younger than 41 than to any other category, while more farmers in the reference group were grouped older than 41.

Table 11.1. Comparison of age and education between organic farmers and commercial farmers.

	Organic farmers		Reference group[1]	
Characteristics	Percentage	n	Percentage	n
Age in years				
Younger than 41	39.3	11	29.8	50
41 to 50	35.7	10	39.9	67
Older than 50	25.0	7	30.4	51
Highest qualification				
Less than Std 10	0	0	3.0	59
Std 10	10.3	3	39.0[2]	771
College/univ. part completed	0	0	9.0	178
Diploma	37.9	11	29.0[3]	573
University degree	51.8	15	20.0	415

[1] Reference group 'Age': Buro vir Markte en Media (1997); Reference group 'Education': Van der Westhuizen and Viljoen (1999).
[2] Agricultural school and other high school.
[3] Agricultural college and technical qualification.
Source: Van der Westhuizen and Viljoen (1999); Buro vir Markte en Media (1997) and own calculations.

Table 11.1. also compares the highest levels of education of the organic farmers with a reference group. These data show that organic farmers were generally higher educated than commercial farmers, with 89.7% of the farmers having a tertiary education in the form of a diploma or a university degree, compared to 50% of commercial farmers in 1997 and 57% in 1998 (Eksteen and Snyman, 1999).

Farm size

In the Western Cape the organic farms were 62% smaller than the average commercial farm. Table 11.2. displays the differences in the results. These are of special interest in the Western Cape since all 16 farms included in the survey were by definition of the National Department of Agriculture horticultural holdings. However, the organic farms showed a wide variation in size, with the smallest farm consisting of 24 hectares and the largest being 525 hectares in size.

A look at the average farm size of all organic horticultural holdings revealed a corresponding difference in size. Organic mixed farming operations were more than double the size of the farms specialising in horticulture and were 37% smaller than average commercial mixed farming farms. The small number of farms included in this sample, however, may have a negative influence on the representativeness of the results. Among organic farms in general there were

large discrepancies in farm size, making it difficult to generalize about organic farms in South Africa as a whole.

Table 11.2. Comparison between sizes of surveyed farms and the reference group in hectares.

	Organic farms			Reference group	
	Average (ha)	Range (ha)	n	Average (ha)	n
Western Cape	202.6	24-525	16	531.8	3,336
Total South Africa	482.9	3-4,000	29	1,427.4	57,980
Horticulture	185.9	3-525	24	484.9	8,039
Mixed farming	484.7	200-1,000	3	769.0	5,711

Source: Abstract (2001) and own calculations.

Differences in labour input

The number of regular labourers per farm and per hectare before and during/after conversion determined the change in labour input during the conversion period. Asked for the main organisational changes that took place during the conversion process, the interviewed farmers saw the increased labour input as an important adjustment. Table 11.3. presents support for this statement.

Table 11.3. Changes in the number of regular labourers employed on the surveyed farms.

	Average number of workers per ha total area	Average number of workers per farm	Range	n
Total				
Before conversion	0.32	34.30	1-150	27
During/after conversion	0.73	37.70	2-150	29
Western Cape				
Before conversion	0.38	40.56	2-150	16
During/after conversion	0.42	45.81	6-150	16

The paired difference t-test, which was applied on the data from the Western Cape, had a null-hypothesis stating that the number of farm workers per hectare remained the same before and during/after conversion to organic farming. This hypotheses was rejected since the t-value was 2.10, located in the critical region $t > 1.753$.

No statistical analysis could be done on the total data since the variations between the farms were too large and did not allow for valuable results. Thus an increase in labour input can be observed, but it cannot be statistically proven. These outcomes support the general expectations and the findings of the

literature, which stated that labour most often increases during the conversion from conventional to organic farming.

Motivational factors and information sources

Different motivations were responsible for the decision of the organic farmers to convert to organic farming. The farmers were asked to rate different motivational factors according to their importance during the decision process. Table 11.4. displays the outcome of these ratings.

Table 11.4. Motivations of interviewed farmers for the decision to convert to organic farming.

Factors of motivation to convert	Mean score
Protecting the environment	3.71
Improvement of soil fertility	3.68
New challenge	3.14
Higher prices for organic products	3.11
Reduction of input costs	2.71
Improvement of lifestyle	2.71
Reduction of inputs from outside	2.68
Low profitability of conv. enterprise	2.61
Philosophical reasons	2.46
Improvement of livestock health	1.86

1 = 'not considered' to 5 = 'very important'.

Protecting the environment and improving the soil fertility were the two major driving forces in the decision process. Farming organically as a new challenge in life motivated more of the organic farmers in South Africa than in other countries (i.e. Germany, USA, New Zealand). Financial reasons such as higher prices or the reduction of input costs played a minor to average role in the decision.

The lowest rating was found for the improvement of livestock health. This low figure can be attributed to the fact that the majority of organic farmers did not farm with livestock. The organic farmers who had livestock included in their farming activities rated this factor as moderately to very important for their decision to convert.

The chi-square test applied on the data from Fisher (1989) revealed the results displayed in Table 11.5. The null-hypothesis could be rejected only in two cases on a 5% significance level. For New Zealand farmers the improvement in lifestyle and especially the reduction of input costs played a bigger role in the decision process than for the South African farmers. The remaining factors were rated similarly by the different groups and showed no significant differences.

Table 11.5. Results of the chi-square test for motivation factors.

Motivation factor	Chi-square test	Critical 5%-level
Protecting the environment	0.14	5.99
Improvement of soil fertility	0.50	5.99
Improvement of lifestyle	7.68	5.99
Higher prices for organic products	3.72	5.99
New challenge	0.31	5.99
Philosophical reasons	4.96	5.99
Reduction of input costs	12.33	5.99

Sources: Fisher (1989) and own calculations.

Other than for the motivational factors, no data were available on the use of information sources that would have allowed a statistical analysis of the differences between the findings of studies done in other countries and the results of this survey. Thus, the other comparison in this section is only descriptive.

The organic farmers rated their own education, conversations with other organic farmers and books about organic farming as the most important sources of information about organic farming, and these were the only three that were rated on average higher than moderately important (see Table 11.6.). The rating of the importance of international magazines and journals, as well as contact with international organic farming organisations compared with their national counterparts, were included in the questionnaire. National organic farming organisations such as COPA and OAASA were rated low in their value to the organic farmers. According to the respondents, universities and research institutions played no role at all in the process of providing useful information for organic farmers.

Table 11.6. Rating of sources used by farmers to gather information about organic farming.

Sources of information	Mean score
Own education	3.76
Talks with organic farmers	3.28
Books about organic farming	3.21
International journals	2.86
Seminars/conferences on organic farming	2.66
International organic farming associations	2.66
National organic farming associations	2.62
Internet	2.52
International journals	2.10
University and research institutes	2.03

1 = 'not used' to 5 = 'extremely useful'.

Approaches to conversion and reasons for the decision

Staged conversion was chosen by 62.1% of the farmers. Only 24.1% decided to convert their farm in one step. Four of the farmers, 13.8%, did not have to convert since they started farming on virgin land. One of them certified only parts of his farm and still plans to certify the rest in the near future.

Three of the 18 farmers, who converted in stages, had parts of their farm already under organic production while the rest was in conversion. Ten still plan to convert the rest of the farm or at least some more hectares. In total 708 hectares were still intended to be converted. Different aspects were mentioned when the farmers were asked why they did not convert their entire farm at once (the number in brackets indicates the number of times farmers stated that reason):

- Fear of not being able to deal with the outbreak of pests for which no organic remedies are available at present (4);
- Markets are not developed yet (2);
- Economic feasibility must first be proven (3);
- Lack of knowledge (1);
- The conventional production carries the certified production through the time of conversion (1).

Five did not plan to convert the rest of the farm. They mentioned the following reasons for this:

- Input costs are too high;
- The remainder of the farm is fynbos;
- Not enough time for extra labour and management available;
- Not enough compost available;
- Crop can only be grown successfully with the use of chemicals;
- Local mill cannot accommodate organic production.

Problems arising from the conversion process

During the process of conversion to organic farming, farmers are confronted with several problems. The literature (i.e. Duram, 2000 and Rigby *et al.*, 2000) identified problems such as yield reductions, higher weed, pest and disease pressure, reduced livestock performance, few marketing opportunities, no premium prices, refusal of loans or insurance for organic production and lack of legislation, subsidies and certification bodies.

In this study the respondents were asked to rate several problems, which were adapted from the literature and based on the expectations of the South African

situation, according to four degrees of importance. Figure 11.3. shows the results of the survey in this regard.

Table 11.7. Ratings of problems that farmers faced during conversion.

	Mean score
Lack of national legislation	3.32
Lack of advice	3.32
Lack of information	3.29
Higher weed infestation	3.19
High certification costs	3.18
Higher input costs	2.74
High investment costs	2.71
Lack of marketing options	2.71
Input availability	2.59
No premium prices	2.57
Higher insect infestation	2.42
Lower farm income	2.41
More diseases	2.27
Lower yield	2.27
Too much work	2.14
Internal farm problems	1.89
Refusal of loans	1.68
Refusal of insurance	1.39

1 = 'did not occur' to 5 = 'very important'.

The lack of national legislation was rated as the most serious problem. Since the draft for national legislation was published during 2001 this problem seems to have been addressed. However, during the personal interviews with farmers who took part in case studies carried out for the author's Master thesis, it was discovered that they believed this draft legislation is unsuitable under South African conditions since it is too closely orientated to EU Regulations. Lack of advice was a further major problem. Since organic farming is a new sector in South African agriculture, the involvement of advisory and extension services, the national press and official agricultural institutions is still small.

According to the survey results, higher weed infestation was the main technical hazard. Higher insect infestation and more diseases were other common technical problems, although they were generally rated as less important than higher weed infestation.

Financial obstacles during the conversion period were relevant for the organic farmers. Relatively high costs of initial certification and the annual inspection, which are dependent on the certification body and also partly on the size of the farm, are also seen as problematic. These costs can often not be recouped, especially during the conversion period, as farmers frequently lack possibilities

for marketing their products as organically produced products or achieving premium prices.

The organic farmers experienced hardly any problems with the reduction in yields and the increase in workload. Increased workload is a common problem in other countries. This may not be a problem in South Africa because labour is more readily and inexpensively available than in Europe or the USA, where labour is expensive and most farms are managed by families alone with no labour input from outside.

The refusal of loans was named by only five organic farmers as problematic and can thus not be seen as a threat to the conversion process. The same applied to the refusal of insurance and problems internal to the farm.

To evaluate the differences in the rating of problems depending on the intensity of farming practice before conversion, the farms were divided into three categories (rather intensive: high input of chemical fertilisers, intensive tillage, etc.; rather extensive: low input of chemical fertiliser, minimum tillage, etc.; and virgin). A chi-square test was then performed on the categories 'rather intensive' (14 farms) and 'rather extensive' (11 farms). The category 'virgin' was not included since only four farmers were in this category. The null-hypothesis stated that no difference existed between the above-mentioned categories. The chi-square test was carried out on those categories where differences were expected (see Table 11.5).

The different farming levels before conversion differed only significantly with regard to more diseases. Farmers who used intensive farming practices before conversion had a problem with increased diseases to a larger extent than farmers who used extensive practices. No significant difference could be found in any of the other factors.

Table 11.5. Results of the chi-square test comparing different levels of intensity.

Factor	Chi-square test	Critical 5%-level
Lower yields	3.25	7.82
Higher weed infestation	1.16	7.82
Higher insect infestation	0.95	7.82
More diseases	8.25	7.82
Lower farm income	1.38	7.82

Discussion

The analysis of the survey resulted in a number of findings resembling those of previous research conducted around the world. It confirmed several of our expectations based on the literature, such as a younger age and higher education for organic farmers compared to their conventional counterparts. These findings comply with prior research conducted by Schulze Pals (1994), Lockeretz (1995), Duram (1997) and others as stated in the introduction. It also confirms the

findings of the South African study carried out by Anim (1999), who found that more educated farmers tend to adopt organic farming methods more quickly than less educated farmers.

At the time of this study, most of the farms converted in South Africa were horticultural holdings and smaller than the average commercial farms. These results support the findings of the literature (i.e. Alteri *et al.*, 1983; Fisher, 1989; MacRae *et al.*, 1990; Lockeretz, 1995 and Egri, 1999). Reasons for this could be that risks and problems associated with the conversion process frighten large scale farmers, as they see difficulties in implementing organic methods on a large sized farm (Egri, 1999). A further aspect could be the greater financial pressure owners of smaller farms often have to face, thus encouraging them to consider high value agricultural activities such as organic farming.

As expected, higher weed infestation was the main technical problem during the conversion period and confirmed the findings of the literature (i.e. Rantzau *et al.*, 1990 and Lampkin, 1994). Surprisingly no significant differences were found by comparing different levels of farming intensity before and after conversion. It was only discovered that farmers who had farmed more intensively before conversion had more problems with diseases. The expected yield reduction as demonstrated by the findings of similar studies (i.e. Dabbert, 1994; Freyer *et al.*, 1994; Lampkin, 1994; Peters, 1994 and Schulze Pals, 1994) could not be proven. A reason could be the generally lower intensity of farming in South Africa compared to other countries.

An interesting aspect to look at was the change in labour input, since the findings of the literature mainly support an increase in labour input when converting to organic farming (i.e. Rantzau *et al.*, 1990; Lampkin, 1994; Padel and Lampkin, 1994). According to Lampkin (1994) and Padel and Lampkin (1994), conversion-specific financial changes can also be related to an increase in labour input. An increase was also found for the surveyed farms, especially in the Western Cape. A reason for that can be the fact that all farms in this province were horticulture dominated, which is labour intensive and requires to a large extent manual work when converted to organic farming. However, although most of the interviewed farmers mentioned an increase in labour input as one of their main organisational changes, they did not rate too much work load as an important problem. An explanation for this can be found in the high unemployment rate of South Africa. Therefore labour is always available and relatively cheap.

Several factors played a role in the process that led to the decision to convert to organic farming. The organic farmers were not mainly motivated by financial reasons, but more by concerns about the environment and soil fertility. This complies partly with the findings in the literature (i.e. Freyer *et al.*, 1994 and Michelsen, 2001). Financial reasons such as higher prices or the reduction of input costs played a minor to average role in the decision. This is contrary to the findings of the literature, which state that the promise of higher profits, although less important than environmental reasons, is at the forefront of the decision

process for farmers in other countries, although a change to organic farming does 'not intend to be a solution for the structural problems of farming in general' (Freyer *et al.*, 1994).

For New Zealand farmers the improvement in lifestyle and especially the reduction of input costs played a bigger role in the decision process than for the interviewed farmers (Fisher, 1989). The latter supports the belief that the interviewed farmers are not as financially motivated as farmers surveyed in other studies. Although the improvement in lifestyle was rated rather low in both cases, it had more influence on the farmers in New Zealand. This, and the fact that a significant difference on the 10% level was found, allows one to deduce that the interviewed farmers were motivated by practical reasons rather than idealistic reasons. The remaining factors were rated similarly by the different groups and showed no significant differences.

However, the low average profitability of conventional farming systems in South Africa had no large influence on the decision, which is confirmed by the fact that only eight of the organic farmers were, according to the statement of the farmers, not farming on a profitable basis before conversion. Therefore it seems that farmers converted because of the added financial attractiveness of organic farming rather than as a solution to an unprofitable farming situation.

Information sources, which supported this process and helped farmers to gather knowledge about organic farming were mainly their own education, conversations with other organic farmers and books addressing organic farming issues. These were the only three sources of information that were rated on average higher than moderately important (see Figure 11.2.). This complies partly with the findings of Fisher (1989), who found books, seminars and conversations with individuals in the organic movement to be the most useful sources for practicing and prospective organic farmers. In both, the studies of Fisher (1989) and Schulze Pals (1994), the farmer's own education played a less important role in his or her acquisition of knowledge than in the case of South African organic farmers, who rated it as the most important source.

The low rating of national magazines and journals showed that organic farming is a sector that is not covered well by the local press, probably because it is a rather new and small industry. The work of national organic farming organisations such as COPA and OAASA provide at least a contact point for local organic farmers, but their low rating shows that they were of small importance to the organic farmers. Universities and research institutions played no role at all in the process of information accumulation. These findings provide evidence for the small national involvement in organic agriculture research and lack of information availability in South Africa.

Only some of the farmers converted their whole farm to organic farming or chose a single step conversion. The lack of knowledge about practices and economic feasibility as well as the lack of financial support of the conversion period were named as reasons. Similar results were found in the analysis of the problems farmers experienced during the conversion period. Minor national

involvement as well as the lack of knowledge of organic farming in the South African context, as stated above, also caused several of the problems farmers rated high in this survey such as lack of advice, information and suitable national legislation.

Conclusion

When comparing the findings of this study with prior research conducted on the conversion to organic farming several assumptions can be made. It becomes clear that the movement in South Africa, although in some aspects comparable to the features of the movement in other countries, has its own obstacles to face. Especially the little national involvement in the sector, on a governmental as well as on an institutional side (universities, research institutions, etc.) indicates a higher pressure for the converting farmers. It also asks for a large amount of commitment and pioneer work.

Furthermore, South Africa's agriculture is a challenging situation for several reasons. There are concerns about the climate; in some areas 'the extreme is the standard', and there is a dualistic structure comprising commercial and subsistence sectors. Over the past two decades there has been a process of deregulation of commercial agriculture, and attempts to 'deracialise' the sector go back to 1994 (Vink and Kirsten, 2003). Therefore, experiences from elsewhere cannot be readily adopted but have to be seen in the light of these particular conditions.

Thus the steps to aid the progress of organic farming in South Africa, which we suggest below, have to acknowledge not only the early stage of development in which the sector is but also this demanding set up when considered to be put into practise.

In the first instance there is a strong need for a greater national involvement in organic farming. This includes the introduction of a suitable national legislation that is based on the one hand on the requirements of South Africa's main export market, the EU, and on the other hand on the socioeconomic and natural conditions of agriculture in South Africa. Furthermore, the problem of lack of information can be addressed if the status of organisations like OAASA improves. Intensive networking among people involved in the organic farming movement is essential to exchange knowledge and experience. Services could include the publication of magazines (as is the case already in the form of the *OAASA Newsflash*), production guidelines, advisory services, farm days and seminars.

A critical issue is the financial support of organic farming, especially during the conversion period. Since it was found that the conversion period for most farmers is a time of financial constraint and risks, support during this time is of decisive importance. Financial support could include the introduction of support for investments, i.e. in the form of soft loans. However, in the case of a fairly well developed domestic market and/or the possibility for export, this support is

only needed if organic farming is identified to have a macro economical surplus for the society.

These support systems could be embedded in national programmes that focus on the promotion of an increase in sustainability of agricultural production. However, the implementation of such support programmes in South Africa is unlikely. In the context of the EU and the USA, financial means are available to introduce such programmes, as has already been done in these countries. In South Africa, due to the political and economic situation. it is doubtful that the state has the financial capacity and the will to implement such programmes at this stage. The focus of the South African agricultural policy is rather on urgent aspects such as land reform. Due to the complexity of this problem. the probability of the introduction of support programmes for organic farming systems in the future has to be investigated in a separate study.

As already mentioned by Mahlanza *et al.* (2003) there is also a considerable potential for research in the field of organic agriculture in South Africa. This could cover technical, economic and social aspects. The contribution of organic farming to the development of sustainable and environmentally friendly agricultural systems as well as the impacts of a widespread conversion to organic farming on public costs and benefits should be evaluated.

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12
Is There a Female Principle in Organic Farming? An Interpretation of Data for Norway

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It is often claimed that due to different value orientations, men and women practise agriculture in different ways. In particular, the idea that women practise a more environmentally friendly or ecological style of management is a key assumption of this difference. Indeed, the female management principle corresponds on many points to the ideology of organic farming. This chapter explores whether female farmers in Norway represent different management values and attitudes to male farmers, or whether male and female organic farmers together represent a more feminine way of farming than conventional farmers do. Using quantitative data collected from a survey of organic and conventional farmers in Norway, the chapter analyses attitudes and motives of male and female, and conventional and organic farmers, and examines the relationship between attitudes and farm management structure. Findings show that there is a higher proportion of female farmers in organic than in conventional farming in Norway. This can be explained by the theory of organic as a feminine value, but could equally be a strategy to demarcate a feminine arena within the agricultural sector. In the final analysis, the chapter provides further elaboration for the theory of a feminine principle in organic farming by reaching beneath the concept of stereotype to discuss the diversity of femininities and masculinities in both organic and conventional farming.

Introduction

Norwegian agriculture is male dominated. This is not an ideal situation concerning politically expressed goals and ideals of gender equality within

agricultural production (St.meld. nr 19, 1999-2000). The Committee on Gender Equality and Recruitment in Norwegian Agriculture points to the fact that girls face more barriers to entering farming than boys. Within conventional agriculture in Norway about 13% of farmers in 2004 were women (Trend-data, 2004). This proportion has risen slowly over the years but within organic farming the proportion is almost double. In 1999, 20% of organic farmers were women compared to 10% of conventional farmers (Bjørkhaug and Flø, 1999a; 1999b). Moreover, according to Trend-data (2004), 30% of farmers undergoing conversion to organic at the current time are women.

The idea that men and women execute agriculture differently due to different value orientations, with women practising it in a more environmentally friendly or ecological way than men, is one of the key assumptions of gender research in agriculture. However, whilst the ideology of organic farming might correspond to the idea of a feminine management principle, there remains a majority of male organic farmers in Norway. The research presented here focuses therefore on the extent to which a feminine management principle typifies women farmers or organic farmers. In the chapter empirical data is used to explore motivation for farming and attitudes to environmental issues in Norwegian agriculture, conventional and organic. Based on the analysis, the author discusses whether these different attitudes explain better female farmers or organic farmers.

Background to Gender Theory

Women in farming and female farmers

In this chapter, the farmer is defined as an individual responsible for agricultural production on the farm. Farming is usually regarded as a male occupation. Traditionally, women on farms have been presented as farmers' wives, mothers or daughters even when participating in production (Alston, 1998). The woman's role in farming is perceived as helper or assistant (Almås, 1983; Brandth, 2002).

Gender research in agriculture began as a project to explain the situation of women on farms, and why women have an inferior status in agriculture. Many of these studies showed that women loyally reproduce gender roles on farms (Alston, 1995; Brandth, 2002). Other studies suggest that agriculture in Norway has become *masculinized* (Almås, 1983). This phenomenon is related to both the mechanization and rationalization of production, pushing women out of production as their labour becomes surplus (Almås, 1983; Almås and Haugen, 1991). Women have also been pulled out of agriculture as the labour market has given women new opportunities and career choices. These factors have been used to explain why agriculture is not only dominated by male farmers but also how the agricultural infrastructure is predisposed towards the masculine principles of linearity and expansion (see e.g. Brandth, 2002).

The succession of Norwegian family farms is based on a system of allodial rights; the oldest child is the formal sole successor. However, the revised

Norwegian Allodial Act of 1974 gave female successors the same right to inherit as male siblings. With this, the number of female farmers has slowly increased. Many of these women choose a traditional farming strategy together with a partner, but studies show that there is a new group of young women farmers who have moved away from traditional female gender roles (Haugen, 1998). Traditionally, women married into the farm, and many women still enter farming this way, however, there is evidence of change, such as women, as farm wives, enter farming through an active construction of a non-traditional farmer identity (Bryant, 1999). With the emergence of women as farmers, gender research in agriculture has found a new direction for enquiry. According to Bryant (1999: 245) a non-traditional farmer is more open to change and the marriage partnership is extended to a work partnership. This has most relevance on farms that can give income to more than one person, a group of farms of decreasing numbers in Norway. Other recent studies focus on how women construct their identity as farmers, and more generally, how gender identities in agriculture are constructed, deconstructed and reconstructed (Haugen, 1998; Brandth, 2002). From being studies with a structural focus, showing changes in women's appearance on farms; newer research has taken on a post-structural perspective with a focus on female farm people's construction of their own reality.

Eco-feminism and gender inequality perspectives

Farmers manage nature through their agricultural practices. Due largely to an emphasis on environmental values in agriculture, policy and society in general, the role of the farmer has taken on other facets as well as agronomics and husbandry. Feminist theory defines land management and the use of natural resources as gendered activities (see e.g. Brandth, 2002). Within some feminist traditions, women are assumed to exist more closely to nature and to have an inherently stronger bond with nature than men (Modelmog, 1998). Earth goddesses notwithstanding, a central tenet of feminist theory is the exposition of inequalities between men and women, and of the consequences of such differences. Difference can be problematized as one class or group subordinated to another but also difference is a critical point at which there is potential for change (Brandth and Verstad, 1993).

Is environmentally friendly agriculture a feminine alternative to existing praxis in the management of natural resources? Through the centuries, the dominant view of nature has been characterized by a mechanistic worldview in which humans (man in feminist thinking) have the necessity, right, and/or duty to dominate and control nature (Merchant, 1984 cited in Pedersen, 1994: 56). Women in gender research are understood to hold holistic attitudes to the use of natural resources, encompassing the principle of conservation. Men on the other hand are more focused on economic issues such as output rather than on ecological systems (Braidotti *et al.*, 1994). Gender theory of socialization

observes that the socialization process predisposes women to separate themselves from their surroundings (Davidson and Freudenburg, 1996). The theory argues that men look at their surroundings as an object that they are able to control while women perceive their surroundings as the subject, which they are both part of and feel protective towards.

Eco-feminist theory posits a connection between the suppression of nature and that of women. The term eco-feminism refers to 'a sensibility, an intimation, that feminist concerns run parallel to, are bound up with, or perhaps, are even at one with, a concern for the natural world as subject to the same abuse and ambivalent behaviour as women' (Cheney, 1987:115). Experiences from developing countries, publicized by the radical Indian scientist Vandana Shiva, are at the front of this school of thought. The theory holds that the processes of production and reproduction are embedded not only in women's biological role as mother but also in their social role. Shiva argues that the female principle is creatively and organically or holistically connected to, '(diversity and) community in local knowledge, local consumption and expressed needs, in accordance with the principles of equality and ecology' (Shiva, 1989:73).

Organic ideology and way of farming

The growth of organic farming can be seen as a reaction to, and movement against, the industrialization of agriculture (Flø, 2001; Michelsen, 2001). Such social movements can be described not only according to how resources are mobilized to create social transformation, but also why individuals come to share the beliefs that mobilized them (Meares, 1997). The concept of organic agriculture is often defined as agricultural production using ecological principles. But, organic farming comprises a multiplicity of methods and practices united by an ideological platform; a fundamental view of nature as value in itself, in which species have a right to develop in the nature of the species. Many organic farmers see humans as part of nature and not outside nature. In this view, earth's resources are limited and have to be managed in order to maintain the quality of soil, air, and water and to sustain non-renewable resources. Humans therefore, because they have a consciousness of and a powerful ability to impact on nature, also have a responsibility towards nature.

Ideologically, organic farming produces food based on the management of local renewable resources. The main goal is to recycle nutrients according to natural cycles (e.g. the nitrogen cycle), in order to preserve the structure and nutrient content of the soil. This is achieved through non-biologically invasive technologies such as manures, leguminous plants and compost, and crop rotation. In theory this creates a self-contained farm system, self-sufficient in fodder and fertilizer. The ethos of organic farming is to care for biological diversity and plant health, but equally the movement aims to infuse social, cultural, and economic values into food production and consumption.

In Norway there has been a sharp rise in the number of organic farms, from 19 Debio-certified farms in 1986 to 2466 in 2003 (Debio is the control and approval organization for production, refining and import of organic food). Still, this represents only 3.7% of agricultural area (certified or converting to organic), compared with the target of 10% by 2010 set by Norwegian agricultural policy (Landbruks- og matdepartementet, 2005). Nevertheless, the organic movement has established a visible alternative to conventional farming in Norway (Flø, 2001). Amongst organic farmers, a high level of environmental consciousness is demonstrated by an expressed wish to produce fresh healthy food in a natural way, and the environmental standards of production are reflected in sector regulation and product marketing. But all farmers do not share these environmental values. In much of the literature, researchers have identified a dichotomy between organic and conventional farmer motivation (e.g. Peter *et al.*, 2000; Bjørkhaug, 2001; Abaidoo and Dickinson, 2002; Storstad and Bjørkhaug, 2003). Conventional farmers are more concerned about economic performance and many of these farmers reportedly had no choice other than farming (Bjørkhaug and Flø, 1999a; 1999b; Bjørkhaug, 2001).

The organic ideology contains several parallels with the feminine principle as expressed in theory. For example, the dialogue of naturalness is maximized in organic farming praxis. Yet organic production arguably requires greater physical strength for manual work due to restricted use of chemical weed killers, and more general dissociation from modern technologies. These factors warrant closer scrutiny of gender perspectives in agriculture. With growing awareness of negative environmental impacts of agriculture, gender issues become prominent. Many studies have indicated, and others have shown, that women are more concerned than men are about conservation of the environment, and are less resistant to state regulation of agricultural praxis (Geno, 2002); women are often a key influence in the conversion process (Vartdal, 1993). However, this does not necessarily imply that the ecology movement per se is feminist (King in Cheney, 1987:116). For example, the prominent role of male farmers in the organic movement means that much of the gender specificity in praxis, which underpins the perceived masculinity of conventional farming, is also mirrored by the organic movement (Meares, 1997).

Feminism, gender research, and women conventional farmers

Feminism of equality theory debates the essentialist natures of rights and opportunities for women. Gender is defined as 'a socially constructed phenomenon, an ambiguous and changeable concept which is not solely connected to biology' (Brandth and Verstad, 1993:14-18). The gender perspective holds that women and men are both equal and different from each other, and that women are also different from each other. In other words, both men and women can embody the feminine principle, and some women potentially embody less of the feminine principle than some men do. By

understanding gender as a constructed and multifaceted phenomenon, the gender discourse shapes conceptions of female and male over time. The question of whether female farmers in Norway challenge the values of industrial, male-dominated agriculture remains pertinent. Let some studies illustrate this point.

In one study Haugen and Brandth (1994) found that Norwegian female farmers in different age groups interpreted the farmer's role in different ways. Older female farmers were more ecologically oriented than young female farmers. In addition, young female farmers had moved away from traditional gender roles and thus, with respect to the new regime of productivity in agriculture, had more in common with male farmers. Haugen (1998) has also shown that young women construct their identity in part on tradition and in part as professional farmers (Haugen 1998:59). Haugen (1993) emphasizes that the equality project has focused exclusively on how women adjust to male methods whilst men have been assumed to continue without change.

An analysis of time-use on Norwegian farms over time showed that men's relative work time on farms has risen while women tend to work less in Norwegian agriculture than they used to (Bjørkhaug and Blekesaune, 2004). Although this study showed that female and male farmers spent an equal amount of time on farm and off-farm work, there was no clear proof of gender equality on Norwegian farms because spouses spent their work time differently on male and female operated farms; male spouses worked more hours outside agriculture than female spouses, and male spouses worked more on farms than did female spouses. Female farmers therefore might manage to construct their own identity as farmers but, even though male farmers' wives often contribute a substantial amount to labour on farms, female farmers are often dependent on males (Bjørkhaug and Blekesaune, 2004).

In a qualitative exploration of the female management principle amongst Norwegian entrepreneurs in forestry and summer farming, Daugstad and Villa (2001) concluded that the concept could be misleading when it is interpreted as relating to biological sex. When men do traditional women's work and women do traditional men's work stereotypes are challenged and deconstructed. In Daugstad and Villa's study (2004) the scope of a female principle was found amongst both men and women, and some men expressed a stronger feminine principle than some women did.

Masculinities and femininities are constructed and negotiated by both men and women (Connell, 1995 in Peter *et al.*, 2000), 'femininity exists only in relation to masculinity and vice versa' (Brandth, 1994:130). Peter *et al.* (2000) found that transition to sustainable agriculture was often accompanied by changes in masculinities. Traditional farm systems corresponded to a conventionally understood masculinity; a monologic masculinity with clearly defined and rigidly observed gender roles. Whereas, sustainable farm systems corresponded to a greater openness to change and tendency not to focus on the control of nature; a dialogic masculinity in which more fluid definitions of work and success were fostered (Peter *et al.*, 2000). Thus, newly emerging concerns

over the environment are described as a feminization of the masculine attitude to nature (Cheney, 1987).

Research in Norway and elsewhere has shown that in general, women practise less intensive agriculture than men but that the underlying reasons for this are less clear (Haugen, 1998). No clear evidence for a female mode has been found even though established gender differences suggest this possibility. But, insufficient research to date has explored this question (Blekesaune and Krogstad, 1997) and for this reason, the analysis presented in this chapter explores the complexity of femininities and masculinities that underpin the concept of a feminine principle in agricultural production.

Data Analysis

Aims and sources of data

Farmers can represent a homogeneous group in terms of class, age, race, ethnicity and culture (Meares, 1997). But, organic and conventional production is frequently depicted at opposite ends of the sustainability scale (Abaidoo and Dickson, 2002) and organic farmers have also been found to hold polarized views about nature (Kaltoft, 1999), with pioneers holding strong, and newcomers weak, associations with the organic ideology (Vartdal and Blekesaune, 1992; Vartdal, 1993). Equally, conventional farmers vary in style of farming, ranging from smallholding to large scale intensive production.

The aim of this analysis was to explore using quantitative data from representative samples of organic and conventional farmers, whether Norwegian women farmers in general exhibit different values and attitudes to agriculture than do male farmers, or whether organic farmers as a group exhibit a more feminine mode of farming than conventional farmers do. The analysis addresses the following specific research questions:

- Are there differences between male and female farmers' motives for farming?
- Are there differences between male and female farmers' responses to the environmental situation in agriculture?

Data were collected via postal surveys in 1999. The surveys related both to technical aspects and attitudes to agricultural production (Bjørkhaug and Flø, 1999a). The survey was distributed to two samples: one of 744 farmers drawn from Debio's register of farms (i.e. approved for organic labelling and/or organic production subsidies), representing 50% of all organic farms at that time, and another sample of 745 conventional farmers drawn from the national production register, representing approximately 1% of all Norwegian farms. Response rates of 59% and 51%, respectively, resulted in terminal samples of 439 organic farmers and 383 conventional farmers. Samples were representative compared to other studies in either Norway or neighbouring countries (there was

no other information available on the demography of organic farmers in Norway), or based on an evaluation of various farm-related and demographic farmer variables.

Male and female farmers on organic and conventional farms

One of the key objectives of analysis was to investigate the interrelationship between two dichotomies: the sex of the farmer and his/her mode of production. An exploratory analysis of farm data showed the principle differences and commonalities between the dichotomies. The first point to note is that the proportion of female farmers in organic farming is almost double that of conventional farming (near 20% organic female farmers as compared with 10% female conventional farmers). This difference is statistically significant. Nevertheless, the absolute number of female farmers is considerably higher in conventional faming.

Other data (Trend-data, 2004) shows that the proportion of women has stabilized within organic farming but is growing in conventional farming, at around 20%. Of total farm population Trend-data (2004) shows that about 5% of male farmers are organic or under conversion whilst the equivalent figure for women is 9%. Within these figures the proportion of farmers undergoing conversion is 2% and nearly 6%, respectively, suggesting that the potential for increasing organic production is higher amongst female farmers.

Further exploratory analysis of survey data from 1999 shows demographic and production-related differences between four analytical categories: age, levels of general and agricultural education, and year farming commenced. Means for these variables were compared using the Anova *t*-test and the non-parametric Kruskal-Wallis test, because variance was not homogenous across categories (shown using the Levene test) in which case the Anova test can be misleading. The variables for farming background and farming with partner were used for cross tabulations to which the chi-square and Pearson's chi tests were applied. The analysis shows that, on average, organic farmers were the youngest group (46 years). Organic female farmers had higher levels of education in general and in agriculture in particular and were the newest entrants to farming. Eighty percent of female organic farmers farmed with a partner. Male conventional farmers, being the oldest group (mean of 49 years) with the lowest levels of education, predominantly farming without a partner (60%), and with a strong or long background in farming, represented the biggest contrast to female organic farmers. Male organic farmers and female conventional farmers had similar demographic profiles.

Differences in farm-related data between the four categories of farmer did not give the same pattern as found in the farmer analysis. Differences in production appear to be gender-related, with labour intensive milk production more frequently found on male-headed farms (35 to 40% of farms compared to around

30 female-headed farms). Male-headed farms also exhibited greater size and income and the lowest contribution to income from work outside the farm (near 50%). Conversely, female-headed organic farms derived the highest proportion of income from off-farm activity (65%).

Factors underpinning the decision to farm

Farmers were asked to evaluate the importance of 12 factors in their decision to farm: interest in or value of a farming way of life, animals, food production, nature, environment, self-employment, rural life, plight, economic prospects, hard to imagine something else, no other possibilities and owning agricultural property. Following an initial statistical clustering of factors, four significant indices were derived: female, male, organic and conventional. Initial assessment of male and female patterns of choice revealed significant markers of difference between organic and conventional producers. Conventional farming is associated with tradition, inheritance and preservation of the family farm. This situation is generally not seen in the organic agricultural sector in which producers are more likely to be driven by interest in promoting production methods. The analysis lends credence to the hypothesis that organic farmers as a group are concerned with eco-sophy or the so-called eco-feminist perspective. Analysis also indicates that women farmers valued nature, animals and rural life (rurality) more than their male counterparts who as a group, more often expressed value as related to economic opportunity and independence (i.e. self-employment). However, all farmers valued farming as a way of life, and valued food production as an objective of farming, so clearly more than gender determines choice of production mode.

In order to answer the research question concerning a feminine principle in organic agriculture in greater depth subsequent analysis aimed to understand the interaction of gender and mode of production. The 12 motivating factors were used to build models for interacting variables of farmers' sex and mode of production to be used as dependent variables for regression analysis (Table 12.1). Analysis of farmer motivation adds an important dimension to the understanding of values. When sex and mode of production are measured together, sex rarely appears to be of primary significance. However, correlations relating to differences between men and women previously observed demonstrate that it is not only biological sex that is the causal variable. Models 1 to 3 (Table 12.1) show that women, more than men, are motivated by an interest in animals, whereas organic farmers are motivated more by their interest in nature. Model 4 demonstrates a lack of difference in gender or mode of production concerning the desire to be self-employed, although conventional farmers valued economic prospects more than organic farmers did (Model 5).

Table 12.1. Regression analyses of motivation for farming by gender and form of production.

	Regression Models 1-12*			
Constructs	Dependent variable	Probability	Dependent variable	Probability
Constant	1. Nature	0.000	7. Food production	0.000
Women		0.078		0.968
Organic		**0.013**		0.148
Interaction		0.931		**0.032**
Constant	2. Animals	0.000	8. Environment	0.000
Women		**0.010**		0.775
Organic		0.710		**0.000**
Interaction		0.124		0.161
Constant	3. Rural life	0.000	9. Owning agricultural property	0.000
Women		0.057		0.553
Organic		0.095		**0.001**
Interaction		0.540		0.732
Constant	4. Self-employed	0.000	10. Hard to imagine something else	0.000
Women		0.068		0.566
Organic		0.080		**0.000**
Interaction		0.817		0.819
Constant	5. Economic prospects	0.000	11. No other possibilities	0.000
Women		0.058		0.982
Organic		**0.000**		**0.000**
Interaction		0.685		0.315
Constant	6. Farming way of life	0.000	12. Plight	0.000
Women		0.324		0.297
Organic		0.526		**0.000**
Interaction		**0.008**		0.325

* Model summary 1: R Square 0.022, Anova Sig 0.001; 2: R Square 0.010, Anova Sig 0.054; 3: R Square 0.012 Anova Sig 0.027; 4: R Square 0.017, Anova Sig 0.005; 5: R Square 0.047, Anova Sig 0.000; 6: R Square 0.019, Anova Sig 0.002; 7: R Square 0.029, Anova Sig 0.000; 8: R Square 0.051, Anova Sig 0.000; 9: R Square 0.022, Anova Sig 0.001; 10: R Square 0.057, Anova Sig 0.000; 11: R Square 0.068, Anova Sig 0.000; 12: R Square 0.079, Anova Sig 0.000. Please contact author for further insight to statistics used in this chapter.

Models 6 to 8 reveal the most prominent organic variables and show that the mode of production contributes significantly. There were significant differences between organic and conventional farmers regarding their interest in the environment, with organic farmers more often citing environment as a motivating factor. The interaction between gender and mode of production shows that also male and female organic farmers differ; female organic farmers were more closely associated with motives of a farming way of life and food production.

The analysis indicates that the conventional dimension of tradition, inheritance and preservation of the family farm is not associated with a gender effect. Organic farmers are significantly less concerned with farming as a duty, which in combination with their background profile more easily explains the pattern of new entrants to agriculture who choose a non-traditional mode of production. Of the motivating factors explored, the author finds little support for the hypothesis that women in general typify a different perspective on farming than do men. What findings do show is that the organic mode of production demarcates values amongst the farm population. Therefore, rather than pointing to a masculine-feminine dualism, the analyses presents a dynamic scale of gender and mode of production, which places female organic farmers at one end and conventional male farmers at the other, between which points male organic and conventional female farmers are variously distributed from issue to issue.

Attitudes to environmental issues in agriculture

The final analyses examined attitudes to specific environmental issues. Farmers were asked to evaluate a set of claims concerning the status of the environment, animal welfare, and technological innovation in Norwegian agriculture. Respondents were asked to rate their attitudes on a Likert attitudinal scale (1 = strongly agree; 5 = strongly disagree). Applying Principal Components Analysis, two discrete factors appeared to hold explanatory power. First, environmental issues in general, covering the following statements:

- Generally, Norwegian agriculture is environmentally friendly;
- The environmental critique directed towards Norwegian agriculture is legitimate;
- Agriculture does little harm to the environment compared to industry;
- Farmers do little to protect cultural landscapes, flora and fauna; and
- Existing husbandry is satisfactory for animal welfare.

These were built into an index for Natural Environment. Second, statements associated with organic rules and regulations:

- After some time agricultural use of chemicals will cause serious environmental damage;
- Pesticide use in agriculture does not harm the environment;
- Nitrate leaching does not harm the environment;
- Genetic engineering may solve future environmental problems of agriculture; and
- There are no factual arguments for converting to organic agriculture.

These factors were transformed into an index for Environmental Regulation. Regression analysis of the two models (Table 12.2) shows that only the mode of production had explanatory power implying that there are significant differences between organic and conventional farmers in their attitudes to the impact of agriculture on the environment. In particular, organic farmer responses to regulatory issues were critical.

Table 12.2. Regression analysis of environmental attitudes.

	Regression Models 1-2*			
Constructs	Dependent variable	Probability	Dependent variable	Probability
Constant	1. Natural environment	0.000	2. Environmental regulation	0.000
Women		0.480		0.103
Organic		**0.000**		**0.000**
Interaction		0.168		0.478

* Model summary 1: R Square 0.274, Anova Sig 0.000; 2: R Square 0.398, Anova Sig 0.000. Please contact author for further insight to statistics used in this chapter.

Discussion: Is Organic Farming a Way of Expressing a Feminine Principle?

Previous research on gender, and feminist research in agriculture, has addressed gender inequalities, gender differences in values and attitudes, and the construction of femininities and masculinities (see e.g. Brandth, 2002). In this chapter the author has explored these theoretical approaches to the role of farmer as custodian of nature, using national farm data. The analysis has revealed a higher prevalence of women in organic farming than in conventional farming. However, a greater absolute number of women choose to farm conventionally than organically (Trend-data, 2004). These data also indicate that the potential for increasing the number of organic farms is greater amongst women than amongst men. Female organic farmers tend to be younger than their male counterparts, with a higher educational level but without a family tradition in farming. This is suggestive of a new agricultural paradigm. By contrast, male conventional farmers typify the old or family farm agricultural paradigm based on inheritance and tradition. Male organic farmers and female conventional farmers appear to be less strongly demarcated by their attitudes. With respect to the farms, male-headed farms tend to be large with a strong commercial focus. Women-headed farms tend to be smaller in size, with lower output volume and higher contribution of off-farm income to total farm income. These findings seem to support the view that women manage their farms less intensively than do men.

Motives and attitudes often underpin performance outcome. Through quantified measures of primary interests, some patterning of women versus men and organic versus conventional was found. However, data for the mode of production tended to neutralize gender differences. Therefore, it is not possible

from the analysis to assert with any certainty that men and women practise agriculture in different ways as a result of their different value orientations. Neither can it be asserted that women practise a more environmentally friendly or ecological style of management than men. The pattern is more complex and appears to relate more to choice of production method than to the sex of the farmer. Organic farmers clearly have different motives for farming than conventional farmers. Organic farmers express strong interest in farming and its relationship with the environment, and perceive the environmental problems, which are associated with agriculture in Norway, to be more serious than do conventional farmers. In this latter instance, gender differences were not found, although factors typically motivating both woman and organic farmers imply an interest in both farming and food production.

The ideology of organic farming corresponds on many issues with the concept of a feminine principle in management. The analysis in this chapter adds to, and also increases the complexity of, an understanding of femininities and masculinities in agriculture. The analysis has shown that female organic farmers expressing traditionally feminine values can be placed at one end of an attitudinal scale and male conventional farmers expressing more typically masculine values at the other end. In the centre of the scale farmers negotiate and interpret their roles and identities, with conventional female farmers expressing femininity in flux (Brandth, 1994), and male organic farmers exhibiting feminine values through dialogic masculinity (Peter *et al.*, 2000). The models constructed for the analysis were based on a limited range of explanatory variables applied to only one data set. But, as Abaidoo and Dickinson (2002:129) point out, 'farmers make choices about farming practices in complex contexts and in the presence of various imperatives'. Further research is needed therefore to provide greater understanding of the research question. Such studies might well employ methodologies complimentary to the findings presented here and bring new interpretations from which to develop a fuller understanding of the relationship between gender and sustainable agriculture.

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13
The Paradox of Diffusion of Organic Farming: a Case Study in Denmark

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The prevailing strategy of the Danish organic movement has been one of creative conflict, to mobilize non-organic actors in the diffusion of organic farming. The question posed by this chapter is whether this strategy has the dynamism and power to replicate organic as an alternative to conventional, or merely to reproduce organic agricultural practices in a variety of guises. This question is explored through the meta-analysis of a case study of organic conversion and diffusion processes in the municipality of Lemvig, northwest Jutland. The analysis reveals a number of forces driving the development of organic farming. The farmers' narratives confirm a dogma of coherence between external and internal (i.e. mental or attitudinal) conversion. Internal conversion processes appear to be linked, not only or primarily to technical farm operations but, to changes in socio-technical interaction with the wider agricultural sphere. Furthermore, the creative conflict strategy tends to reduce the gap between organic and conventional farm practices, thereby diminishing the demarcation of organic farming as an alternative sustainable form of agriculture. The study shows that non-organic actors are tools for the operation of organic agriculture but not forces driving the replication of organic as a vision of sustainable development. But, the involvement of non-organic actors stems from mutual interest so that organic farming becomes also a tool in the non-organic actors' strategy as a means to gain access to grants and markets. In the final analysis, the chapter suggests that, if non-organic actors gain control over organic agricultural policy and development, the replication of the broader objectives of the organic movement could be marginalized.

The Danish Context

The Danish experience of organic farming is generally regarded as an agri-developmental success. From 1994 to 2003, the total number of organic farmers increased by a factor of five, from 677 to 3510. During the same period, the area of organic farmland increased by a factor of eight (Danish Plant Directorate, 2004). A characteristic of organic agricultural development in Denmark was the early enrolment of powerful actors from the conventional agricultural arena (Michelsen, 1996 and 2001; Noe and Stoye, 2000; Lynggaard, 2001). The organic movement has since succeeded in forming an institutional relationship with the conventional agricultural sector in, following Lynggaard (2001), a situation of 'creative conflict'. Lynggaard defines such interaction between organic and conventional farming as both cooperative and conflictual, and as ultimately instrumental in creating productive relationships that have subsequently influenced national (Danish) agricultural policy.

The creative conflict strategy is enshrined in the principles of the Danish Organic Union (Økologisk Landsforening), which state amongst others the aim to 'convert all agriculture to organic farming' (author's translation). This principle is unique in that it is not found in the aims of IFOAM. The mechanism for achieving total conversion is formulated as 'through mutual exchange of methods and experiences between Økologisk Landsforening and agriculture in general, including educational and research institutions' (Økologisk Landsforening, 2004). The strategy behind the principle of total conversion is also to be found at the level of the individual farmer. During interviews conducted in the early 1990s, organic farmers explicitly and repeatedly stated that their strategy was to *involve conventional colleagues* (consultants and marketing channels), in their socio-technical network (Noe, 1996 and 1999). Although the organic farmers were aware of organic farming being more than just the rules, there was a strong and shared belief that once farmers' technical skills improve, organic farming also becomes heartfelt (Noe, 1999). Thus, the creative conflict strategy is embedded in a fundamental belief in an inevitable synergy between technical and mental, external and internal, conversion processes.

The internal conversion process is well described in several studies (Vartdal and Blekesaune, 1992; Østergaard, 1998; Noe, 1999; Hansen, 2003), which reveal a symmetry between internal and external conversion; between values, rationality and production (Noe, 1999) or reciprocity between praxis and perception (Hansen, 2003). In a larger-scale survey, Michelsen similarly found that organic farmers who converted in 1995 held almost identical values and attitudes towards organic as earlier converters, despite the more central role played by economic motives for conversion (Michelsen, 2001; Michelsen and Jæger, 2003). However in recent years, organic farmers have been telling a different story about why they converted and what happened after conversion to their farm system, perceptions, and goals so that now, organic is referred to as a

concept separate from or outside the farmer. Furthermore, these farmers feel the need to retain an exit route back to conventional farming; indeed there has been already a wave of reversion to conventional farming for economic reasons.

Nevertheless, organic farming in Denmark is not in crisis. Rather, organic farming is facing a crossroads at which a new approach, to pursue an alternative vision of agricultural development as opposed to merely targeting a premium niche market, can be taken. Much of the effort to diffuse organic farming has been successful, not least because the strategy has in recent years been underpinned by research on food quality and safety (Strukturdirektoratet, 1999), and has resulted in the streamlining and standardizing of new organic food chains in line with conventional food chains. However, the main elements of the Danish organic discourse have been environmental concerns, food quality, and to some extent animal welfare, while other aims have received less emphasis (see e.g. Michelsen and Jæger, 2003). For this reason therefore, organic farming is vulnerable to capture by an environmentalized conventional farming, as regulations and voluntary standards for environmental impact and animal welfare are introduced more generally under the 2001 Agenda for CAP reform. This implies the need for the agenda driving organic (the movement) to highlight other elements of the organic discourse in order to replicate the totality of organic as a sustainable alternative to conventional food production.

Whilst there is no perceived need to question the power and success of the creative conflict strategy in the Danish model of organic farming, the more interesting question is: Does the strategy have the dynamic power to replicate organic farming as sustainable development? A series of projects have made it possible to revisit a number of farm cases, which were first appraised in 1996, in the municipality of Lemvig (situated in northwest Jutland). Through this meta-analysis of organic conversion and diffusion processes, the chapter begins to elucidate answers to the question posited by the success of the Danish model. Actor-network theory is employed as an underlying framework for this analysis. A comprehensive account of the process of interpretation and application of actor-network theory is discussed elsewhere (Noe and Alrøe, 2003 and 2006).

Background

History of organic conversion in Lemvig and the founding of a local organic network

In this predominately rural area, agriculture still plays an important role in the economy. Lemvig has a stable rural population, as yet little influenced by the influx of urban commuters to the countryside. In 1997, there were around 500 farmers in the municipality, of whom approximately 200 were dairy farmers. On average, farms had 62 cows. During the 1990s, an increasing number of dairy farmers in the municipality converted to organic farming. In 1991, two dairy farmers converted, and in 1995 12 more dairy farmers converted in response to a

15% price premium offered by MD-Foods dairy cooperative (now Arla) for milk delivered in the conversion period, a measure that was introduced to stimulate conversion and thereby meet growing market demand for organic milk (Michelsen, 1996). The group of organic farmers then established a cooperative for the mechanization of organic growing, which was enabled by EU support for the third pillar of rural development, specifically 5b. The preliminary project for the cooperative was potato production but other machinery was soon included in the project, such as weed harrows. In 1997, a further two dairy farmers converted and joined the mechanization cooperative. In 1999, another three farmers converted bringing the total dairy farming organically to 19, approximately 10% of the municipality's dairy farmers. However, two farmers from the mechanization cooperative exited farming altogether and one of the 1999-converters reverted to conventional farming. The conversion of dairy farming seems to have influenced farmers from other sectors as well and in 2003, there were 32 certified organic farmers in the municipality.

The Lemvig case study

In 1996, the first case study of Lemvig was conducted as part of the pilot study: Stimulating the implementation of environmentally sound agricultural practices in Europe – the role of farmers' organisational dynamics (Assouline *et al.*, 1996). The case study was selected for several reasons. First, a high number of traditional conventional dairy farmers had converted to organic farming. Second, there has been clear involvement by the local advisory centre. Third, the farmers' networking strategy had been institutionalized through the formation of the mechanization cooperative. In 1999, Lemvig was revisited in greater depth as part of the EU project: Making agriculture sustainable – the role of farmers' networking and institutional strategies (Assouline and Just, 2000). In 2001, two farmers who converted in 1999 were interviewed in connection with the project: Farmer motivation and potential to include environmental, landscape and aesthetic concerns into farm management and decision-making. Finally, this group of farmers was re-interviewed in 2004 in connection with the project: Farmer decision-making behaviour and decision support needs.

All organic farmers involved in the above projects derived their main income from milk production. The age of farmers ranged from 34 to 60 years, whilst farm size ranged from 40 to 140 cows. Three of the farmers were members of the Danish Family Farmers' Association, while the others were members of the Danish Farmers' Union. All the farmers used the local advisory service, Kvægbrug Nordvest (KN), which operates in cooperation with the two farming unions. Five farmers delivered output to a small organic dairy cooperative, Thise Dairy (TD) with 44 suppliers. The remaining farmers delivered to the national dairy cooperative MD-Foods (now trading as part of the Swedish dairy cooperative, and renamed, Arla).

Methodology

The analysis is chronological, starting with the views of 1991-converters, and covers both how early and late converters view the diffusion process, and how farmers *changed* their views of these processes. Second, informed by actor network theory (Latour, 1993), the role of organic and non-organic actors is analysed. The term non-organic actors refers to those actors that operate from interests other than the promotion of organic farming *per se*, and therefore whose existence as organizations can be sustained independently of the organic sector. The study focuses on three actors of major importance to the diffusion of organic farming in the municipality - Thise Dairy, MD-Foods and the local advisory centre Kvægbrug Nordvest (KN) - as portrayed in the narratives of the farmers. These narratives are synthesized through the lenses of three discrete risks or challenges of conversion discernable within farmers' narratives. Amongst the interviewed farmers were representatives from the boards of both Thise and MD cooperatives.

In the 1996, two 1991-converters and a regional organic advisor were tele-interviewed, two 1995-converters were interviewed on farm, and an advisor from the local advisory centre (KN) was visited and interviewed. In 1999, 11 farmers were interviewed on farm and two advisors were visited and interviewed. Two of these farmers and one advisor had been interviewed previously in 1996. Two of the 11 farmers were 1991-converters, four were 1995-converters, two were 1997-converters, and three converted in 1999. In 2001, two of the 1999-converters were re-interviewed in connection with another project and finally, in 2004, one of these farmers was interviewed again after deciding to revert to conventional farming.

With the exception of the two telephone interviews, all interviews were conducted on farm using semi-structured schedules and lasted between 1½ to 2½ hours. These interviews were recorded and transcribed for pattern searching. Based on information from advisors and initial farmer interviews, farmers were subsequently selected to represent the range of perspectives held within the socio-technical network group (the mechanization cooperative). The analysis is presented in three sections. The first depicts farmers' narrative on organic diffusion and conversion processes, and the means by which farmers have built social and technical relations within these processes. The second section focuses on the strategies employed by actors that were peripheral to farmer interviews, whilst in the third section the three categories of risk posed by the conversion/diffusion process are discussed.

Farmer Narratives on Conversion and the Formation of a Local Socio-technical Network

The 1991-converters did not know each other prior to conversion, but after conversion they established network relations, primarily through engagement in

the Thise Dairy (TD). Two of these farmers joined the board of TD, one in the capacity of chairman from 1992 to 1999. An evident characteristic of both farmers was a *pioneering spirit* in that they were not averse to non-conformity with other farmers and willingly embraced the image of the pioneer:

> [Organic farming] was something new and exciting, and it has never bothered me to be a little different from other farmers...what people say and think has never bothered me. In a way I like [being different] (KT).

The 1991-converters expressed a desire to *prove* to conventional colleagues that it is technically and economically feasible to farm organically. Also, they wanted to convince their colleagues of the benefits of conversion and to spread the values and ideas of organic. Their strategy was to remain in their existing socio-technical network with the exception that they switched outlet from MD to TD cooperative. They continued to use their conventional advisors at KN despite the advisors' limited knowledge of organic practices at that time. In cooperation with KN, organic farm visits were organized for local farmers. In addition, both farmers remained with their cow clubs despite the lack of relevance to organic of some of the topics discussed.

This strategy proved successful. The 1991-converters demonstrated first, that organic dairying is both technically possible and profitable, thereby reducing other farmers' perception of the risks inherent in conversion. Second, the 1991-converters made it more socially acceptable to convert. They successfully demythologized the term organic in that they were able to disassociate themselves from the stereotype of longhaired hippies and unkempt holdings. The 1991-converters had gained respect for their dairying skills and were therefore relatively attractive to identify with. Subsequent interviews with 1995-converters revealed the exemplary role of the 1991-converters:

> AN and KT have been very good ambassadors...I did not know them very well, but I knew their farms and could pass by to see them! (PB).

> We have been impressed...their farms look as nice as the others do... (JC).

Another important trigger identified through interviews with 1995-converters was a growing questioning of the conventional mode of farming, in particular the use of pesticides. One farmer reported that he had suffered headaches ever since a pesticide-poisoning accident some 20 years previously. Other farmers also reported finding pesticide use increasingly unpleasant because they did not feel especially competent at spraying in the unpredictable and inclement wind patterns of their west coast location. Moreover, they believed that society frowned upon the practice and this made them feel uneasy:

> I have always felt very bad about using the sprayer. I am sick and tired of it, probably because I have never been too good at it (JC).

The local advisory office (KN) was instrumental in network building. Following MD's offer of 15% premium in 1994, many farmers asked KN advisors to estimate the technical and economic consequences of conversion, and this growing interest prompted KN advisors to organize an introductory course on organic farming, at which farmers who had already converted shared their experiences. The course director afterwards explained that he felt participants would either all convert or very few would. Several farmers themselves stressed the importance of being one of a group:

> the neighbour effect has played a major role. When more people dare, and can support each other, it makes it much easier...It is a group of ordinary farmers; both trend setters and some not so...like the rest of agriculture...when [trend setters we look up to] dare, we do as well (JC).

The 1995-converters perceived themselves as a group of normal, skilful farmers like their conventional colleagues. This was an important aspect of the network strategy. The 1995-converters strove to retain their social and technical relationships with colleagues who continued to farm conventionally. The local farmer unions that also made a considerable effort to pay attention to organic farming in their organisations mirrored this inclusive strategy. None of the actors appeared to want a spilt within the local farmers' organization:

> I am a member of a cow club and we are three organic farmers now. The fact that we still care about each other as dairy farmers is important...pig farming is one thing and dairy farming something different [but] we are not going to split organic and conventional [dairying]. We must be careful to keep the things we have in common. I respect my colleagues as I always have (JC).

This attitude reveals the essence of the creative conflict paradox. Organic farming is in actuality a critique of conventional practices and yet the converted farmers continued to feel strong bonds with those farmers who continued with the criticized conventional practices. Thus, the paradox becomes an internalized component of their self-identity. However, such internalized conflict may be particular to the 1995-converters.

The 1997-converters integrated with the local organic socio-technical network (the mechanization cooperative), one more loosely than the other who expressed similar ideas and thoughts to the 1995-converters. This farmer was pleased to have converted because he no longer had to feel that society looked down on him when spraying. Like the 1995-converters he also talked about his internal conversion process and the fact that he had become more orientated towards organic ideals after the conversion:

> [Conversion] has given me more self-esteem...It is a relief to get rid of the sprayer...money made us convert but gradually, as we see it is practicable, we become more organic in our hearts (EK).

This same farmer explained that he did not like to be in the vanguard, he preferred to wait for others to convert first, and hence he did not convert before 1997. However, once he had observed for himself how well the 1995-converters had fared, both technically and economically, he was no longer afraid to take on the challenge of conversion. He is now an active member of the mechanization coop and is raising interest in equipment for maize growing:

> I had been thinking about [conversion] but did not trust market demand in 1995, even when MD offered 15% premium...I wanted other farmers to try it out before I took the decision...(EK).

The other farmer (aged about 60 years) stated that his decision to convert was linked to the farm's economic prospects and not to any critique of conventional farming. He too had made an initial estimate of profitability in 1995, but at that time was not convinced. For him the greatest risk of organic was being unable to control weeds without using pesticides, although he admitted that he had turned more towards organic farming as time had gone by. Nevertheless, the trigger for commitment to conversion in 1997 came when he built a loose-housing stable, which created access to EU-subsidies available under Objective 5b. This farmer is now a member of the mechanization coop but due to his chosen crop rotation, only in a limited capacity - the use of a weed harrow:

> When MD offered the 15% premium there were no estimates to show if [conversion] would be profitable. In 1997, there really was some money in [organic]...we were trapped on a treadmill. It was difficult to get care for cows fettered in a shed but we could get [EU] funds for re-housing... (AL).

The three 1999-converters shared this more profit-oriented attitude towards conversion. Thus the local dairy farmers' discourse on organic appears to have shifted. Profit and market demand became valid arguments for conversion amongst farmers who did not perceive any problems for conventional farming and conversely, the example set by earlier converters, as a trigger for conversion was less evident:

> *What made you convert to organic farming?* Kroner and ører [Euros and cents]. I don't believe we use too much fertilizer or pesticides [in dairying...because these are] expensive. *Have you had any connection with organic farmers?* Not directly, but we talk to them like everybody else (NL).

Accordingly, the 1999-converters were less likely to enrol with the local organic socio-technical network. These farmers managed over 100 cows each and preferred to keep and maintain their own machinery. Plus, the required knowledge of organic practices is obtainable through existing networks largely due to the success of the inclusive strategy of earlier converters.

One 1999-converter who reverted to conventional farming explained in a 2004 interview that he is reverting to conventional agriculture because he is not allowed to use embryo technology under the organic system, and breeding is a particular interest for him. However, despite the reduction in milk yield under the organic system, the farmer reported positive experiences of organic growing and consequently had decided to retain a high proportion of organic clover-grass in his system, but to return to using agro-chemicals for growing fodder maize.

Strategies of peripheral actors

Thise Dairy (TD) cooperative played two main roles in the diffusion of organic agriculture according to farmer narratives. First, TD was the only existing outlet for organic milk for the 1991-converters. Second, TD bolstered the existing pioneering spirit and commitment of early converters. Although government financial support was available in the early 1990s, nevertheless the market was not buoyant (Oldrup and Just, 2000). At this time TD was struggling to find or establish a stable market that would allow it to purchase organic milk at a competitive price, and for a while members received no more than the members of MD-Foods. Thus, the pioneers proved willing to sacrifice income until the market caught up with their values and it was from this tenacious optimism that TD members set up the mechanization coop:

> I wanted to join Thise because of their idealism - an idealism I still meet there...you can burn with enthusiasm...I am still pleased to belong to a small dairy...with the ideas of the cooperative movement (PB).

MD-Foods also played a central role in the second wave of conversions (in 1995) by offering a 15% premium for milk delivered in the year of conversion. In 1994, one of the large supermarket chains began promoting organic products and demand exploded (Michelsen, 1996). Importantly therefore, MD's premium was both a short-lived economic trigger for conversion and a signal that in the longer term the organic market would grow. However, whilst the activity of MD-foods was integral to 1995 conversions, according to farmer interviews, MD has since had a more ambiguous role in the relationship between organic and conventional dairy farmers in the locality. By 1999, tension between organic and conventional farmers changed from a focus on the ideological to a purely economic conflict between organic and non-organic members of the cooperative, which it is believed was exacerbated by MD's strategy. Local farmers feel that the accounting for organic and conventional milk lacks

transparency, and due to the current overproduction of organic milk, organic milk is mixed with conventional during collection from the farm gate. From MD's perspective, this is an economically rational practice since separate collection is only necessary for output sold as organic. However, since organic dairies are known to receive a 20% premium, conventional farmers feel that they are indirectly subsidizing organic production. Evidence of this conflict, according to one interviewee, is apparent whenever they meet their conventional colleagues. At the same time, for existing organic dairy farmers and those considering conversion, milk-mixing is a strong caveat that, in direct contrast to the 1995 situation, the organic milk and milk products market has matured and production has become saturated.

The advisory centre (Kvægbrug Nordvest), as previously noted, played a primary role in the dissemination of information on organic practices via courses, and in creating a local organic socio-technical network. Due to this positive attitude towards organic, KN advisors were fundamental to the second wave of conversions:

> [1991-converters] were good pioneers; they did not preach but they were advocates for organic dairying. Through their efforts they proved that [organic dairying] is possible (PE).

By assessing the production outcome of early converters, advisors understood that skilled dairy farmers, with an appropriate balance between herd size and farmland area, could convert easily and profitably. At this time, KN invested in building its advisors' capacity to disseminate knowledge of organic methods and regulations. In addition, KN overtly pursued a creative conflict strategy in which advisors became expert navigators in an atmosphere of both cooperation and conflict. This was achieved by viewing their role as a tool in the process of diffusion, by disseminating, and facilitating the exchange of information on technical and economic aspects whilst leaving the discussion of the ideas and values to the farmers themselves. This strategy allowed KN to remain detached from the organic movement whilst at the same time working towards common goals, and this enabled KN to gain the confidence of both organic and conventional dairy farmers:

> My point of departure has been technical and economic...the ideology will come gradually...[farmers consider conversion] with a professional, pragmatic attitude (PE).

Farmers were encouraged to convert only following economic assessment. The model offered by KN was a combined conversion and erection of loose-stabling for 110-120 cows (financed by Objective 5b). This model fitted three of the five post-1997 converters:

> The advisor tells us: Convert now! There is money to get there! (AL).

Risks of conversion and the importance of socio-technical networks

The farmers' narratives depict three different types of risk faced by would-be converters: technical, economic and social. Technical risks include the new knowledge and control required to relinquish spraying and chemical fertilization. Economic risks primarily relate to market perceptions, sale of produce, premium, and the long-term evolution of organic market demand. Social risks refer to the fear of exclusion from existing social networks such as neighbours and colleagues, and also including the relationships of farmers' children with their school peers.

These perceived social risks were an important driver for the network strategy of 1995-converters. Whereas technical risks had been virtually eliminated through KN's commitment, in particular KN's enlistment of practising organic farmers in the process of dissemination and capacity building, and economic risk had been minimized by MD's 15% premium and the contingent signal of market growth, perceived social risk remained. The significance of the strength of the local agricultural social nexus, and farmers' fear of exclusion, should not be underestimated. Whereas 1991-converters were not afraid to be regarded as different, many of the 1995-converters identified more closely with conventional dairy farmers and several of these farmers stressed the importance of being part of a group of farmers who converted simultaneously:

> [my wife] definitely did not like [the idea of converting] because she was afraid that friends and neighbours would ostracize us...Our children were bullied for it in school...the worst thing is that some people are so keen on slating organic agriculture that their children know it, and they are people we know very well (PB).

However, the interviews with 1999-converters seem to suggest that the social risk of conversion has diminished or is now non-existent. Organic farming has become far more widely accepted amongst conventional farmers. This elimination of risk made it much easier for 1999-converters to commit, but equally, the lack of perception of social risk appears to have weakened the forces stimulating the development of the local organic socio-technical network. Unlike 1995-converters, the 1999-converters did not feel it necessary to form specific socio-technical relationships with other organic farmers in the locality, and this had an indirect influence on the network activities of early converters:

> The enthusiasm from the early years is not as strong now, probably because we do not meet adversity anymore...If we meet resistance from conventional farmers it is easier to stick together (PB).

Discussion

Evolutionary phases of the conversion process

Through analysis of farmers' narratives three phases of conversion and socio-technical network building in the locality have been identified. Non-local and non-mainstream agricultural network building characterize the first, pioneer phase. This phase culminated in the early 1990s. Farmers converting in this phase faced large technical, economic, and social obstacles to organic conversion and survival and all sought support from involvement in organic networks for marketing, knowledge exchange, and social relations. Typical of this group was a fierce determination, and a predisposition towards accepting minority status.

The second phase was characterized by the enrolment of local conventional actors within the organic network, such as unions and extension services. Once local pioneers had demonstrated the technical and economic competitiveness of organic production, the local agricultural advisors entered the debate and provided support for conversion. As a result of the pioneer phase, and with growing market demand, by 1995 the perceived technical and economic risks of conversion had been reduced considerably. What remained was the social risk and this was ameliorated through new intermediaries, i.e. the mechanization cooperative and a processing and marketing cooperative.

The third phase can be characterized as the non-connected phase. Newly converted farmers no longer automatically enrol in a dedicated organic network. From interviews with 1999-converters, it seems that conventional agricultural networks have incorporated the concepts of organic farming into the narrative of conventional farming, albeit in terms of niche market and food quality, and adopted the notion of conversion sufficiently to delimit social risk of converting in the face of simple economic reasoning.

Furthermore, the translation of organic farming concepts into the narrative of conventional agricultural networks means that all the necessary network relations for organic farming - marketing, processing, purchasing, weed control etc. - can now be obtained through conventional agricultural networks and institutions. Thus newly converted farmers are neither pushed nor pulled towards the local organic socio-technical network of farmers to the same degree as 1995-converters. In addition, the narratives of 1999-converters do not contain stories about an internal conversion process; on the contrary there are stories about keeping a safe or professional distance from organic values and organizations. Relevant to this conclusion therefore is the critical question as to whether or not the 1999-converters, who were interviewed shortly after conversion (whereas 1991-converters were interviewed four or more years post-conversion), will sustain their organic mode of production. Some light can be shed on this by the fact that when 1995-converters were interviewed in 1996, they talked about how conversion had affected their way of thinking as well as

their agricultural methods (Noe, 1996) and yet the 1999-converters made no reference to any internal conversion process when re-interviewed in 2001.

Clearly, this finding cannot be generalized to an assertion that all farmers who converted after 1999 are not organic in spirit or heart. For example, Hansen (2003) found in a study of conversion on Zeeland (a region somewhat closer to Copenhagen than Lemvig in Jutland) strong evidence that internal conversion processes exist amongst farmers converting in the late 1990s also, although participants in the study demonstrated a greater concern over communication with the non-farming community than was apparent in this analysis. In any event, both these studies reveal some of the social mechanisms and driving forces behind the mental or internal conversion process.

Conclusions

This chapter posed the question: Does the Danish cooperative strategy block the further advancement of the ideology behind organic farming? In the pursuit of answers to this question, the multi-layered case study presented in this chapter aids understanding in particular of the socio-technical context of the process of conversion from conventional to organic framer. The farmers' narratives confirm the dogma of coherence between external and internal conversion processes, and the reciprocity between perception and praxis (Noe and Alrøe, 2003). For some 1999-converters only a few technical changes were made to the farm system, and the farm could be reverted relatively easily to conventional if the farmer so decided. With reference to the terminology of actor-network theory, these farms remain essentially non-organic actors. Furthermore, the analysis reveals that internal conversion processes are linked, not only to technical changes for the operation of the farm as an ecosystem but also and to greater extent, to changes in the socio-technical interactions of the farm and farm household with the encompassing world.

The risks or challenges perceived by those involved in farming appear to be important driving forces both for the internal conversion process and for building and sustaining socio-technical networks. Due to the different categories of risk that pioneering farmers faced, there has been both a strong pull and a strong push for farmers to join the socio-technical network but these forces virtually disappear in the non-connected phase. This theory of a push and pull into organic networks may in fact hold greater potential for explaining the internal conversion process than changes in technical practices.

The Lemvig case study reveals that the creative conflict as described by Lynggaard also underpins strategy at individual farm and household levels, a finding that is supported by case studies in south Jutland (Oldrup, 2000). By staying within existing conventional socio-technical networks, whilst at the same time creating new organic networks, the 1991- and 1995-converters built a bridge between conventional and organic agricultural sectors, which at local level facilitated later conversions. Technical and economic motives play a

central role in bridge building, especially when local advisors are prepared to evaluate such motives, yet the ideological driving force for conversion tends to remain inside the dedicated organic social network.

The creative conflict strategy has been crucial for the successful diffusion of the organic mode of farming in the case study area. Without such a strategy it seems likely that the number of farmers converting to organic farming would have been limited to those with a pioneering spirit. The enrolment of the advisory centre Kvægbrug Nordvest, as a non-organic actor allowed diffusion into the non-organic farming community. Moreover, the strategy would seem to relate also to the overall size of the organic agricultural sector. For example, the researchers found a parallel successful creative conflict strategy described in the Netherlands (Wiskerke, 1997; Wiskerke and Oerlemans, 2000). Whereas, in other countries, including Belgium (Lynggaard, 2001), France (Assouline *et. al.*, 2000), and Latvia (Tisenkopfs and Sumane, 2000), where organic and conventional networks remain slightly antagonistic to each other, a much smaller overall proportion of land is under organic farming (Michelsen, 2001).

Nevertheless the reduction in the gap between organic and conventional practices, that it is suggested is a corollary to the creative conflict strategy, is blocking a continued demarcation of organic farming as an alternative way of thinking and living. The main topics of the organic agricultural discourse - environment, food quality and animal welfare - have, under CAP reform, become also the main topics of the conventional agricultural discourse to the extent that they are now enshrined in EU regulations. Thus the chapter concludes that in order to evoke the true driving forces of organic production sector growth, new demarcations have to be made to mobilize new resources and to realize the power in the principle aims of the organic movement. Following Coombes and Campbell (1998) this chapter is not advocating a dichotomization, between true and fake organic farmers, nor a strategy of non-cooperation. The creative conflict strategy builds on the idea of involving non-organic actors in the organic food network, including conventional farmers, research institutions, processors and retailers etc. However, it is important to stress that these actors are tools and not driving forces in the replication of the values and ideas of the organic movement, and of organic agriculture as a vision of alternative, sustainable agricultural development. The involvement of these non-organic actors grows from a mutual interest in food production and marketing such that the organic method becomes a tool in the non-organic actors' strategy to access public sector funding and private sector market share.

However, if a situation were to arise whereby non-organic actors gained control of political means to push agricultural development towards environmental conservationism, the integrity and holism of organic agriculture could be threatened, and the broader social objectives of the organic movement to work for a sustainable, alternative development of agriculture, overshadowed (Tovey, 1997). Such could well be the case in Denmark where regulation and certification have gradually been taken over by the state (Michelsen, 2001).

Likewise, in the USA it has been suggested that a whole range of non-organic actor-networks influences the process of legislating organic agriculture with various non-organic primary interests (Goodman, 1999).

To conclude, a creative conflict strategy for the diffusion of organic farming builds on a paradox and can never therefore be a stable situation. The more non-organic actors are enrolled in the organic food network, the stronger will be the need for organic actors to reproduce the ideas of the organic movement, of an alternative pathway for food production and consumption. Otherwise, organic farming will be, not only diffused but also, dissolved into the mainstream industrialized and globalized food system.

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14
Regional Rural Development: the Formation of Ecoregions in Austria

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Austria experienced a boom of conversion to organic farming during the 1990s. Supermarkets started to introduce organic brands and agricultural policy shifted subsidies from product-related payments to environmental programmes, in which the high profile of organic farming became a means for conventional agricultural policy to maintain and improve its image. At the same time a growing conventionalisation of the organic market restricted the organic component to primary production while the numerous stages of processing and marketing became more and more similar to conventional products. The affiliation of new converts to the organic movement remained often low and the movement's main concern has been to comply with the expanding regulatory system, imposed by public institutions (for subsidies and certification) as well as commercial partners. More recently various stakeholders proposed 'Bioregionen', ecoregions, which aim to integrate organic farming and regional development, as a counter concept. The current expression of the ecoregion is as, not a concise strategy but a broad bottom-up approach. Ecoregions vary therefore in their exact form since they are responses to specific regional problem situations. Ecoregions may appear as regions of origin for organic products in supermarkets or as a strategy to market an entire geographical area, albeit using the images of typical organic produce. Sometimes, ecoregions become a vision for agricultural development. In the long run ecoregions aim to extend the philosophy, inherent to the organic farming *value* system, of sustainability, to other actors and sectors in a region and apply them territorially. This chapter assesses the potentials and limitations of ecoregions, based on the results of multiple case studies, starting from initial farmer expectations and following the processes of ecoregion formation.

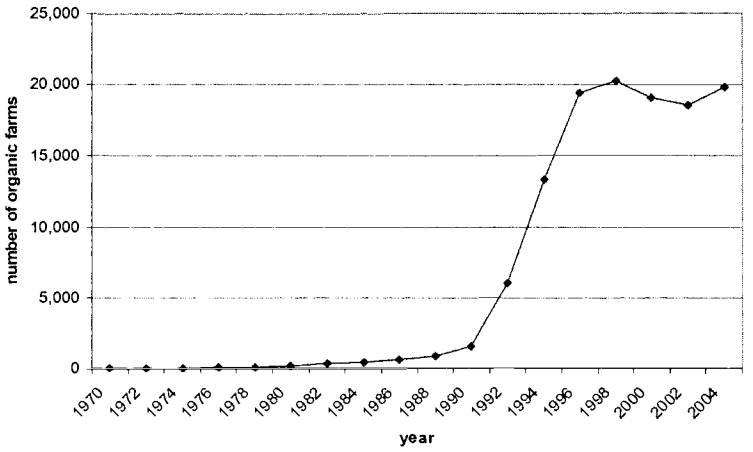
Background

The rise of organic agriculture in Austria

The promotion of organic agriculture in Austria dates back to the late 1980s. In 1987, the Austrian federal minister of agriculture, Riegler, introduced what he termed an 'eco-social agricultural policy'. The main goal of this policy was to integrate ecological and in particular social aspects into the prevailing economic view on agriculture. The social dimension was defined as the protection of smaller farms in less favoured areas (Riegler, 1989). Direct marketing activities, innovation and organic farming were promoted as the new niche strategies. This development shows significant differences to most other EU-countries. It reveals that market pressures reducing the gross value of production (van der Ploeg *et al.*, 2000) were felt much earlier in the mountainous areas of Austria than in more advantaged regions. Consequently, counter strategies were also applied at an earlier stage. Already at that time, one of the strategies proposed under the eco-social agricultural policy was organic farming.

By the end of the 1980s the debate about EU-accession for Austria had just started. Farmers raised serious concerns about how they could survive in a 'common market' against competition from agriculturally more favourable regions. In preparation for accession, the system of agrarian support was amended. Austrian agricultural policy decreased support on production activities and compensated for any loss by introducing and expanding environmental payments. This indicated a shift in the orientation of agricultural policy from *production* to *protection*. Consequently, public support was also introduced for organic farming; subsidies were given first for conversion and from 1992 direct payments for ecologically sound farming methods also included organic farming. These payments resulted in a massive wave of conversion to organic (Figure 14.1), which accelerated further after Austria's accession to the EU in 1995. Changes to the agricultural support system had been substantial. On one hand, accession resulted in an immediate and significant drop in producer prices, and on the other hand, in an increase of public transfer-payments via the agro-environmental programme, which was launched to mitigate these effects. Organic farming had become an accepted means to maintain and even increase farm income. Thus, organic farming was originally promoted by two groups of policy actors: first as a niche strategy and second as a way of pioneering ecological agriculture, compatible with new requirements for direct payments (especially the General Agreement on Tariffs and Trade and later the World Trade Organisation). This changed orientation of agricultural policy, from production to protection of the environment, resulted in, not only an increase in direct payments but also, a regulatory transformation. Whilst previously, regulation focused mainly on the market, it now became a rationale for environmental production, in particular, after Austria's accession to the EU, through the horizontal agro-environmental programme (ÖPUL).

Figure 14.1. Development of Austrian organic farming from 1970-2004.



Source: Federal Ministry of Agriculture, Forestry, Environment and Water Affairs (BMLFUW, 2005).

About 75% of all Austrian farms, representing 88% of total agricultural area, take part in the ÖPUL program (BMLFUW, 2003b). Various sub-programmes or measures are implemented under the ÖPUL framework. The highest transfer payments offered are for organic farming, assuming that this represents the most ecological form of agriculture. In 2002, 17,891 out of a total of 18,672 organic farms received payments through ÖPUL (BMLFUW, 2003a). The programme has resulted in a strict regulatory framework for small scale farmers, especially those in marginal mountain areas. Combined with a lack of market opportunities, ÖPUL support was a major reason for the wave of reversions around 2000 (Schermer, 2001). Many farmers whose farms reverted to conventional had never joined an organic producer association but had signed up under the regulations of the Austrian Codex Alimentarius, and are often referred to as 'Codex' farmers. 'Codex' farmers remained rooted in their traditional networks (often as producers of high quality breeding stock) and did not develop an *organic consciousness*, being mainly interested in transfer payments and not in developing the organic market. These farmers accepted and adopted the prescribed organic production methods as far as they fitted into their traditional value system, but did not convert to the core values of the organic movement. With the completion of the first ÖPUL programme in 2000, farmers saw payments did not compensate for the higher cost of organic feed and hence renounced their participation.

Organic production has since stabilised with marginal increases, especially in arable regions. At present, the further development of organic farming is generally considered to depend mainly on consumer demand (BMLFUW, 2001). This view is supported by the fact that in recent years it has been mainly the

larger farms in productive arable areas that have been converted. At present in Austria about 9% of all farms and 12% of farmland are certified organic. In some districts, especially in the Alps, over 30% of farms are organic (BMLFUW, 2003a). Today Austria, together with Lichtenstein and Switzerland, still has the highest percentage of organic farms of all European countries. The simultaneous presence of three types of organic farmer, those participating in the various measures of ÖPUL, those farming organically according to the Codex Alimentarius, and the 'authentic' organic farmers, confuses the public about the exact nature of this form of agriculture. Austrian agricultural policy used this division in a strategy of 'total cooperation' (Michelsen *et al.*, 2001). The image of being an 'almost-organic country' serves as an excuse for not entering into a productive dialogue between organic and conventional. The strategy could be also termed an instrumentalisation of organic by conventional agricultural actors.

The second crucial factor for the development of organic farming in Austria was the market environment. Organic farming started as an alternative to mainstream distribution systems at the end of the 1980s by marketing directly into short supply chains. With the influx of converting conventional farmers after this time, the direct niche markets were too small to absorb the increased output from organic production. As early as 1994, during the period in which organic production grew most rapidly (Figure 14.1), the biggest Austrian food retailer Billa/Rewe, launched the first organic brand available in supermarkets (Ja!Natürlich). Although other supermarket chains and major discounters have established organic brands since, Ja!Natürlich still holds the leading market position and is the brand most widely recognised by consumers. From 1992 onwards regulations protecting Austrian agricultural markets were removed in anticipation of accession to the EU. But this process of market liberalisation was accompanied by new forms of regulation controlled by powerful actors along the supply chain, especially multiple retailers. In Austria, unlike Germany and other countries, supermarkets are the major point of sale for organic products. About 70% of all organic products are marketed through this sales channel (Hamm and Groneveld, 2004). To maintain the required volume and uniformity of organic produce, supplier contracts issued by retailers to organic producers, dairies and other processors tend to include an exclusivity clause and prescriptions for inputs such as animal feed. Due to this control over production standards, retailers are able to influence the membership of some producer associations, and the use of certification bodies.

The emergence of multiple retailers as leading actors in the organic sector has led to the increasing globalisation of organic food supply chains. The structure of the organic sector, once dependent on regional and rural supply chains, has evolved into a network of international linkages operating to the same principles as conventional food markets. The added problem for the organic sector of extended supply chains is the risk of fraudulent or pseudo-certification. This potential for organic food scares increases pressure for new forms of regulation

such as the implementation of traceability systems. Additionally in supermarkets, consumer demand for organic food is driven by preference for convenience, as it is for conventional products. Therefore the degree of processing of organic products is increasing constantly. Combined with high volume throughput, the recent entry of large-scale conventional processors into the organic sector has meant that the only wholly structurally organic components of the chain are the small-scale producers at the end of the chain. Over time, the shift in agricultural policy from production to protection, and of the market from public to private regulation, have led to a growing instrumentalization of the Austrian organic movement and that has weakened the influence of producers both on marketing and farm management. The organic movement set out to create an alternative food system, to that of corporate production and mass consumption, but ultimately those same market structures have enveloped the organic sector.

The ecoregion counter strategy

Especially farmer-driven organic marketing initiatives have been seeking alternatives to avoid the corporation trap. Such an initiative is the creation of ecoregions (or Bioregionen). An ecoregion is a neo-endogenous form of regional development (Ray, 2001) that centres on the rationalisation of organic farming. Ecoregion development is currently advocated as a viable strategy for Austria, particularly for farms in mountain regions that depend on effective marketing in order to boost income from government subsidies (Groier, 1998). Regional branding is considered an innovative means to tackle the growing competition between marginalised mountainous areas of production and the more agriculturally favourable low lying lands, where inevitably farmers can and do target the organic market also. The concept of a branded ecoregion could feasibly confer competitive advantage on mountain products, given the following assumptions underlying the primarily economic benefits of ecoregionalisation:

- Producers in areas of marginal farming engaged in long supply chains run the risk of being substituted for cheaper suppliers from less marginal areas;
- Under Austrian policy, regional supply chains have the potential to increase net value for an entire region, especially in connection with tourism as noted by EU Commissioner Fischler in 2001 in reference to the future of mountain areas (Schermer, 2003);
- The concentration of organic enterprises in one region can reduce transaction costs associated with logistics especially for processing units and this saving can be passed on to consumers whilst at the same time maintaining high producer premiums.

But as well as delivering economic advantages, ecoregional development can have a positive impact on social or cultural capital in the region:

- New institutional arrangements are expected to emerge such as horizontal, multi-sector alliances within a region, and more cooperative arrangements for vertical supply chains;
- The application of organic principles on a regional scale allows core values of the organic movement to be re-embedded in discourses on sustainable regional development;
- The formation of regional agricultural and marketing initiatives provides opportunities for farmers who converted to organic in the 1990s to learn with and from early converters;
- Renewed publicity for organic principles has reoriented the organic movement away from prescription and regulation and towards a new dynamism of innovation.

However, the concept of the ecoregion is not ubiquitously applicable because successful implementation relies on natural and social conditions. These conditions include a pre-existing image of the region as an area of natural landscape, especially by visitors to the region. For example, widespread presence of light industry, or evidence of heavy industry would almost certainly preclude such an image being formed. The number and size of organic farms in an ecoregion should be higher than the national average, but a number of additional social and institutional conditions must also be met. For example, it would be usual to set up an organisation representing stakeholders from the main sectors of the regional economy and relevant NGOs. The term ecoregion is thus defined as regional development based on the principles of organic agriculture. These were originally outlined at the first IFOAM conference in Sissach, Switzerland, in 1977 (Woodward *et al.*, 1996). Applied at the level of a bounded territory, the 11 principles would of themselves provide a strategy for regional development:

- Closed cycles of production and consumption.
- An economy built from local resources.
- Clean technologies.
- Orientation of production on quality instead of quantity.
- Short value added supply chains.
- Renewable energy/energy-saving technologies.
- Appropriate living and working conditions.
- Enterprise based on long-term sustainability not short-term profits.
- Cross-sector networking and cooperation.
- Preservation of the cultural landscape.
- Enhancement of biodiversity.

The above is also a list of factors contributing to sustainable development and in this way; the principles of organic agriculture reduce the concept of sustainable regional development to its measurable components (Schermer and Kratochvil, 2003). This is an expressed perspective of various stakeholders and not only those from the farming sector. The concept of ecoregion arose out of, and is driven by, the agricultural sector but is maintained through the links between agriculture and other sectors.

The Empirical Evidence

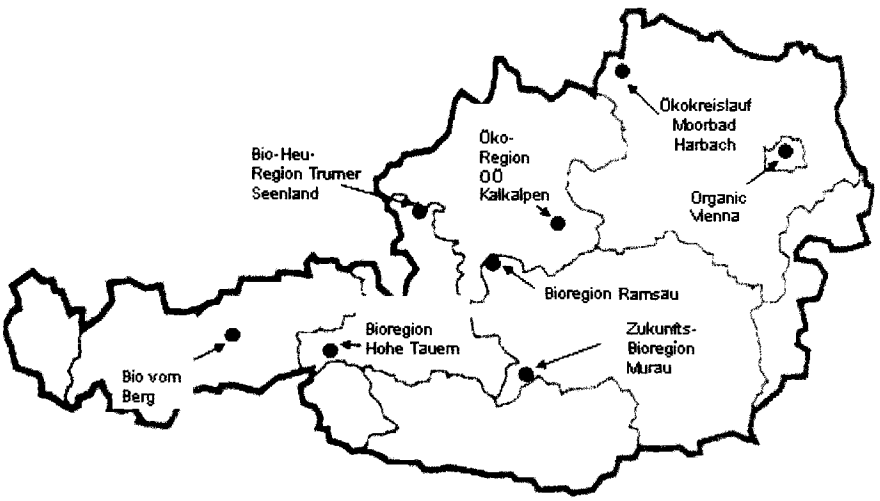
Based on the above assumptions, this chapter reports on present achievements in ecoregion development and examines the potential for widespread and/or long-term deployment of the strategy. The conditions under which ecoregions have proved successful will be critically discussed, and in so doing the author brings to the analysis a reflection on three years of empirical work. Drawing on experience of multiple projects, the author synthesises findings from a series of case studies, policy groups, and academic initiatives related to organic marketing and rural infrastructures. The evidence presented is an aggregation of insights gathered from participation in the multi-stakeholder discussion of ecoregions, principally through the EU 5th framework (OMIaRD - Organic Marketing Initiatives and Rural Development), doctoral research at the University of Innsbruck, and a number of expert workshops held since 2001.

EU research involved a survey in four regions, to evaluate links between marketing organic food and the surrounding rural locality, followed by a more detailed case study of one region (Midmore *et al.*, 2004). Doctoral research uncovered the history, dynamics and potential of another two established ecoregions (Schermer, 2003). The workshop process was instigated by an organic umbrella organisation and the agricultural University of Vienna (Kratochvil *et al.*, 2001), and was taken further at the 7th Conference of German-speaking Researchers for Organic Agriculture 2003 (Schermer and Kratochvil, 2003). Since then the process has intensified with the interest of the regional government of Upper Austria itself engaged in devising comprehensive criteria to assess proposals for sustainable regional development projects. The group formed by this process continues to meet regularly to review potential indicators and minimum standards for ecoregions.

A survey on existing approaches to ecoregion development in Austria generated a list of 23 potential regions (Schermer, 2003). These approaches vary widely in mode of expression; some appear as regions of origin only on organic supermarket products whilst other regions are marketed as locations based on organic farming. Some regions have promoted organic farming as a vision for agricultural development but in the long term the main experience of ecoregions has been to extend the philosophy of sustainability to other actors and sectors than organic farming. This preliminary typology suggests that there are two main approaches emerging, one focusing on regional competitiveness and

another on regional policy. A third more ideological approach focuses on decoupling from the world in reaction to the pressures of globalisation (Schermer, 2003). This latter developmental type is found rarely as an explicit strategy in Austria, a long-term vision of regional self-sufficiency is often part of in the other approaches. The chapter groups therefore the achievements according to the economic and social expectations of ecoregions (Figure 14.2).

Figure 14.2. Map of Austrian ecoregions used in the text.



Economic expectations: profit and power

Competitive advantage in supermarkets

Organic farming has become increasingly integrated with conventional sales channels. The main risk for organic farmers selling into long integrated supply chains controlled by multiple retailers able to switch suppliers is insecurity. Security can be increased through an adequate communications strategy and branding policy (Sylvander *et al.*, 2004). The ecoregion concept makes use of supermarket interest in region of origin niche market. Austrian consumers exhibit a degree of consumption patriotism compared to other countries (Sassatelli and Scott, 2001). A predisposition, to prefer the quality of domestic produce to imports, was strengthened after accession by public campaigns and continues to provide good market potential. The largest supermarket chain Billa/Merkur, now owned by Rewe, started the first organic brand

(Ja!Natürlich). This brand started with a highly regional image of traditional farming methods in the Hohe Tauern national park. Ja!Natürlich advertisements were the first to use the term 'Bioregion'. The retailer formed a strategic alliance with a regional dairy cooperative that would otherwise have had to merge with a larger processor to remain competitive on the EU market. At the same time, government incentives in the environmental programme made conversion to organic production attractive for many traditional small-scale farms in the region. Public transfer payments triggered conversion to organic agriculture on a large scale and new market opportunities sustained the growth. But, the power of the retailer to lock dairies into exclusivity clauses increased dependency on retailers and what at first sight seemed to be a win-win situation is shown also to be problematic.

Austrian farmers in general, but especially in mountain areas, are proud to be independent. In neighbouring Tyrol organic farmers initiated an ecoregion in deliberate opposition to the Ja!Natürlich ecoregion in the Hohe Tauern, Salzburg. Although the goal to establish an ecoregion failed because the horizontal cross-sector network did not emerge as intended, the initiative resulted in the formation of an umbrella cooperative of farmers and small dairies that launched a producer-owned brand, Bio vom Berg (organic from the mountain). Producers accept retailer contracts through a careful selection process that prioritises trade with regionally-based and family owned retailers over national supermarket chains, and has more recently entered an agreement with a specialist organic trading company in Bavaria. The group aims to retain control of product to the point of sale, even when distributing through mainstream channels. The strategy has so far proved successful also for the retailer since the visibility of the producer and farm in the brand has increased consumer trust with a corresponding reduction in required promotion costs.

Regional added value

The driving force for ecoregional development in Austria, in most cases, derives from tourism, and with the emergence of eco-tourism the inclusion of organic actors holds considerable economic and developmental potential. The health spa Moorbad Harbach in Lower Austria highlights the mutual benefits that arise from joint ventures. As early as 1990 an alliance was formed between the operators of Moorbad Harbach and local farmers. The tourist managers considered it essential for the resort to maintain non-destructive farming practices in the forest-dominated landscape adjacent to the Czech border. With the increase of forest cover a 'darkening' of the landscape was associated with reducing its recreational value. During the cold war period, agriculture in this isolated area became marginalised, leading to reforestation of previously agricultural land. Farmers had already lost their traditional infrastructures for processing milk and meat and wanted to increase the proportion of products processed and marketed locally in order to retain a higher share of net value. The

company Ökologischer Kreislauf (OK - ecological circle) was consequently set up to produce and market organic products locally. A detailed evaluation of the ecological and economic benefits of OK demonstrated that this cooperation founded a new organic dairy and established a processing infrastructure for meat (Fromm and Hess, 1999; Pusböck, 1999). Farmers were able to diversify production without encroaching on valuable forest thereby boosting regional added value whilst at the same time reducing the pressure on farmers to transport large volumes of output.

In other regions, farmers rather than tourism enterprises have pursued the ecoregion agenda. The community of Ramsau started at the time of the Nordic World Ski Championship in 1999. The sports arena included an organic village comprising market stalls run by local producers. This event received a very positive response and a core group of organic farmers, restaurant owners and retailers decided to build collectively on the success of the organic village, and promote the region as Bioregion Ramsau am Dachstein. The aims included the promotion of closed regional food circuits, eco-tourism and sustainable development. Activists in this venture believed that it was important to achieve competitive advantage for sustainable tourism development (http://www.bioregion-ramsau.at/). Membership of the initiative includes a number of organic farms offering on-farm retail sales, five farms offering farm holidays, and five hotels and hostels offering organic meals. The group also organises events ranging from an annual organic summer festival to cooking courses. The region has the highest number of enterprises officially certified as eco-tourism within Austria, and the growth in uptake of eco-tourism bears witness to the promise of a sustainable niche. Whilst in Harbach full-time farmers cooperate on specialist tourism ventures, tourism in Ramsau mostly operates as a source of diversified income for family farm households.

Organic clustering

A third route to the formation of ecoregions is to capitalise on the aggregation of organic production from the area, especially in terms of logistics for processing and marketing. A good example of this strategy is to be found in the history of Bio-Heu- Region Trumer Seenland that runs across the border of two states, Salzburg and Upper Austria. Most farming in the region is based on dairying. The initiative preserves the cultural landscape by emphasising the greater importance of haymaking compared to silage, which is perceived to symbolise agricultural intensification. The use of hay fodder adds value to cheese production through the resulting unique quality. In 1996, the year after EU accession, 13 organic farms that delivered milk to different dairies formed an association for the purpose of exchanging delivery quotas to enable one dairy to set up an organic milk processing line, which proved successful. Fuelled by this success the initial group started a number of networking activities. Currently about 180 organic farms in 22 municipalities belong to the cooperative and all

dairies in the region operate an organic product line. The group's economic activities have now expanded into tourism by creating a standard organic breakfast for hotels and inns and supporting a regional delivery service, which offers a range of over 400 organic products to about 20 certified eco-tourist enterprises. This network of organic farm shops, dairies, and restaurants makes the region an attractive destination for tourists.

Farmers themselves do not always drive the phenomenon of such organic clustering; factors outside the region can trigger the development of ecoregions such as in Vienna and Lower Austria where regional policy to supply organic products to public canteens was introduced some years ago. In Vienna, an alliance to enact the Kyoto climate protocol served as a catalyst. Local government supported the introduction of organic food into public sector catering (in hospitals, homes for the elderly, and other institutional canteens) to reduce negative impacts on climate related to agro-industrial production including the tendency to transport output over long distances. The authority established a target for supply to public canteens of 25% organic by 2006. Although prompted by environmental policy, this regulatory intervention created a protected market that stimulated organic production, and provided new opportunities for the deployment of labour in the regional infrastructure. New specialist organic businesses were established and networking between producers, processors and logistic services intensified. Organic methods were also adopted within agricultural production units owned by the municipality. The regional government of Lower Austria has now also passed a similar regulation and other regional governments in Austria have agreed to introduce policies based on the Vienna example.

Social expectations: networks and values

The social expectations for ecoregions are here categorised according to two fundamental dimensions - the creation of networks, and the extension of organic values to new and/or non-organic actors.

Networks

The formation of ecoregions is closely tied to the emergence of new groups and initiatives. Not surprisingly however, the diversity of organisational approaches to eco-development is mirrored by a plurality of modes of cooperation. In some regions, networks are relatively informal and members operate independently in the pursuit of a common goal. In Bio-Heu- Region Trumer Seenland, group organisation is loosely structured and different interest groups under the umbrella of the network undertake many different activities. For example, some organic farmers use the network to achieve volume savings on the purchase of inputs whilst others exchange professional experiences or negotiate cooperative marketing ventures and organic events to sell to tourism enterprises. Thus

different actors, in different contexts, use the network in different ways. The group also consciously fosters business partnerships with conventional farmers but maintains a clearly demarcated boundary between organic and conventional marketing activities. A common goal for all farmers is to resist the introduction of genetically modified (GM) inputs to farming.

Development of the Öko Region O Ö Kalkalpen grew from the founding of a rural development agency, Regionalforum Steyr-Kirchdorf, as an umbrella organisation for activity within the National Park. Regionalforum Steyr-Kirchdorf is a forum for the communication of shared goals and organisation of joint strategies for stakeholders from all sectors of the economy as well as organic and conventional farmers. Within this umbrella framework, organic farmers in the region have their own interest group that promotes the inclusion of organic principles into regional development where possible. Within this group, a more formal farmer cooperative takes responsibility for organic marketing.

Most organic farmers in ecoregions employ other regional development initiatives, and programmes for sustainable development (e.g. Agenda 21), to advance their situation. In the Zukunfts-Bioregion Murau, eco-development arose directly from Agenda 21 activities that focused on renewable sources of energy. A working group of powerful stakeholders in agriculture, industry, commerce and tourism was established to develop projects and joint initiatives. Through their interaction with professional and political institutions, these stakeholders were able to lobby regional policymakers.

Ethical values and the ecological ideology

The extension of core organic values is made possible through the operation of networks. By creating synergies with non-organic groups in both business and civic communities, the principles in which organic farming is based (i.e. IFOAM's 11) can be used as the template for development even in official plans and documentation. A pre-requisite for achieving synergies across sectors is to first build coherence and trust amongst organic farmers; only then can ideas be successfully presented to stakeholders outside the organic sphere.

The Bio-Heu-Region Trumer Seenland began at the end of 2003 with the launch of a regular publication, *die Heumacher*. Several articles in the inaugural issue highlighted the importance of organic farm feasts in creating a common spirit amongst group members, as well as forging links with consumers. Farmers have since developed pride in the mutual assistance that enables them to manage resources collectively. In addition to the collective purchase of agricultural inputs, plans are in place to rotate responsibility for Sunday routines in order to maximise leisure time for members. This idea is also being considered for creating time for occasional holidays. Such innovative approaches to farming present a far more attractive proposition to young people in the area and have

revitalised an interest in organic farming for reasons other that market prospects and public subsidies.

However, since 100% conversion of the region's agriculture to organic methods is not anticipated in the foreseeable future, the organic farmers' group invests effort in liaising with conventional farmers in the region by seeking out commonalities between the two forms of agriculture. The creation of ecoregions is closely connected to the preference that conventional Austrian farmers have for GM-free zones, and this has been the starting point for several ecoregions in Austria (Schermer and Hoppichler, 2004). Several regional governments in Austria attempted to ban the use of GM inputs in agriculture but under current EU legislation this strategy has not proved possible and thus the ecoregion can play an instrumental role, albeit on a voluntary basis, in achieving the objectives of conventional as well as organic farm communities.

In the final analysis, such shared interest or common ground between organic and non-organic stakeholders, farm and non-farm stakeholders, underpins the sustainability of the ecoregion. As well as cooperation along supply chains, synergies exist in a wide range of ecoregion programmes and projects. For example, one of the drivers for Zukunfts-Bioregion Murau was a local firm supplying and installing heating systems that, after participating in Agenda 21 processes, decided to switch from oil-fuelled boilers to biomass stoves. Since the region is rich in forestation, the decision seemed logical and to operationalise the decision, contacts were sought with forest-owning farmers in the area, about 25% of which were certified organic. Besides improving direct sales, organic farmers could thus diversify their output to include fuel products. Nowadays, the construction and refurbishing of public buildings in the district is used to build up micro-networks of decentralised energy stations fuelled by wood chips. The regional chambers of both commerce and agriculture now back the energy firm that began these activities. More recently the scope of activity broadened to include the establishment of a UNESCO biosphere reserve and this has invoked new cooperation, also with stakeholders in the neighbouring states of Salzburg and Carynthia.

Counterbalancing the Forces of Globalisation

The examples illustrated in the above discussion show that efforts to implement ecoregions significantly contribute to both economic and social elements of regional development, and allow farmers to actively influence that development. The concept of the ecoregions represents a form of neo-endogenous development (Ray, 1998 and 2001). The idea for ecoregionalisation can come from farmers themselves, non-agricultural sectors in a region, or relevant activity outside the region. Constraints on conventional agricultural production, has in some instances created pressure on farmers to find new markets, a push strategy. But new opportunities often come from outside actors pulling the region towards eco-development. Thus the true definition of ecoregions is neo-

endogenous as opposed to endogenous in a purist sense of the word. Nevertheless ecoregionalisation deploys material and conceptual endogenous resources and follows what Ray (1998 and 2001) terms the modes of a cultural economy. Clearly, there is potential to improve the marketing of regional products by attaching to them appealing characteristics of the geographical and cultural composition of a region. Ecoregions also, due to the net value added by ecoregionalisation, offer new opportunities for marketing the region as an entity. Ecoregions tend also to increase the coherence of the region and unify development projects by providing an overarching direction or umbrella for constituent groups.

However, there is immanent risk that the concept, like organic production, will be redefined to suit the commercial motives of economically powerful actors, which for the most part implies the involvement of dominant national retailer chains that seek to revitalise their image. In this situation, participating farmers can again be used merely as tools in the creation of profit reaped by extra-regional corporate interests. The risk of such misdirection can be lessened through careful selection of venture partners and by operating robust contractual agreements, as in Moorbad Harbach. Furthermore, although by retaining ownership of brands farmers in ecoregions have been able to influence branding policy and thus far organic farmers have secured added value, concerns for the future remain. The challenge at this point in time is for organic farmers and their associations to move from a merely supporting or even catalytic role in ecoregional development to that of the dominant driving force. This requires the activation of both important forms of social capital, strong internal relations within the group to bond the members together and a multitude of 'weak ties' to bridge between the economic sectors (Woolcock, 1998). The role of networking as both a fabric of, and communication channel for ecoregions cannot be understated. In order that the ecoregion can protect place and space, and act as a laboratory for innovation, networks need to carry a value system across groups and economic sectors.

The idea of protected spaces builds on the concept of strategic niche management. Strategic niche management supports the idea of analysing the operation and human resource dynamics of technologies, in the absence of market forces (Kemp *et al.*, 1998). This concept has been mainly developed in the Netherlands and Denmark in the context of critical technology assessment. Thus so far, strategic niche management has been examined in an industrial context, but more recently the idea of transferring the strategy to an agricultural context in relation to rural development has emerged. In the debate over farming systems, van der Ploeg (2000) argues that protected spaces are necessary to give systems that run counter to the dominant technological regime a chance to develop (Rip and Kemp, 1998). The ecoregion embodies the concept of a protected space because it calls for regulatory intervention, demarcation (e.g. of GM-free zones) and/or public sector procurement. In this way, the ecoregion holds the potential to counterbalance unregulated forces of globalisation.

But ecoregions are more than protected spaces; they provide a vision for development and a direction for policymakers. Such coherence and clarity can overcome the paralysing effect on rural areas of the sea change in agricultural policy, from subsidies to decoupling (i.e. payments for environmental farming methods, and environmental benefits from farming). But, only those actors that are pro-active and have a coherent and positive goal for development are likely to successfully implement the ecoregion concept. The high variety of ecoregion types renders the concept complex to define and simple to imitate. All stakeholders proposed need to be aware of where the common ground between them lies before proceeding to launch initiatives or design projects. Recently, a working group has been established to push forward an agenda of selection and definition in order to protect the authenticity of these protected spaces (Schermer, 2004). Thus, the end point for ecoregionalisation could be regional certification.

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15
Rural Social Development: Small-scale Horticulture in São Paulo, Brazil

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Organic farming is increasingly considered as a possible alternative model to design a new rural society in Brazil and making sense in a global economy. Farmers in São Paulo have set up collectives, based on new relationships with institutions and urban consumers, in three Brazilian metropolises. The starting point for the research presented here therefore, was the hypothesis that organic farming is a *social* strategy, committed to creating spaces for agricultural production in order to rebuild rural communities. The research uses an institutional framework to investigate modes of organization, and the dynamic of economic and social relations. Secondly, the authors characterize the process of organic farming as social development in Ibiúna territory, and identify contingent economic and environmental interactions. Thirdly, the authors analyse the evolution of organizational forms through various initiatives to aid production, certification and distribution, and show how stakeholders can select and marginalize farmers. Finally, the chapter outlines those elements of social organic development that act as a template for the renewal of farmer associations, and discusses available strategies to reduce the risk inherent in sustaining alternative avenues for organic sector development.

Introduction

The first step to formal recognition of organic farming in Brazil was the establishment of standards covering production, processing, identification, and certification for vegetal and animal products, by the Ministry of Agriculture (FAO, 2004). Recently introduced legislation provides a broad definition of organic principles and cites various acceptable production methods, including agroecology (Altieri, 1995), biodynamic, and permaculture (Lula da Silva,

2003). Alternative systems, such as participative certification (Oliveira and Santos, 2004) and political agroecology (Byé *et al.*, 2002), are recognized in national law because it is the express aim of the organic law to support small farmers, foster cultural integrity of rural communities, and promote sustainable development. The law also acknowledges multiple certification systems (Pallet *et al.*, 2002; Fonseca, 2002), over 20 of which use third party auditing, to state, national or international standards (de Souza, 2003). Certification is optional for small farms that sell direct, on condition that records for agricultural and processing procedures are kept. However, bodies accredited to either IFOAM or ISO-65 standards must certify organic exports.

Thus in Brazil organic farming is not only a food production system but also a means to address environmental and cultural challenges. In this way, organic agriculture goes beyond compliance with regional, national or international standards, and is both reflexive and self-directing. The authors reject therefore the thesis of linear development based on economic concentration and industrial technologies, in which parallel systems, such as direct sale, small-scale on-farm processing, and subsistence, are considered anarchic and vestigial adjuncts to mainstream niche markets and not developmental pathways in their own right. Conventions theory acknowledges the scientific and socio-political legitimacy of multiple developmental pathways. However, the patterns of relationships, between agricultural production, food consumption and environmental conservation that contribute to the reduction of social inequality and territorial erosion are critical to sustaining these alternative pathways of development.

Various studies attest to a revitalization of rural communities in Brazil, arising from recognition of the social dimensions of agriculture and consequent diversification of activities having an economic dimension (Carneiro, 1997a; Campanhola and Graziano da Silva, 2000). This process entails building new rural-urban relations based on both symbolic and material exchange. Assuming that various forms of organic farming coexist and correspond to different institutional arrangements, the research poses the following question: Does social cohesion build capacity for small farmers to engage with markets? The objective of this research was to explore patterns of social conventions, and the potential to replicate in the context of small farming those conventions that are meaningful in relation to food quality and environmental issues.

Existing demand for root, fruit, leaf and salad vegetables, combined with favourable prices for fresh produce has produced a buoyant market for fruit and vegetables and stimulated expansion of horticultural production. Organic farming is an opportunity to add further value to horticulture. In Brazil, consumer willingness to pay for organic food of certified or guaranteed quality is high but organic supply remains below the level of demand (Assis, 2002). Furthermore, a much larger latent market is believed to exist, inhibited by the organic premium.

To date, the contribution made by the social sciences to the study of organic farming in Brazil has been limited to a few case studies (Tubaldini and Coelho,

2002; Cittadini, 2004). In particular, the way in which smallholders adopt organic methods in peri-urban areas, the green belt, as a means to access urban markets, has received no special attention. Thus, the authors elected to conduct a community-wide case study of Ibiúna, in São Paulo State, where there is already a cluster of organic holdings and the territorial management of organic farming is at stake (Abreu and Bellon, 2004).

This chapter examines how these small-scale farmers are organized, or organize themselves, to capture urban demand and develop organic production. The case study starts from the theoretical viewpoint that these farming communities have distinct social structures and economies that are different from contemporary rural society. Inside such rural territories, social networks overlap and articulate with one another but do not merge (Carneiro, 1997b), and therefore an examination of organic farm/market relations predisposes towards an understanding of these complex territorial and institutional arrangements.

Background

Organizational forms of organic farming in Ibiúna

In order to explore the diversity of existing relations among farmers, consumers, and certifying agents, the authors identified and conducted interviews with farmers and other active group leaders, including technical inspectors and government officials. Interview schedules differed according to stakeholder: farmer interviews aimed to understand reasons for conversion, choice of production methods and marketing channels, and relations with other farmers and/or producer organizations. Interview schedules for technical officers focused on their activities and relations with organic farmers, as well as their understanding of the operation, growth and spread of organic farming. In total, twelve organic farmers and one conventional farmer, two marketing managers, two organic smallholder association presidents, two certification inspectors, two public sector agricultural technicians from the Rural Office (House of Agriculture), were interviewed. Discussions also took place with local counsellors and environmental activists. Based on secondary data, the research also identified the number and location of organic farmers. Most organic farmers in Ibiúna were located in the Verava micro-basin, but the office for one of the producer groups was located in the neighbouring community of São Roque, even though most produce came from farms in the Verava micro-basin.

Differences among social groups were assumed to be attributable to, not only different supply chain structures but also, specific value systems in social groups. In order to include and characterize the diversity of value systems, the study focused on norms, and rules. More generally, researchers assumed that social and economic actions occurring in the various groups derive from a moral and economic order (Weber, 1991). This ongoing order can be a way to ensure social reproduction of the group structure and values but equally it can generate

new ethical and economic values. It becomes necessary therefore to understand how a group uses cultural reference points, such as ethical or moral norms, to build an identity distinct from other groups (Oliveira, 1999; Almeida, 1999). Further, these group identities and positions are contrasted and compared with the trajectories of other groups and hence such interconnections between groups also had to be investigated.

The institutional context of organic farming in Ibiúna

Ibiúna is a municipality with multiple statuses. Located about 70 km from São Paulo, a city of 13 million inhabitants, the municipality can be depicted as both green belt (Ueno, 1985) and a tourist destination on the fringe of Paranapiacaba Mountain. The altitude of Ibiúna ranges from 840-1214 m conferring a temperate yet humid climate. Over 40% of Ibiúna's 1093 km^2 territory belongs to the Biosfera reserve, comprising native Atlantic forests (*Mata Atlântica*), vegetation, and associated ecosystems. Environmental protection zones are enshrined in state and federal law. This area is rich in strategic aquatic resources and natural lakes, which feed the city of Sorocaba and the community of Ibiúna. Development of agriculture in the area is marked with severe erosion problems. Horticultural holdings usually comprise both flat and steep areas, and preserved areas (Ahrens, 2003). The local climate is favourable for year-round horticulture including December to March, months when high temperatures and heavy rain halt production in other areas of São Paulo State.

The population of Ibiúna is made up of 64,160 inhabitants of the rural environment and 42,979 inhabitants of urbanized communities. However, farming is still the basis of the economy. Over 50% of landholdings are less than 10 hectares, making horticulture the prevailing agricultural activity. Most farm households (53% of the 7728 ha vegetable area) produce leafy vegetables, typically for salads (SAASP, 2001). The next most important horticultural crop is fruit. Leafy products require greater attention to temperature and water control. Many other commercial activities are undertaken alongside agriculture, often in response to the influx of city dwellers who visit the countryside of Ibiúna in search of peace and tranquility, and contact with nature. Such services include accommodation offered by country lodges, fishing, trekking, and the São Sebastião pilgrim fair. Other more elite activities have also sprung up in response to the new country house culture in the municipality, such as horse farming and riding. In actuality, many private holiday homes and second homes for the city population are small condominiums. Ibiúna attracts on average 20,000 tourists every weekend, which come from São Paulo and neighbouring cities. As a result there is a conflict of interest between those human activities that impact on natural resources and the requirements for preserving a higher environmental quality. Hydrographic basins from Ibiúna not only provide irrigation water for vegetable growing but also contribute to human water supply in both Ibiúna and Sorocaba. Formal and illegal real estate development for the

new activities such as tourism, including commercial fishing resorts, contributes to both a lower quality of and higher demand for water. Development also carries with it expectations for landscape preservation in order to support agricultural and other activities or amenities.

Specific contextual barriers to the development and organization of organic farming

Despite the existence of vast urban populations in São Paulo (13 million), Sorocaba and Campinas (together comprising 3 million), and buoyant demand for horticultural produce, farmers located in the green belt face difficulties marketing their output, especially during summertime. Subsequently, the maintenance of small farm households that are solely dependent on agriculture is problematic. Organic farming therefore is an alternative strategy available to struggling producers. The region currently has a significant concentration of small-scale organic producers who have taken this option due to the economic crisis in conventional farming and other commercial activity. But, the opportunity offered by the green market and new approaches to farmer organization and product distribution, is not without risk. Producers in the Verava micro-basin where most participants in the study were located mostly have a low level of education (often less than 3 years schooling), with low capacity to invest, and production units made up of poor quality land and inadequate or outmoded infrastructure (Table 15.1). A holding is an administrative entity, which can be cultivated by several farmers.

Table 15.1. Farm size in the Verava micro-basin.

Size band (ha)	% holdings (n = 37)	% area (total 2603 ha)
< 10	70.0	4.1
10-50	24.3	10.7
50-100	2.8	3.3
>1000	2.8	46.5
Non-registered	–	35.0

Source: SAASP, 2001.

There are approximately 90 small farmers in the Verava micro-basin, 72 of which are organic. Because none of these farms exceeds 100 hectares they are referred to as *mini-fundios*. Some farmers rent land, either because they have no other means to farm or to expand their area of production. State programmes to provide technical and extension services for organic horticulture in the Verava micro-basin, which contributes to the wider Sorocabuçu catchment supplying Ibiúna with water. Environmental monitoring in the Sorocabuçu River is funded in part by the World Bank. Currently, environmental law requires that a 30 m

strip of land along the river is designated under permanent protection, so that for farm units bordering the Sorocabuçu River the area of land available for cultivation has been dramatically reduced. The extent of production of leafy salad vegetables in the micro-basin has resulted in small, specialized organic units (Table 15.2). This strategy was promoted by a local private company, as discussed in the following section.

Table 15.2. Distribution of horticultural production in Verava micro-basin

Vegetable Crops	%
Leaf (cabbage, lettuce)	71%
Fruit (tomato, cucurbit)	23%
Root (beet, carrot, yam)	6%
Total vegetable crop area	143 ha

Source: SAASP. 2001.

Although there is suitable pasture for grazing in Verava, there is less animal husbandry than in other parts of the Ibiúna territory. Five farms in Verava raised horses or mules and several other farmers used horse manure as compost. However, no data could be found to verify this observation. Poultry keeping was found as a large-scale operation in one rural enterprise and poultry waste was previously one of the most affordable methods of compost used but the organic certification authorities recently banned this practice.

Case Studies

Forms of social organization for organic production and commercialization of farming

The majority of, and oldest, organic farms in the micro-basin converted in the 1990s through the support of a project initiated by agronomists and other professionals who were ideologically engaged in the Brazilian environmental movement. These activists set up a company (C) to develop and commercialize organic production on smallholdings. This history helps to explain how the various forms of organization coexist. The authors' research identified four distinct forms of social organization, collective and entrepreneurial, that express *a priori* different concepts about the market and organic farming, but all of which used the company (C) as a constant reference point.

1. Church and supermarkets

The first form of organization is represented by the Association of Small Rural Producers from Ibiúna (APPRI), which is linked with the Campo-Cidade (Country-City) Foundation, created in the late 1980s. Campo-Cidade activities

have been important for local development of organic farming in two districts, including Verava. APPRI was set up through:

- Initiatives of the Catholic church in two areas peripheral to São Paulo city; and
- Volunteer religious out-reach workers operating in Ibiúna.

These agents designed a project that included a set of social actions aimed at improving quality of life and increased solidarity among poor communities in the countryside and city, by regulating prices for both producers and consumers. The main objectives were environmental preservation, healthy food, and rural school education. The school building was funded by Campo-Cidade. Collective investments in transport and equipment were also achieved through the collaboration of Campo-Cidade, APPRI and the Ibiúna Union of Workers and Rural Employees. According to APPRI's present coordinator, organic farming started in the Cachoiera district (where many producers from APPRI are still active) but did not spread in the Verava district due to the downstream location and the likelihood of water pollution from upstream activities. This geographical situation made it difficult for farmers to comply with organic standards; river water analyses confirmed the presence of agrochemicals.

Box 15.1. Spotlight on the Association of Small Rural Producers from Ibiúna (APPRI).

Presently, APPRI includes over 50 farmers who supply over 800 families organized into purchasing groups, and many other families who frequent Sunday open markets at the Catholic church. However, only two of the 50 farmers are formally certified organic. Every fortnight APPRI farmers supply boxes containing 10 different products. The agriculture practised can be described as diversified, household-based, with low environmental impact and strong bonds between farm families and other citizens. On rotation, each farmer also has the opportunity to sell directly in an open market in São Paolo, where a higher premium can be obtained. Farmers have also set up direct trading links with consumer groups outside São Paulo, whose members periodically visit farmers and know the local conditions of production. Such cultural interchange contributes to the revitalization of the local rural culture, which is based on religious activities, music and horses, and the recognition of indigenous knowledge, such as of medicinal plants some of which are included in food boxes. Both market customers and consumer group members are socio-economically vulnerable but nevertheless aspire to eat healthy food. This aspiration is for good functional nutritional reasons but is also embedded in a value system that aims to sustain local food production and native plants. Cultural interchange also leads to a sense of cordiality and partnership among people with different social horizons.

In the early 1990s, a different expression of organic farming came from the participation of four farmers from São Roque and Ibiúna in the two municipalities' street markets and in São Paulo Organic Producers' Fair. These

farmers received support from the Farmers' Association of São Paulo and were encouraged to join Coopernatura, a new cooperative operating in the three neighbouring communities of Vargem Grande, Jundiaí and Mogi das Cruzes. The rationale behind Coopernatura in 1991 was to supply the 50 shops in São Paulo city that were selling natural and whole foods and were preferentially located in middle class districts. Coopernatura employed a manager, salesman, and secretary and invested in delivery vehicles but the coop failed after two years due to a lack commitment among members and subsequent instability of year-round supply:

> The producers' vision was immediate and individualistic. They continued selling in street markets, especially during summertime when prices are higher. They were only selling excess production to Coopernatura, and when the price was higher. Only two producers were supplying Coopernatura year-round, myself and the other director (Coopernatura member).

Nevertheless, the efforts of association among farmers clearly created new spaces for marketing during this period.

2. A large commercial company (H&A)

The second form of insertion of farmers into the market is characterized by vertical integration between farmers and the company H&A. The main goal in 1994 was to create new marketing channels and to occupy spaces in city supermarkets, using the experience of Coopernatura. The objective was to obtain a year-round supply of organic horticultural products with good visual quality. According to one company director, vegetables had previously often been 'small, ugly, crooked and expensive'. The company is legally defined as an association of small organic farmers but operates as a conventional private capital company. H&A is a large commercial concern that controls the entire supply chain, aims to maximize profits and efficiency, and uses aggressive marketing techniques that are not transparent and are ethically questionable. Suppliers receive less than a third of the prices paid by supermarket customers but nonetheless the company maintains that it sells fairly traded goods. According to interviewees, H&A's aggressive drive for profit has squeezed the profitability of farming causing discontent among farmers, and has introduced capitalistic forms of social organization for organic production to the area. One hundred and thirty farmers sell produce through H&A and about 70 of these are located in the Verava rurality.

The regulation of market flow is achieved through contractual obligations previously designated by the company's eight agronomists that stipulate exclusivity; farmers must sell their entire output to the company. All inputs and technical services are part of the contractual planning of production and the costs for these services are passed on to the farmers. In addition, certification is

conducted through the company and paid for by the farmer. However, the company is not obliged to purchase a farmer's entire output. Products are sold on consignment; farmers only receive payment for produce sold and not for spoiled or surplus produce. The cost of compliance with these terms is therefore high and reduces farmer profit substantially. H&A's products are clearly distinguishable, in supermarkets in all major Brazilian cities, by their brand, modern packaging, certification and labelling.

Box 15.2. The main certification bodies in São Paulo State.

The Association of Organic Agriculture (AOA) was created in 1989, started registering organic producers in 1992, and created an organic label in 1996, which is likely to gain IFOAM accreditation in the near future. AAO is based in São Paulo city and the label is widely recognized on products in most of São Paulo's supermarkets. Many farmers in the study area are certified by AOA. During the same period, (the 1990s), the company that grew out of Coopernatura moved away from AOA certification to the Biodynamic Institute of rural Development (IBD), which was set up in 1986 and began certifying from 1990. IBD was accredited to IFOAM standards in 1995 and to ISO 65 in 1999, for the German market. IBD is located in Botucatu in São Paulo State and is the only Brazilian association with internationally recognized organic and biodynamic certification. IBD group certification reduces the cost to individual farmers by as much as 90%. The Brazilian Biodynamic Association (ABD), created in 1999, also provides certification and conducts research and training. A third certifying body operating commercially in the study area is ECOCERT.

Farmers joining H&A were initially certified by AAO but later obtained group certification from IBD. One of the reasons for the switch was so that H&A could access larger domestic and export markets. However, the division of responsibility between farmers and H&A is unclear due to the lack of traceability from product to farmer. Certification can be obtained for a cooperative or association, or by a commercial enterprise also using its own label but this is not without problem:

> The company owns the certification label, and marketing with this label occurs solely through this enterprise. Then the enterprise selects a set of producers, completes audits in various areas, everybody agrees, and they are certified. But it consists in a collective certificate, which belongs to the solicitor. Then a producer cannot sell on his own with this label, but must sell through the enterprise, the wholesaler. To sell on his own, he is bound to sell as conventional product. This was somehow a manipulation to maintain the producers (former AAO inspector).

Researchers interpreted these findings as a coherent system, in which H&A has played a pioneering role in planning production, distributing product and accessing mainstream urban markets. But this drive to expand markets into commercial spaces has been accompanied by the replacement of cooperative

relations with a more Taylorian management ethos (Williamson, 1986). The inherent risk for farmers in this management strategy is high since planned production at farm level can exceed market demand, one interviewee used the term super-planning to indicate both the lack of balance between supply and demand and the vast scale of the operation, which encompassed over 100 farm units. In any case, large commercial organizations offer relative market security for an agricultural activity with high levels of technical and economic risk. In horticulture, planning is critical (Salmona *et al.*, 1977). Delegating planning to a third party with technical support lends security to the production process but restricts opportunity for producers to learn new skills. Moreover, production requires little interaction among producers and in this form organic farming becomes the mere substitution of conventional agrochemical inputs with mechanical and other permissible organic techniques.

3. Horizontal integration between productive and commercial positioning

A third form of social organization identified in Ibiúna is represented by an association of 15 small farmers, eight of which prioritize the commercial dimension of the association, whilst the remaining seven regularly supply to the association since membership does not involve a contract of exclusivity. This group is led by one member farmer who chose, for ideological reasons, to create a new organization based on the principles of exchange of information and sharing problem solving approaches through daily contact. Unlike the aforementioned group, this group prioritizes the social as well as the economic dimension of organic farming in return for a 10% share of gross profits (i.e. retail price received). Management of the association is flexible and participatory. The association supplies two large supermarkets and several smaller retail outlets. The group also operates home delivery and sells to a consumer group, in a Catholic community on the outskirts of São Paulo, and periodic open markets similar to Campo-Cidade (the chairman of the association was formerly treasurer for Campo-Cidade). However, most produce is destined for the supermarkets where it is sold alongside AAO products. Members have more freedom to plan planting schedules and incorporate diverse agricultural strategies and the group collectively discuss any market intelligence gleaned so that individual farmers can adjust enterprise management accordingly. All individual producers are certified by AAO, whereas the collective box scheme is certified by ECOCERT. These farmers hire agronomists independently of the association.

Since moving from a rurally located operation to a packing plant in the centre of Ibiúna in 2004, the association has grown rapidly. The new premises enable the association to conduct weighing and packing operations on a larger scale (employing three assistants) and to provide invoices and receipts to customers and producers. The chairman of the association presents the producers with their cheques in person because he feels that face to face communication is important

for building strong but amicable business relationships. However, as the association increasingly faces competitive pressures, it will have to demonstrate the ability to, not only understand but also, respond to market signals and the challenge for the future is in achieving this ability without losing social cohesion and justice in the process.

4. Integration through an existing cooperative

A fourth form of organization was established in 1995 by 23 producers in one rural neighbourhood as a reaction to the harsh conditions for producers in the first identified market channel. Farmers who were concerned about the low price paid to producers compared with retail prices in supermarkets, sought to assure fair economic return on production by enrolling dissident organic farmers in a regional cooperative. Integration of the association with the cooperative occurred in late 2003 following a training course offered to both association and cooperative members. Although the director of the cooperative had already discussed the possibility of integration, the course provided an opportunity for farmers to cement this relationship. Members of the association gain enough marketing support to become commercial and benefit from the cooperative's strategy to explore new markets. The premium market for organic products is to be found in the supermarkets of medium and large cities in São Paulo State, where the cooperative operates. It is anticipated that the cooperative will also target export markets for specific horticultural products. As in the previous form of organization, this cooperative does not require members to supply exclusively nor adopt an obligatory certification system. The director, taking into consideration transportation, administration and networking costs, monitors the prices paid to the producer and by the consumer for fairness. Finally, as well as providing access to more and cheaper organic inputs, integration benefits farmers through the availability of technical expertise from specialist organic agronomists who are proficient in organic methods such as the use of green manures.

Persistent individual forms of direct selling

Small farmers who sell in street markets and informal outlets on city streets represent the fifth and final form of organization. This form of direct selling was not closely observed in this study and is practised by many farmers who are also affiliated to an association or cooperative.

Summary of organizational forms

In the final analysis, the forms of organization encountered were diverse but had overlapping trajectories. The formative influence of Campo-Cidade and Coopernatura persists to this day and some of the original project agronomists

are still active in the region. The existence of H&A is an acknowledged lifeline for some farmers. An examination of organizational forms not only reflects existing market relations but also, illustrates the emergence of new economic relations among farmers and between farmers and consumers with changed food purchasing priorities (Table 15.3). Most of the organizations investigated did not operate exclusivity clauses thus allowing farmers to spread risk by selling to the association, cooperative, direct, or to APPRI.

Table 15.3. Classification of organizational forms encountered.

Case	Farmers	Production and certification	Marketing	Values
1. APPRI	50 farmers, 2 organic farmers Interaction with city consumers	Food autonomy and diversity via box scheme Consumer-validated	Solidarity in pricing and integration Food sovereignty communities	Fraternity, cooperation Congruence between principle and practice
2. Private co. H&A	70 organic farmers in micro-basin Hierarchical/ technical relationship	Super-planning Input and technical assistance Group certification	High visual quality City supermarkets Demand-stimulated conversion	Economic realism, technological orientation High environment impact
3. Organic assocn.	15 scattered farmers Mutual exchange Strong leadership and market investment	Individual initiatives Exchange experience/ information Farmer group certification	Commercial agility and efficiency Fairer prices for producers	Social justice, respect, liberalism
4. Group coop.	15 neighbouring organic farmers, 105 conventional farmers	Based on org. farmers' experience, possible impact on conventional farmers	Outer-city supermarkets Secure markets and fair prices (producer and consumer)	Timing Collective vision Regeneration Proximity

Discussion

Defining new territories

In the case of organic farmers in Ibiúna, the space for articulation and action is not solely the municipality of Ibiúna, or the circles of geographically proximate relations (i.e. neighbourhoods). The organic farmers in the study maintained complex relationships with diverse actors in wider networks relating to marketing, technical assistance, certification systems, and urban consumers. The

authors suggest therefore that the territory should be viewed as the expression of multiple means to integrate small-scale farmers in a peri-urban area with low socioeconomic status, as agents in globalization. Although Ibiúna's main economic identity is a tourist location, much of the labour employed in this sector comes from the surrounding conurbations. Therefore, specialist organic horticulture offers the opportunity to develop a locally based rural industry with added value. The role of Ibiúna municipality in the growth of organic farming is a crucial route to decentralization of local government power, in contrast to the dynamics imposed on citizens in other peri-urban areas (Lorda and Duvernoy, 2001). However, analysis of the process of farmer-insertion into wider markets has highlighted the deficiency in public policy instruments available to support and strengthen family farming in general, and organic farming in particular (Assis, 2002). But, despite a scarcity of resources, the Micro-basins Environmental Monitoring State Programme is an indirect form of financial aid for organic farmers who need to understand the environmental constraints that are regularly monitored by the certification institution. This in turn facilitates the expansion of environmental objectives within the programme.

Organic and environmental issues at stake

This research has thrown up new questions, such as what exactly is the environmentally driven component of social and organizational forms? The Verava micro-basin has a dual status as site of horticultural production and watershed. With a high concentration of small organic farmers, the issue of resource conservation could help reduce both transaction costs and environmental impacts. This could be achieved through, not only input management but also, the implementation of practices to recuperate soils, and ciliary (river-bordering) forest to improve water quality. An improved mix of trees, hedges and woodland would also benefit crop production through the provision of breeding grounds for pest predators etc. However, the implementation of hydromorphic buffers (ciliary) and protection zones (AAP) threaten the survival of small-scale horticulture. APPRI already supplies medicinal herbs, many of which come from wooded areas, but in general the role of agro-forestry within organic farming has not been sufficiently explored (Ahrens, 2003). The integration of trees into organic standards is rather ambiguous, whereas there are more explicit parameters laid down for conventional agro-forestry, and interestingly the use of trees in permaculture and biodynamic agriculture also (Sixel, 2003). The poor quantity and quality of water is a central debate among various actors in Ibiúna and the surrounding region. Contamination risks are real and there is an acknowledged reduction in surface water restricting the scale and scope of economic activity, which compromises the distribution of goods to major urban markets and turns responsibilities into future threats for millions of local inhabitants (Mug, 2004).

The meaning of organizational and production diversity

Despite a lack of research on organic food consumption and marketing in Brazil (Karam *et al.*, 2003), it is estimated that sales to Catholic communities through box schemes, and direct sales to urban consumers, have helped to redefine local values and guarantee the reproduction of a truly rural economy. The role of the Catholic church in the trajectory of agro-ecological movements has been noted in other Brazilian states also, namely Parana, Sta Catarina and Rio Grande do Sul where the Earth Pastoral Commission works specifically with small farmers (Brandenbourg, 2002). This form of organization is accompanied by a world vision and value system akin to biodynamic and permaculture production systems. These systems not only substitute agro-toxins with other inputs but are a prototype for a moral agriculture.

The growth of organic farming in Ibiúna is testament to a paradigmatic shift in attitude to agriculture, from production or output to survival and reproduction of family farming. The employment of multiple strategies to achieve this common goal has been recorded in other Brazilian states also (Karam, 2001; Fonseca and Campos, 2002; Schmidt, 2003). Through the integration of non-market values, new relationships between producers and consumers have emerged based on sharing experiences and information, and building technical capacity and solidarity. Direct markets enable farmers to bond socially with consumers, whereas the exclusivity required by large companies increasingly distances and alienates the farmer from the consumer. Although networking and extension patterns differ according to the form of organization in Ibiúna, the expansion of organic technical networks in particular is known to occur in other regions also (Ruault, 2000).

The planning problem in horticulture

Horticulture has a special status in organic farming, compared with other commodities, because it contributes widely to household consumption and therefore impacts directly on family well-being, health and esteem. Although the total area under organic horticulture in Brazil is relatively low (approximately 3000 ha in 2002, 1% of total organic area), the sector employs nearly 8% of organic farmers (Ormond *et al.*, 2002). Planning is a strategic operation within horticulture and this study has shown the existence of both collective and individual initiatives leading to very different crop rotations and mixtures. With reference to the different forms of organization, mass planning by the large commercial company simplifies production and reduces the diversity of crops, in opposition to the goals of organic farming. But, when commercialization is based on a network of urban consumers with relative geographical proximity, the planning system is characterized by diversity of products often combining fruit and vegetable production with dairying and short supply chains. In the final analysis, more research needs to be undertaken to investigate how organic

farming transforms conditions for farm reproduction, redefines cultural and economic identities, and contributes to social stability (Sylvander and Bellon, 2003). These results represent the first stage of an ongoing research programme. Nonetheless, the authors were able to verify that most organic farmers in the study had experienced technical or environmental failures and a fall in profits under the conventional farming model, and had been forced to exit farming for precarious livelihoods in the local informal tourist or construction sectors. In this critical situation, the large company was not perceived as exploitative but as a means to remain in agriculture. However the existence of other forms of organization is evidence of agriculture-related forms of *social marketing*, a phenomenon that is increasingly embraced as an important mechanism for international and rural development in a global economy.

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16
Public Sector Procurement: Organic School Meals in Denmark

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Denmark was the first European country to introduce legislation for organic agriculture back in 1987. This public commitment boosted the conversion of farms to organic production and subsequently the supply of organic food. It also trod a track for an integration of agricultural policy with other sectors especially the environment. However, public and political support for these policies shifted with the change in government in November 2001 that prioritized deregulation, and consequently the functioning of the market became more important to the organic producers. This represented a sea change for the organic sector in Denmark as the previous dynamic of active public support for market actors was dismantled. This chapter reflects the discourse on organic production in Denmark today and discusses the relationship between the market and proactive policy through a study of public procurement by focusing on school meals. The research shows that major actors in the organic sector agree that further growth of organic production should be market-driven, as for other commodities, with demand dictating what is produced. This market-oriented perspective is gaining influence throughout Denmark and in this chapter, the authors document the ways in which companies and other organizations including central government, perceive the role of organic production within the agri-food economy. In contrast, an analysis of public procurement shows that other actors, such as local and regional public authorities, believe that a more proactive approach to organic production is required. Several municipalities in Denmark now have policies to promote organic food as part of sustainable development including through the provision of organic food for school meals. In this chapter the authors identify success factors for such a strategy.

Background

The history of the Danish organic sector has been the topic of much research and both farmer and market perspectives, and the process of institutionalization, have been documented (Kristensen and Nielsen, 1997; Michelsen 1998; Ingemann 2003). The Danish organic movement in the 1980s and early 1990s was poorly organized (Kristensen, 1992). Organic farmers started to become better organized in the mid-1990s through the formation of strategic branches within product sectors, and cooperation with conventional farmers through sector political institutions. One of the main results of this cooperation was the formulation of the first Action Plan for organic agriculture (Anonymous, 1995). Many organizations were actively involved in formulating the policy in the framework of the Ministry of Agriculture, which particularly involved the establishment of an alliance among organic and conventional farmers' associations. This work was formulated through an advisory board of the Ministry of Agriculture, the Ecological Agriculture Council. The Action Plan marked a consensus on the advancement of organic farming, and although there remained opposition to organic farming as a movement, there was nevertheless an increasingly positive attitude towards the ideas of the movement as organic producers demonstrated the operation and potential for ecological methods. The second Action Plan was released in 1999 and focused even more on market demand.

Thus the organic sector emerged with no clear interest in the market economy, and in the absence of a guaranteed demand or distribution system for products. But, pioneering farmers were innovative and motivated to demonstrate a sustainable alternative to conventional agriculture. From the mid-1980s, the Ministry of Environment reported the environmental impacts of conversion to organic farming (Anonymous, 1984) and for some time the promotion of organic principles was linked to the environmental benefits of the production system as a public good and regulatory instrument. Theories of social movements indicate that a lively debate is an important tool for sector expansion and for defining and achieving common goals. Expansion of a movement's activity implies also the need for established institutions to integrate new routines and alliances into their agendas. This process of transformation from social movement to industry sector, and the accompanying institutionalization of policies and procedures, characterizes organic sector development in the recent decade.

Main actor-positions in the Danish organic sector

There is broad agreement among researchers that the organic sector has changed markedly in relation to the changing institutional environment, and production practices since the 1970s. These changes have led to the emergence of new actors entering the sector, such as new groups of consumers, sales channels, producers, and (marketing) support organizations. At the same time, actors in the

fields of environment, work, and health have correspondingly become less important. In this section, the positioning of actors in the changing discourse of organic production will be discussed using data from interviews with a broad range of key informants.

As processed organic products increasingly enter the market, new actors can be found in the processing industries. Whereas there is a physical division between pioneer organic producers and conventional producers, reaching mass markets has meant the aggregation of output from many types of organic system, including conventional farms with organic side-production. Also, the tendency has been for conventional processing industries to venture into the organic market often using the same technologies as for conventional products such as homogenization of milk, which has never been the norm in organic dairies. The biggest conventional (and organic) dairy, Arla Foods (2005; www.arla.dk), began homogenization after a customer survey showed that consumers were dissatisfied with the strange consistency of organic milk. In addition, Arla maintains a relatively low profile for organic products on their website suggesting that when large conventional firms adopt organic as part of their full product line, which contributes positively to a company's environmental image, organic products do not have special status as the good alternative. The environmental manager of Cerealia Unibake (CU), an industrial bakery, emphasized the importance of conventional food companies supplying a full range of products:

> We have organic products because some costumers want it and it is important for us to be able to deliver a full product line.

These examples clearly illustrate a market-oriented approach to organic food processing and this presents a wide gap between the more idealistic approaches of dedicated organic processors. This gap in motivation to process was on the agenda of the national Økologi-Kongres (Organic Congress) 2002 the theme for which was 'Between Values and Growth'. This event brought together researchers, advisors, practitioners, and policymakers in both public and private sectors, and many of the presentations illustrated the current variety of socially constructed perceptions of organic production, some examples of which include:

> Organic production should be a sharp alternative to synthetic food production (Paul Holmbeck, Manager of the Danish organic association, Økologi-Kongres, 2002).

On the other hand, Holmbeck also emphasized that the relationship between organic and conventional farmers should be characterized by creative and constructive conflict. This means that organizations should be in constructive dialogue and both parts should contribute creatively to sustainable development of farming in Denmark. The concept of creative conflict also suggests that new

initiatives should not be undertaken to the exclusion of prior alliances. The manager of the Consumers Council Rasmus Kjeldahl pointed out that:

> Organic is no longer counterculture but something normal...taken for granted. Organic production must adjust to the demands of modern consumers for good eating quality and variety...and accept the premises of the market (Økologi-Kongres. 2002).

The Consumer Council's former support for sustainable development is not prominent in Kjeldahl's view of organic farming's role. The Council is involved in a study of consumers' future expectations of organic food production in which sustainability plays a major role. The president of the Danish farmers' association 'Dansk Landbrug' emphasized:

> The importance of being market oriented, and for the organic producers to accept that production should be driven by demand (Økologi-Kongres, 2002).

Thus the president sees the demand for organic products in identical terms to other market trends and does not promote specific organic support policy – even though the association represents the majority of the organic farmers in Denmark. The chairman of the Danish organic association K.E. Sørensen made a rather different statement, saying that:

> We are some (organic) farmers who want to produce in a certain way and then afterwards it's our duty to find out how to sell our products (Organic Økologi-Kongres. 2002).

The chairman of the Danish organic association can be seen as an actor responding to both nature and the market. At the same time he addresses policymakers in saying that producers want to influence legislation and policies for organic production in order to produce in a predetermined way and not solely in response to market signals. The difference between letting the market decide what producers should produce and following principles of production, is very important for the continued supply of organic food. If organic production is understood as a dynamic concept, following market trends (this year animal welfare, next year healthy eating...) production might loose identity and justification. But equally, if production is disconnected from modern consumption patterns, the organic sector might not survive.

Changes in government policy

The role of the Danish state in advancing organic sector interests has been diverse and includes:

- Political alliances and networking

- Construction of support instruments
- Organic legislation
- Conversion support
- Pesticide tax
- Research and development schemes
- Organic purchasing scheme
- Implementing and controlling legislation.

We will only briefly touch on issues of political alliances and networking in relation to organic production in this chapter. The focus here will be the role of public institutions as market actors. In Denmark there is a national organic label representing the state-controlled certification system and anchored in legislation for organic production and marketing. For many consumers this label symbolizes organic production. The label is recognized by a very high percentage of Danes and is considered very reliable. However, the Danish authorities underline the fact that the organic label is a control label and not a guarantee of eating quality. Indeed, the state's vested interest in the controllability of the organic certification system is evident throughout the evolution of the organic regulatory system. But, whether legislation and the monitoring authorities have replaced core organic values, so that production is guided by reductionism without any real understanding of the holistic approach, remains unclear. Some would say that this is the case and that something important has been lost (i.e. the emphasis on the quality and the fertility of the soil), while others point to the fact that a state-controlled certification system has boosted producer confidence.

The state can also be seen as a market actor in relation to public sector purchasing (Vogel, 1997). In Denmark, public authorities have an obligation to work with environmental aims when purchasing[3] and consuming and an institution's purchasing policy can define criteria for preferred goods and services. Public sector demand for organic products can be seen as a strategy for a common good, such as environmental protection, and green public purchase policies can protect groundwater from pesticide residues. Thus trans-sectoral policy integrates agricultural production with environmental policies. In 1998, political support for organic purchasing in public kitchens was agreed by parliament, and later transformed into policy and an administered support scheme by the Ministry of Food, Agriculture and Fisheries. The change in government to a neo-liberal coalition in 2001 influenced environmental goals in Denmark remarkably. Sustainability and environmental aims and policies were immediately downsized with the result that many funding programmes were

[3] Pursuant to Section 6 of the Environmental Protection Act (Consolidated Act No. 590 of 27 June 1994), Danish Ministry of Environment and Energy.

closed and subsequently many projects stopped because their resources vanished. Funding, for some established projects, was even called back.

Local government actors

Among the new actors entering the organic arena in recent years are the municipalities and counties. Several of these have framed a sustainability policy in which the use of organic food is one of several instruments to aid local and regional sustainable development. The local government association Kommunernes Landsforening (KL), an umbrella organization for all 271 Danish municipalities, recommends municipalities to introduce organic food in all municipal kitchens. Organic food is seen as less polluting and therefore organic foods should be promoted as part of green purchasing policy. KL claims that organic food has important symbolic value as a visible reminder of sustainable development and environmental responsibility (KL, 1998). In 2000 a formal agreement on environmental cooperation, Dogme (2000), was made between five green pioneering municipalities, Albertslund, Ballerup, Fredericia, Herning and Copenhagen. Participating municipalities have to comply with three basic rules:

- Human impact on the environment must be measured.
- An Agenda 21 plan must be drawn up.
- Environmental work must be anchored in the locality.

As part of Agenda 21 a strategy is formulated based on the principle of 'order in your own house', and among other targets, public municipal institutions aim for 75% of food consumption to be organic. Another example from the municipality of Roskilde is the Good Meal project that has been in operation since 1998 and aims to re-orientate public meals provision to 100% organic. This focus on organic is motivated by a perception that:

> The public sector ought to be, and can be, a locomotive in the agricultural transition to organic production (KL, 2002).

Due to the increased demand for organic foods in Roskilde, organic wholesalers have been established to distribute a comprehensive range of organic products in cooperation with the municipality (Agger, unpublished).

A Case Study of Organic School Meals

Municipalities are now actively promoting organic school meals and this has previously not occurred on a wide scale in Denmark with the exception of school tuck shops. In the municipality of Copenhagen the project Organic and

Healthy School Meals (KØSS) started in 2002 as part of the Dogme project (www.kk.dk/skolemad). By 2007, all public schools (60) in the municipality will participate in the aim of reaching 75% organic food. The project defines three elements of organic:

- Agriculture that cares for the environment
- High standards of animal welfare
- Fewer additives in processed food products.

Furthermore, the KØSS project focuses on the interaction between students' health, well-being, learning capacity and eating habits and sees the school meal as, not only a functional duty of supply but also, a forum for education. There is an understanding that the project empowers students by:

> Influencing their attitudes and values in terms of food, healthy eating and environment (KØSS homepage).

The KØSS school meals scheme is based on the selection of foods produced in a central kitchen that produces food for the elderly also. Food is delivered daily from the central kitchen to be sold in school canteens by 6th grade students and their teacher. The kitchen operates specific selection criteria as follows:

- Food should be healthy according to measured nutrient content.
- Certain organic raw products are prioritized within the goal of 75% organic in order to stay within budget.
- A professional cook is engaged in menu development and to ensure gastronomic quality, pupils test new recipes.
- Food production is based on cook-chill production with a three-day shelf-life in order to reduce waste.
- To enable senior students to dispense hot meals a two-step process has been designed. Hot meals are served in two components one hot and one cold that the diner mixes before eating, such as a bowl of cold rice with peas, and a cup of sauce which is heated in a microwave oven just before it is sold. A simple manual explains the technique.
- Sandwiches, bread, fruit and beverages are also sold in the canteen.

The KØSS organic school meals project employs three full-time members of staff from the municipality who take care of all organizational aspects, such as menu development, new canteen start-ups, ordering, scheduling deliveries, liaising with organic suppliers, providing basic food hygiene education to school teachers, communicating with central government and devising plans to sustain the project.

Teacher-aided student trials

As noted, the idea for the KØSS school meals project is to be an integral aspect of a school's educational function. Therefore the municipality invites school teachers to write educational material featuring nutrition, health and hygiene, environmental, cultural, and religious aspects of food and production, and an insight into budgeting. These topics are suitable for insertion into the curriculum as a preparatory step prior to participating in the running of the canteen and also as a reflexive process of evaluation subsequent to canteen practice. One young teacher involved in KØSS at one of the schools worked 60 hours per year with students in the canteen and intended to incorporate food education material in mathematics and biology. Most important for this teacher was the practical organization of the canteen. He had devised a comprehensive work schedule for all canteen tasks. In relation to teaching material, his first priority was practical skills and knowledge required for the running of the canteen, principally budgeting and basic food hygiene, to reduce stress among students with kitchen responsibility and to ensure students understand the relevance of work practices such as wearing an apron.

This teacher claimed that the school did not promote the project label KØSS as the canteen was primarily perceived, by the students in charge, as a source of food and only secondarily as a means to achieve practical competence in a range of subjects including mathematics. Students that do not contribute well during classes usually prefer to learn in a more active environment, and often developed a more positive and open demeanour having worked in the canteen. A secondary objective for the canteen was the opportunity to investigate the meaning of organic farming. Typically students' knowledge of organic was linked to television commercials and as a result they frequently defined the term organic as something to do with milk. The teacher contrasted this with his own school biology education at which time teaching biology involved visiting an organic and a conventional farm to experience the difference. Nevertheless, it was clear from the interview that practical problems dominated and broader project concerns were not yet fully integrated. This situation could be a general starting-up problem or due to the way in which the aims of the project are communicated to participating schools by the municipals' organizers, but the actual implementation of the project depends on a more local interpretation of the project's aims. Criteria for success must be that the ideals of health and organic are taken up by and reflected as relevant within each school.

Introducing food into schools: motivational pluralism

Many arguments for, and expectations of, organic school meals can be found in the literature, broadly related to three areas:

- An improved learning capacity due to a full stomach

- The whole-school approach provides a natural setting for physical exercise
- Potential to increase nutritional health by promoting the taste of healthy food.

Faced with epidemic obesity in many countries, health has become an hegemonic societal discourse. However, at the level of public administration there often seems to be an instrumental understanding of how to solve the problem of unhealthy eating habits and that is through choice based on the provision of information about, and accessibility to, healthy foods. Research shows that information and availability can create dietary change but nevertheless it is crucial to remain aware of the socio-cultural context and of the group norms that influence the actions of the individual. Examples include the perception of independence and risk as cool, such as leaving the school during lunch break to consume fast food and smoke cigarettes. Therefore choice of meal is not always based on health considerations but if health is interpreted as relating, in addition to the avoidance of disease, to a broader definition of well-being then socialization aspects of the lunch break can be taken into consideration. Involving students in the process of providing a healthy lunch break makes the school meal more attractive.

Young Minds is an internet-based project in which young people from a number of European countries communicate and explore links between youth, culture, health and environment (http://www.young-minds.net). Bjarne Bruun Jensen, one of the most experienced Danish researchers in this field, is actively involved in the Young Minds project and reportedly works 'in collaboration between school and society on action oriented health and environmental education'.

Jensen emphasizes the importance of broadening the understanding of food quality, referring to a model developed by teachers and students working at promoting health with schools' nutrition projects. In this model nutrition is only one of four dimensions of food. Another dimension is related to aesthetics, focusing on taste, visual appeal and odour. A third dimension is the social environment: the way meals are organized. The fourth dimension deals with conditions under which food is produced and includes animal welfare and environmental pollution, as well as work-related health and safety. Speaking at the European Forum on Eating at School in 2003, Jensen affirmed the belief that students have an active interest in farming issues.

The role of organic food on the school agenda

To move to a discussion of a sustainable relationship between school food and organic production requires consideration of various components of school meal planning and execution. Discussion among researchers about whether organic food is healthier than conventionally produced food is ongoing (O'Doherty Jensen *et al.*, 2001). Some researchers point to the fact that organic plants have a higher content of secondary metabolites that potentially have a positive effect on

the human body, but equally consumers might simply feel better for eating food produced in a preferred way.

However, it is open to question exactly how reflexive school students are over their daily lunch. In relation to a correlation between a full stomach and capacity to learn, organic food would seem to have no absolute advantage over any other food. However, experiences with organic food in public kitchens suggest that the needs of the target group can be met with high quality food (KL, 1998). Furthermore, participatory school meals can be seen as a stimulating activity or entertaining event of the day, especially for younger students. But it seems unlikely that organic food makes that much difference to the experiential outcome. For senior students, the lunch break is an important opportunity, not only in relation to food but also, for socializing with other students and to step outside the institutional domain with their peer group. The organic element adds little as regards informal or student-directed social organization during lunch break.

But in relation to what is becoming known as food education, organic food might have an important role to play. Food education might focus on both material and immaterial aspects of food and production of food, as noted in the health-promoting KØSS school model. Discussions about organic production can be integrated into any debate on ethics or the environment, consequences of industrial food production, or sustainability. Relating discussion to foods available in the canteen offers an opportunity to present societal and ethical problems in a more tangible way. Not all participating schools take up the organic challenge. In the municipality of Copenhagen the organic aspect related to the quality of the drinking water is currently a highly political issue. The project contributes mainly to create a positive environmental image for the municipality. But whatever the political decisions involved in the promotion of organic food, organic agricultural sales are enhanced, which means that organic producers will not be exclusively dependent on retail demand. In the final analysis, the research has revealed some areas of potential for working with organic food production in primary schools. This can be taken as an invitation to what has been called relational reflexivity (Murdoch and Miele, 2004), where students relate in a reflexive way to both local and global problems and future possibilities of the whole food area. What the authors argue for here is a widening of the perception and understanding of different components of food production, both as a concept and a practice. In the long term the aim should be for all stakeholders - consumers, producers, retailers, managers, and researchers - to reflect on the different aspects of both the quality of food and how it is produced. These reflections might lead to a more concerned and proactive positioning of actors in relation to future market development.

Conclusions

The case study of public sector procurement in Copenhagen documents the transformation in organic food policies in Denmark. Whereas the deregulation of national policies for sustainable development dominated for some years, this case study shows that at the local level conditions for promoting sustainability exist. A state financed programme introduced in 1998 has resulted in a series of participatory experiments including in some municipalities, the transition to organic school meals. This transition has been tackled through a range of strategies, with varying degrees of success and demonstrating the need for facilitation. Another potential outcome of public sector procurement is the augmentation of consumer demand in the private sector following exposure of students' families to discussion about organic food. So far only a minor share of total food consumption in public institutions is organic and relatively few public institutions and kitchens have as yet documented their experiences with organic food. Nevertheless, schools offer an important niche market within the public food procurement sector. Connecting knowledge in schools through insight and reflexivity of food, agriculture, future generations, and nature offers potential for an important cultural process.

The authors' research continues with the closer examination of these transition processes over the next few years. Further research will focus on the relations between the pedagogical function of the school environment and experiential learning of organic school meal production. In yet another study, the authors will concentrate on institutional processes at macro level such as the impact of agri-environmental support schemes on public sector procurement of organic food. Through this research it is anticipated that detailed policy recommendations for practical improvement of organic meal schemes will be formulated.

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17
National Agricultural Policy: the German Agrarwende

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Following the BSE crisis in Germany in 2001, the newly formed Ministry for Consumer Protection, Food and Agriculture adopted a precautionary approach to consumer protection in Germany, which would be achieved through new industry structures and quality assurance standards. This policy became known as the Agrarwende, or agricultural turn, first declared by the new Minister, Renate Künast of the Green Party, in a governmental policy statement shortly after taking office in February 2001. The aim of the policy was to reorient German agriculture towards a new model of food production and supply, which, instead of striving to be competitive through economies of scale, prioritizes the quality of food as defined by its health value to consumers, and the impact of production on the environment and farm livestock. Policymakers accepted that the template for the new model would be ecological agriculture and organic food, which although comprising only a small niche market was nevertheless growing in significance and popularity. This study was commissioned to provide government with a deeper understanding of the long term potential of the Agrarwende. This chapter presents results from a series of interviews conducted in 2003 with key informants from organizations involved in the practice and promotion of organic farming in Bavaria - including the German organic certification and marketing organizations Bioland, Demeter, Naturland and Biokreis, the Bavarian Farmers' Organization, government and academia. Interviewees were asked to evaluate the development of organic and conventional agriculture in Germany, the impact of Agrarwende policies, and the role of socio-cultural institutions and networks, such as the family, neighbours, communities, and clubs, in the evolution of agricultural systems in Bavaria. The study forms part of a national evaluation of Agrarwende policies for the German food production and supply system.

The German Organic Sector

Germany has the longest history of ecological farming in Western Europe. Biodynamic agriculture emerged in 1924 (based on the work of Rudolf Steiner 1861-1925), and today Germany has one of the largest organic consumer markets in the world, much of which is supplied through imports. In 2000, Germany had the highest revenue from retail sales of organic products of all European countries, around 1,647-1,830 million Euros, representing between 1.25% and 1.5% of total food sales (ITC, 2001). The second largest European organic retail market in 2000 was the UK with a market value of 763-915 million Euros (ITC, 2001). The current forecast for annual growth of the German organic market is 10-15%, somewhat slower than the 25-30% growth rate anticipated in the UK. The organic share of the total agricultural area in 2003 was 4.3% and of organic farms was 3.9% (Federal Ministry of Consumer Protection, Food and Agriculture, 2004a). According to the FAO, about 80% of all organic farms in Germany are members of one of the nine organic producer organizations in the country (FAO, 2004). The Federation of Organic Food Commerce (BÖLW - Bund Ökologischer Lebensmittelwirtschaft) replaced The Working Group for Organic Farming (AGÖL - Arbeitsgemeinschaft Ökologischer Landbau) in 2002 as the umbrella organization for organic producer organizations. With the reorganization of the organic umbrella, membership now includes associations for the food processing and trade industry as well as corporate representatives of the organic food industry. Most organic farms in Germany are located in the federal states (Länder) of Baden-Württemberg and Bavaria in southern Germany, a distribution that arose from various post-war population movements and policies. The majority of land farmed organically in Germany is used to grow cereals. The new national organic label for organic farm products (Biosiegel) is based on the European Council Regulation EEC 2091/91 and its amendments (Federal Ministry of Consumer Protection, Food and Agriculture, 2003; 2004b; Künast, 2004).

The Agrarwende

Due to intense economic problems caused by the BSE epidemic in Germany in 2001, and subsequent loss of consumer confidence in the food industry, the Ministry for Consumer Protection, Food and Agriculture was set up with the specific purpose of ensuring that the German food sector operates according to the Precautionary Principle of consumer protection. In so doing, the government was conscious that implementing such a policy would have far reaching consequences for both industry structures and the assessment of product quality. Thus, the policy represented a sea change in German agricultural policy and hence became know as the Agrarwende, or agricultural turn. In practical terms, the policy has meant that new forms of competitiveness are encouraged, so that agricultural industrialization is no longer the model for German food production.

Ecological and small scale forms of production are now seen to possess certain attributes that also confer competitive advantage, including high quality food, and to offer additional benefits, such as the preservation of landscape and cultural heritage. The slogan adopted for the Agrarwende is 'Class instead of Mass', also the title of a book (*Klasse statt Masse*) published in 2002 by Renate Künast, the Minister of Consumer Protection, Food and Agriculture.

A system of agriculture based on the principle of class instead of mass requires, not only commitment from government but also, a change in the current dominant attitude and behaviour to food consumption in general and nutrition in particular (Künast, 2004). However, there are many trends working against such a conversion of consumer attitude, including the ever-increasing consumption of processed, convenience, and fast foods, and eating out. In addition, it is anticipated that the increased costs of production of agricultural ecologization, arising from enhanced quality assurance and animal welfare standards, will be passed to the consumer. Thus far, the organic market has been sustained on the basis of consumer willingness to pay premium prices for organic food products in Bioläden and Naturkostläden (organic food shops and natural food shops). To encourage widespread purchase of organic food at a price affordable to consumers, in the absence of state subsidy, consumers will need to be persuaded to transfer expenditure on convenience to other attributes of the food product, including high environment and welfare standards and small scale of production.

The goal for organic agriculture under the Agrarwande is the expansion of organically farmed agricultural land to 20% by the year 2010 (Feindt and Ratschow, 2003). On one hand, established organic farmers perceive inherent risks in the Agrarwende, such as the dilution of organic production standards, intensification and industrialization of organic farming and the loss of the organic sector's independence and identity. On the other hand, conventional farmers perceive risks in conversion, such as strong pricing pressure and independence from conventional processing and distribution structures. However, some conventional farmers feel that, because agricultural support is now biased towards organic agriculture, there is no other future for their farm than conversion, and in that sense they feel victimized by the Agrarwende.

Farm enterprises are the first to be directly affected by the Agrarwende. The precise combination of opportunities and obstacles presented by conversion to organic farming depends on the type of farm. But the willingness of farmers to convert from conventional to organic production is dependent on many factors, including institutional support, economic incentives, market prices, perception of organic farming, projected impacts of conversion on the farm and family, and public attitudes to Agrarwende policies. Therefore, the potential for widespread conversion must be measured at perceptual, operational and structural levels in order to fully capture the quality of life changes entailed in conversion to organic farming.

Background Review

Data was collected on national statistics for organic farming and the organic food market in Germany, and from policy support measures and programmes for organic farming in Europe. Set against this background more detailed desk-based research was conducted on the specific agricultural situation in Bavaria. The literature search covered the following key themes: agricultural politics (including gender issues in farming and societal images of agriculture and nature or the landscape); rural development (including regional and rural social structures); sustainability and indicators of sustainable agriculture; organic farming (including farmer decision-making for conversion); network analysis; and marketing.

An important finding from the literature review was the number of new studies examining possible directions for the development of the organic sector in Europe, suggesting that organic farming is currently in a critical phase. The demand for research on organic conversion and farmer motivation has increased in recent years because changes in the prevailing agricultural economic climate affect farmer perception of conversion. For example, the payment of conversion subsidies, new markets and forms of marketing, and regulation of both organic and conventional markets have all contributed to a more favourable perception of organic production as a viable economic alternative to conventional. These factors have been further enhanced through a Europe-wide increase in consumer demand for organic products (Tregear *et al.*, 1994; Roddy *et al.*, 1994; Wier and Calverley, 2002).

Literature on organic conversion found in farm handbooks and journals tends to deal with the process of conversion within the context of agricultural problems and practices (Freyer *et al.*, 1994; Freyer, 1998; Fromm and Freyer, 2001; Preuschen *et al.*, 1999). From the late 1970s, several studies were conducted on the social characteristics of organic farmers (most notably Wernick and Lockeretz, 1977). In recent years there has been a revival of academic interest in the sociological and psychological aspects of farm conversion and several studies deal with motivation, success factors, and perceived barriers or risks. These studies focus on educational and cognitive processes, such as knowledge transfer and decision-making prior to and during the conversion process (Duram, 1999; Fairweather, 1999; Morgan and Murdoch, 2000). Research on socio-psychological aspects of conversion in countries outside the UK, New Zealand and the USA is less evident. One early study of barriers to conversion in the USA (Blobaum, 1983), provided many examples of potential barriers to conversion, and these were integrated into the farmer survey for this study. A later study (Freyer *et al.*, 1994) briefly outlined farmer socioeconomic motivations and goals prior to detailing technical changes farmers face during conversion. However, the authors concluded that because the financial situation during conversion has changed in recent years, the results are of limited relevance to farms converting to organic farming in Germany at

the current time. The study presented in this chapter therefore, provides a timely update on socioeconomic analysis of conversion to organic farming in Germany, reflecting changes in farmer perception and attitude since the implementation of Agrarwende policies to support conversion in 2001.

Instead of measuring the success of the organic sector on the basis of numerical indicators, such as farm size and number, several researchers are beginning to look at the spread and impacts of an ideology, including sustainable consumption patterns, actor networks along supply chains, and social movement theory (Michelson, 2001; Reed, 2001). Actor network theory (theoretical overview by Murdoch 1997) is useful because the Agrarwende affects existing structures upstream and downstream of production and it therefore becomes necessary to study a multiplicity of interactions woven through the processes and events of conversion, the actor network. Whilst, the Sustainable Consumption Model or Triangle, based on three dimensions of sustainability - Social, Economic, and Ecological (SEE), provides a useful analytical framework. In this study, data collection and analysis was informed by both of these approaches.

Methodology

Desk-based research outlined above was distilled into the following hypotheses:

- Widespread conversion will involve women in a fundamental decision-making role both as consumers and producers.
- Variations in local environmental resources and marketing infrastructures imply regional variation in production and distribution and hence also in criteria for sustainable regional consumption.
- Conversion of the largest possible area to organic farming practices does not automatically imply the widespread adoption of a sustainable consumption model and therefore:
- A vision shared by producers and consumers is a prerequisite for the adoption of sustainable consumption.
- Conversion to organic farming on a wide scale is likely to alter the relative power of agricultural organizations, and this could indirectly create or remove barriers to sustainable consumption.
- The widespread adoption of the sustainable consumption model will be affected by the market. Continued preference for convenience foods acts against the model whilst it is anticipated that the launch of the Biosiegel label, the national equivalent of the EU standard for organic food, will boost demand for organically produced food.

The focus for research in 2004 was the design of a questionnaire that could fill gaps in the data on farmer decision-making by answering the following questions:

- What factors determine farmer willingness to convert to organic farming in general, and what are the most significant specific farm enterprise decisions?
- What has been the impact of the Agrarwende on farmer willingness to convert?
- What trends and scenarios in organic sector development can be detected?
- How can the above factors be evaluated in terms of sustainability?
- What additional criteria are required to ensure that organic management of newly converted land is compliant with criteria for sustainability?

The research objectives were therefore, to gain insights into the potential for and constraints on organic farming in Bavaria, and to evaluate the role that the Agrarwende has played in the region's farming structure. But, because farmer willingness to convert plays a major role in the expansion of organic farming, the research objectives were primarily addressed through a study of farmer motivation and farmers' socio-cultural networks. Of particular interest was the relationship between personal motivation and these networks, a connection that has yet to be fully expounded in the scientific literature.

In order to determine criteria for the evaluation of sustainable regional food, production was analysed according to the sustainability triangle (SEE). However, desk-research highlighted the paucity of knowledge concerning the use of methods to evaluate, in particular, the social dimension in European agriculture (although in the international agricultural development context, social capital has been examined more closely under livelihoods theory), especially in studies that have employed actor network theory. Consequently, in the first part of the project the authors' focused on the social dimension of sustainability through the use of scenarios, a discussion of which is presented in this chapter. Nevertheless, ecological and economic dimensions of sustainability are considered in relation to natural resources and distribution channels.

The research methodology was based on a continuous and open-ended process of theoretical sampling in which the experiences of the empirical study were interpreted in comparison to theory at each step and only after this process was the next step defined (Strauss and Corbin, 1997). The following three-step model was adopted for empirical investigation:

- Expert interviews;
- Structured interviews were conducted to clarify the social and economic context of organic farming in Bavaria, in relation to the prevailing national situation, and to check that the development scenarios envisioned by the research team remained relevant and accurate;
- Farm interviews were conducted to triangulate narratives arising from expert interviews and to discuss issues relevant only at the farm level. Experts' transcripts were distilled into the farm interview schedule, which comprised mostly open-ended questions supplemented by some closed questions;

- Focus groups will be conducted in the next wave of interviews to investigate the modes in which actors are integrated into the supply chain, in order to devise new development strategies and scenarios.

A regional case study in Bavaria

It may be anticipated that the process of agricultural conversion will not affect regions homogenously. Often a cause and effect relationship cannot be seen due to a range of variables influencing the process at the level of production (such as location, and enterprise structure), processing (such as scale) and marketing (such as distribution and demand). Undertaking a regional case study allowed the relationships and interactions between individual actors (producers, processors, marketers) to be assessed in relation to specific resources and geographical identity. This case study was chosen because Metropolitan Munich in southern Bavaria has witnessed dynamic growth in organic agriculture, and even though the small scale of organic farming in the area creates high marketing and transport unit costs, marketing prospects are good because the location is excellent for selling produce locally through farmers markets and natural food stores.

Expert interviews

Expert interviews were conducted at the beginning of the project. The experts represented all the relevant institutions concerned with organic production in Bavaria. This included the German organic certification and marketing organizations (Bioland, Demeter, Naturland and Biokreis), the Bavarian Farmers' Organization, government and academia, and companies processing and marketing upstream and downstream of producers. An initial series of interviews served to gain contacts for subsequent interviews. Despite some difficulty arranging interviews at mutually suitable times, interviews were informative and interviewees expressed interest in the project. Expert interviews thus played a fundamental role in the design and development of the subsequent farmer survey. Furthermore, in order to provide as complete a picture of development in the region as possible, expert interviews were analysed concurrently with farmer interviews. The aim of the expert interviews was to ascertain the current situation for organic farming in Bavaria. The following three scenarios for the future development of the agricultural sector formed the basis for discussion:

Scenario I: Industrialization of organic agriculture
Expansion of the organic production sector as a result of government targets for conversion, emphasising Europe-wide production to a uniform organic standard (i.e. Biosiegel or equivalent).

Scenario II: Regional organic production, processing and marketing
This scenario is labelled the sustainable regional development scenario comprising models for sustainable production, processing and consumption based on local realities and market conditions.

Scenario III: Ecologization of conventional agriculture
Organic production remains a niche activity, whilst mass volumes of production gradually become more ecological through environmental regulation. This scenario is in operation in Switzerland and Austria and is favoured by many actors in the supply chain.

Results

Analysis of interview transcripts confirmed the validity and relevance of the pre-selected themes discussed in the survey of expert opinion. Most experts agreed that through Agrarwende policies, and changes in public opinion, organic farming now plays an important role in agricultural and rural development. However, although the symbolic power of the Agrarwende was evaluated positively by all interviewees, individual measures operating under the umbrella policy were judged less favourably.

The introduction of the national Biosiegel label was greeted as an important step towards establishing a mainstream organic market by the experts interviewed. But, the organic farmers in Bavaria, who are members of German organic producers' certification organizations, perceived the Biosiegel as a threat because it is based on the less stringent or lower status (but more costly) EU Council Regulation (EEC) 2092/91organic standard. For example, in Germany in 2003 there was a crisis in the organic milk market when domestic oversupply was confounded by the influx of imports leading to a sharp drop in producer prices. The crisis was particularly critical for farmers in Bavaria where the majority of organic farms are engaged in dairy farming.

Expert interviews revealed the following attitudes to regional development scenarios I-III. The industrialization of organic farming (scenario I) was defined as an increase in efficiency and growth potential. Interviewees confirmed that there is considerable scope to increase efficiency in the organic sector through marketing. However, farm size and growth were not concepts that interviewees used in defining efficiency. Some interviewees accepted the introduction of large scale organic production in other areas but not in Bavaria, whilst others rejected large scale farming for organic food outright. The regional organic scenario (II) was viewed most positively for the existing structure of Bavarian farming - small scale and generally extensive enterprises. Regional organic marketing was perceived to be ripe for development. However, from an economic perspective, scenario III, the ecologization of agriculture, was viewed most positively.

The Agrarwende target, 20% of agricultural land in Germany to be farmed organically by 2010, was welcomed in principle, although the target date was considered to be no longer attainable. Based on market trends over the past two years, the experts favoured a projected slow but constant growth in production, with a growth rate similar to the average for the sector over the last decade, and a corresponding increase in retail sales.

In relation to the conversion process, experts confirmed the relevance of the listed constraints and motivating factors. Most prominent was the prevailing stagnation in dairy farmers' willingness to convert as a result of the market crisis previously noted. In other agricultural sectors willingness to convert was estimated to have been constant over the last few years although, due to the instability of agricultural policies in Europe, there was reportedly a general reluctance to make long term changes in farm enterprises. On the question of reversion, no definite conclusions were reached but experts confirmed that, on a relatively scattered basis, some organic farms in Bavaria have reverted to conventional production.

Unfortunately there is little information available on organic farms in Bavaria that are not members of an organic organization, the number of which has risen dramatically in the last two years. Indeed, obtaining any information on this emerging sub-sector proved difficult since it involves coordination and cooperation with multiple local governmental agricultural offices, and the fact that many databanks do not differentiate between members and non-members of producer organizations. Nevertheless, this is a group of farmers that promises new insights in the second phase of the research.

Interviews with experts that were most closely involved in the conventional sector revealed that the dynamics of the EU agri-environment framework was a central talking point. At the time of the interviews there was little information available on the Common Agricultural Policy reforms that were eventually formalized in spring 2004, and experts expressed the sense of insecurity this created for producers. None of the experts appeared at the time to have a clear impression of the direction EU agri-policy would take.

Since regional marketing presents opportunities for conventional as well as organic farms, expert interviews also covered conventional marketing. Interviewees emphasized that the benefits of niche marketing are only available to a small number of dedicated farmers and that, in order to expand production through niche marketing, the retail food industry needs to be involved as has been the situation in the organic food sector.

Implications for the design of farmer interviews

Analysis of the farmer interviews in late 2004 will reap further insight into the impacts of the Agrarwende programmes on Bavarian farmer motivation to convert. Expert opinion expressed at the interviews strengthened the authors' prior understanding of the research topic substantially, and statements recorded

at the interviews were used to design data collection instruments for subsequent fieldwork. Based on these expert interviews, the following questions, which remain to be addressed through the further progression of the project, were formulated:

a) Motivation to convert

- Can a sustainable motivation to convert be defined?
- How do EU agri-environment policies need to be framed in order for productive farmland to be converted in addition to marginal land?
- How does the market's infrastructure and regulation influence motivation to convert?

b) Networks

- What impacts do existing networks have on motivation to convert and the formation of organic organizations?
- What networks do organic farmers that are not members of an organic organization belong to?
- What similarities and differences are there between the structure and operation of organic and conventional farmer networks?
- What is the role of village social structures in determining motivation to convert?

c) Processing and marketing

- To what extent do regional marketing initiatives, such as Chiemgauer Naturfleisch and Unser Land, have identifiable characteristics that can be used to build a model for replication and/or best practice?

d) Evaluation criteria for sustainable production

- What is the current overall economic position of organic farms in Bavaria?
- What are the reasons for reversion to conventional farming?
- What impact does regional organic farming have on regional economic development?

Conclusion

The organic sector in Germany has a long history but in recent years other European countries have taken the lead in the proportion of agricultural land farmed organically. Nevertheless, Germany remains the largest European consumer market for organic products. The current political situation in Germany and in the EU has the potential to boost the number of farmers who

convert to organic farming in the coming years. However, the Agrarwende, or agricultural turn, which is currently the dominant policy of the Ministry of Consumer Protection, Food, and Agriculture in Germany, aims to achieve a 20% share for organic farmland by 2010. This goal was assessed by experts in a qualitative study and although the consensus was that this target will not be met, experts believed that the awareness raised by the target has been of vital importance in moving the organic debate forward and raising the profile of the organic sector.

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18
Sociological Perspectives of Organic Research: To Policy and Beyond

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It has been more than a decade since the publication of *The Economics of Organic Farming: an International Perspective* (Lampkin and Padel, 1994). In the period since this last major work, the amount of research into agricultural and economic aspects of organic farming that has been funded has increased considerably. National governments, non-governmental organizations and the private sector have supported a variety of projects but few can match the funding from the European Union (EU) Research Frameworks for both substantive researches on the organic sector and support for dissemination and information systems. This facilitation of access to research findings has enabled a dialogue between European researchers to be initiated and for the idea of 'organic research' to be realized.

During this time the organic movement has also been transformed; engaging more people and taking on an importance it has never had before. Organic sector bodies have mobilized support across Europe and many of the movement's aspirations for agricultural development have been realized. However, as part of this process of change the organic movement stands at a threshold, watching a runaway train as the supermarkets firmly claim rights to the established lucrative niche organic market. Consequently, there has been considerable debate about whether organic agriculture still provides the radical challenge that it once did. But, although there has been dialogue on this struggle for survival between academics and practioners, the processes of change and growth in the organic sector have not yet been widely discussed outside specialist journals.

At such a crucial juncture, intervention from social scientists is valid not only within the context of the economic changes in the organic sector but in all related components of the organic 'world', including the operation of networks of stakeholders and motivations for consumption of organic food. In this volume

we hope to have consolidated some thoughts and perhaps shed new light on the debate by presenting a timely and varied collection to fill the growing gap between sociological and economic researches.

This final chapter reflects on the way in which the future of organic research in the social sciences might develop, through considering some of the themes that have emerged in this collection. The chapter starts by considering the story within a story of how this collection came about. From here it moves to considering the various methodologies that have been used throughout the collection and perspectives within the sociological science community, culminating in attempts to capture the sense of a dialogue that is still continuing between the contributors.

This collection was born out of the shared enthusiasm of researchers who have met at Sligo in 2003 and Trondheim in 2004, and increasingly felt a need to examine the role of organic agriculture within society, within social and rural development, and within public health. At the same time as organic producers are facing the often harsh challenges of the market, organic production is discovering a radically different relationship with society, and a new ally in the public sector. A patchwork of transitions, conflicts, and mobilizations was appearing in front of researchers but the picture was not widely recognized.

There are signs too that in many countries 'organic' is being reinvented and the challenge renewed. At Sligo in 2003, Oliver Moore introduced the term post-organic to refer to farmers who appeared to be no longer following the example of earlier organic farmers but who were demonstrating their own innovative activities. The term post-organic had immediate resonance with the conference group and was adopted as the rallying point for continued dialogue at Trondheim in 2004.

In taking a global perspective the collection has highlighted crosscutting themes and methodologies. In the book, we have placed the market and movement alongside each other and we have moved discussion forward by presenting studies from a range of academic disciplines in order to follow both the contemporary debates within the organic sector, and the breadth of approaches to understanding the sector as a whole. Our book reveals therefore a kaleidoscope of organic sector developments in different countries, and serves, not so much as a snapshot but as a still image of the flows of these national and regional trajectories.

Movements and Markets

At the European Society of Rural Sociology (ESRS) 2003 Conference in Sligo, Ireland, there was a core of researchers starting to examine organic production as a focus for regional and national agricultural development, and in local policy initiatives. By 2004, at the International Rural Sociology Association (IRSA) in Trondheim, Norway, many of these projects had come to fruition and several similar projects were beginning, creating a community of experience and

research interests. The story that these researchers have written together is the story of two overarching themes, that of the organic movement and the organic market. The book traces the rise of the European organic movement from its beginnings in northwestern Europe, and the transition of pioneer farmers from small to large markets.

The roots of organic farming in Europe can be traced to the biodynamic agricultural movement founded in the 1920s on the philosophy of Rudolf Steiner in Germany. The organic movement emerged as an early offshoot from Steiner's vision, at once less esoteric in its outlook than the biodynamic movement. Interestingly, the structure of Germany's organic sector grew more along the lines envisioned by the movement than elsewhere, with supply chains composed of small independent outlets. Elsewhere in Europe however, as consumer demand gained critical mass, multiple retailers were able to step in and dominate supply chains by nurturing a niche market. At one and the same time small organic producers were offered the opportunity to expand production and realize economies of scale, and scope if supplying diverse products, but at the expense of a loss of control over output and returns. Small producers became subject to the contractual policies of the major retailers, such as that orders could be cancelled at short notice.

In the major markets for organic produce – North America, Western Europe and Japan, organic produce began to appear in supermarkets in the early 1980s. This demand was echoed in other markets, in many countries specialized in agricultural exports, which were gearing up to meet consumer demand. The complex and often subtle consumer preferences that constituted demand began to ripple through the global food chain, gathering momentum over time and reshaping many aspects of contemporary food provision. By the late 1990s, some organic markets in Europe had become oversupplied, often with as much as 50% of organic production entering the conventional market with loss of premium to producers (e.g. milk in the UK, Denmark and Germany). Many product markets appeared to have stabilized at around 20%, e.g. for milk (Holt *et al.*, 2003), although globally national average organic production remains less than 6%.

The longer-term consequence of supermarket interest in a mass organic market has been the introduction of uniform standards. But, whilst the movement, especially the UK Soil Association, informed the formulation of the EU organic standards, nevertheless there was widespread disappointment at the perceived weakening of 'organic' through the EU Regulation. The real or perceived lower cost of compliance with the standard, combined with the increasing volumes of product sought by suppliers, also encouraged large commercial producers into the market. Many small conventional farmers seeking alternative markets in the face of dwindling output-based incentives, or for some the opportunity costs of not converting in an increasingly competitive free market, also converted at this time adding impetus to the wave of conversions that took place in the second half of the 1990s.

In the era after the retail growth phase, some felt that supermarkets had overpowered the organic movement and many pioneers felt that their ideals had been eclipsed. At the core of the contemporary European organic movement tension grew between the attempt to re-think the way in which food was grown and sold, and participation in the rapidly expanding industrial sector that had grown around organic farming. This paradox has made the organic sector one of the most dynamic parts of the contemporary European agri-food system and this is the point where our narrative begins.

In most national organic sectors across the planet, agribusiness has now moved into production of large-scale, high value organic products. This has created barriers to entry for small-scale producers, so that many small-scale conventional producers, who converted from a more or less exclusively profit motive, were dismayed when they found that markets for their organic products were saturated or that competitive pressures were too severe, and subsequently took the decision to revert to conventional farming methods. A while ago, a distinction became apparent in agricultural communities, and embedded in academic literature, between early and late converters.

The pragmatists and idealists (Fairweather and Campbell, 1996; Rigby, 2000) are roughly divided either side of the introduction of agri-environment support payments to the organic sector and other incentives related to farm infrastructure, most commonly in Europe in 1994. Over the past few years, researchers have begun to understand the cultural nature of this economically motivated division. Reversion has become a popular topic for research and although Germany and the UK seeded much of the European organic movement, it is in the advanced organic markets of Austria, Denmark and Norway that reversion is being experienced. Pernille Kaltoft and M. Risgaard share their findings in Denmark in this volume, in the wake of similar research in Austria by Ika Darnhoffer. Noe revisits organic farmers in Denmark with whom he has previously collaborated to discover the reasons why a number of them are reverting to non-organic farming. Noe argues that the very consensual model of development that the Danish organic sector followed is stifling further growth.

At other points in the globe however the organic conversion-reversion cycle is just beginning. In Neimeyer and Lombard, the authors describe the emergence of an organic farming sector in South Africa and discuss potential for growth. In presenting new evidence from a country with considerable potential for a buoyant commercial organic sector but equally with great social problems, the chapter highlights the problems faced by all emerging sectors in terms of the diffusion of good practice and access to market. It is tempting to place these experiences along a developmental line, but the shape and functions of these intra-national sectors make an evolutionary trend less simple to discern.

Methodologies

The book brings together research from many projects that attempt to analyse and understand the development of organic food and farming. Until recently, research has been fragmented between projects on the market for organic products, farm level production and practices, the meaning of organic food, and the wider social implications of organic production, most recently in terms of the organic movement. Drawing on rural sociology, food socio-anthropology, agricultural economics, business studies, marketing, and political science, the collection depicts the state of the art of organic research in 2005 and shows an academic community in as much a state of flux as the agri-food sector that it reflects and depicts.

Within the book a range of methods is applied. Many chapters examine attitudes, whether of consumers, producers or market stakeholders, either by interpreting interview texts or numerical analyses of structured scales. Multi-methodologies are employed to bridge the epistemological gap between qualitative and quantitative data, for example by Holt, Sirieix and Scholten who blend market research with interpretation to deconstruct purchase behaviours and group rationales. Another group use case studies of specific areas to make localized investigations about their observations whilst others use their own inferences to draw out wider conclusions from their data.

Theoretical foundations

The collection has been influenced in particular by certain geographical placements of scholarship; hence the relative influence of each depends also on the location of the author. These are the team around Terry Marsden and Jonathan Murdoch at Cardiff University in the UK, who have been hugely influential in developing an economic and social geography of alternative and local food economies, and whose acute observations stand behind many chapters in the collection. Their analyses of middle ground concepts and networks of institutions has led to a broad school of thought addressing the relationship between rural society and the global food system. Their work is characterized in particular by an awareness of innovation and emerging trends.

A second group of scholars working mainly in New Zealand and Australia have sought to adopt and adapt Regulation theory by focusing on the impacts of the transition from Fordist to post-Fordist food regimes. A third body of scholarship that informs the collection is found in the California school of political food economy, notably Goodman (2004) and Guthman's (2004) recently formulated Conventionalization thesis. Both these groups use the essentially Marxist framework of change through struggle between opposing groups with differential power bases.

Finally, in continental Europe a fourth set of influences follow the work of Ulrich Beck in Germany, Alberto Melucci in Italy, and Bruno Latour in France

each of whom have developed theory out of the broad premises of post-modernism. These poststructuralist theses on forces driving social change in Europe, Western civilization, and the world include social movement theory.

Relating these diverse disciplinary influences back to organic food and farming has been the challenge that many authors have set for themselves and their readers. Some chapters adopt a first person narrative. The authors' research findings are told to the reader and the reader is drawn into the author's story, the author's reality. In this way, the book brings within a common framework theories and epistemological perspectives that would ordinarily not be found together. Although for many non-specialist readers, social theory serves to complicate what feels to be common sense observations, it is important to bear in mind that ideas are not common sense before a body of theory is formulated; social theory brings a cutting edge to research. As several chapters in this collection have suggested, whilst it may seem to be a presumptive goal, by relating our observations on organic food and farming to inform public policy, we could in turn also inform the process of research, and the rest of society.

Geo-cultural approaches

One of the most important contributions of the Cardiff team has been an emphasis on space and the contingent activities carried out around the narrower space of food production and consumption. In this volume, Bruce Scholten picks up on the spatial approach by applying geodemographic criteria to purchase behaviour. Scholten's study broadens our perspective of organic food consumers by examining the farmers' marketplace within a geographically located culture, in the same way that agricultural policy has been forced to address the role of agricultural practices, and the rural community, within the landscape in which they are played out. In this way Schotlen demonstrates the role of food within the concept of life quality.

Life quality and behaviours are the subject also of Melissa Schafer's chapter who, along with other authors shows that research on organic food is moving beyond the product or even production methods to the role of food in the lives of consumers, or members of a population. Holt's assessment of willingness to pay is an attempt to move from the narrow confines of the 'product-price' world of neoclassical economics to engage with the rhythms of consumers as they go about their daily lives and the decisions they face. Willingness to pay for a single item may no longer be relevant in a world that understands food habits. Understanding willingness to pay for a culturally relevant meal event, such as a lunchtime sandwich, may lead to a greater emphasis on menu negotiation and the contextualization of economics. Whilst food choices are strongly linked with cultural and subculture patterns, nevertheless location is also a determinant factor in most diets. Focusing on food events rather than on anonymous commodities implies a spatial as well as cultural dimension. These avenues of research suggest therefore a role for mapping in the novel approaches to

methodology that we now enjoy, such as the use of Geographical Information Systems (GIS).

For feminist theory situated knowledge reflects the particular perspectives of the subject. Different conceptions of how gender impacts on situated knowledge also inform feminist approaches. Many commentators have noted the special role that women play in the organic movement. In this volume Schmitt and Bjorkhaug have focused on gender in their investigations of the spread of organic agriculture. Schmitt's chapter elaborates on the cultural forces that encouraged geographically distant female scientists to share their findings in the face of geographically proximate but culturally even more distant male scientists and knowledge structures. Whilst, Bjorkhaug speculates through a rigorous quantitative analysis of farm data collected throughout Norway, that the practices of organic agriculture conform to existing feminine principles of action that either men or women may embody. In so doing, Hilde's work takes us beyond the gender debate to open the way for searching questions about the very nature of human gender.

Post-modernism

Modernity, which began intellectually with the Enlightenment, attempted to describe the world in rational empirical and objective terms. It assumed there was a truth to be uncovered, a way of obtaining answers to the question posed by the human condition. Postmodernism does not exhibit this confidence, gone are the underlying certainties that reason promises. Modernization theory depicts six stages of economic growth from traditional agricultural economies to mass consumption. But modernism is criticized for its linear perspective, for the assumption that development is triggered only by external stimuli, and for the tacit understanding that the only development possible is capitalist. According to Giddens, public faith in the modern project has declined leaving variable trust in industry, government and experts (Giddens, 1990) and more recently, 'modernity is increasingly preoccupied with the future (and also with safety), which generates the notion of risk' (Giddens, 1999: 3). Post-structuralism along with deconstructionism can be seen as the theoretical formulations of the post-modern condition.

In this collection the prime thinker used is Ulrich Beck and his reflections on the Risk Society, 'a society that is organised in response to risks'. Risks are a systematic way of dealing with hazards and insecurities induced by modernization itself (Beck, 1992: 21). Concerned with how the rationalities of contemporary society become irrational, Beck draws our attention to how the degradation of the environment is undercutting contemporary society, on the one hand by undermining collective confidence in expert knowledge, and on the other through the boomerang effect: individuals producing risks will also be exposed to them and the costs of progress rebound on the proponents of progress. The level of risk experienced by an individual is fundamentally

dependent on their knowledge and access to information. Holt and Scholten use Beck's conception of the risk society to examine cultural processes in conjunction with economic influences on purchasing behaviour.

Likewise, knowledge is a central tenet for Foucault. Foucault was critical of meta-theory. Borrowing from Nietzsche and Marx, Foucault sought to show the mechanisms of knowledge, but unlike Marx, he saw no underlying structure or truth, and no objective viewpoint because all knowledge is socially created. This lack of structure and lack of objective viewpoint leads to the need for 'reflexive modernization' as demonstrated by concepts such as sustainability.

Systems and complexity

One of the main problems for scholars hoping to understand and predict changes on the organic market and shifts in consumer cultures is the organic philosophy. Organic agricultural practices are based on the science of ecology. Ecology is based on systems thinking, in which homeostatic systems operate around a dynamic equilibrium, a range of normality, between thresholds that mark the limits of criticality in terms of development and survival. These are the limits beyond which point the system implodes and becomes dysfunctional; the order that has been maintained through the delicate maintenance of optimum conditions and complex feedback mechanisms is lost and the system descends into disorder, disintegration, entropy.

Ecology represents a paradigm shift in thinking. Systems thinking draws not on Newtonian mechanics but on Quantum mechanics and sits in opposition to mechanistic thinking, which posits building blocks of life that can be dismantled and rearranged to no ill effect on the system or machine. The application of systems thought has led to the use of the term holistic meaning that the whole is greater than the sum of the parts, that no element of the system is less important than another for the successful functioning of the system. Systems of nature have been shown to interact synergistically so that behaviour and properties of a system cannot be predicted on the basis of behaviour of individual components. Systems are self-organizing structures, in which essential interactions (laws) produce wholeness, and the elements of systems, moments and relations, are interchangeable.

Moreover, organic *farming* is based not just on ecology but on an ideology built from systems thinking. Organic is an ideology that sees the whole world as a system and the way that human cultures behave within that system impacts on the success or failure of the system, the limits to sustainability. What starts to become apparent is that the tools, including mental, for understanding systems may need to be different from those for understanding machines. For mechanistic knowledge, compartmentalization of academic disciplines was the route to specialist knowledges that allowed deep understanding of components of machines. Organic research however requires a different approach. The

measurement of organic farming cannot be meaningfully based on hectares, volume output or premium.

Systems thinking in the 20th century was pioneered by biologists who emphasized the view of living organisms as integrated wholes. It has been further developed through Gestalt psychology, ecology, quantum physics and more recently the sciences of complexity (Capra, 1996). The science of complexity has greatly increased understandings of the conditions for self-organization of systems, which include non-linearity (positive feedback mechanisms). In changing its inner conditions each system reaches its limit and borders at the bifurcation point. Then that system ends and disintegrates or forms a new system. These revelations have provided a template for social theorists anxious to move on from the Newtonian worldview:

> The social psychological impact of complexity studies on social science has undermined the cavalier argument of nomothetically oriented social scientists that they represented the incarnation of the scientific method. By doing this the sciences of complexity have opened up space within the social sciences for a different approach to science, one centering around the end of certainties. We are aware that in the last 30 years the Newtonian model of science has been under sustained challenge from within the belly of the beast – physics and mathematics. I shall simply point to the counter slogans of this challenge: in place of certainties, probabilities; in place of determinism, deterministic chaos, in place of linearity, the tendency to move far from equilibrium and towards bifurcation, in place of integer dimensions, fractals, in place of reversibility, the arrow of time (Paraphrased from Wallerstein, 2005).

Systems and complexity theory have found their way into the social sciences. However, a social system is a living system but it is not an organism, it is more comparable to an ecosystem:

> Pitirum Sorokin, one the great sociologists of the 20th century, made the point that cultures are predicated upon ideas of concepts, that they revolve around a metaphysical principle. The old culture revolved around the metaphysics of materialism (but) quantum physics itself is no longer materialistic in the 19th century sense. Everything is interconnected in such a way that the properties of the smallest pieces depend on the properties of the whole. Whereas before we believed that dynamics of the whole can be explained in principle – by breaking it down, now we see that properties of the parts can only be defined in terms of the dynamics of the whole, it's a complete reversal. If you go even further you will find [that] whatever you call an object, particle, atom or molecule, are patterns in an ongoing process. There are no things, there's emptiness out of which comes all forms of the whole. Physics is now a textbook paradigm shift but will no longer be the metaphor for reality. The shift that is going to be revolutionary, the new physics being and dealing with material phenomena, is from physics to the life sciences as the centre of our view of reality. The principles of organisation of these systems are mental principles. Physical phenomena are part of that but all things are not

> related in the same way; only when you understand life will you understand wholeness (Capra, 2005).

Capra's theories have to date been utilized for the most part in the business sciences:

> Most of our social institutions subscribe to this outdated worldview. It seems as if the big institutions have an awful lot of momentum going but I see it as an evolution. I see these institutions getting even larger but at the same time becoming hollow, they will disintegrate or decentralize. There is a dramatic change in the way business schools operate, they say that management problems cannot be neatly pigeon holed into marketing, finance, R&D, etc. The corporation has three levels, material, biological and ethical, you have to understand all three levels (Capra, 2005).

Wallerstein by contrast has focused on the world system and in so doing has tended towards emphasizing the historical, in particular the dialectic of history, and the real:

> I have argued that world-system analysis is not a theory but a protest against neglected issues and deceptive epistemologies... In social science, not even the hardiest of nomothetic advocates has dared to argue reversibility. What they have done instead is to ignore history and indeed deplore historicism...The world system evokes images of equilibrium assumptions [but] the interesting thing about systems is how they all have deep cleavages [and] it is equally true that systems never succeed in eliminating their internal conflicts...this understanding remains the legacy from Marx...I thus discovered that it would not be enough to argue that the description of the real world had to be different than the ones previously presented. I discovered that the crucial battle was over how we could know which description of the real world was in fact more plausible than another (Paraphrased from Wallerstein, 2005).

From a systems perspective, changes and innovation in one part of the global food market have unexpected impacts in other parts of the system. As Campbell *et al.* have shown in this volume, EurepGAP assurance has upset the balance of trade for countries in other parts of the globe forcing producers out of organic production and into a blander system of ecological production, as witnessed in New Zealand. Equally, Egon Noe's research fusing innovation theory with a systems perspective presents empirical research on the socio-technical farm system that challenges existing precepts of the separateness of social and technical relations.

To answer this need to understand social systems, from Critical Theory a new body of social theory has emerged such as that of the late Alberto Melucci who in his work on social movements sought to explore how individuals create meaning for their lives 'in a planetary society'. Melucci combined post-structuralism with systems thinking. In this sense, systems are contextual, they are nested within other systems that interconnect to form networks but how the

researcher perceives the system is critical to the system being studied. Perception and action are based on one's experience of the world; responsibility replaces objectivity, knowledge is socially constructed. Melucci was able to draw together the insights of Critical Theorist Jurgen Habermas, with those of Michel Foucault to explain how the individual is able to realize the self through collective action:

> We live in a society, which conceives of itself as constructed by human action. Experience is more and more constructed by cognitive, cultural and material investments. Science develops the self-reflective capacity of modifying internal nature, the biological, cognitive and motivational roots of human action...What was considered reproduction of the natural aspects of a system has become the field of social intervention. In contemporary systems, material production is transformed into production of signs and relationships...The production of meaning is marked by the necessity for control and systemic regulation (Paraphrased from Melucci, 1996).

Melucci concurs with Foucault in viewing socio-cultural systems as phenomenological entities transporting information in a self-organizing though directionless process:

> Antagonist collective action is a form, which by its very existence by the way it structures itself, delivers the message. The unity and continuity of individual experience cannot be found in a fixed identification with a definite model, group or culture (Melucci, 1996).

Moreover each seeks to emphasize the moment of experience rather than to discover the trends that Wallerstein seeks to identify:

> The very idea of...history derives from a model of time that supposes an orientation towards an end: progress, revolution, the wealth of nations or the salvation of humanity. A linear time which moves towards an end is the last desacralised inheritance of Christian time...Goals certainly exist but they are sporadic and to some extent replaceable...[The system] must instead be based on an inner capacity to change form, to redefine itself repeatedly to the present, to reverse decisions and choices. But it also means cherishing the present as a unique unrepeatable experience within which one realises him/herself (Melucci, 1996).

The one fundamental agreement amongst contributors and theorists is that society is in a state of flux. How changes play out and what impacts accrue is, for Wallerstein citing Iliya Prigogine, a question of distinguishing between bifurcations, and between adjustments and systemic transformations:

> Bifurcations are the manifestation of an intrinsic differentiation between parts of the system and its environment...The temporal description of such systems involves both deterministic processes [between bifurcations]

> and probabilistic processes [in the choice of branches] (Prigogine, 1997: 69-70 cited in Wallerstein, 1997).

Many ecologists see the totality of the universe but do not accept any real evolution. Some ecologists think that the universe is an eternal circular process. Development is criticized much by feminists and those in so-called developing countries because the Western concept of development, progress, is forced on them it is not their own self-evolution. Now we have a new view of processes of social change that takes into consideration the fact that competition for resources is not resolved by being the strongest but by creating new possibilities to exchange resources in an effective way.

Actor Network Theory

One of the most prevalent theories in the collection comes from Actor Network Theory. ANT is not a framework that can be applied to the field of study; rather it is a method for analysing data that allows the actors to express themselves. The network is not simply a series of connections but of flows making ANT a particularly useful theory for situations when changes are occurring rapidly or where boundaries are fuzzy. Analysis favours thick description rather than explanation, the network is not the object of the description it *is* the description; as the story unfolds, 'actors themselves make everything, their own frames, their own theories, their own contexts, their own meta physics, even their own ontology' (Latour, 2005).

Latour (2005) casts all soldiers of the science wars as blinded either by naive realism or anchorless relativism equally beguiled by the conceptual foundation of modernism. Modernism, Latour tells us arose because the presumed victory of reason led to complexly politicized posturing of reason against the foggy haze of nature's appearance in experience. Modernist realism energetically waves the standard of reason as post-modern antirealism reactively champions the dense and mutable fog. Latour expresses displeasure with the bifurcation of minds and mindless objects and emphasizes instead the processes of interaction between organic and non-organic worlds. He has no time for interpretive and reflexive methods, 'most of what sociologists call reflexivity is just asking totally irrelevant questions' (Latour, 2005). Nevertheless the truth-value of a claim is the result of circulating reference in which every step involves a complex process of connection and flow.

> I firmly believe that sciences are objective – what else could they be? They're all about objects, no? I simply say that objects might look a bit more complicated, folded, multiple, complex, entangled, than what the objectivist would like them to be...One way to criticise objectivity is to move away from the object towards the subject. But the direction I am taking is back to the object. Why should we leave objects to be described only by the idiots?! Positivists don't own objectivity. A computer described by Turing is more interesting than one described by *Wired* magazine, no? (Paraphrased from Latour, 2005).

Instead, Latour posits a new single object of consideration, the collective of all that is know to exist. The still-evolving concept of the collective is an ontological category gathering together human and non-human elements of the worlds into an interactive and vital whole, disposing of the need for supposing that isolated minds search in vain for a way to connect to objects that are wholly other in nature. Latour differentiates his theory from that of the poststructuralists in that he believes multiplicity comes not from the effect of the observer on the situation but through multiple objective assessments of the object:

> The great thing about a standpoint is that you can change it...all the sciences have been inventing ways to move from one standpoint to the next, that's relativity. Without those displacements I would be limited to my own narrow viewpoint for good (Latour, 2005).

But his theory is difficult to appreciate. He is after all neither a structuralist:

> If information is transformation, [we] cannot rely on any structuralist explanation. If the actors have realized their potentialities they are no longer actors (Latour 2005).

Nor is he a relativist:

> I prefer to break all the rules of science and follow my actors; I am in the end a naïve realist, a positivist (Latour, 2005).

Trends in Organic Sector Evolution

The conventionalization thesis

In one way, this book was brought to fruition through Julie Guthman's conventionalization thesis expounded in *Agrarian Dreams* (2004). There is no doubt that this publication is a major step forward for everyone interested in understanding organic farming. Conventionalization is a process through which capitalism eventually re-incorporates the oppositional aspects of organic farming and uses them to generate profit. California, the epicentre of the conventionalization thesis, is the world's fifth largest economy and as Guthman notes, the organic boom soon resulted in higher land prices, and narrowing profit margins for producers. Although this argument was developed in relation to agriculture in California, such economic forces are to some extent now being replicated further north in Washington State. In this volume Sangeeta Jordan and colleagues argue using new research on export markets in Japan, that because corporate agriculture is subsuming organic farming in Australia, conventionalization is also occurring in Australia.

Guthman's thesis is challenging in that it is not cheerleading for the organic movement but being realistic about the way in which the modern world assimilates organic agriculture into an ongoing, some might say unstoppable and

even unhealthy, food system. Whilst the authors in this edition do not necessarily agree with the conventionalization thesis, there was a consensus that when presented with a challenging and erudite analysis such as Guthman's, much thought about why they do not is required. Moreover, Guthman's pivotal assertion that:

> This transformation [to commercialized organic agriculture] was not the doing of conventional agribusiness per se. Nor is it the case that agribusiness entry was intended to subvert the organic sector. Instead, the pioneers of the organic industry have grown and expanded to become effectively agribusiness themselves, drawing these conventional firms in with them (p. 61).

This challenges Michael Pollan's 'orginal organic dream' (2003), which implied that agribusiness actors somehow conspired to appropriate organic production. Guthman by contrast, shifts blame from the multinational corporations onto organic pioneers by posing a rational reaction to competitive markets. However, if in a two-pronged approached, organic is appropriated from the bottom up as well as from the top down, then both Guthman's and Pollan's critiques of the capitalist organic industrial agriculture complex are realized (Scholten, personal communication).

Following the work of van der Ploeg on heterogeneity in farming practices, it is argued that the homogeneity of organic agriculture is not a uni-linear development path with no alternative ways, no bifurcation points. This has presented an opportunity for a range of experiments to take place on organic, extensive and low intensity farming. The post-productivist argument has been criticized for being too simplistic, and without an empirical base, but it echoes the drive for simple, one-directional arguments that the North American critiques have promoted. What the examples of New Zealand, Ireland, the USA and UK offer are organic sectors split between market and movement orientated producers. The more interesting question might thus be why is the debate in North America expressed in ideological rather than empirical terms informed by research?

In continental Europe the state plays a role in supporting organic agriculture for broadly social reasons and what is happening in California is not happening in Austria. Much of Austrian land is less favoured agriculturally (but most favoured for tourism) and there are many incentives from Austrian agricultural policy to keep small farms alive (if not necessarily well), not least through premium for organic farming. What is happening in California, and in Australia, is interesting but most of the specific conditions that lead to the development there are absent in Austria, or at least they are much less powerful. Of course, organic farming in Austria is not 100% according to the organic ideal, and the same economic forces are at play. But these forces are mitigated by a range of other forces creating a middle ground between ideals and the conventional reality in California and Australia (Darnhoffer, personal communication). But

equally, European agriculture may not continue to be marked by heterogeneity (Gilg and Battershill, 1998 and 2000), suggesting that less favoured areas of Europe might hold comparative advantages in organic and other extensive systems of farming (Scholten, personal communication).

The European organic trajectory does show dissimilarities with that of the US organic sector. The European Model of Agriculture, contained within Agenda 2000 CAP reform, balances production with social cohesion, conservation, and food safety and quality. Financial incentive schemes exist to aid conversion to organic farming through Regulation (EEC) No 2078/92 and EU policy has introduced controlled designated labels for food from a specific geographical region to aid farmers to differentiate their product. Whilst community supported agriculture has achieved great successes in the US, a move towards public health policies or public sector procurement policies, such as the provision of organic school dinners in Denmark, and also in Italy, are not emerging in California. For state authorities to change over to organic food in schools is essentially a partial state subsidy of the organic sector and in this way the changes taking place in Europe are very different to the USA (Moore, personal communication).

It is tempting to imagine a European model versus a North American model of organic agriculture. However, comparing Guthman's main results with the alpine Austrian situation, it is different but at the same time, the general trend for organic production structures to become closer to the form of conventional agriculture is also visible. It appears that, as the development of the conventional sector is different in each country so too the way that the conventionalization thesis is expressed is also different. The agrarian dream for organic production to save small-scale farmers from the squeeze of structural integration and consolidation is no longer realizable unless we see further advances in the social movements that promote as a priority structural changes, as in the successful application of the bioregionen approach (Schermer, personal communication).

The issue of conventionalization is thus a complex web of natural and social conditions woven by values and policy incentives that leads to diversity between countries. Guthman herself makes reference to calls for more responsive or reflexive approaches to understanding capitalist markets in response to the conventionalization thesis. Instead of looking at extremes, it may be more fruitful to see the shades of grey between. Whilst yes, there is a market side to everything, not all types of market development lie within the conventionalization thesis. And sometimes mainstream policy and the organic movement ideology overlap (Moore, personal communication). Reed suggests that a more productive road map to follow might be one focusing on specific salient issues.

- First, Guthman gives only a cursory account of the role of the organic social movement in California in terms of those activities that are acted out alongside the expansion of organic food production;

- Second, Guthman's account is dominated by discussions of horticulture but she does not discuss livestock production and as such her thesis is not easily generalized; and

- Third, the thesis is spatially limited, focusing on one area and not the flows between markets, which as many in this collection note are of central importance.

Analysing the relationship between the movement and the economics of organic production is new territory requiring further consideration. The role that social innovation plays in organic farming needs to be given greater importance, especially how innovation resists the flows that dominate in the USA market situation. This latent Utopianism that informs both Pollan's and Guthman's work tends to focus on compromises rather than achievements of organic agriculture. In many ways the debate about the form and direction of organic agriculture is just beginning.

Sustainable consumption

Through the IRSA World Congress and related scholarly activity it is apparent that the explicit objective of much social research on organic farming now is enquiry into the spread of the ideology, in addition to the spread of agricultural practices, such as by examining the mode of transmission of organic ideology:

> We examine the relevance of socio-cultural institutions and networks (family, neighbours, community clubs, organic organisations, agricultural seminars, coops, church) in the change of agricultural forms (Bellon and de Abreu, Chapter 15).

This ideology is tightly bound with the concept of consumption behaviours. Research in this volume includes assessing the extent to which commercial organic farmers, late converters, themselves consume organic products (Kaltoft and Risgaard, Chapter 8), and defining a model of sustainable consumption behaviours (Schafer *et al.*, Chapter 17).

Organic agriculture started as a virtually self-contained economic unit. Some early communities were wholly self-sufficient and self-sufficiency underpins elements of the IFOAM principles. The organic farming system was devised because people wanted to eat a certain kind of food or food that had a certain kind of relationship with the environment. People did not set out to be farmers, they set out to live in a particular relationship with nature that meant that the way they obtained food had to be different from standard agricultural practice. Originally therefore, market supply and demand were fuelled by the same ideology but, whilst a minority continues to believe that organic food is both a spiritual connection with our environment and the only means to sustain the productivity and aesthetics of the environment for future generations, consumer

research indicates that today's urban consumers consume organic food for different reasons.

A unique feature of the organic market has been the ability to use both healthy lifestyle and environmental concerns as marketing levers but early market research typically found that urban supermarket consumers were willing to pay organic premium for health and taste attributes of organic food rather than for the environmental attributes of organic (Holt, 1993). Consumer research continues to demonstrate that urban consumers of organic food either do not associate organic food purchase with environmental issues (Sirieix *et al.*, Chapter 5) or rarely want to be seen as aligned with the movement (Holt, Chapter 6). Food labelling has not raised consciousness of organic science or philosophy. Organic continues to be understood as chemical free and not as a system of ecological feedback. However, food quality trends suggest that there is an underlying growth in preference for attributes offered by organic.

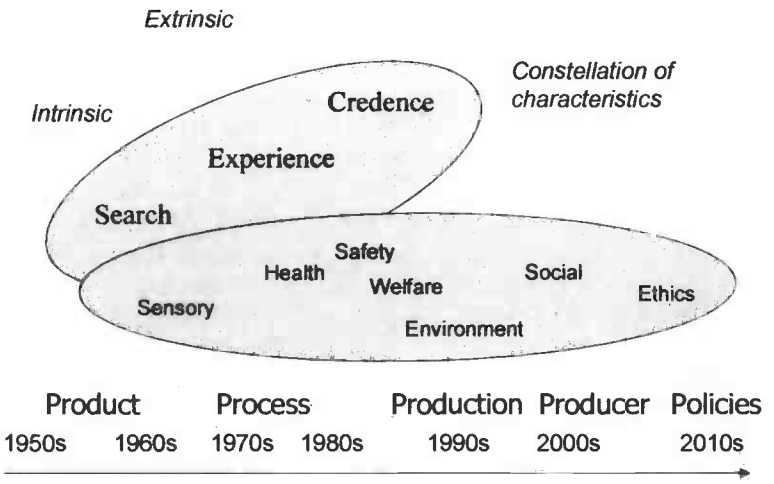
Food quality attributes can be intrinsic, such as colour, freshness and nutrient content, or extrinsic referring to attributes such as price, promotion, origin and presentation (Dahl and Kristensen, 2004). In Figure 18.1, food quality attributes are depicted in two ellipses. In the first of these, the arc of quality is denoted using the nature of goods classification. The second ellipse portrays the 'constellation of characteristics' that arises from a qualification process between intrinsic and extrinsic quality characteristics, termed 'a moving boundary of sustainability thinking' (Murdoch and Miele, 2004).

The chronology of consumer concerns with respect to food quality attributes suggests that the early 20th century was dominated by food security concerns whilst in the second half of the century consumer interest in food moved from sufficiency to sensory quality and later health quality. Food safety scares and concerns in the 1980s heralded the beginning of the era of consumer concerns related to credence properties – attributes that cannot be determined either through examination of the product (as for search attributes), nor after consumption (as for experience attributes). The last decade of the 20th century saw an unprecedented growth in interest in credence attributes and a transition from concerns about the product and processing methods to such qualities relating to the farm system and company (Wright and Howcroft, 1990).

Although a social ethos is integral to international organic guidelines, 'achieving organic sustainability requires recognition of social systems as much as agricultural' (IFOAM, 2001), social systems have been emphasized less than environmental issues until recently. With the rise of the local food market this situation is now changing. In 1998, the UK Soil Association set up a subsidiary company dedicated to the promotion of local, organic foods and it is through this renewed interest in the local sector that organic food has become associated with diet, and health other than food safety concerns, more than ever before. Pretty (2002) for instance, classifies slow food, an international movement founded in Italy in 1986 that promotes traditional regional recipes, as one of a number of forms of local food. The potential for health through local organic foods is seen

most evidently in several exploratory school meal schemes across Europe (Morgan and Sonnino, 2004; Dahl and Kristensen, 2004). However, at the same time that public health policy is experimenting in this way, there are also signs that the introduction of, for example, energy credits could also be a means of persuasion towards more sustainable habits of consumption.

Figure 18.1. Food demand trends in relation to food quality attributes.



To Policy and Beyond

In the final analysis, the boundaries between markets and movements have become blurred. Two schools of thought are emerging, a conventionalization school and a movement school. The latter covers innovative adaptation to the present, or any activity that responds to the problems inherent in the way in which capitalism and the organic movement coalesce. Anything that cannot specifically be narrowed down to an exclusively economic relation is the 'other school', the one that opposes conventionalization. Most chapters in this volume fit into one or other camp, problems being more or less about conventionalization (Campbell *et al.*, Jordan *et al.*, Kaltoft and Risgaard, Niemeyer and Lombard, Noe), and market potentials being mostly about policies and movement (Bellon and de Abreu, Dahl and Kristensen, Schafer *et al.*, Schermer), or some sort of creative response from organic stakeholders (Moore, Reed).

The final section of the book on market potentials asserts that: Danish policy promotes organic food in schools, German policy promotes organic farming as peri-urban development, Austrian policy promotes competitive eco/organic regions, and rural communities in Brazil are mobilizing and being mobilized by the Catholic church to form competitive organic coops and promote eco-tourism. Three of these final four chapters describing future market potentials for organic are about mainstream policy and one refers to community self-development initiatives. The chapters on the Agrarwende (or agricultural turn) in Germany (Schafer *et al.*) and on bioregionen in Austria (Schermer) show that the state and rural development are moving beyond the unsatisfactory outcome predicted by Guthman's conventionalization thesis.

The outbreak of BSE in Europe led the German federal government to declare an Agrarwende, a re-direction for German agriculture towards more sustainable systems, and by implication organic. Schafer and colleagues' description of the operation of the new policy in Bavaria suggests tremendous potential for Agrarwende to boost organic farming. This makes the case of the organic sector in Germany highly mutable. This is interesting in particular because, as previously noted, the German organic sector has historically exhibited less retail concentration than in the UK, Italy, France or Ireland. It is feasible therefore that the introduction of the Agrarwende through retaining shorter supply networks could act to resist the concentration in retailing witnessed elsewhere.

Austria has one of the largest areas of land certified organic but much organic land is located in geographical niches such as mountains and valleys. These are not only picturesque but also marginal areas in terms of agricultural possibilities. As a result, these areas have been formalized under a development strategy known as bioregionen (Schermer). Bioregionen are not however a panacea for rural development. Their success depends on a finely tuned and monitored mix of socio-economic criteria. Understanding the self-organizing features of these regions and the dynamics that sustain them will be a priority in order to assess more widespread potential of ecoregions for sustainable rural development.

Dahl and Kristensen's interpretation of public procurement of organic food through mainstream and local channels (Chapter 16) brought the conventionalization thesis to consumption as earlier authors brought it to production. The chapter raised a series of searching questions and provided some answers as to the mechanisms through which organic production principles can be translated into organic retail principles. What is needed in future is the assessment of successful funding arrangements and operational responsibilities to make organic school food a living contract between education services and the communities they serve.

Bellon and de Abreu demonstrate (Chapter 15) the need to revisit organic agriculture in developing countries with a non-Western eye. The overlap between social and environmental concerns depicted through the lens of organic horticulture in Brazil exposed the role of organic production in providing a

resource to deeply poverty-stricken rural communities. The recognition by supporting organizations such as the church, in areas where environmental pollution and land degradation are proceeding apace, that organic farming holds the key to revitalization of communities and to rural-urban cultural interchange, is testament to a new vision for organic development. The case studies are witness to both a rekindling of aspiration and embracing of commerce that cannot be accounted for under the conventionalization thesis and offers the reader a glimpse of social enterprise in the organic food sector at its best.

Organic farming and food is unlikely to become a dull topic in the near future; it appears poised on the edge of a range of changes that are transforming communities, families and individuals just as it has led to profound changes in various nations' policy frameworks and food markets. It has consistently raised the question that food and farming can be done, not just differently but, in a way that improves the environment, the quality of the food produced and the society in which it is embedded. Whilst many may still contest this message and others will be impatient that it has not yet been realized, it is a challenge that few societies will be able to ignore and certainly one that those who study food and farming will not. This collection has been written as a contribution to that debate, with the authors confident that they are contributing to a public discussion that is far from finished.

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California Facts, Legislative Analyst's Office: www.lao.ca.gov/2002/cal_facts/econ.html,

Cardiff University Centre for Business Relationships, Accountability, Sustainability and Society: http://www.brass.cf.ac.uk/

Organic-Europe.com: http://www.organic-europe.net/europe_eu/default.asp.

Slow Food: http://www.slowfood.com/

Soil Association: UK http://www.soilassociation.org/web/sa/saweb.nsf?Open

SUSTAIN: http://www.sustainweb.org/

Index