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Governing the Global Value Chain: GLOBALGAP and the Chilean Fresh Fruit Industry

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Abstract. An important argument within the agri-food literature is that power within the value chain has shifted from producers to global supermarkets chains. An example of this is GLOBALGAP, a standards and certification scheme launched by a handful of UK and European supermarkets, which allows them to govern their global value chains. This case study draws on in-depth interviews to understand how large-scale producers and exporters within the Chilean fresh fruit export sector have responded to GLOBALGAP. Rather than accept the role of standards takers, the organizational leadership of this sector has integrated itself within the decision-making structures of GLOBALGAP as standards makers. From their perspective, GLOBALGAP is a tool that will help consolidate and advance their position as world leaders in the export of fresh fruits. While the rising power of retailers is extraordinary, this study demonstrates that we cannot ignore how large-scale producers and exporters are also positioning themselves to negotiate, lead, and advance their own interests.

Introduction

Some of the most dynamic experiments in global governance today are occurring not in the public sphere but in the private sphere. Within the context of national capitalism, governments were looked to as primarily responsible for inspecting food, establishing standards for food safety, and then providing assurances to the public about the safety and quality of the food supply (Giovannucci and Ponte, 2005). However, with the expansion of global capitalism, neoliberal reforms, and concerns about food safety and quality, non-governmental actors, including corporations, business and industry associations, and social activists are now playing a greater role in gov-

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erning the value chain (Busch and Bain, 2004; Giovannucci and Ponte, 2005; Henson and Reardon, 2005; Barrientos and Dolan, 2006; O'Rourke, 2006; Lawrence and Burch, 2007).

Within this context, Gereffi et al. (1994) has argued that power within global value chains has shifted away from producers, such as large manufacturers, towards buyers, especially retailers. The role of food retailers has been recognized as especially significant with global supermarkets chains, such as Tesco or Wal-Mart, emerging as some of the most powerful corporate actors in the world (see, for example, Reardon et al., 2003; Busch and Bain, 2004; Konefal et al., 2005; Lawrence and Burch, 2007). In the process of sourcing goods from farms and factories from around the world, these buyers have established themselves as key drivers in the global production, distribution, and marketing of food products (Busch and Bain, 2004; Fox and Vorley, 2004; Burch and Lawrence, 2005; Konefal et al., 2005). In part, these retailers have established themselves as the new 'food authority' and gatekeeper to consumer markets by utilizing their power to develop and impose performance and production standards and certification systems onto their suppliers (Lawrence and Burch, 2007). It is through such institutional arrangements that supermarkets are able to govern their value chains, thereby determining who gets to participate, what gets produced and under what conditions, and finally where it is sold (Campbell et al., 2006a; Burch and Lawrence, 2007).

An important example of this is GLOBALGAP,[1] 'the most widely implemented farm certification scheme' in the world (*Eurofruit Magazine*, 2008), which was launched in 2001 by a handful of leading UK and European food retailers. To participate in GLOBALGAP, fresh produce suppliers must meet not only a broad array of food safety and quality standards but also standards for labor and the environment. To demonstrate compliance, producers must then be independently audited by a third party certifier. While these standards are not mandated by law and thus are considered 'voluntary', the reality is that compliance with GLOBALGAP has essentially become an 'entry ticket' into the UK and EU marketplace (Fox and Vorley, 2006, p. 170; Campbell et al., 2006a). Threatened with exclusion from this valuable market, tens of thousands of producers from Chile to Ghana to New Zealand have become certified, with thousands more in the process.[2]

Nevertheless, some scholars now argue that claims about the concentration of power among supermarkets may be overstated. While acknowledging that the influence and authority of supermarkets 'has increased significantly', Harvey (2007, p. 53) argues that power relations vary considerably between different economies and between value chains for different products. Campbell and Le Heron (2007) warn that blanket assumptions of supermarket dominance can lead researchers to ignore or dismiss the power gains of diverse groups of actors, such as large scale producers and civil society organizations, and what the effects of these power gains might be.

Drawing on the example of GLOBALGAP, this article explores this issue of governance within the Chilean fresh fruit export chain. This article is drawn from a broader study designed to assess the distributional implications of GLOBALGAP's certification program for stakeholders within this global value chain. Fieldwork for

this study was conducted in 2004 and 2005.[3] The analysis for this article is based on in-depth, semi-structured interviews with 19 Chilean producers, exporters, industry representatives, and government officials, each lasting an average of one hour. The sample of participants was purposive rather than random. Participants were seen as key informants and were selected because they were either intimately involved in the production and/or exporting of fresh fruit to the UK and Europe, or because they were aware of the effects of GLOBALGAP on the industry because of their leadership role within industry organizations or government (see Appendix 1).

My focus here is to understand how large-scale producers and exporters – the traditional bastions of power within the Chilean value chain – have responded to efforts by supermarkets to govern their value chain by imposing new standards and certification requirements. What I found was that participants viewed GLOBALGAP as an important part of the competitive strategy of these stakeholders as well as for the Chilean fresh fruit sector as a whole. From their perspective, GLOBALGAP plays a key role in helping large-scale growers and exporters improve their global reputation as responsible producers, helps mitigate risk, and allows them to govern their value chains. Rather than feeling vanquished by the supermarkets, the organizational leadership of the Chilean fresh fruit export industry has instead integrated itself within the decision-making structures of GLOBALGAP. Rejecting the role of standards takers rather than standards makers, these stakeholders have positioned themselves within the organizational structure of GLOBALGAP in an effort to shape its institutions in a manner that is mutually beneficial. Thus, I conclude that while the rising power of retailers is extraordinary, this study helps demonstrate that Chilean large-scale producers and exporters are also positioning themselves to utilize GLOBALGAP as a means to consolidate and advance their position as world leaders in the export of fresh fruits. To frame this discussion, I now turn to provide an overview of the concept of governance within the agri-food literature. In particular, I focus on the shift by supermarket chains to govern their global value chains through new institutional mechanisms such as GLOBALGAP.

Governing the Global Agri-food System

The concept of governance has emerged as an important means of analysing contemporary practices within the context of globalization and neoliberalism. The term attempts to capture the idea that power, authority and sanctions of the state are no longer central to governing. Rather, governing is far more organizationally and spatially diffuse today and includes a much broader configuration of political agents than just the traditional state (Foucault, 1983; Campbell, 2006). For scholars of the agri-food system, governance is proving to be a useful heuristic tool for investigating the multiple actors, sites, and structures that regulate the sector (Busch and Bain, 2004; Higgins and Lawrence, 2005). Rather than focus on analyses that center on local or regional analytical frameworks and paradigms within the nation state, scholars are turning their attention to analyses that give emphasis to transnational governance structures (Gereffi, 2005). The concept of governance directs attention not only to the

involvement of non-governmental actors but also to the different levels (from local to national to international) and the various contexts (e.g. organizations, value chains) in which governing takes place (van der Grijp et al., 2005). Consequently, this concept has proved useful for drawing attention to the development of new sites of governance (such as multinational corporations (MNCs), NGOs, standard-setting bodies, industry associations) whether at the local or global level, where regulatory activities are taking place (van der Grijp et al., 2005).

Of particular significance here is the role of global buyers, especially retailers and brand-name companies. Gereffi et al. (1994) argue that we have witnessed a shift away from 'producer-driven' commodity chains towards 'buyer-driven' commodity chains where lead firms, such as retailers, play a powerful role in making and enforcing decisions about production practices and structures in the global economy, even though they do not own any of the production or manufacturing facilities themselves. Following from this, a number of agri-food researchers argue that major supermarkets – especially from Europe, the UK and the US – have established themselves as the main drivers within the global agri-food system (Busch and Bain, 2004; Burch and Lawrence, 2005; Hatanaka et al., 2005; Konefal et al., 2005; Campbell et al., 2006a). In fact, Burch and Lawrence (2007, pp. 12–13) talk about the ascendance of a 'third food regime',[4] where supermarkets, not manufacturers or agricultural producers, predominate. The concentrated power of the modern retail sector[5] allows these firms to wield enormous power and influence in determining how food is both produced and consumed, which is reshaping the nature of agri-food businesses especially in the fresh fruit and vegetable sector (Campbell et al., 2006a; Lawrence and Burch, 2007; Vorley, 2007).

For Gereffi et al. (1994), governance is about the power and authority to determine how resources – whether monetary, material or human – are distributed throughout the value chain. How such power is exercised is affected through particular 'rules, processes and practices' (van der Grijp et al., 2005, p. 446). Governance structures and practices produce divisions of labor along the chain, which in turn contribute to the allocation of resources and redistribute gains in specific ways (Ponte and Gibbon, 2005). To understand how actors within a chain are linked together and coordinated or 'governed', it is necessary to analyse the role of institutions, such as standards, audits and metasystems (e.g., GAP, HACCP, ISO).[6] Hands-off governance and control by global retailers through their value chains is possible because complex quality information is embedded in their standards and certification requirements (Humphrey, 2005; Ponte and Gibbon, 2005). Supermarkets are now able to impose these requirements upon their suppliers, many of which are far more rigorous and comprehensive than those of either governments or international standards bodies (Hatanaka et al., 2005). Together with other requirements (e.g. volume, price), retailers use these institutions to determine who gets to participate in the value chain and under what conditions.

More recently, however, Campbell and Le Heron (2007) have cautioned against what they view as overstatements concerning the shift in power away from producers or processors to supermarkets. In a set of four contrasting case studies concerning

audit technologies, the authors found that efforts to define quality within the value chain led to 'negotiated alliances' among groups of actors that not only include major supermarkets but also large-scale corporate producers and a range of public groups (p. 132). Therefore, the authors conclude that – while perhaps appealing – such 'blanket claim[s]' of supermarket dominance can lead researchers to ignore or dismiss the 'range of diverse power gains within agri-food systems and… their cumulative effects' (p. 149). Similarly, Harvey (2007) argues that, while it is undeniable that the power of supermarkets has risen considerably, one-dimensional claims regarding their collective power are unhelpful and overly simplistic. Rather than concentrated in the hands of a few supermarket giants, his research findings show that relationships of power and dependency between economic agents within the value chain 'vary considerably from one economy to another, and from one commodity to another' (2007, p. 53). Instead of viewing power as simply the property of certain actors based on their 'size or market capitalization', a relational view of economic power allows the researcher to examine the range of variables (2007, p. 70).

GLOBALGAP

The concept of governance is powerfully illustrated by GLOBALGAP. In 1997, UK retail giants Tesco, Safeway, Sainsbury's, and Marks & Spencer, together with Dutch retailer Royal Ahold, began working together and in 2001 they launched their first set of harmonized standards for Good Agricultural Practices (GAP) for the production of fresh fruit and vegetables, together with a system of third party certification. While the focus of GLOBALGAP is food safety, the protocol also incorporates standards for worker health and safety, and the environment.

Market dominance, together with a changing social and political environment, motivated food retailers to manage their risk by increasing control and governance of their global supply systems. These factors have been written about extensively elsewhere (for example, see Gaskell et al., 2001; Campbell, 2006; Campbell et al., 2006a; Freidberg, 2004; Barrientos and Dolan, 2006); briefly, they include new food safety regulations in the UK, which require retailers to demonstrate due diligence in relation to the safety of their products. At the same time, market dominance has increased corporate vulnerability to high profile activist and media campaigns, which have spotlighted unethical practices within their global value chains. Supermarkets have found that their valuable brands can be severely damaged if it is linked with child labor or destructive environmental practices. In addition, scandals associated with 'mad cow' disease (bovine spongiform encephalopathy, or BSE) or genetically modified organisms (GMOs) demonstrate that public concerns about the safety of the food system – whether real or perceived – have the potential to negatively affect the entire industry, not just the firm or producers responsible.

Within this context, failure to demonstrate 'due diligence' in finding or preventing food safety problems, the failure to meet maximum residue levels for pesticides, or ignoring the importance of social and environmental concerns could pose considerable reputational and financial risks not simply to an individual retailer but the

industry as a whole. Undoubtedly, retailers recognized their shared fate. According to GLOBALGAP's Independent Chairman Nigel Garbutt, the view of its members is that '[r]esponsible agriculture is not something to seek competitive advantage with, it is for the long term benefit of both industries and consumers' (EurepGAP, 2005a, p. 1). Thus, GLOBALGAP was a means through which retailers could reassure the public that their food is being produced in a safe and sustainable manner (EurepGAP, 2004).

At the same time, retailers wanted to avoid a situation where each company was in the business of creating its own standards and auditing system. Not only would this prove enormously expensive but independent standards could make it difficult to sustain guaranteed supplies of certified product from producers (EurepGAP, 2005b). In contrast, a uniform set of minimum standards allows for the creation of harmonized European-wide value chains, allowing supplies to be interchangeable (Levidow and Bijman, 2002). Having established a baseline standard, individual companies are then free to choose to develop additional standards and audit schemes (e.g. Tesco's Nature's Choice) if they wish to do so.

While GLOBALGAP was originally conceived by a group of supermarkets and continues to be viewed generally as a food retailer protocol, the organization quickly moved in 2001 to re-conceptualize itself as 'an equal partnership of agricultural producers and retailers' (GLOBALGAP, 2010). This shift is reflected in the voluntary membership of the organization that has climbed from the original 21 founding retailers in 1999 to around 250 members in 2007, which includes not only retailers but also suppliers and non-governmental organizations (see Table 1). There are, in fact, three categories of membership.

1. Retailer Membership is open to retailers and foodservice organizations who are eligible for nomination and election to GLOBALGAP's governing board or the Sector Committees (see below).
2. Supplier Membership includes any organization directly involved in growing, producing and/or handling food products. Hence, they might be a producer but they could also be an exporter/importer. They are also eligible to be nominated and elected to the Board or the Sector Committees.
3. Associate Membership is open to Certification Bodies, consulting companies, agri-chemical companies, and their associations. These members are only eligible for nomination and election to the Certification Body Committee (CBC).

Table 1. GLOBALGAP Membership (1 January 2007).

Continent	Retailers	Suppliers	Associates	Total	% of Total
Africa	0	7	3	10	4
Asia	1	0	3	4	1.6
Australia & New Zealand	0	4	2	6	2.4
Europe	30	81	76	187	74.8
Middle East	0	8	6	14	5.6
North America	0	3	4	7	2.8
Latin America	0	8	14	22	8.8
Total	31	111	108	250	100
% change since March 2004	+29	+21	+44	+31	

Broadly, retailer or supplier membership brings with it the right to participate in and contribute to the various Committees and Working Groups, invitation to plenary member meetings, and input into the continued technical improvement of the GLOBALGAP documents. In reality, opportunities for voice and participation in this partnership between retailers and producers are extremely limited. When we examine more closely who gets to play a part, it is the large-scale retailers together with major corporate suppliers – many of whom are not even producers – who participate.[7]

GLOBALGAP has become *the* standard for growers who want to export fresh produce to the UK and EU markets (Campbell et al., 2006a). As a result, the worldwide growth of GLOBALGAP has been nothing short of phenomenal. According to GLOBALGAP's website (<http://www.globalgap.org>), in 2009 the number of certified growers had grown to over 90 000 from 90 countries, with thousands of additional growers involved in benchmarked schemes (see below). The number of international certification bodies that are accredited to GLOBALGAP has grown to approximately 150.

Much of the burgeoning literature on GLOBALGAP focuses on what the dominance of this global protocol means for other stakeholders within the value chain. In particular, research has examined what the specific costs and benefits are for small-holders in developing countries, especially Africa (see Mausch et al., 2006; Graffham et al., 2007).[8] Researchers note that while there are some benefits, such as improved health and safety and enhanced efficiencies on the farm, the economic burden for small-holders can be considerable. This has raised equity concerns about how the costs and benefits of GLOBALGAP are distributed and whether small-holders may be forced to exit (Henson and Humphrey, 2009). Recent work has also looked at the implications of GLOBALGAP standards on worker welfare. This research has questioned the efficacy of these standards for addressing health and safety concerns of women and temporary farm workers, especially in relation to pesticide poisoning (Bain, 2010; Bain and Hatanaka, forthcoming). Campbell and his colleagues have examined the role of GLOBALGAP in restructuring agri-food industries in new Zealand and Australia (Campbell et al., 2006a), especially its influence on sustainable management practices and organic production (Campbell et al., 2006b). To date, however, there has been little research that has focused on how large-scale producers and exporters have responded to GLOBALGAP and their efforts to influence the protocol. It is to this issue that I will now turn.

Governing the Chilean Fresh Fruit Export Sector

Chile is a world leader in the export of fresh fruits, and by 2005 it was supplying almost half of all exports from the Southern hemisphere to the lucrative North American and European markets during their counter-season. Over 80% of national production is exported, either as fresh fruit or as processed products (ODEPA, 2005b). In terms of value, fresh fruit exports were worth US$2.6 billion a year in 2007, up from US$168 million in 1980 (Gámez Bastén, 2007a; ODEPA, 2008). Within Chile, this

success has turned fresh fruit exports into the third most important economic sector after mining and forestry products, contributing 1.3% of national GDP (ODEPA, 2005b). In terms of its exports, the UK and European markets are a crucial destination for Chilean fresh fruit; between 1998 and 2008 exports to this region increased two-and-a-half times from just over 325 000 metric tons to 817 000 metric tons (see Figure 1); and in the 2006–2007 season accounted for 28% of all fresh fruit exports (Gámez Bastén, 2007b)

According to the 1997 National Farming and Livestock Census, there are around 112 000 fruit farms registered in Chile, of which 90% are subsistence and small producers. However, of the hectares registered as cultivated area, almost 70% is in the hands of medium and large growers (see Table 2) (Kremerman, 2005).[9] Since 1997, the land area devoted to fruit production has expanded dramatically. According to the 1997 and 2007 National Farming and Livestock Census, the total area planted

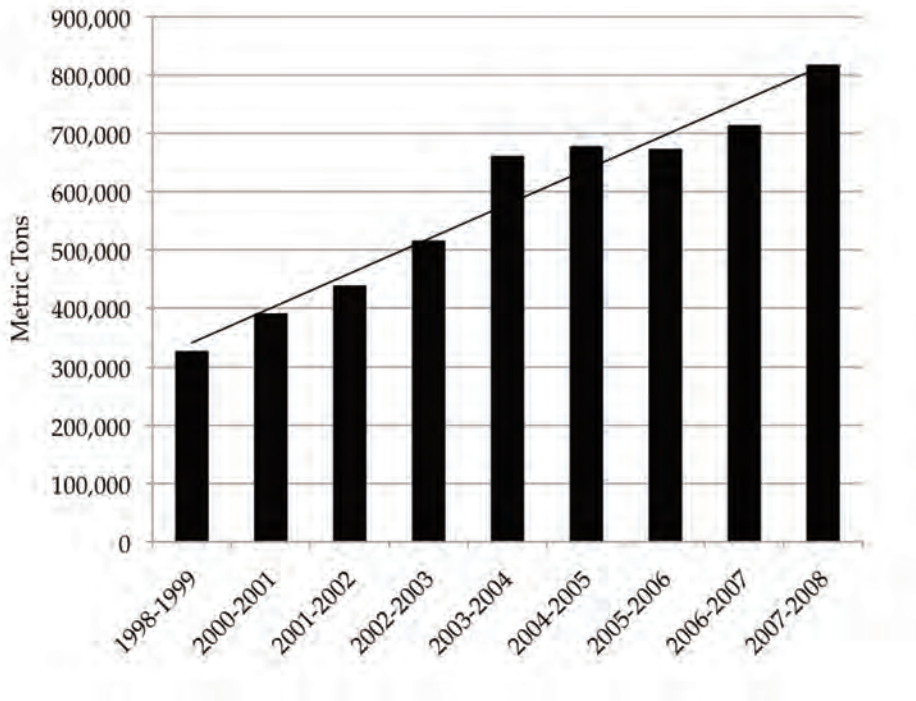

Figure 1. Chilean fresh fruit exports to Europe, 1998–2008.
Source: Chilean Fresh Fruit Association.

Table 2. Distribution by type of producer (%) 1997.

	Subsistence	Small-holders	Medium	Large	No Classification	Total
No. of fruit farms	30.0	58.8	6.0	3.8	1.1	100.00
Cultivated area of fruit orchards	3.4	25.9	20.6	49.9	0.2	100.00

Source: Kremerman, 2005.

with fruit orchards increased 45.3% from 213 518 hectares to 310 286 hectares. According to a report by the Ministry of Agriculture (ODEPA, 2009, p. 41), '[f]or an industry that is becoming mature, this is an extraordinarily dynamic expansion'. The most significant growth occurred among large-scale producers with land holdings above 500 hectares, which grew 112% from 27 318 hectares to 57 976 hectares (Bravo, 2009). During the same period, small-scale farms of less than 10 hectares decreased their participation in the sector from 13% to 11% (Bravo, 2009).

Within Chile, exporters play a central role as the nexus between the 7,800 local fruit growers producing for export and global markets. Active within the export sector are some 518 export firms; however, if one includes individual producers that export independently, then the number is over 700 (Gámez Bastén, 2007b). Despite this large number, approximately 43% of all exports are sold by just 12 companies (see Table 3). The three largest fruit companies in the world by sales are Dole, Chiquita, and Del Monte Fresh and each of them has a significant presence in Chile. There are also a number of large Chilean exporters, with David del Curto, the largest, working with 400–500 growers. More recently, medium-sized companies, such as Agricom, Copefrut, and Frusan, have reduced the market participation of three of the largest companies (Dole, Del Monte, and David del Curto). A clear division between producer and exporter is not always easy to ascertain since the largest exporters also own their own land, grow their own fruit, as well as utilize contractual arrangements with small and medium-scale producers to buy and sell their fruit (Kremerman, 2005).

Retailers from the UK and Europe prefer to deal directly with major suppliers such as a Dole or a Unifrutti, with whom they develop close, tightly managed working relationships. These dedicated suppliers tend to be the more sophisticated producer/exporters that have the capacity to meet their rigorous demands for flexible production schedules, just-in-time delivery systems, guaranteed quantity and evermore stringent quality standards. With this strategy, retailers hope to reduce their transaction costs, enhance quality assurance and traceability systems, and thus reduce the risk of any problems associated with food safety and quality (Fearne et al., 2005).

Advocating GLOBALGAP

In 2000, the Association of Exporters (ASOEX) had announced that all fruit produced by its members must meet GAP requirements (OECD, 2008). It was not surprising then that when GLOBALGAP was launched a year later the main organizations representing the Chilean fresh fruit export sector exerted considerable time and resources promoting it within the sector. These organizations include ASOEX, the Chilean Fresh Fruit Association (CFFA) (an industry funded organization with the purpose of promoting Chilean produce in its overseas markets), and the Fruit Development Foundation (FDF) (a private organization founded in 1992 and funded by a group of 30 exporters and producers). As part of these efforts, ASOEX – perhaps the most powerful organization within the fresh fruit export industry (Díaz, 2004) – also

Table 3. Participation of the top twelve exporting companies (in thousands of boxes).

	Volume 2003/2004	% Participation 2003/2004	Volume 2006/2007	% Participation 2006/2007
Dole Chile SA	17268		13132	5.3
Unifrutti Ltd	11538		12055	4.1
Del Monte Fresh	11637		10326	4.1
David del Curto	10034		9,990	4.0
Rio Blanco Ltd	7,146		9,632	4.0
Copefrut SA	9,019		9,671	3.9
Agricom Ltd	6,330		8,795	3.5
Chiquita Enza	7,490		8,656	3.5
Subsole	4,344		7,789	3.1
Frusan SA	6,232		6,277	2.5
Aconex	3,416		6,214	2.5
Rucaray SA	6,215		5,865	2.3
Total	100669	47.7	108402	43.4
Remaining Exporters	110446	52.3	141496	56.6
Total	211115	100	249898	100

Source: Gámez Bastén, 2007b.

lobbied hard to get the Ministry of Agriculture to support the certification program. As a result of these efforts, the FDF reported that between 40 and 50% of all Chilean produce sent to the UK and Europe was GLOBALGAP certified by early 2007, just five short years after the first protocol was released (Cea Covachich, 2007). In terms of the number of growers certified on a global level, Chile stood in eleventh place out of 80 countries (EUREPGAP, 2007a).

However, these organizations were not simply content to see GLOBALGAP implemented within their industry. In addition, the leadership of these organizations sought from the outset to take an active leadership role within the GLOBALGAP organization itself. These stakeholders recognized that *who* gets to participate in the organization is enormously important since they determine the very framework and substance of the protocol. Their goal then was to participate in the process of shaping future standards and certification requirements, whose content would ultimately affect them. The director of the exporter Unifrutti views this participation as significant since it has provided the FDF and ASOEX with the opportunity to fight 'to maintain [GLOBALGAP] requirements that are reasonable' for their industry (Cea Covachich, 2007).

Chile was the first developing country to have representatives participate on GLOBALGAP committees, which is significant in an organization whose membership is heavily weighted towards developed countries, especially Europe (see Table 1). Representatives of the fresh fruit export sector are integrated into the GLOBALGAP organizational structure and decision-making process, participating in a variety of leadership roles and committees, ostensibly to represent the interests of all Chilean growers. Long-standing supplier members of GLOBALGAP include the CFFA, the FDF, and the sixth largest exporter in Chile, Copefrut. Ricardo Adonis, Technical Manager of FDF, is a member of the 'Fruit and Vegetable Sector Committee' (see Figure 2). This committee is made up of seven retailer and seven supplier members who are elected every three years by their peers. Committee members are expected to 'rep-

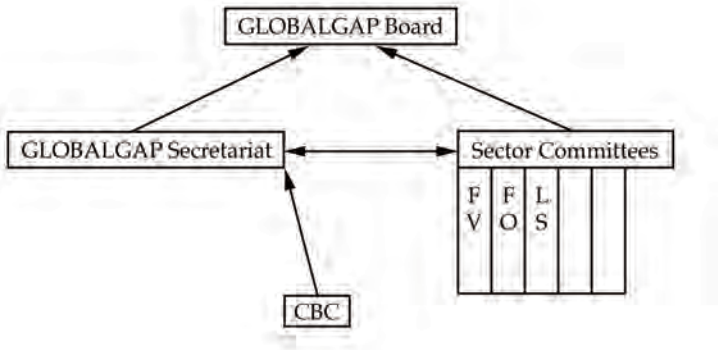

Figure 2. GLOBALGAP's governance structure.
Source: EurepGAP, 2007b.
Note: The organizational structure of GLOBALGAP has undergone several modifications since the organization's inception; this figure reflects the structure as it exists in 2007. The abbreviations here are FV (Fruits and Vegetables), FO (Flowers and Ornamentals), LS (Livestock Sector), and CBC (Certification Body Committee).

resent their sector (growing/production or retail) and not individual companies' (EurepGAP, 2003, p. 1). Membership is extremely important, since the main role of these committees is to review, evaluate and approve GLOBALGAP standards, benchmarked schemes (see below), as well as propose revisions to its General Regulations. Since GLOBALGAP has set a goal of continuous improvement in terms of their standards, committee members are constantly involved in reviewing emerging issues, collecting input from various stakeholders, and conducting risk assessments, which eventually lead to a revised version of the protocol every three years (EurepGAP, 2007c).

One major concern for Chilean exporters and large-scale growers who sell to more than one market is the costs and technical challenges associated with meeting multiple certification requirements, which 'creates confusion and doubt, apart from extra investments by the producer and exporter', argues ASOEX President Ronald Bown (Strating, 2008, p. 8). Chilean industry representatives, among others, worked within GLOBALGAP to increase harmonization between standards. Subsequently, GLOBALGAP developed a system of in-country certification schemes that can be approved as equivalent with GLOBALGAP standards through a process of benchmarking. Benchmarking involves a comparison of the standards of the in-country scheme with GLOBALGAP and an agreement to adhere to them through contractual obligations agreed upon between the standard owners and GLOBALGAP (EurepGAP, 2005b). Producers in that country who gain certification to the national standard will also achieve compliance with GLOBALGAP standards.

Chile was the first country to follow up on this decision by developing its own national certification scheme benchmarked with GLOBALGAP, known as ChileGAP. ChileGAP was mandated by ASOEX and is implemented by FDF. ASOEX and FDF were eager to establish ChileGAP because it eliminates the need for multiple audits by satisfying standards recognized by both the European and US markets. According

to Bown (Strating, 2008), many of the problems associated with multiple certifications are eliminated by ChileGAP, which unifies the majority of the quality systems. For example, ChileGAP is the only scheme in the world that has harmonized the requirements for GLOBALGAP and the US GAP standard. Benefits thus accrue to those growers and exporters who sell to both markets and who wish to reduce the costs of multiple certifications (OECD, 2008).

Another area that Chilean representatives have fought to keep more 'reasonable' are GLOBALGAP standards for labor since labor accounts for up to 70% of growers' production costs (Bain, 2010). In the first 2001 version of the GLOBALGAP protocol established by retailers, growers were required to comply with all state regulations covering employment conditions. The protocol included some 14 individual standards concerning wages, age of employee, hours of work, and employment contracts that auditors were required to verify. This standard was significant since non-compliance with labor laws in the Chilean fresh fruit export sector is widespread (Bain, 2010). One large-scale grower/exporter explained that the standard was viewed by the industry as placing undue hardship on growers and that Chilean representatives sought to replace these standards with something that would give more flexibility to growers in dealing with labor issues. The subsequent 2004 version of the protocol reflected an important shift in the standards to the benefit of growers. This version replaced the above requirements with a single standard that required that 'a member of management [is] clearly identifiable as responsible… for ensuring compliance with… national and local regulations on worker health, safety and welfare issues' (EurepGAP, 2004, p. 21). As Bain and Hatanaka argue, the benefit to producers is that,

> '[r]ather than independently confirm that growers are in fact abiding by the law, GLOBALGAP's standard simply requires that certifiers verify that *someone* is responsible for complying with the law. They are not required to corroborate that this person is in fact ensuring compliance; whether labour laws are abided by is outside the bounds of the certification procedure' (Bain and Hatanaka, forthcoming).

Rather than waiting to act as standards takers, the organizational leadership of the Chilean fresh fruit export sector embraced the GLOBALGAP concept from the beginning; lobbying for its implementation and integrating itself within the organization's decision-making structures. Importantly, participation within GLOBALGAP has wrought some important benefits to these stakeholders, especially in terms of reducing the costs involved in establishing and sustaining the protocol. In the next section, I turn to discuss what broader factors motivated these stakeholders to support GLOBALGAP in the first place.

Why GLOBALGAP?

Competing on Quality – A National Strategy

Since the return to democracy in 1990, successive governments have remained committed to a continuance of neoliberal economic policies that have allowed them to

deepen the country's participation within the global economy (Murray, 2002; Gwynne, 2003). As part of this effort, there is widespread support both within the public and private sector for developing policies and practices that are 'aimed at generating favorable conditions for the development of a profitable and competitive agriculture', capable of competing in the international economy (ODEPA, 2005b, p. 72).[10] GLOBALGAP fits within this broader national approach to economic development and was promptly viewed as an important part of the industry's competitive strategy – both for individual producers and collectively as 'the Chilean fresh fruit export sector' competing against other national sectors.

From the perspective of exporters, large-scale growers, and the Ministry of Agriculture, to ensure long-term economic success Chile must counter its image abroad as a 'developing' country and a producer of poorer quality fruit. Since poor quality fruit has the potential to undermine both the reputation and the price for all Chilean products, efforts to position and retain Chile's role as a world leader in the export of fresh fruit depend on establishing and maintaining a strong reputation as a trustworthy supplier of safe and quality products (Barrientos et al., 1999; Chilean Fresh Fruit Association, 2004). When Chile began to develop as an exporter, international competition was not so fierce and as a result the industry was able to get away with selling fruit that was of variable quality (Barrientos et al., 1999). However, the international environment for fresh fruit exports is now extremely competitive and is only expected to become more so. Not only does Chile face tough competition from some of its traditional rivals, such as New Zealand, Australia and South Africa, but it also faces growing competition from countries such as Argentina, Brazil, China, India and Peru, who are emerging as major fruit producers and exporters.

While Chile has demonstrated its capacity to compete with the most efficient agricultural countries, economic efficiency is no longer recognized as sufficient for positioning strongly within the global market (ODEPA, 2005a). Instead, participants emphasize the need for Chile to build a positive image and brand for itself based on quality, frequently pointing to the success that New Zealand has had in creating a positive global image as 'clean and green' and the need for Chile to follow suit. Then Minister of Agriculture Álvaro Rojas explained:

> 'We also still need to reinforce our country's image, the Chile brand name in world markets. While it's true we are present in all the world's markets, our image as an exporter of healthy, secure food products is still very weak. [Consequently, we need] a more massive emphasis on quality. Which is to say that the nation's entire agricultural community needs to be operating from a Good Agricultural Practices platform' (*Santiago Times*, 2006).

The 'poisoned grape' incident was identified repeatedly by participants as the exemplar of what can happen to an entire industry if there is a food safety or quality problem. In 1989, the US imposed an embargo on Chilean fruit imports after two grapes that were supposedly laced with cyanide were discovered by US port authorities in Philadelphia. Ominous headlines such as 'U.S. Urges Consumers Not to Eat Fruit From Chile' (Leary, 1989) and 'Stores Remove Chilean Fruit: Tons Piled Up as US Probes Cyanide Threat' (Callahan, 1989) warned US consumers to avoid not only

Chilean grapes but Chilean fruit in general. The consequences were devastating for the entire industry. The closure of the US market the following fruit season resulted in 'a massive fall in prices and severe financial hardships for both Chilean fruit companies and farmers' (Gwynne, 2003, pp. 313–314). The CEO of one major exporter/producer explained:

> '[A]s an industry we're concerned with defending ourselves as any food scare affects us all. If there's a problem with a grape it's not recognized as Juan Ortiz's grapes, but 'Chilean grapes'. So, we're supporting FDF's efforts [to expand certification] because we need a good face for the entire industry, even though we compete with each other.'

Within this context, the buying practices and strategies of Northern food retailers have enormous import not only for the fresh fruit sector but for the Chilean economy as a whole. The Ministry of Agriculture asserts that the growth and success of the industry since the late 1990s can be attributed to the industry's success in satisfying consumer demand for product traceability and food safety and quality, as well as the industry's success at implementing new innovations and developments throughout their value chains (ODEPA, 2009). It asserts that if producers wish to participate in the global food system or to gain entry into the global value chain, it is no longer sufficient to simply 'be efficient and competitive', but rather they also need to 'honor the requirements demanded by [supermarkets], which in turn reflect consumer preferences and the concerns of civil society, as well as industry efforts to improve efficiencies' (ODEPA, 2005a, p. 23). Producers have to recognize the 'importance of food safety, quality, perception of the environment and to a lesser degree labor', and respond to demands from their major markets for good agricultural practices, together with inspection strategies related to their compliance (ODEPA, 2005a, p. 22). Quality certification programs are thus viewed as an indispensable tool both to ensure continued access into foreign markets and as a tool to help create a positive brand and demonstrate to buyers that the industry is as sophisticated and focused on safety and quality as any developed country.

Competing on Quality – A Corporate Strategy

While GLOBALGAP was perceived as providing value to the entire industry, participants also explained why they believed certification would benefit large-scale growers and exporters in particular. One CEO for a large exporter/producer explained:

> '[T]he supermarkets are paranoid as they are the last connection with the consumer. There are the legal issues, if somebody gets sick, they will go back to the supermarket, who will go back to their supplier. *It's become a business necessity to put your best foot forward*' (emphasis added).

It is important to note that in general the larger one's farm size, the more easily one can incorporate the costs associated with GLOBALGAP. Large-scale producers and exporter-owned farms face lower investment costs per acre to meet GLOBALGAP

requirements. For example, in Chile the cost of annual certification was approximately $US600 a year regardless of size. Moreover, some export-owned farms were already following at least some GAP specifications before GLOBALGAP was required, which meant that they had to invest less upfront, and were able to implement the standards more quickly and at lower costs. As with retailers, third-party certification is cost effective for many exporters who are able to pass on many of the costs and risks of implementing GLOBALGAP back up the chain to their suppliers.

The large-scale growers and exporters that I spoke with hoped that, by responding swiftly to retailer demands for food safety and quality standards, their company would gain a competitive advantage over both their domestic and international competitors and gain the respect of their buyers. For example, the manager of a major grower-owned export company explained that its growers (none of whom were small) were among the first in the country to gain certification. These growers had decided that as a competitive strategy they would take the initiative and establish GLOBALGAP as well as any other major supermarket certification program, such as Tesco's Nature's Choice, before it even became obligatory to do so. The company then used its certifications as a competitive strategy, to demonstrate to buyers during negotiations that its growers were leading the field on food safety and quality issues and taking a proactive stance towards certification.

According to participants, certification also helps producers mitigate risk by allowing them to demonstrate that their production practices are socially and environmentally responsible. In particular, MNCs, such as a Dole or a Chiquita, are concerned and increasingly conscientious about ways to protect their image as they find themselves the targets of campaigns for corporate social responsibility. As with supermarkets in the UK and Europe, the size and scale of MNCs has proved to be a double-edged sword as social activists target high profile companies in their effort to expose poor corporate social and environmental practices within global value chains (Klein, 2002; Fox and Vorley, 2004; O'Rourke, 2005; Utting, 2005). The CEO for a multinational fresh fruit exporter and producer explained:

> 'These new standards are market driven. It started with environmental issues with the Green movement in Europe. In the US there is not such a strong movement so there is little pressure from there. [We are] concerned with our reputation because we're exposed because our banana business is 'an elephant' for us. The environmental movement together with political movements has targeted banana plantation practices… So yes, we are exposed to NGO pressure… In the US it doesn't really matter but in the EU bad publicity can affect your business, so the effects of NGOs are not good for us.'
>
> 'We have found having certifications really crucial to defending ourselves.'

The CEO described an instance of how his company had used its GLOBALGAP certification to counter a claim made by a newspaper reporter that a worker on one of its farms had said that the company was using the pesticide Paraquat.[11]

> '[When the reporter called me asking me for my response to this claim] we could go back to our records and demonstrate that this was not true… Our company complies with all the laws and with international standards and now with certification we have the documentation to demonstrate this, so we're not just saying it anymore, we can counter any accusations, so from a PR point of view – and I'm always answering to reporters – it's excellent because we can demonstrate what we are saying with certification…. [This company] is in the public eye.'

In 2004, Chiquita President and CEO, Fernando Aguirre explained that 'Our SA8000 and [GLOBALGAP] certifications reflect this company's tremendous efforts and commitment to attain high ethical, social and environmental standards based on the principles of transparency and independent verification' (Chiquita Brands International, n.d.). Thus, GLOBALGAP certification is viewed as an important tool to defend MNCs against criticism or negative publicity by NGOs or the media about their practices, thereby protecting their valuable brand-name and international image.

Modernizing the Value Chain

> 'But the key thing with supermarkets is your commitment to volume. If you promised 10 000 boxes during a certain period, then they want to know that you will supply it… Credibility is really important especially in relation to supply. This is an advantage for [us] because we have the volume to meet the demand.'

From the perspective of large-scale growers and exporters, GLOBALGAP is a powerful governance mechanism that facilitates the modernization of the fresh fruit value chain (Chilean Fresh Fruit Association 2004; ODEPA, 2005a). In order to provide the volume of product demanded by supermarkets, large-scale growers and exporting companies in turn rely on a network of perhaps dozens or even hundreds of contracted outgrowers. As the nexus between retailers and producers, however, any problem with an outgrower's product becomes their problem. Modernizing this chain not only facilitates access to valuable Northern markets and ensures that growers remain competitive in the global market, but it also establishes both an individual company's – and the country's – position as a 'trustworthy' and 'reputable' supplier of safe, quality, sustainable produce to the world (Chilean Fresh Fruit Association, 2004; ODEPA, 2005a).

Participants believe that implementing GLOBALGAP standards and third-party certification helps these stakeholders govern their value chains. To protect their reputation, these growers and exporters are using GLOBALGAP certification as a tool to reorganize their value chain and bring selected growers up to speed. As researchers have detailed elsewhere (Campbell et al., 2006a, 2006b; Mausch et al., 2006; Graffham et al., 2007), certified good agricultural practices oblige growers to upgrade their farm management techniques (e.g. pesticide management) and on-

farm facilities, implement more business-like and professional practices (e.g. bookkeeping), and develop a more highly skilled and educated work-force (e.g. training in applying pesticides) while at the same time shifting much of the cost of compliance back onto growers. Outgrowers who do not have the capacity to implement GLOBALGAP find that either their product is directed by their buyer to less lucrative markets that are less rigorous in terms of standards, or they are dropped as suppliers altogether.

Conclusion

Within the agri-food literature, the growing power of supermarkets to govern their global value chains at the expense of producers has become an important area of investigation. From this perspective, greater market share has allowed retailers to improve their bargaining position in relation to their suppliers. With the majority of fresh produce now sold through a small number of supermarkets chains, producers who export to the UK and Europe have few alternatives but to deal directly with them. The establishment of GLOBALGAP by a handful of these retail giants would appear to exemplify this shift. The authority to establish and enforce the rules, standards and processes under which food is produced and sold is fundamental; it is through such institutional mechanisms that some stakeholders are able to determine who gets to participate in the fresh produce value chain and under what conditions, which has important implications for development. More recently, however, scholars such as Campbell and Le Heron have encouraged us to revisit the issue of supermarket power within the value chain. Their concern is that the rise in supermarket dominance might blind us to ways in which other actors might be able to maneuvre and establish or gain power for themselves.

To explore this tension within the literature, this article examined the response by large-scale producers and export companies – the traditional power holders – within the Chilean fresh fruit export sector to the establishment of GLOBALGAP. From the perspective of these actors, GLOBALGAP advanced not only retailer but also their own competitive interests, both as individual firms and as the Chilean fresh fruit industry as a whole, since implementing internationally recognized standards would enhance the sector's international competitiveness and reputation. Many participants viewed GLOBALGAP as the tool many in the industry had been looking for to accomplish these broader goals by helping them to modernize the sector and govern their value chains. At the same time, GLOBALGAP was a mechanism to drive out those growers unable – or unwilling (from the standpoint of some participants) – to meet the standards and achieve certification. Overall then, these changes were understood as necessary to help improve the safety and quality of the product, mitigate risk, and improve the reputation of major producers as socially and environmentally responsible.

Recognizing these benefits, major players within the Chilean fresh fruit export industry quickly established themselves within the organizational structure of GLOBALGAP. Their objective was to take a leadership role within the decision-mak-

ing processes to ensure that their voice was part of the negotiations over what standards GLOBALGAP would pursue, what these standards would look like, and how they would be implemented. With a seat at the table, these stakeholders could help ensure that standards remained 'reasonable' for growers and that grower concerns, such as harmonization among standards and increased flexibility to deal with labor standards, were addressed.

Over the past decade, the Chilean fresh fruit sector has continued to improve its competitive position in relation to other exporting nations and both the quantity and value of its exports continues to increase. Significantly, as Chilean fruit production has expanded to meet this growing demand many of the benefits appear to have accrued to major exporters who have held their own in a competitive market and to large-scale growers who have significantly expanded their presence within the sector. This case study helps illustrate that while the rising power of retailers is extraordinary, large-scale growers and exporters within the value chain have also found ways to use GLOBALGAP to negotiate, lead, and advance their own strategic interests helping to extend their position as world leaders in the export of fresh fruits.

Notes

1. At the time of this study, GLOBALGAP was known as EurepGAP. The name change came in September 2007 and is intended to reflect the organization's global significance and its position as the preeminent international standard for good agricultural practices (GAP). To avoid confusion, the organization is consistently referred to in this article as GLOBALGAP.
2. GLOBALGAP's sphere of influence continues to expand. While this research focuses on its fresh produce standards, GLOBALGAP has since developed standards to include crops (e.g. flowers and ornamentals), tea and coffee, cereal and livestock production (with standards for animal welfare), and aquaculture.
3. For this broader study, 52 in-depth interviews were conducted with participants who were selected to maximize variation and ensure that a range of perspectives and social positions within the Chilean fresh fruit export value chain were represented. Participants included growers, exporters, industry association representatives, third party certifiers, farm workers, farm worker representatives, government officials, trainers in GAP, European food retailers, and GLOBALGAP members. Content analysis was also performed on an extensive collection of related government, industry and GLOBALGAP documents, newsletters, data sets, and reports, as well as newspaper articles. Using NVivo, the interview and content analysis data was analysed using codes that were developed from my theoretical framework, my research questions, as well as inductively generated from the research process (Maxwell, 1998; Strauss and Corbin, 1998).
4. For a discussion on food regimes, see Friedmann and McMichael (1989); Campbell and Dixon (2009).
5. For example, Lawrence and Burch (2007, p. 21) report that 'the top 30 supermarkets grocery chains in the world control an estimated 33 percent of all global food sales'.
6. Good Agricultural Practices (GAP), Hazard Analysis and Critical Control Points (HACCP), International Organization for Standardization (ISO).
7. Membership is only accessible for those stakeholders who have the considerable time, money and resources necessary to participate. Individual supplier membership is €1,550 a year, while membership for produce groups or producer organizations is €2,550. To participate on a committee requires that the individual is available to attend four meetings a year, is able to develop an election proposal, and is able to find two other GLOBALGAP members to act as their proposer and seconder (EurepGAP, 2003).
8. For a recent summary of this literature, see Henson and Humphrey, 2009.

9. It is likely that landownership is more concentrated than indicated by formal land tenure since larger producers often own more than one farm, which is not reflected in the data (Barrientos et al., 1999).
10. Chile's Minister of Agriculture, Álvaro Rojas, explained that one of the state's goals is to become a global agricultural powerhouse and to 'be among the top 10 food-exporting countries in the world' (Santiago Times, 2006). According to the article, the rate of exports would have to double from its current value of US$8 billion to accomplish this.
11. Paraquat is a highly toxic herbicide, which is not banned in Chile but is classified by SAG as in 'restricted use'.

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Appendix

A total of 19 participants were interviewed. Interview participants included 11 growers and exporters ranging from small-scale, sub-contracted growers through to large-scale growers/exporters who contracted with numerous outgrowers. The number of contracted outgrowers utilized by four of these growers/exporters ranged from 10 outgrowers for the medium-scale, Chilean grower/exporter up to approximately 450 for the multinational grower/exporter. In terms of export volume, the five export participants interviewed control collectively at least 15% of the export market. Interviews were also conducted with representatives of the Ministry of Agriculture, the Agricultural Development Institute (Instituto de Desarrollo Agropecuario, INDAP),† the three leading auditing firms in Chile that conduct third party certification for GLOBALGAP, the Association of Exporters (ASOEX), the Fruit Growers Federation of Chile (Fedefruta), and Fundación Chile‡ (see Figure A1).

† INDAP is a subsidiary of the Ministry of Agriculture. Their main goal is to support the integration of smallholder farmers into the market.

‡ Fundación Chile is a non-profit corporation created by the Chilean Government and ITT Corporation of the United States to foster Chilean business and industry growth, especially through the development of new technologies. One of its priorities was to help develop third-party certification of fruit for export.

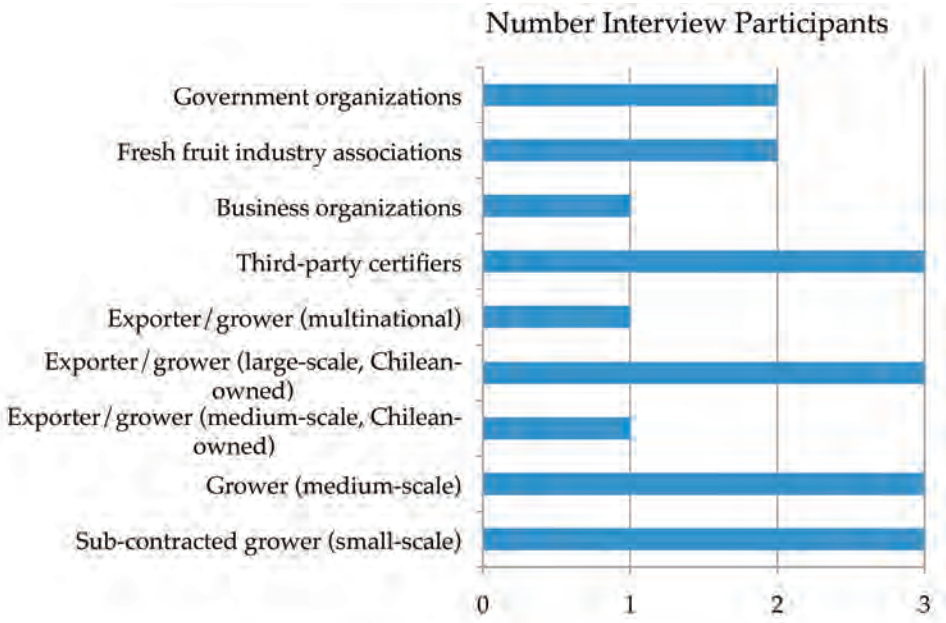

Figure A1. Categories and number of participants involved in formal interviews.

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Visiting a Farm: An Exploratory Study of the Social Construction of Animal Farming in Norway and the Netherlands Based on Sensory Perception

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Abstract. Most citizens in modern societies have little personal knowledge or experience of animal farming. This study explores the social construction of animal farming by studying how citizens perceive and evaluate modern farming after visiting a farm in real life. We wanted to understand how (non-farming) citizens develop an opinion of modern dairy farming when experiencing dairy farming in real life and practice, and how they translate what they see, smell and feel into an evaluative perception and mental image. We therefore conducted dairy farm visits with citizen panels in Norway and the Netherlands and asked the panel members to register what they saw, heard, smelled and felt and what they appreciated (or not) on the farm. The aspects that respondents registered could be grouped into four themes: the animals and their products, the rural landscape, farm practices and the farmer. When respondents described their experiences of these aspects on a specific farm, they appeared to look at them from three angles: modernity, tradition and naturality. Most respondents wanted farms to be modern, traditional as well as natural, but they were ready to negotiate and to accept compromises. Many respondents considered the farmer to be responsible for reconciling modernity, tradition and naturality. By taking different topics and issues into account and looking at animal farms from multiple angles, the respondents' developed a balanced and nuanced opinion of animal farming. The image that they constructed was not dualistic (arcadia versus factory) but pluralistic, thus at the same time more complex but also more flexible than expected. We expect that the development of a pluralistic image and balanced opinion was facilitated through the direct experience of dairy farming and farm life.

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The article starts with a theoretical analysis and aims to contribute to recent debates in rural sociology in two ways: 1) it studies how material experience and mental perception interact in the construction of an evaluative image of animal farming; and 2) it explores the social construction of animal farming as embedded into to the construction of nature, rurality and human-animal relationships. It concludes by discussing the contribution of the findings to the ongoing theoretical debate in this field.

Introduction

Modern Western societies are urbanized societies, in which most people have hardly any experience with farming (e.g. Cloke, 1997). In such societies, farming and the countryside acquire specific meanings. In the present article, we describe such meanings on the basis of dualistic contrasts. One of the contrasts in relation to farming and the countryside is that, 'life on the land' represents the good life compared to life in the city. Farming is portrayed as a more natural, authentic life, away from the artificiality of life in the cities (Eder, 1996). The countryside is romanticized and described as 'arcadia' – a place where people, and especially farmers, live close to animals and in harmony with nature (van Koppen, 2002). In this vision, the city is viewed as 'Babylon' – a crowded, noisy and dirty place where life is stressful and dangerous (Short, 1991; Frouws, 1998). Although agriculture is part of the rural idyll, it is at the same time under increasing criticism for putting the environment, food safety and animal welfare at risk (Frouws, 1998). Here reference is made to the 'unnatural' developments occurring on modern farms, their industrial character and the resulting careless and disrespectful treatment of animals and nature (Fraser, 2001). Over the last decades, animal farming is more and more confronted with public concern and criticism, which raise the question how the different images of animal farming are interacting within contemporary social imagination and how they are constructed as contrasting but also supplementing and fluent images, as they are neither 'given' nor stable. The present study explores the ongoing social construction of animal farming by studying how citizens translate what they see during a farm visit into an evaluative mental image of animal farming.

In order to understand how these images are constructed, it is important to consider the embeddedness of people's knowledge and experience and the context in which their opinions are formed (Macnaghten and Urry, 1998; Carolan, 2008). As we have argued above, most people in modern societies have little personal knowledge or experience of farming; their opinions are often based on second-hand information, often obtained from newspapers and television (Cloke, 1997). They are therefore often considered as laypersons and have been excluded traditionally from agricultural research, which is strongly expert-oriented with a firm belief in agricultural science and technology. Animal farming is one of the many issues or sociotechnical controversies where a debate with the public has long been avoided but would be highly desirable and necessary (Callon et al., 2009). Callon and others (2009, p. 108) refute the general view of experts that laypersons 'don't know what is good for

them', and that studying public perceptions of technologies are interesting only for promoting the public acceptance of these technologies (Callon et al., 2009). Instead, they plead for interaction and cooperation between different actors involved in sociotechnical controversies, in which the different actors – including laypersons – are given the opportunity to learn from each other (Callon et al. 2009). Several studies about laypersons' perceptions of animal farming – particularly about animal welfare – have been conducted over the past years, mostly in the form of survey studies (e.g. European Commission, 2005; Glass et al., 2005; Boogaard et al., 2006; María, 2006). Although laypersons are able to express their opinion in survey studies, learning possibilities remain limited. The present study tries to enable learning by taking citizen panels to farms, as thus to give citizens (as laypersons) the possibility to experience an animal farm in real life and to learn about animal farming when forming their opinion.

Our aim then is to understand how (non-farming) citizens develop an opinion of modern dairy farming when experiencing dairy farming in real life and practice, and how they translate what they see, smell and feel into an evaluative perception and mental image. More specifically, we aim to answer the following questions:

1. What do citizens notice on a dairy farm?
2. Which of these aspects of dairy farming do they appreciate and consider as important to preserve for the future?
3. Why do they consider these aspects as important to sustain?
4. Do citizens of different countries, in this case the Netherlands and Norway, differ in what they notice and appreciate on dairy farms and how do they express their appreciation?

The article is divided into five sections. After the introduction, we discuss the recent debates in social theory about the social construction of nature, animals and rurality. We believe that these debates are relevant for understanding how citizens construct their image of animal farming. The third section describes the research methodology (farm visits with citizen panels) and the research locations in the Netherlands and Norway. In the fourth section we present the empirical findings. The fifth section provides the conclusions and discussion.

The Social Construction of Animal Farming

Over the last decade, there has been an increasing interest among rural sociologists in the social and cultural meanings of rurality, nature and – more recently – animals in modern society. By now it is generally accepted that these understandings and relations change over time and are context and place specific. This interest coincides with the cultural turn in rural studies (Barnett, 1998; Cloke, 1997; Philo, 2000; Morris and Evans, 2004; Cloke, 2006). Although the cultural turn in rural studies paid much attention to the social construction of nature, the social construction of rurality (Cloke, 1997) and human–animal relationships, it has somehow by-passed the agricultural sector (Morris and Evans, 2004). The present study contributes to this field

by exploring the social construction of animal farming and its embeddedness in the construction of nature, rurality and human–animal relations.

The theory of social constructivism has been widely applied since Berger and Luckmann (1967) first wrote about it, and has been interpreted in many different ways (Sismondo, 1993; Demeritt, 2002). Generally speaking, the theory departs from the idea that phenomena are socially constructed and that they would be different if constructed in another society, with different values, needs or interests (Boghossian, 2001). More recently, social constructivism is criticized for focusing on the social and cultural meanings of phenomena and ignoring the influence of materiality – how material or physical characteristics contribute to the construction of a phenomenon and its meaning and have, as it were, their own role to play (e.g. Demeritt, 2002; Castree and Braun, 2006). The present study attempts to address this critique by confronting the respondents directly with the materiality of animal farming. We asked the respondents to notice and consciously experience the material world through sight, smell and noise, and to reflect upon these material experiences while forming an opinion. During the analysis, we aimed at getting insight into the (selective) process of sensory experience, evaluation and mental perception or image construction, in order to better understand their construction of animal farming.

In summary, this study aims to contribute to recent debates in rural sociology in two ways: 1. it studies how material experience and mental perception interact in the construction of an evaluative image of animal farming; and 2. it explores the social construction of animal farming as embedded into the construction of nature, rurality and human–animal relationships.

The Social Construction of Nature

Recent social theory departs from the idea that nature is socially constructed and constituted symbolically rather than objectively given (Greider and Garkovich, 1994; Eder, 1996; Macnaghten and Urry, 1998). The way in which nature is perceived depends on its historic, geographical and social context and is culturally defined (Eder, 1996). There is no one singular nature, only natures (Macnaghten and Urry, 1998). In the past, nature was often depicted as wilderness, a dangerous place or an intimidating force that needed to be tamed (Short, 1991). Modern day society conceptualizes nature in several ways. On the one hand, nature is considered as 'Arcadia' (van Koppen, 2000) – a realm of purity and moral power, to be enjoyed or worshipped (Eder, 1996). At the same time, nature is seen as being under threat from modern society's drive to control and dominate nature (Eder, 1996) and to use it as a production resource (van Koppen, 2000). With new technological developments, domination all too easily turns into exploitation and (potentially) destruction (Macnaghten, 2006). Nature therefore needs to be protected and preserved, ultimately in order to safeguard the future of humanity.

Farming plays an important role in both these conceptualizations of nature. It figures as a threat to nature because of the negative effects of modern production methods (Eder, 1996; Franklin, 1999). But farming may also figure as part of nature

and its preservation, especially when traditional and 'natural' production methods are employed (Macnaghten, 2004). In the latter concept, the traditional farm is an important element of the countryside and natural rural landscape, and therefore part of the rural idyll and pastoral myth.

The Social Construction of Rurality

Social understanding of 'the rural' changes over time and place. Compared with urban areas, the countryside may be pictured as remote, backward and unsophisticated but also as honest and authentic, safe and clean. While social perceptions of the rural idyll are persistent, their precise interpretation varies according to time and place (Short ,1991, 2006; Bunce, 2003; Cloke, 2003; Horton, 2003). In general, the rural idyll only acquires meaning in contrast to an un-idyllic other one (Short, 1991), and 'the concept can be used as an ongoing point of reference to less complex ways of simpler and more honest endeavour, and keying into fundamental human desires to sustain some harmony with nature and community' (Short, 2006, p. 146). Farm life is part of this romantic picture representing the good and traditional way of life in which people live in harmony with each other, with nature and with animals. Farmers are not so much producers in this pastoral myth but act more as proverbial shepherds, watching over and caring for their animals.

After World War II, farming became increasingly mechanized and rationalized and anti-idyllic images of animal farming came into being (Bell, 2006). Since then 'the pastoral myth has been sullied by the use of pesticides, and fertilizers and by the emerge of factory farming systems where cows never feel grass beneath their feet and hens live and die in small cages in sunless rooms lit only by electric light' (Short, 1991, p. 38). With modernization, farming became the offender instead of the defender of idyllic traditions and one could even say that the idyll has 'been turned against' farming (Short, 2006, p. 143). Increasingly, citizens have become concerned about damage to the environment, the destruction of cultural landscapes, the loss of farming traditions and about food safety and animal welfare. However, the rural idyll appeared remarkably persistent, in the sense that people seem willing to 'forget' or 'close their eyes' for the production-side of farming in favour of the idyll (Franklin, 1999), and over the last decades the countryside became disconnected from agricultural production (Frouws, 1998).

Human–Animal Relationships

The relationship between farm animals and humans has been described as the oldest and most intimate of all society–nature relations (Buller and Morris, 2003), but it is also an ambivalent relationship (Eder, 1996). The ambivalence can be traced back to the two classical and dichotomous conceptualizations of nature described above: as being wild and to be controlled, and as vulnerable and to be protected (Eder, 1996; Macnaghten and Urry, 1998). On the one hand, farm animals represent the modernist conception of nature as wild and to be tamed, domesticated, husbanded and con-

trolled (Buller and Morris, 2003). Using farm animals for human purposes is part of the desired and taken-for-granted dominance of humans over nature. In contrast, farm animals symbolize nature and 'the rural', which, in the post-modern romantic construction, need to be reified and protected (Eder, 1996). They embody rural traditions (e.g. traditional breeds) and colour and animate the landscape with their presence and diversity (Yarwood and Evans, 2000; Buller, 2004). In this symbolic role, animals are seen as 'icons of nature and rurality' (Buller, 2004, p. 139), which should be looked after by caring farmers and should lead a good and happy life. But at the same time, farm animals are kept in 'factory farms', where they are turned into a means of production and become 'victims of a greedy, global economy' (Franklin, 1999, p. 3), just like nature. Consequently, farming practices are called into question, raising, for example, animal welfare issues (Buller and Morris, 2003).

Furthermore, emotional and social ties with animals increased in the twentieth and twenty-first centuries, which gave them a rather paradoxical position (Tovey, 2003; Macnaghten, 2004; Wilkie, 2005). This means that, due to increased empathy, we feel connected to farm animals, but use and eat them as meat at the same time. This instrumental value clearly distinguishes them from being human.

To summarize, human–farm animal relations in the twentieth and twenty-first centuries are complex, ambiguous and even paradoxical (Yarwood and Evans, 2000; Buller, 2004; Macnaghten, 2004; Jones, 2006). Societal values have shifted, in the sense that production and economic purposes of animal farming are no longer taken for granted (Buller and Morris, 2003). Instead, animal farming also reflects values of nature, culture, rurality and empathy towards farm animals. The present study tries to gain further insight in 'the complexities, paradoxes and messiness' (Jones, 2006, p. 197) of human–farm animal relationships by better understanding how citizens construct their image of animal farming. The present study therefore starts literally at the farm gate by taking people to an animal farm.

Research Method

In order to investigate citizens' opinions about present-day farming, we organized dairy farm visits and asked the participants to observe the farm and to register and elucidate their observations. The following section explains the research methodology in more detail.

Research Locations

The study was based on the idea that nature, the rural and human–animal relationships are socially constructed and hence are culturally defined (Greider and Garkovich, 1994; Eder, 1996; Macnaghten and Urry, 1998). As a result, we expected the constructions of dairy farming to differ between countries. On the basis of the literature review (above), we anticipated that the extent of urbanization, population density, land use, geography, and the relative abundance and character of natural areas would contribute to these constructions. For this reason, we decided to compare

the Netherlands and Norway; both are developed, modern and high-income countries, but vary considerably with regard to their geography, population density and land use. The Netherlands is highly urbanized, has a high population density (484 people/km^2 in 2003; CBS, 2007) with a large part of its land under cultivation (55.5% in 2003; CBS, 2007) and only a few small nature areas, all of which are man-made and managed. Norway is less urbanized, has a low population density (15 people/km^2 in 2006; SSB, 2007) with large areas of 'wild' and relatively unmanaged nature and only a small part of the land used for agriculture (3.2% in 2006; SSB, 2007).

We decided to focus on dairy farming as it is a prominent and traditional sector and occupies a relatively large part of the agricultural land in both countries. It has been practiced for hundreds of years and people in both countries associate animal farming with dairy farming (Haartsen et al., 2003). Moreover, in both countries, the aesthetics of the countryside have been, and remain, strongly influenced by dairy farming: pastures with grazing cows are considered to be a tangible feature of the countryside. Besides, dairy farming is less intensive and less contested compared to other sectors, such as pig or poultry farming; and it was expected that dairy farming would give people the opportunity of experiencing farming with less preformed opinions, and of noticing a bigger variety of aspects, than in more intensive systems which are 'known' to have 'animal welfare issues'. But, of course, the exclusion of intensive farming is a shortcoming of the present study, as people most likely experience pig or poultry farming differently. One should be careful, therefore, with extending the presented findings to more intensive farming systems.

In the Netherlands, dairy farming has been modernized considerably since World War II, when Dutch farmers were stimulated to produce as much and as efficiently as possible, resulting in highly productive dairy farms. In recent years, Norwegian agriculture has also been stimulated to become more cost effective (Storstad and Bjørkhaug, 2003). To survive financially, two types of dairy farms are developing. The first, 'organic dairy farming', can be seen as a continuation of the traditional, relatively small-scale pattern of dairy farming in Norway. The second type is called *samdriftsfjøset* (joint-shed farm), in which several farmers merge their farms and cattle herds and build one large *fellesfjøset* (cubicle shed). Farmers manage the joint-shed farm together in order to produce as efficiently as possible for the conventional market.[1] To give the respondents a realistic idea of dairy farming, we selected farms that represent the most common practices in each country. In the Netherlands, we selected six average dairy farms located in three different areas; in each area, one of the farms was involved in nature and landscape conservation. In Norway, we selected one organic and one joint-shed farm in the same area. Due to time and financial restrictions, we were unable to include more farms and citizen panels in Norway. In the analysis, we did not differentiate between farms, because of these small group sizes.

Data-gathering Method: Farm Visits – Lived Experience

In modern society, many citizens know little about animal farming from first-hand experience; they hardly know where their food comes from, how it is produced or

what animal farming actually entails (Holloway, 2004). There seems to be a 'collective blanking out' of animal farming and especially of those aspects that involve the use of animals (Macnaghten, 2004). Following Franklin (1999, p. 127), livestock production systems have been 'deliberately obscured from the sensitive and critical public gaze' from the nineteenth century onwards. As stated in the introduction, most citizens can therefore be considered to be 'laypersons' on animal farming. There are different methods for involving the public into research, such as focus-group discussions, consensus conferences and panel studies (Callon et al., 2009). This study made use of panel studies, by conducting farm visits with (non-farming) citizen panels, because this methodology gave citizens the opportunity to learn about dairy farming through lived experience. As such, this process allowed laypersons to gain a better understanding of dairy farming when forming their opinion. Learning opportunities are limited when compared to other methodologies such as consensus conferences, in which different actors (e.g. scientists, laypersons, technicians and politicians) are cooperating for a longer period of time and are in search for a common world (see also Callon et al., 2009). However, the aim of the present study was not to search for a common world for animal farming or to facilitate participatory decision-making. Our aim was simply to explore the process of construction of meaning and the role of lived material experience. Lived experience involves sensing, feeling and knowledge, and it gives insight into people's perceptions of reality. This matches the notion that social practices are embodied, and experienced through the body rather than grasped purely at an intellectual level (Macnaghten and Urry, 1998; Carolan, 2008).

In total eight panels (with eight respondents in each) visited eight farms. Each panel visited two farms on the same day, with the sequence of the visits changing for each panel. In the Netherlands, the farm visits took place in the spring and autumn of 2005 with six citizen panels visiting dairy farms in three areas (Friesland, Brabant and Zuid-Holland). In Norway, the visits took place in autumn 2006 when two citizen panels visited two dairy farms in one area (Vestfold).

The farm visits were organized in the following way. First, the farmer told his or her story about the farm. Each respondent received a hand-out with specific information about the farm (land area, number of animals, litres of milk produced, etc.). Next, the farmer gave the respondents a guided tour of the farm and land. Thereafter, the respondents walked around unaccompanied while responding to a questionnaire.

The questionnaire focused on sensory perceptions, on the grounds that sensory perceptions are the primary basis for reflection (Merleau-Ponty, 1970) and provide a way to gain insight into people's experiences (Krogh, 1995; Krogh and Clementsen, 2004; Carolan, 2008). We asked the respondents to note down what they smelled, heard, saw and felt; we also asked them to indicate if their perceptions were positive, negative or neutral and to try to explain their judgments. In addition, each participant received a digital camera and recorded 10 pictures per farm representing valuable aspects of the farm, which, in their opinion, should be preserved for the future. A few days after the farm visits, the respondents received their pictures by post. We asked them to select five pictures per farm that represented the most valu-

able aspects, to explain their choice and to send the pictures and explanations back to us.

Data Analysis

The questionnaire was designed in Dutch and translated into Norwegian by a bilingual Norwegian. With perceptions and feelings a correct understanding and interpretation of words is of crucial importance. In order to analyze the Norwegian and Dutch data, one of the Dutch authors learned Norwegian. She translated the Norwegian data into English and discussed her translation and interpretation with the Norwegian author. For the analysis of the data we used the programme ATLAS.ti (2006). We created two databases: one Norwegian (with English translation) and one Dutch. Each consisted of one document per respondent: a total of 16 and 47 primary documents, respectively. The analysis followed four steps, in line with the four research questions. In the first step, we identified what the respondents registered when experiencing the dairy farms. In the second step, we analysed which aspects respondents evaluated as positive and important to preserve. We then analysed respondents' explanations of their choices and, finally, any differences and similarities between the Norwegian and the Dutch respondents. We wanted to better understand how people construct their images of animal farming and, therefore, we asked them to consider how they perceived and experienced the farm through the senses. In the analysis, we did not differentiate between perceptions per sense, because we were interested in perception as a whole.

Respondents

In the Netherlands, we selected the respondents from the CAPI@HOME database of the Dutch Institute for Public Opinion (NIPO), using the following selection criteria: age, gender, educational level, place of residence (urban or rural) and value orientation.[2] In Norway, we used the same selection criteria, except for value orientation. We approached people personally by telephone, inviting them to participate. Respondents in both countries received modest financial compensation for taking part, to ensure that not only people with interest in agriculture would participate. Table 1 gives an overview of the composition of the panels in both countries. Because of the small group sizes (particularly in Norway), we did not look for differences between social groups but for differences between countries. Moreover, a quantitative follow-up study in the Netherlands focused on differences between people.

Empirical Findings

The empirical findings give insight into the social construction of animal farming and follow the structure of the research questions. We have illustrated our findings with quotes from the participants. After each quotation, we note the participants' nationality and number, e.g. NL-14.

Table 1. Composition of six citizen panels in the Netherlands and two in Norway.

Country	Netherlands[1]		Norway[1]	
Selection criteria	Intended	Actual	Intended	Actual
Number of panels	6	6	2	2
Total number of citizens (8 per panel)	48	47	16	16
Age range (years)	18–75	18–75[2]	18–75	14–82[2]
Gender (% female)	50	51	50	50
Urbanization (% living in urbanized areas)	50	51[3]	50	62.5[3]
Educational level (% higher educated)	17[4]	36	19.6[4]	12.6

Source (note 4 only): CBS, 2007; SSB, 2007.

Notes: [1] The intended numbers are based on the planned design; the actual numbers show the actual composition of the citizen panels. [2] Netherlands: $\mu = 44.0$, min = 18, max = 75, s.d. = 15.5; Norway: $\mu = 46.0$, min = 14, max = 82, s.d. = 22.6; [3] Netherlands > 1,000 addresses per km^2, 8 missing values (= 1 panel); Norway > 300 inhabitants per km^2. [4] Netherlands: average % higher educated (at least 'bachelor degree'). Norway: average % higher educated (at least 'short tertiary education').

Four Themes

What the respondents registered on and around the farms could be grouped into four themes: the animals and their products, the rural landscape, farm practices and the farmer. Responses within the *animals and their products* theme include references to the variety of animals on the farms: dairy cows, calves and bulls, as well as sheep and chickens. Respondents also noticed the animal products, such as milk and meat for human consumption; and they often noted details about how the animals were kept and cared for: inside or outside, type of shed, feeding management, and the use of cow mattresses and electric rotating cow brushes.

The *rural landscape* theme contains the respondents' observations about the farmyard and the house, the garden, sheds, barns and silos, farm machinery, fields and pastures, fences, shrubs, trees, flowers, farm animals and wildlife.

The *farm practices* theme includes all references to the use of technological innovations, such as a manure scraper, a concentrate box, a feeding chip and a computer. This theme also included recognition of organizational aspects of dairy farming – for instance, that the farm was run as a family farm or that the farmer lived on the farm and combined work and family life.

Under the theme the *farmer* we grouped all the observations relating to the farmer and his/her personal and professional characteristics, such as enthusiasm, motivation, engagement, close contact with animals, professionalism and level of education.

Positive Aspects

We structured and analysed the phrases used by respondents when explaining why they appreciated certain aspects of the farm and of farm-life and why they considered these important to preserve for the future. In these explanations, participants referred to specific elements (e.g. machinery) and the feelings that these aspects evoked (e.g. happiness, nostalgia, fear, surprise or admiration). When the respondents explained what they liked or disliked about what they experienced on the farm, they tended to use terms as 'cosy' and 'idyllic' but also 'efficient' and 'unnatural'. Their evaluations

resulted from reconsidering their experiences from the following three angles of vision: modernity, tradition and naturality. Modernity in farming refers to a continuing process of rationalization, searching for the most productive and efficient farming systems by making use of high levels of technology. Tradition refers to our past and rural way of life. Farming traditions include collective representations and customary ways of doing things, such as the involvement of family members in the farm. And third, farming reflects 'naturality' through farming's intimate interactions with nature, animals and the soil but also through its dependence on nature – on the rain, the wind and the sun. On the basis of these three angles of vision, we schematically summarized a selection of responses (one per theme).

Animals and their Products

Table 2 summarizes those aspects about *animals and their products* that the respondents evaluated as positive and important to preserve. Respondents in both countries appreciated that the farms produced food (milk) for human consumption and the modern, and thus hygienic and safe, way in which food was produced (part of modernity). Norwegian responses included the view that food produced in Norway was important for safeguarding public health.

> 'We all need to have food. Times of crisis might come and then it is good to produce sufficient food ourselves. Nowadays we can buy cheap food from abroad, but we can never be sure about their use of biocides. Let us buy Norwegian food with the guarantee that the products are fresh and free of pesticides' (NO-2).

Participants from both countries appreciated the way in which animals were kept in contemporary, modern farms and the use of innovative devices such as cow mat-

Table 2. Dutch and Norwegian citizens' appreciation of dairy cows and products.

Angle of vision / Country	Modernity	Tradition	Naturality
Netherlands	*Food production*: milk production, human needs, production oriented. *Modern achievements*: hygiene, good product quality. *Technological innovations*: cow mattresses, electric rotating cow brushes, automatic feeding.	*Dutch culture*: cows in the pasture, variation in animal species (e.g. sheep or chickens), typical Dutch products (e.g. cheese).	*Animal nature*: natural environment, natural feed, freedom to move, being able to go outside (cows in the pasture), eat and drink when they want, birth, natural mating, cow and calf living together.
Norway	*Food production*: milk production, production oriented. *Modern achievements*: hygiene, food safety, public health. *Technological innovations*: cow mattresses, electric rotating cow brushes, igloo huts (outside calf pens).	*Norwegian culture*: natural way of farming, variation in cow breeds (e.g. Jarlsberg), taking care of traditional breeds (should not become extinct), variation in products (not mono-production).	*Animal nature*: freedom to move around, freedom to choose (in- or outside), cows in the pasture, eat and drink whenever they want, fresh air, natural manure, natural mating.

tresses, electric rotating cow brushes and automatic feeding technologies, which, in their view, increased animal welfare as well as production efficiency. Dutch respondents valued grazing cows and dairy products such as cheese and milk, because they preserved Dutch culture and identity (part of tradition).

> 'For me dairy farming is part of Dutch culture: Dutch cattle in the pasture, black-pied in the north and red-pied in the south, has defined the Dutch landscape through the years. Also Dutch cheese is famous all over the world' (NL-25).

In Norway, respondents valued the diversity and variety in both animals and products at the farms and the presence of traditional cow breeds, such as Jarlsberg cows, rather than Norwegian Red cattle (part of tradition). In addition, they appreciated the variety of food products in contrast to monoculture. Dutch respondents considered it important to preserve the 'animals' naturalness', and they expressed the view that farm animals should be kept in an environment that resembles nature as much as possible. Animals should have enough freedom of movement and the opportunity for expressing their natural behaviour. Dairy cows should therefore graze in pastures (part of naturality).

> 'In my view cows belong outside. A cow is a social animal and needs to have as many opportunities as possible for expressing her natural behaviour in a natural environment' (NL-39).

For the same reason, they wanted calves to stay with their mothers and not be taken away shortly after birth. Norwegian respondents also appreciated a 'natural situation' in animal husbandry, which ensured 'natural animal keeping'.

> 'I value this photograph as it portrays Jarlsberg cows… They look very well taken care of; they are beautiful cows, and not pressured to produce an enormous amount of milk; they produce 5000 l/year, which is animal friendly. Traditional breeds naturally belong on this farm; they continue to keep animals in a natural way, as in the past' (NO-11).

Norwegian participants referred to 'natural animal keeping' as the traditional way of farming (part of tradition) whereas Dutch respondents underlined the need for the environment to be as natural as possible (part of naturality). In both countries, however, the freedom of animals to move, drink, eat and rest whenever they wanted, as well as their ability to graze outdoors all year round, were of utmost importance.

The Rural Landscape

Table 3 gives an overview of the respondents' appreciation of the *rural landscape*. Participants from both countries appreciated the idyllic beauty of the rural landscape and its reflection of their country's culture and traditions (part of tradition). The sound of a tractor, the smell of cows and straw, and the peaceful rural environment evoked childhood memories and feelings of nostalgia. Wind, fresh air and the sounds of birds (part of naturality) were tangible aspects of such a quiet and peaceful environment and evoked relaxed and happy feelings. Norwegian respondents valued the

Table 3. Dutch and Norwegian citizens' appreciation of the rural landscape.

Angle of vision / Country	Modernity	Tradition	Naturality
Netherlands	*Productivity*: Monotonous production landscape.	*Cultural landscape*: 'typically Dutch', beautiful, characteristic for the region, idyllic, romantic picture, history, cultural heritage, preservation value. *Nostalgia*: emotional matter, old-fashioned, memories, farm smell, pleasant, cosy, peaceful environment.	*Nature*: let nature run its course, natural balance, 'helping' nature, silence, bird sounds, peace and quiet, open landscape, beautiful to see, wind, fresh air. *Pleasant experience*: feeling of freedom, being outside, being happy, relaxing, healthy, holiday feelings.
Norway	*Productivity*: viability of the countryside.	*Cultural landscape*: classical for Norwegian agriculture, taking care of the landscape, beautiful, aesthetic, attractive, fresh air, healthy life at the farm, pleasant, attractive, positive experience, quiet. *Nostalgia*: sound of tractor, smell of cows, the way it should be (smell and sounds), cosy, old-fashioned, home-made, melancholy, memories of childhood.	*Wilderness frontier*: prevent expansion of forest and scrubs, transition area to the forest.

fred og ro (peace and quiet), which the Dutch respondents described as *rust en ruimte* (quiet and open space). Although they used slightly different terms, they were expressing the same value: a peaceful and quiet countryside as a counterweight to 'the stress of daily life'. Both Dutch and Norwegian participants also valued the openness of the rural landscape, although for different reasons: Norwegian respondents expressed their fear that the forest may take over the land if farmers stop cultivating it (part of naturality).

> 'This picture [of cows in the pasture] is most valuable to me, because [it is] important that the growth of forest and bushes is restricted. At the same time, the cows are able to graze in the open landscape' (NO-16).

Dutch respondents appreciated the open farming landscape as a buffer to urbanization.

> 'The Netherlands is becoming too full and over-urbanized. The countryside has to stay as it is, as a counterweight to progressing urbanization' (NL-17).

Dutch respondents appreciated the rural landscape as a green area and as part of naturality. They described the rural landscape as a 'natural' landscape that should contain a variety of farm animals (part of nature).

> 'This picture of sheep and lambs is valuable to me. This is how I see nature' (NL-13).

In Norway, respondents valued the rural landscape as a 'cultural landscape', contributing to national culture and identity (part of tradition).

> 'Dairy farming has a hundred-year-long tradition in Norwegian cultural life and for me Norway without dairy production is unthinkable' (NO-5).

In both countries, several participants stressed that they preferred a varied landscape (part of tradition) to a monotonous one (part of modernity).

> 'I really like the variation and I think that most people appreciate this. [I value] the contrast between the pastures and the ditches and a few trees or sometimes a pool. A varied landscape makes you more curious, you are more taken up by it. I really miss that in a monotonous landscape' (NL-46).

One Norwegian respondent considered it important that dairy farming contributed to the viability of the countryside (part of modernity). Others explained that they wanted to see and enjoy the rural idyll and therefore associated the rural landscape with values of tradition and nature rather than with production or modernity.

Farm Practices

Table 4 illustrates the respondents' appreciation of *farm practices*. Respondents in both countries valued technological developments (part of modernity) for two reasons. First, technology reduces farm labour and increases efficiency; this should contribute to increases in farm income and the farmers' free time. In Norway, participants considered more free time as an important advantage of joint-shed farming. Second, technological innovations reduce heavy work burdens.

> 'Farm work has become easier on modern farms. The sheds are more spacious and allow the farmers to work more efficiently. There are computer-controlled feeding boxes (with ear chips) and the milking parlour is adjusted to the farmers' way of working' (NL-5).

But Dutch and Norwegian respondents also wanted to preserve farming traditions. They were glad that the farmers' families were still involved in the farm. And, they gave a high value to farmers' frequent and close contact with their animals.

> 'Of course there is the contact between humans and animals… This contact is really part of being a farmer. It is about life. I think this is the joy of being a farmer, working with living beings… I can imagine that it greatly enhances the value of your work when you work with animals' (NL-43).

A close and personal farmer–animal relationship demonstrated to the visitors that the farmers took good care of the animals, as it was in the past. In addition, the participants referred to the continued importance of manual labour as a positive feature, even if the farm might be a bit messy as a result. Both contact with animals and the enduring importance of manual, artisanal work made dairy farming seem different from other, more industrial economic sectors. Several respondents found it important to preserve such traditional characteristics, which satisfied a sense of nostalgic longing. Dutch respondents appreciated the link with nature, expressing this through their appreciation of wildlife (birds) and nature conservation. In Norway, respon-

Table 4. Dutch and Norwegian citizens' appreciation of farm practices.

Angle of vision / Country	Modernity	Tradition	Naturality
Netherlands	*Modern achievements*: less heavy work, good control, machines, impressive, necessary, progress, clean, innovation, renewal, good for animals, efficiency, sufficient income.	*Pastoral myth*: cosy, taking care of animals and humans, working with living beings, knowing the animals, giving attention. *Rural idyll*: personal time schedule, being free to do what you want, family, harmony.	*Nature*: in touch with nature, love for nature, taking care of nature, actively involved in nature, protecting birds, conservation of plants and birds.
Norway	*Modern achievements*: clean, tidy, practical, new, useful, modern, economically based, effective, very modern, good working conditions, increased efficiency, lightens work.	*Pastoral myth*: humans need animals, people and animals together, working with living beings, taking care of animals, name plates for the cows (personal relation), farmer knows every cow, creating everything that lives. *Rural idyll*: always something to do, farmer and wife, family, children.	*Wilderness frontier*: prevent expansion of forest and scrubs, transition area to the forest.

dents appreciated the fact that farmers kept the forest back and prevented wilderness from encroaching onto the open landscape.

The Farmer

Table 5 illustrates how the respondents' described their perception of the *farmer*. Here the phrases used could not be categorized into the categories used above (modernity, tradition or naturality). All the expressions referred to the personal characteristics of the farmer, either as a 'human being' or as a 'businessman'. Participants in both countries valued the farmers for similar reasons. They admired their strong motivation, passion and enthusiasm for their farm and profession.

> 'The farmer! Without him there would be no farm, no milk and the countryside would not be put to use. I admired that the farmer talked about his profession with so much love, that he was creative in innovating and had a positive vision of the future' (NL-36).

The participants valued the closeness of the human–animal contact, not only for the sake of the animals, but also as part of the joy of being a farmer. They also admired the farmers' entrepreneurship, their freedom to organize and manage the farm and their up-to-date knowledge and high level of education. The latter was underlined by Dutch respondents.

> 'It is a large farm with few workers. Such an efficient enterprise demands a lot of knowledge and expertise. This deserves respect: there are no "stupid" farmers anymore' (NL-23).

Table 5. Dutch and Norwegian citizens' appreciation of the farmer.

Country	
Netherlands	*Type of man/woman*: way of life, love for animals, honesty, enthusiasm, affinity, the farm is at the farmer's heart, friendly, being happy, hospitable, respect, admiration. *Entrepreneur*: manager, businessman, dynamic, realism, much knowledge, proud, trust, openness, being content, creativity, diversity, eager to work, skilled.
Norway	*Type of man/woman*: joy, happiness, harmony, idealism, enthusiasm, optimism, have faith, willingness to contribute, down-to-earth, friendly, honesty. *Entrepreneur*: realistic, creativity, flexibility, vigorous, capability, hospitality, freedom, clever, knowledge, experience, strategic thinking, good planning.

Dilemmas and Balances

In this step of the analysis, we explore how respondents weighted conflicting aspects against each other and what they saw as a satisfying balance. We found that respondents expressed concerns about potential imbalances and dilemmas between modernity, tradition and naturality. The entwinements between the three angles of vision can be illustrated as a threefold knot (see Figure 1). The knot reflects that the three angles of vision are complementary parts of the whole. Each component influences another. Moreover, the threefold knot avoids notions of hierarchy or priority – all three angles of vision are equally important. And finally, a threefold knot shows the complexity of the interrelations better than a 'standard triangle'; the relationships appear less linear and the angles of vision are not represented by a single dot but by a more diffuse and flexible shape, that can represent transitions between, for example, modernity and tradition or naturality and modernity. Below we describe the balances and dilemmas for each theme.

Animals and their Products

Many Dutch respondents expressed concern about modern dairy farming being unnatural and in conflict with nature. They specifically referred to the separation of calf and cow, calves being fed with milk powder rather than their mother's milk, the use of artificial insemination instead of natural mating, the short lifespan of farm animals and 'unnaturally' high milk production per cow.

> 'Production comes first. I understand that a farm has to function like a business and that milk production needs to be as high as possible. But I feel a bit of resentment too. Because what is best for the animals? As humans where are we going?' (NL-43).

Several respondents recognized that such modern aspects are inherent to dairy farming today and that this reality should be faced.

> 'On the other hand I am quite realistic: it is an enterprise after all. When cows are no longer able to produce milk… they should go to the slaughterhouse. If you do not want to face that reality, you should not buy milk' (NL-36).

Sometimes naturality and modernity complemented each other. Dutch respondents mentioned, for example, that innovations, such as cow mattresses, increased the naturalness of the environment by imitating it or by compensating for a lack of it.

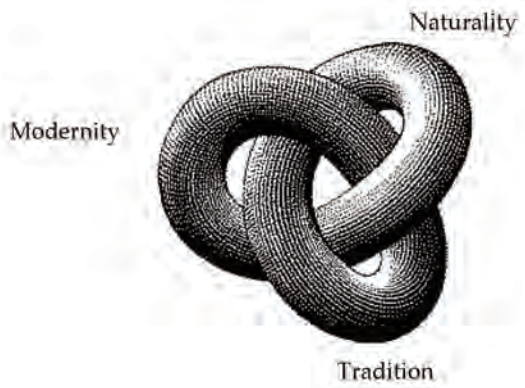

Figure 1. Threefold knot representing relations between Modernity, Tradition and Naturality in animal farming.
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> 'This picture [of a cow shed] is valuable to me because the cow has sufficient space to move around; she is not tied in a box. The half-open shed copies the natural environment as much as possible' (NL-39).

Norwegians were less concerned about the conflict between naturality and modern production than the Dutch respondents, although they were also worried about the short lifespan of production animals.

> '[I feel] wistful. Short lives. More the feeling of an industry' (NO-3).

Norwegian respondents accepted that cows were kept for production purposes. And while Norwegians valued a 'natural way of keeping animals', they did not necessarily see this as being in conflict with using modern equipment, such as individual housing for calves in modern 'igloo huts' (outside calf pens).

> 'This picture [of a calf in an igloo hut] is valuable to me because it shows that the calves are well taken care of and looked after. The calves can eat hay exactly when it suits them… And when I see this calf in a 'private' and large pen alone with a lot of hay, it makes me happy. That is exactly how it should be (NO-9).

Several Norwegian respondents, however, worried that the increased specialization of modern farms threatened traditions and might endanger the traditional diversity of farm production.

> 'This picture [of a rooster] is valuable to me because it shows the variety on the farm; it is no monoculture, but a wide range of products are made – juice, herbs, eggs, milk, etc.' (NO-14).

In conclusion, we can say that Dutch respondents were more concerned about the dilemma between production and the animals' nature and the imbalance between modernity and naturality. Norwegian respondents were more concerned about the

dilemma between farm specialization and the preservation of diversity and variety in farm production. Hence, they feared an imbalance between modernity and tradition (see Table 6).

The Rural Landscape

Dutch and Norwegian respondents also perceived the issues around the *rural landscape* to raise quite different dilemmas. In the Netherlands, respondents were concerned about increasing urbanization and recognized the need to maintain an open, 'natural' landscape. To them, the rural landscape represented a relaxed and idyllic environment (embodying tradition as well as nature), which was disrupted by the noises of machinery.

> 'I am a bit disappointed about the noise of all the machines at the farm. There is more noise pollution here than in a city centre' (NL-36).

This shows a conflict between modernity and the ideas of tradition and naturality. Norwegian respondents mentioned the importance of the cultural landscape as a place for relaxation, and they were concerned about forests recolonizing the cultural landscape when farmers stopped cultivating the land. In addition, several respondents expressed concern about modern dairy farming changing the traditionally diverse rural landscape into a 'monotonous' production landscape. Hence, Norwegians experienced two dilemmas in the rural landscape: with naturality and modernity both endangering the maintenance of the traditional rural landscape (see Table 6).

Farm Practices

Participants in both countries recognized a similar dilemma about *farm practices*, acknowledging the conflict between technological and economic development (part of modernity) and the conservation of typical farming values (part of tradition). One Dutch respondent described this in the following way:

> 'This is a picture with a wheelbarrow. It is a very traditional image. It is nice that this can still be found on the farm. It is a tool of authentic manual labour. Of course, not everything can stay authentic, this is the dilemma. You also have to be able to survive financially otherwise you cannot realize your ideals. I understand that very well, this is a frequently occurring dilemma' (NL-43).

Table 6. Perceived dilemmas in Norway and the Netherlands between three angles of vision (Modernity, Tradition and Naturality) for three themes.

Country	Themes		
	Farm Animals and their products	Farming Practices	Rural landscape
Norway	Modernity – Tradition	Modernity – Tradition	Naturality – Tradition
Netherlands	Modernity – Naturality	Modernity – Tradition	Modernity – Tradition Modernity – Naturality

Many Norwegian respondents worried that production-oriented agriculture would lead to a loss of traditions.

> 'The "old farm" is gone. Farms have become large, factory like, efficient' (NO-14).

But respondents also saw the possibility for combining modern production and tradition:

> 'This picture [of a joint farming shed] is inspiring to me because it shows that traditional milk production can also be modern and develop itself (NO-15).

The same respondent mentioned that nostalgia and development can go together:

> 'This picture [of a tractor] is important to me because it shows both nostalgia and agricultural development' (NO-15).

Both Dutch and Norwegian respondents were enthusiastic when innovations and new techniques went hand in hand with maintaining the traditional farm.

> 'This picture [of machines and a shovel] shows the activity on the farm: there are colourful machines behind the gauze and an old-fashioned shovel at the front. To me, this picture shows how renewal, innovation and new techniques need not damage the value of the farm' (NL-36).

In general, participants appreciated technological innovations (part of modernity) but at the same time wanted to preserve farming traditions (part of tradition) (Table 6).

The Farmer

When analysing the respondents' observations about *farmers*, it was apparent that they saw them as being at the centre of all of the perceived dilemmas. They expected farmers to handle these dilemmas, solve the conflicts and maintain the desired balance between modernity, tradition and naturality.

> '[The farmer] has a very reflective attitude to his work. He is well informed (has a lot of knowledge) about animals, breeding, chemistry, market, economy, together with idealism and engagement' (NO-12).

Only a few respondents expressed criticisms about farmers.

> 'This is a production-oriented company, and a chilly and unpleasant farm. I still think that he is a good farmer as he is a good businessman. I think it has to be like this nowadays, it is a necessity' (NL-40).

National Differences

The descriptions and perceptions provided by the Dutch and Norwegian respondents differed in some respects and showed exploratory evidence for three main points of difference. First, Norwegian respondents described the rural landscape as

a cultural landscape, distinguishing it from 'free' (wild) nature. This is clearly expressed in the following quotation:

> '[I hear] birds chirping. Close to nature, access to the forest, a gradual conversion from free nature to a cultural landscape' (NO-5).

In Norway, the rural landscape was considered a transitional area between free nature and the urban landscape. It helps to protect citizens against the wilderness but is also appreciated for its peace and quiet and the opportunity to escape from the stress of city life. By contrast, in the Netherlands, the rural landscape is perceived as a 'natural' landscape, the 'green area' a term used to describe everything that is 'not urbanized'. The Dutch public also appreciate the quiet and open space of the rural landscape as a contrast to life in the city (van der Ziel and Steenbekkers, 2006). In short, Norwegian respondents perceived the rural area as a transitional area between nature and urban areas, while Dutch respondents experienced the rural area as part of the 'green area' and nature (see Figure 2). Respondents in both countries appreciated the rural area as being quiet and peaceful, and different from the city. One Dutch citizen stated: 'I feel happy. One day at a farm feels more relaxed than a week's holiday'. Gullestad (1992) argues that peace, quiet and silence are connected with achieving a harmonious, balanced state of mind.

Second, the different perceptions of the rural landscape also influenced the perceptions of farm animals. According to Franklin (1999), animals can be part of three different areas: (a) urban, (b) intermediate and (c) relatively wild and natural areas. Norwegian respondents perceived farm animals as part of the 'intermediate' areas, whereas Dutch respondents considered farm animals as part of nature. This difference influenced national concerns about the way in which animals were kept on farms. Norwegian respondents generally accepted that animals were kept under human control for utilitarian purposes. They were concerned about the loss of the traditional diversity of animals and animal products but less about the naturalness of the animals' lives. This last issue was the main concern of Dutch respondents. They wanted the animals to live in a 'natural' environment and to live 'natural' lives. In conclusion, we can say that Dutch respondents were more concerned about values of naturality when it comes to rural landscapes and farm animals, whereas Norwegian respondents were more concerned about values of tradition. These findings are in line with a study by Vihinen (2001, p. 192), who also noted that 'the values of the environment and nature were more obvious for the Dutch than rural or agrarian values'.

Third, Norwegian respondents greatly appreciated the production of (sufficient) food in Norway as they considered domestic products to be safer and of higher quality than products from abroad. This is in line with Norwegian consumer studies, which show that Norwegian consumers put great trust in domestic agriculture, food control and products (Nygard and Storstad, 1998). Dutch respondents appreciated the export of dairy products and were proud of the worldwide fame of typical and traditional Dutch products, such as cheese and milk. Although respondents from both countries were concerned about the loss of farming traditions, Norwegians showed more concern about this than the Dutch. The following quotation empha-

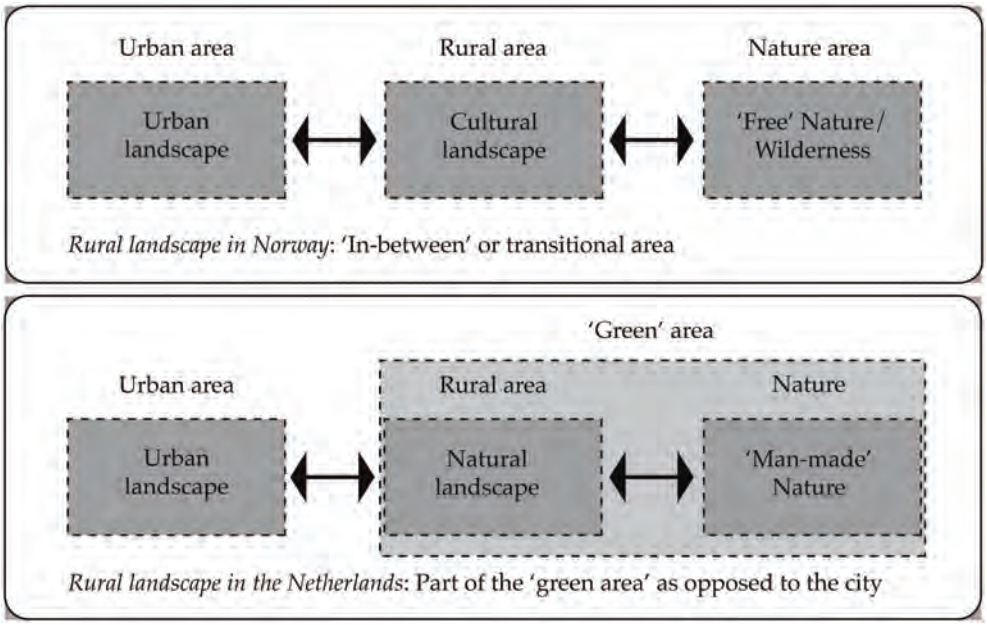

Figure 2. Position of the rural landscape in Norway and the Netherlands.

sizes the importance attached to farm traditions in Norway and summarizes the main arguments made.

> 'Is the farm important apart from for milk production? Is the farmer important? Yes! Would it be sufficient to have just professional large-scale farm milk production? No! Do we need Norwegian food production? Yes! Can we buy everything in the market? No! Does the farmer's culture mean something for our identity? Yes!' (NO-14).

Most Norwegian respondents wanted dairy farmers to combine aspects of modernity and tradition. These findings are in line with the study by Daugstad et al. (2006), which depicts agriculture as both a threat to, and a caretaker of, cultural heritage.

> 'It is thought-provoking that farming is on it is way to becoming a cultural institution instead of just being about food production… Why should we maintain agriculture in a world where cheap food overflows the global market? (NO-12).

The Dutch and Norwegian respondents expressed similar thoughts about farmers. In both countries they expected farmers to solve all of the perceived dilemmas and to maintain the balance between modernity, tradition and naturality.

> 'This picture [of a milking shed] symbolizes the heart of the farm. Ultimately, it is all about milk production. This is the place where the animals and the business interest meet every day. This picture shows how the farmer

deals with weighing these interests… It made me think that it is possible to combine animal welfare and business interests' (NL-1).

Conclusions and Discussion

The main aim of this article was to explore the social construction of animal farming and the role of material experience. In this section, we summarize the main empirical findings, reflect on contributions to recent debates in (rural) sociology and make recommendations for further research.

The Social Construction of Animal Farming

The empirical findings suggest that the social construction of dairy farming is constituted around four different themes: the animals and their products, the rural landscape, farming practices and the farmer. Several of these themes have been previously identified in sociological debates, such as 'the rural landscape' in the social construction of nature and rurality (Short, 1991, 2006; Macnaghten and Urry, 1998; Cloke, 2003) and 'animals' in the construction of human–animal relations (Buller and Morris, 2003; Tovey, 2003, Eder, 1996). This confirms our expectation that the social construction of animal farming is interrelated with and embedded in the construction of nature, rurality and human–animal relations. It is interesting to note the prominent role that the farmer and farm practices play in the construction of dairy farming. This provides a strong link to the human world. The farmer has an important role as a person who has not only professional knowledge but also emotions and affection, and hence 'morals'. In this way, the 'sensitive' farmer maintains the humane face of agriculture. Their emotions prevent a purely instrumental handling of animals and nature and they assure 'care' for animals and nature. The ethical aspect of 'care' is emphasized here, and expressed in terms of the farmers' love for animals and the link between the farm and the family. Farm practices are also seen as important human and cultural ingredients of dairy farming; they link today's farmers with their forebears and farming traditions, but also root them in modernity, where work should not be too demanding physically and should be rewarded fairly. Farmers are not just seen as economic actors who use their animals as 'means of production'. They are also seen as human beings with a moral responsibility to assure the welfare of their animals. Equally, they are seen as fellow citizens whose well-being should be secured as part of modern culture and social justice.

Second, we found that people evaluated their on-farm perceptions by reconsidering them from three angles of vision – modernity, tradition and naturality. They also explained how they felt frictions between the three. They appreciated the modern, hygienic and thus 'safe' production of milk but also wanted the animals to live naturally. They were in favour of technological innovations that improve the farmer's working conditions, but they also wanted to keep farming traditions alive and to maintain the traditional way of farm-life. This is interesting as it demonstrates that citizens' appreciation of dairy farming is not solely dependent upon preserving tra-

dition, i.e. an idyllic image of farming. While it is true that people appreciate tradition in terms of diversified production, variety of farm animals and traditional landscapes (Yarwood and Evans, 2000; Buller, 2004), they also greatly value modern achievements, such as safe and sufficient food, sufficient farm income and good working conditions for humans and animals. The respondents seemed happy with modernity as long as nature and tradition were not too threatened. It is also interesting that participants thought that farmers should reconcile care for animals, landscapes and production – or in other words to keep modernity, tradition and naturality in balance. They respected farmers for this ability and showed a lot of trust in them. This, however, places a large responsibility on farmers.

Third, social constructions are context dependent. The comparison between Norway and the Netherlands showed that there were indeed differences between both countries, but there were also interesting correspondences in the social construction of dairy farming. Respondents from both countries referred to similar angles of vision when explaining what they liked and disliked about dairy farming. In both countries, they attached importance to maintaining a balance between modernity, tradition and naturality. Neither the Dutch nor the Norwegian respondents judged the farms they visited as purely good or bad or expressed a preference for a purely modern or purely traditional agriculture. Both nationalities wanted farms to be modern, traditional as well as natural, and both were ready to accept compromises and to negotiate limits of acceptability. However, the present study involved visits to very specific types of dairy farms. We anticipate that the threefold knot of modernity, tradition and naturality would be useful for analysing citizens' valuations of more intensive animal farms. In a recently conducted follow-up study citizen panels visited intensive husbandry farms and first analysis of the experiences and feelings already revealed more worries and resentment. A follow-up study might also increase insights into where balances tip over and citizens see the dilemmas as irresolvable.

Finally, we learnt that sensory experiences are indeed important for understanding the social construction of animal farming. First, respondents expect to experience certain sensations – you should feel, hear and smell certain things on a dairy farm; these sensations are tangible – 'material' elements of the social construction of animal farming; here we can think of the wind on our face, the smell of grass or the sound of birds. Second, sensory experiences are strong carriers of meanings – the smell of hay refers to nature but also to nostalgia and the desire to hold on to tradition, whereas the sound of machinery is associated with industry. In doing so, the study reconfirmed the important role of the material world in the social construction of phenomena and the need to include the material into our analysis (e.g. Demeritt, 2002; Castree and Braun, 2006). Meaning is constructed in (reflective) interaction with the material world and 'material' bodily sensations (Crossley, 2005; Carolan, 2008).

Farm Visits with Citizens – A Reflection

Visiting a farm evoked feelings – of nostalgia and appreciation of tradition and continuity – but it also enabled participants to recognize and identify with farmers and

their right for an adequate income and less physical labour. It also led participants to recognize the comfort and autonomy that modern sheds and devices such as automatic milking and feeding technologies provide to dairy herds (compare with Holloway, 2007). The respondents' valuations of the farms were not black and white, in the sense that animal farming was considered as either 'good' or 'bad'. When respondents explained what they appreciated or disliked about the farms, they referred to the rural idyll and the pastoral myth (and hence tradition); however, at the same time they took into account that 'one needs to be realistic', recognizing elements of the 'anti-pastoral' image – more specifically, the hard work by and low returns to farmers. In this context, modernity was not seen as being only 'bad', for the respondents appreciated that some aspects of modern dairy farming, such as automatic milking and other machinery, represented improvements. By taking into account different topics and issues and by looking at animal farms from multiple angles of vision, the respondents developed a balanced and nuanced opinion of animal farming. The image that they constructed was not dualistic (Arcadia versus factory) but pluralistic, thus at the same time more complex but also more flexible than expected.

We expect that the development of a pluralistic image and a balanced opinion was facilitated through the direct experience of dairy farming and farm-life. Instead of judging aspects as 'good' or 'bad', the participants set limits and preconditions for their acceptance and respect, referring to what they had noticed, reflected on and learned during their visit. Direct experience, then, seems to promote better understanding of the 'realities' that farmers have to deal with (compare with Carolan, 2007). This finding is important for the ongoing political debate about farmers' 'license to produce', but is also interesting for scientific research.

The present study not only provided insights into laypersons' perspectives, ideas and concerns about present-day dairy farming, but it also showed that laypersons are willing and able to discuss 'very "real" dilemmas' in society (Macnaghten, 2004, p. 548). The respondents stated explicitly that their wish for farms to be modern, traditional and natural could only be achieved through accepting compromises. They were ready to do this and weighed the advantages and disadvantages of certain aspects of dairy farming in search of solutions. To give one example: participants accepted modern cow mattresses replacing the traditional and natural layer of straw as the mattresses provided additional comfort. But there were limits to the flexibility or elasticity in these evaluations, especially when the naturalness of animal life was concerned. Outdoor grazing is a clear example of this. Norwegian and Dutch respondents were very concerned about the trend of keeping cows indoors all year round. Outdoor grazing was considered to be essential and non-negotiable in assuring animal welfare and maintaining an essential element within the typical, traditional rural landscape.

Farm visits are not only useful for the purpose of studying citizens' opinions. They are also a potentially useful and effective instrument for promoting citizens' engagement and participation in policy development and decision-making. Callon et al. (2009) describe 'hybrid forums' in which laypersons not only learn more about a con-

tested issue – e.g. animal farming – but also learn from and with other actors, such as politicians and scientists, in order to develop a common vision and share public decision-making democratically. Although the present study cannot be considered a 'hybrid forum', it does contribute to a better understanding of social concerns and criticism of present-day animal farming. For future research, it might be interesting to explore the possibilities of a common world for sustainable animal farming, by involving, for example, politicians, farmers, (animal) scientists, animal-welfare organizations and laypersons. The learning process would then be broadened from laypersons visiting an animal farm to a collective learning process with a variety of actors related to animal farming.

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Notes

1. The joint-shed farm in Norway is comparable with the production methods of conventional dairy farming in the Netherlands, except for the social organization of the farm, since in the Netherlands it is rare for one farm to be run by three farmers.
2. We used value orientations in another part of the research project. For the present study we did not look at value orientations and therefore do not elaborate further on this selection criterion.

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Plantation Workers by Definition: The Changing Relevance of the ILO's Plantations Convention

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Abstract. The ILO's Plantations Convention is intended to provide a standard for plantation labour. The Plantations Convention defines plantations – and thus plantation labour – in terms of the production of specific crops in the tropics and subtropics. This paper examines world production of these crops over time to determine the proportions accounted for by labour in countries that have ratified the Plantations Convention. The Convention is shown to have limited reach, with only a minor proportion of plantation crops produced by labour in ratifying countries. The structural conditions under which the Convention's purpose was formulated have altered and the plantation's significance in the global division of labour has diminished. Although the ILO's general approach to agricultural labour is consistent with changes in the sector, the Organisation nevertheless continues to apply its inappropriate definition of plantations in its attempts to extend the reach of the outdated Plantations Convention. The article contributes to an understanding of the complexity of applying labour standards in the parts of global value chains that are located in the global South. It points to the need for revisions to better serve the South's export agricultural workers.

Introduction

The International Labour Organisation's Plantation Convention of 1958 was a path-breaking instrument of reform. It offered a standard against which to assess and improve living and working conditions for workers producing agricultural exports in the global South. However, this attempt at international reform was made at a time when economy and society on a world scale were entering a period of restructuring that would undo the Plantation Convention's potential in the longer term.

David Lincoln, Department of Sociology, University of Cape Town, Private Bag, Rondebosch 7700, Cape Town, South Africa. E-mail: david.lincoln@uct.ac.za. I am grateful to the IJSAF's editors and anonymous referees for their helpful recommendations. My thanks also go to the Chief Librarian of the University of Mauritius for granting me access, while I was away from my own university, to ILO documents that are not available online. My interest in plantation agriculture and more particularly sugar production in south eastern Africa have led me to the research question addressed in this article.

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In the immediate post-World War II period there were distinctive economic and political impulses for reform and regulation on a world scale. These impulses stemmed in part from a determination to entrench peace by having the state and international organizations take charge of world economy and polity. The pursuit of social welfare and economic regulation in Northern countries was accompanied by the spread of Northern capital and markets into countries of the South that in turn were striving to industrialize and needing to maintain the stability of their emerging industrial workforces (Silver, 2003, pp. 151–156). Regulatory oversight of the transforming post-war world economy was assumed by newly established international financial and trade organizations (notably World Bank, International Monetary Fund, General Agreement on Tariffs and Trade), while the United Nations and its tributary organizations attempted to initiate and implement development on a world scale (impeded until the late 1980s by US hegemony; Arrighi, 1994, pp. 67–69). That these themes of a world 'development project' gave way to the 'globalization project' (to borrow McMichael's 1996 formulation) is a reflection of the wider restructuring that occurred with enhanced financial mobility and new production possibilities. The structures that prevailed when the instruments of global reform were created were transformed within a few short decades, with the overarching international institutions adapting or transforming in tandem and some of the lower order instruments fading away (such as the international commodity agreements for tropical export crops; Gibbon and Ponte, 2005, pp. 48–49) or surviving as anachronistic relics of the world development project.

Amidst the sometimes contradictory and widely varied restructuring of the post-war period, agriculture saw significant change regarding the location and the organization of production, markets and consumption patterns. The tightening embrace of agriculture by international economic structures meant an acceleration of commercialization, corporate control and depeasantization (Araghi, 1995). With the global restructuring of agro-food systems, agriculture's position in the division of labour was transformed (McMichael, 1994; Talbot, 2002). Agricultural exporters of the South were particularly affected by the intensified competition in the post-war period as most aspects of production, prices and markets – other than labour – moved rapidly beyond their national control. The implications for plantation agriculture were especially pronounced, the plantation having been the pre-eminent organizational form and farming unit of pre-war export agriculture in the former colonies.

Plantations and their fate became a tooth-breaking bone of contention for adherents of opposing political and theoretical perspectives in post-World War II anti-colonial struggles. Without any resolution of the contention, the plantation remained important in the post-colonial pursuits of international development and international labour standards. A leading body in this respect has been the International Labour Organisation (ILO). The ILO has recognized the plantation as a distinct employment site and plantation workers as a distinct category of labour. The distinctiveness of plantations and of workers in plantations relates to the history of export agriculture in countries of the South; an agriculture whose processes, labour forms

and markets set it apart from those agricultures that have been geared to meeting subsistence needs and supplying the domestic markets of colonial and former colonial societies.

There is a vast scholarly literature on plantations, much of it historical and focused thematically on slavery, colonialism and/or sugar, and regionally on the United States, the Caribbean Basin, South America and South East Asia. Within the social sciences – notably in sociology and geography – the decades of the 1950s to the 1980s saw extensive discussion about the plantation as an exceptional institution. These studies tended to approach the contemporary plantation either in organizational terms or in systemic terms; that is, either in terms of its internal functioning or by regarding the plantation as being integral to a larger system and referring then to plantation systems, plantation societies and plantation economies. But if theory and empirical evidence once spoke of plantation exceptionalism, export agriculture in the South today occurs at points in global value chains that do not necessarily exhibit the same exceptional internal and contextual features.

The ILO's adoption of the Plantations Convention in the late 1950s was the outcome of a political process that resonated with social scientific thought of the time in delineating the plantation as a distinct site of production. Subsequently, however, the meaning of the plantation has changed significantly in empirical and theoretical terms, and the value of current policy based on a specific, earlier meaning comes into question. This article argues that the ILO's Plantations Convention is based on a time-bound plantation concept that is of limited relevance today.

The article begins by identifying themes in post-World War II thought about the contemporary plantation. This review is followed by an exposition of the Plantations Convention itself. An analysis of the Convention is then made in three sections and by reference to data about plantation production. Finally, the conclusion provides closing comments on the declining relevance of the Convention. This assessment of the Plantations Convention contributes to our understanding of the broader matter of international labour standards in the context of a global division of labour.

The Contemporary Plantation as a Distinct Production Site

When I refer to the contemporary plantation, I have in mind the plantation as analysts and policy-makers find it to actually exist. It is the views of post-World War II observers of plantations in the global South that are of interest here. The first of three noteworthy themes in their observations is the way in which they've regarded the plantation for its role in development. In the immediate post-World War II years development was often construed in terms of policies of decolonization and/or reconstruction, and the plantation's potential was contentious. In Java and Sumatra of the late 1940s, for instance, it appeared that the 'greater efficiency and foreign exchange earning capacity of the plantations are more than outweighed by their unfortunate impact on the social and political life of the nation' (Jacoby, 1961, p. 73). At about the same time, the 'Malay world's' plantations were portrayed as successful results of scientific agriculture, which variously competed against and co-operated

with successful peasant agriculture, the small holdings of which 'seem to be indispensible to social equilibrium' (Robequain, 1958, p. 366). Amidst struggles over nationhood and land, and trying to balance the quest for advantageous trade with that for affordable food, many newly independent countries of the South thus contemplated the plantation as both an exploitative colonial relic and a profitable link to the world economy. If these struggles usually culminated in decolonization and deep political changes, the plantation nevertheless remained in notable cases one of the post-emancipation state's unchanged institutions (Lamusse, 1980).

The social sciences held two, alternative perspectives on the development contribution of this contradictory institution. Sometimes referred to as a unit of production and sometimes in systemic terms, the plantation was seen capable of either uplifting (in the sense of modernizing) or debilitating (in the sense of underdeveloping) societies. By the early 1960s, these divergent identities of the plantation had firmed up as integral elements of either the dependency or the modernization schools. Each school saw the plantation as a pivotal instrument either in retarding or promoting development, and each rejected the other's premises. The plantation encapsulated the challenges of the newly independent states of the South, with its critics – notably Beckford (1972) – condemning it as an institutional survival from the era of slavery and colonialism, and its proponents – notably Graham (1984) – exalting it as a bridgehead for modernization. As suggested below, this debate's intensity would later fade as the global division of labour developed and the plantation became less conspicuous on the South's export agricultural landscape.

The second of the post-World War II themes is the recognition of the plantation as a context for particular social and economic activities. Analyses of the plantation's social life gave it the semblance of a 'total institution' and recurrent reference to management–labour relations emphasized this as a cardinal feature of the 'modern' (by contrast to the slave or paternalistically run) plantation's economic culture. The fullest statement of the plantation's wholeness was Thompson's (1975) definition of a multi-dimensional institution,

> 'settled on its own land and occupying its own space [with] … an industrial dynamic exercised through agricultural rather than through manufacturing production ... [with an] economic dynamic [that] is built into its geographic location, its territorial expansion, its authoritarian structure, and the way it shapes the lives of its people' (1975, pp. 32–34).

Thompson famously found, amongst other characteristics of the plantation, those of a 'race-making situation' (1975, pp. 115–117). Whereas Thompson concentrated on the social and cultural dimensions, Courtney (1965), and Jones (1968) too, brought to the fore the economic activities that defined the modern plantation's purpose and the related organizational features that gave it a unique identity. In Courtney's words,

> 'More significant in making a plantation a distinctive type of tropical crop producing unit than mere size, origin of labour force or nationality of controlling interest is the way in which production is organized …[with] the scientific management of land, the employment of skilled personnel, both

> technical and operational, the organized recruitment, housing and supervision of labour, and the constant seeking after improved crop varieties, better cultural practices and more efficient processing techniques' (Courtney, 1965, p. 52).

From another perspective – that of structural class analysis – the plantation's distinctiveness as a production site has predictable social consequences; plantation workers are predisposed to reformist rather than revolutionary forms of collective action due to their relationship to plantation owners and the way in which they encounter income-earning possibilities (Paige, 1975).

The third post-World War II theme is related to the development of the global division of labour. Before the 1970s, any commentary on an international division of labour revolved around the simple configuration of economically advanced North and economically retarded South, with the South's mines and plantations serving as key links with the industrialized North. When a 'new' international division of labour was conceptualized in the mid-1970s (Fröbel et al., 1980), manufacturing relocation from North to South was highlighted and agriculture all but overlooked. However, evidence of a global fruit and vegetable market was already being recorded (Mackintosh, 1977), and advances in transport and refrigeration technologies and globalizing capital flows provided a stimulus for the addition of 'non-traditional' agricultural products to those traditionally exported from the South. The new diversification of crops and of labour forms mirrored new ways of harnessing Southern agricultural labour to global markets and the 1970s and 1980s saw considerable expansion of non-traditional exports from the South (Islam, 1990). By the early 1990s, 'new agricultural countries' were being recognized (Friedmann, 1991), and social scientists were debating the precise form taken by the 'new' internationalization of agriculture (Raynolds et al., 1993). As global, and increasingly buyer-driven, agricultural value chains were being reorganized (Gibbon and Ponte, 2005), and efforts to optimize control and profitability gave rise to hybrid forms of labour regulation and risk displacement (Collins, 1993; Cid-Aguayo, 2007), export agriculture in the South steadily became dissociated from the plantation. The local politics of gender and of land tenure presented various alternatives to large-scale farming under single ownership and with a residential, wage-earning workforce. The increasing participation of women, especially in producing non-traditional exports, was a significant aspect of the transformation of labour forms in this sector (Korovkin, 2003; Dolan, 2004), and global value chains absorbed small-scale entrants where plantations might once have predominated (Little and Watts, 1994; Weis, 2007). As agrarian relations changed in such fashion, references to the plantation as a distinct contemporary production site became less frequent.

My intention in singling out these particular themes is to identify at a very general level aspects of scholarly thought that might be directly helpful in assessing the Plantations Convention. Taken together, the points raised here are indicative of transitions in both the historical and the conceptual status of the plantation. Change in global agricultural production has altered the plantation's identity and it is consequently in decline as a prominent contemporary institution with conceptual individuality. The

economic purpose of the isolated, enclave-like plantation is now being met under alternative and diverse production arrangements and the plantation worker too has been displaced or complemented by an export agricultural worker who works in any of a variety of production arrangements. In accordance with Graves's criticism of plantation exceptionalism – 'the plantation as an institution … is not unique' – and his insistence that 'we should be … looking at the nature of economies first and observing how plantations operate within them' (1986, pp. 279–280), analyses of export agriculture in the global South are now less about the effects of an inserted institution and more about the effects of incorporation in global value chains. Yet, as the next section shows, the Plantations Convention and its definition of the plantation worker are rooted in an anachronistic, distinctive site of production conception of the plantation.

The Plantations Convention

The ILO's Committee on Work on Plantations held its first session in Bandung at the end of 1950, and plantation workers were the first specifically agricultural category of labour to be covered by an ILO convention when the Convention concerning Conditions of Employment of Plantation Workers (or what I refer to here as the Plantations Convention) was adopted in mid-1958.[1]

The Plantations Convention applied to workers on plantations, defining this worksite in geographical as well as product terms as follows:

> 'the term plantation includes any agricultural undertaking regularly employing hired workers which is situated in the tropical or subtropical regions and which is mainly concerned with the cultivation or production for commercial purposes of coffee, tea, sugarcane, rubber, bananas, cocoa, coconuts, groundnuts, cotton, tobacco, fibres (sisal, jute and hemp), citrus, palm oil, cinchona or pineapple; it does not include family or small-scale holdings producing for local consumption and not regularly employing hired workers'.

Ratifying countries were given the option of broadening the scope of this definition to cover any other crop produced on 'other plantations', or of including any production unit that was defined nationally as a plantation. Of the scores of tropical and subtropical countries to which the Plantations Convention might have applied, only 12 ever ratified it. Cuba was the first to do so (in 1958), followed in turn by Liberia, Mexico, Côte d'Ivoire, Guatemala, Brazil, Philippines, Ecuador, Panama, Uruguay, Nicaragua, and finally Sri Lanka (in 1995). Brazil then denounced its ratification in 1970 and Liberia followed suit the next year, leaving 10 ratifications in force today. While the broad terms have remained unchanged, a small but significant revision was made when Cuba and Uruguay ratified a 1982 protocol that excluded from the Plantations Convention's definition all production units of less than five hectares and with less than 10 workers at any time in a year.[2]

A first survey of conditions faced by plantation workers was published by the ILO in 1966 (ILO, 1966). It was an important but uneven report, undoubtedly limited by the unavailability of comparable international statistics of the time, yet pointing to the inferior working conditions and 'often very poor' (ILO, 1966, p. 262) living conditions endured by plantation workers. Two decades later, Sajhau (1986) contributed another report on plantation labour, concluding that while there had been significant change in plantation ownership and production, these had had little positive impact on the generally bad conditions of work and life on plantations. Sajhau's (1986) article, coupled with a more extensive study by Sajhau and von Muralt (1987), portrayed the plantation as a consistently low-cost site of agricultural production for world markets, with migrants from poorer countries sometimes replacing local workers who were repelled by its conditions (see also Lee and Sivananthiran, 1996). All told, the survival of the plantation seemed dependent on conditions that the Plantations Convention was aimed at reforming.

For all its intended reforms, the Plantations Convention today has fewer signatories than the number of crops contained in its definition of the plantation. Ratification behaviour has been not only restrained but also regionally concentrated, with a strong Latin American emphasis. These signs of disjuncture between intent and acceptance invite closer inquiry. The analytical purpose of the following sections of the article then is to explore levels of acceptance in terms of volumes of plantation crop production that have been accounted for by workers in countries that have ratified the Plantations Convention.

Latitude, Crop and Labour

The Plantations Convention refers to plantations as commercial agricultural 'undertakings' in the tropics and subtropics that produce coffee, tea, sugarcane, rubber, bananas, cocoa, coconuts, groundnuts, cotton, tobacco, fibres (sisal, jute and hemp), citrus, palm oil, cinchona or pineapple. Nevertheless, and especially if aimed at ameliorating conditions for workers in export-orientated agriculture in countries of the global South, the Convention's definition contains misguiding geographical and product prescriptions. Geographically, Australia shares the subtropical sunshine with the likes of Burkina Faso, and some of the crops in the ILO's definition are as likely to be cultivated in the United States as in Mozambique. And as strongly associated as some of these crops may have been with colonial agriculture in the tropics and subtropics, the expanded range of agricultural exports from former colonies in these latitudes since the 1970s has dramatically changed the role of Southern agriculture in the global division of labour. With the spread into low-cost tropical and subtropical countries of horticultural and other fresh produce production for immediate consumption in high-wage temperate countries, and with changes in labour forms and tenure arrangements, the traditional plantation and its crops have been altered or sometimes displaced as the export agricultural norm in the global South (as shown by Collins, 1993; Collins and Krippner, 1999; Dolan et al., 1999; Raynolds, 2000; McCulloch and Ota, 2002; and in the ILO's own working papers by Asea and Kaija,

2000; Semboja et al., 2000). Consequently, the relationship between latitude, crop and labour is not as straightforward today as it may have appeared in the 1950s when the Plantations Convention was formulated.

ILO policy-making, when focused on international labour standards, proceeds on the basis of resolutions voted by participating national representatives; these being equal governmental, employers' and workers' representations from member countries. However, the countries that traditionally have possessed a plantation sector are widely known for their low levels of organized worker representation in agriculture and their heavy dependence on agricultural export earnings, and they typically have had neither the trade-union densities and capacities nor the governmental enthusiasm to concertedly uphold favourable labour standards. Under these circumstances, and as was seen in the ratification behaviour of potential signatories following the adoption of the Plantations Convention, its promise was never going to be realized easily. One of the key questions to arise from this situation is: what has been the extent of the ILO's Plantations Convention's coverage? Beyond simply listing the names of countries that have ratified the Convention, it is important to establish their respective contributions to world production of plantation produce over time. This after all may be the clearest measure of the Convention's relevance for workers in the global South's export-orientated agricultural sector.

The Plantations Convention's Changing Reach

There is no ready means of determining how many workers are and have been engaged in the production of ILO-defined plantation crops. In the absence of suitable workforce details, volume of production is used here as a surrogate indicator of labour's role in the production of these crops. Volume of production tells us nothing directly about the employment, organizational, technological or ownership variables that define specific forms of production, but it does serve as a convenient comparative measure of the Plantations Convention's changing reach over time. Employing data compiled by the United Nations' Food and Agricultural Organisation (see Appendix), I've assembled a series of tables (Tables 1 to 12) to show change in the production of plantation crops by countries that have ratified the Plantations Convention.

Of the countries that have ever ratified the Convention, Brazil stands out for the large volumes of plantation crops it produces. Having contributed almost 40% of the world's coffee supply in the early 1960s, Brazil remains the single largest coffee producer. In the early 2000s, Brazil alone was producing about 30% of the world's coffee and of sugar cane, respectively. But because Brazil was only a Plantations Convention signatory for five years before withdrawing in 1970, its prominence as a producer has not helped to maintain the Convention's reach. Brazil aside, three signatories whose significant production of several plantation crops has consistently given substance to the Convention's impact have been Mexico (Tables 1, 2, 3, 4, 5, 8 and 10), the Philippines (Tables 1, 4, 5, 8, 9 and 10), and Côte d'Ivoire (Tables 3, 5, 8 and 9). Other signatories that have accounted for significant output of one or two plantation

crops have been Sri Lanka (Tables 4, 9 and 11) and Ecuador (Tables 1, 3 and 5). For the most part, however, the combined production of the Convention's signatories has been of minor and quite varied proportions.

The only crops produced by all Convention signatories in volumes exceeding one fifth of world production have been cocoa beans (Table 3), bananas (Table 1) and coconuts (Table 4). With Convention signatory Côte d'Ivoire being the largest single producer of cocoa beans and commanding over one third of world production by the early 2000s, the Convention's applicability to cocoa plantation labour has remained statistically if not geographically more extensive than with labour producing any other crop. The next most significant crop, bananas, has had Convention signatories Ecuador and the Philippines accounting for relatively large shares of world production, with only non-signatories India, China and Brazil producing more than them in recent years. The production of coconuts by Convention signatories bears some resemblance to that of cocoa beans in that most production may be attributed to a single country, the Philippines in this instance, whose output has consistently exceeded one quarter of the world's total.

The primacy exhibited by some producer countries has as its corollary the spread of much plantation crop production amongst numerous far smaller producers. The Convention's signatories belong more often than not to this latter grouping of smaller individual producers. At the lowest representational extreme in this respect are the Convention signatories producing natural rubber (i.e. latex) (Table 9), palm oil fruit (Table 7), tobacco leaf (Table 12) and groundnuts (Table 6). Natural rubber production by Convention signatories expanded to 5% of the world total in the early 2000s (due largely to Sri Lanka's ratification in 1995) but remained a small side-show on a stage dominated first by non-signatories Malaysia and Indonesia, then by the same two in reverse order, and finally in overwhelming measure by Thailand, another non-signatory. Palm oil fruit, by far an African product in the 1960s, was produced thereafter in massively increased quantities especially by Malaysia and Indonesia, which today each produce more than three times the total for the entire African continent.

By the early 2000s, no more than 40% of any of the ILO-defined plantation crops was being produced by labour employed in countries that have ratified the Plantations Convention. This coverage of 40% was attributable to cocoa bean producers; it was followed by 33% for coconut, 22% for banana, 19% for pineapple, and 13% for coffee producers. No more than 10% of any of the remaining plantation crops under study here was produced by labour in countries that have ratified the Convention. In sum, the collective representational role of the plantation crop producing countries is minor. It follows that workers producing only a small proportion of ILO-defined plantation crops have recourse to the protective mechanisms offered by the Plantations Convention.

Between Definition and Ratification – A Discussion

The limited reach of the Plantations Convention is indisputable. While it is readily apparent that ratifications have been rare, the above section has confirmed that only

Table 1. Shares of world banana production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	<1	<0.5	<0.5	<0.5
Cuba	<0.5	<0.5	<1	<0.5	<0.5
Ecuador	–	8	5	8	8
Guatemala	1	1	1	1	1
Liberia	<0.5	–	–	–	–
Mexico	4	3	5	4	3
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	3	3	2	<1
Philippines	–	4	10	6	8
Sri Lanka	–	–	–	–	n.d.
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	6%	21%	25%	22%	22%

Table 2. Shares of world citrus fruit production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–-1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	<0.5	<0.5	<0.5	<0.5
Cuba	<0.5	<0.5	<1	<1	<1
Ecuador	–	<1	<1	<0.5	<0.5
Guatemala	<0.5	<0.5	<0.5	<0.5	<0.5
Liberia	<0.5	–	–	–	–
Mexico	4	5	5	5	6
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	<0.5	<0.5	<0.5	<0.5
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	<0.5	<0.5	<0.5	<0.5
Total Share	5%	6%	8%	6%	8%

Table 3. Shares of world cocoa bean production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	14	27	30	35
Cuba	<0.5	<0.5	<0.5	<0.5	<0.5
Ecuador	–	5	4	3	3
Guatemala	<0.5	<0.5	<0.5	<0.5	<0.5
Liberia	<0.5	–	–	–	–
Mexico	2	2	2	2	1
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	<0.5	<0.5	<0.5	<0.5
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	2%	22%	34%	36%	40%

Table 4. Shares of world coconut production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	<0.5	<1	<1	<0.5
Cuba	<0.5	<0.5	<0.5	<0.5	<0.5
Ecuador	–	<0.5	<0.5	<0.5	<0.5
Guatemala	<0.5	<0.5	<0.5	<0.5	<0.5
Liberia	<0.5	–	–	–	–
Mexico	4	3	3	3	2
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	27	24	23	27
Sri Lanka	–	–	–	–	4
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	4%	30%	29%	27%	33%

Table 5. Shares of green coffee production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	6	4	3	2
Cuba	<1	<1	<0.5	<0.5	<0.5
Ecuador	–	2	2	3	1
Guatemala	3	3	4	4	3
Liberia	<0.5	–	–	–	–
Mexico	3	5	5	6	4
Nicaragua	–	–	1	<1	<1
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	1	3	2	1
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	7%	17%	19%	19%	13%

Table 6. Shares of world groundnut production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	<0.5	<0.5	<1	<0.5
Cuba	<0.5	<0.5	<0.5	<0.5	<0.5
Ecuador	–	<0.5	<0.5	<0.5	<0.5
Guatemala	<0.5	<0.5	<0.5	<0.5	<0.5
Liberia	<0.5	–	–	–	–
Mexico	<1	<0.5	<1	<0.5	<0.5
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	n.d.	n.d.	n.d.	n.d.
Philippines	–	<0.5	<0.5	<0.5	<0.5
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	<0.5	<0.5	<0.5	<0.5
Total Share	<1%	1%	1%	1%	1%

Table 7. Shares of oil palm fruit production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	4	3	2	<1
Cuba	n.d.	n.d.	n.d.	n.d.	n.d.
Ecuador	–	<1	<1	1	<0.5
Guatemala	0	0	<0.5	<0.5	<0.5
Liberia	<1	–	–	–	–
Mexico	2	<1	<0.5	<0.5	<0.5
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	0	0	0	<0.5
Philippines	–	<0.5	<0.5	<0.5	<0.5
Sri Lanka	–	–	–	–	n.d.
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	3%	6%	4%	4%	3%

Table 8. Shares of world pineapple production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	4	2	2	1
Cuba	<1	<1	<0.5	<0.5	<0.5
Ecuador	–	1	1	<0.5	<0.5
Guatemala	<0.5	<0.5	<0.5	<1	<1
Liberia	<0.5	–	–	–	–
Mexico	5	5	5	2	5
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	5	11	10	11
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	6%	16%	21%	15%	19%

Table 9. Shares of world natural rubber production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	<0.5	<1	1	2
Cuba	n.d.	n.d.	n.d.	n.d.	n.d.
Ecuador	–	0	<0.5	<0.5	<0.5
Guatemala	<0.5	<0.5	<0.5	<0.5	<1
Liberia	2	–	–	–	–
Mexico	0	0	<0.5	<0.5	<0.5
Nicaragua	–	–	n.d.	n.d.	n.d.
Panama	–	n.d.	n.d.	n.d.	n.d.
Philippines	–	<0.5	<1	<1	1
Sri Lanka	–	–	–	–	1
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	2%	1%	2%	3%	5%

Table 10. Shares of world sugar cane production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	0	<0.5	<0.5	<0.5
Cuba	8	8	8	5	2
Ecuador	–	<1	<1	<1	<0.5
Guatemala	<0.5	<1	<1	1	1
Liberia	<0.5	–	–	–	–
Mexico	5	5	4	4	3
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	5	4	3	2
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	<0.5	<0.5	<0.5	<0.5
Total Share	13%	20%	18%	14%	10%

Table 11. Shares of world tea production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	n.d.	n.d.	n.d.	n.d.
Cuba	n.d.	n.d.	n.d.	n.d.	n.d.
Ecuador	–	<0.5	<0.5	<0.5	<0.5
Guatemala	0	<0.5	<0.5	<0.5	<0.5
Liberia	n.d.	–	–	–	–
Mexico	n.d.	n.d.	n.d.	n.d.	n.d.
Nicaragua	–	–	n.d.	n.d.	n.d.
Panama	–	0	<0.5	<0.5	<0.5
Philippines	–	n.d.	n.d.	n.d.	n.d.
Sri Lanka	–	–	–	–	9
Uruguay	–	n.d.	n.d.	n.d.	n.d.
Total Share	0%	<0.5%	<0.5%	<0.5%	10%

Table 12. Shares of world tobacco leaf production by Plantations Convention signatories (percentages per annum).

	1962–1964	1972–1974	1982–1984	1992–1994	2002–2004
Brazil	–	–	–	–	–
Côte d'Ivoire	–	<0.5	<0.5	<0.5	<0.5
Cuba	1	<1	<1	<0.5	<0.5
Ecuador	–	<0.5	<0.5	<0.5	<0.5
Guatemala	<0.5	<0.5	<0.5	<0.5	<0.5
Liberia	n.d.	–	–	–	–
Mexico	2	1	<1	<1	<0.5
Nicaragua	–	–	<0.5	<0.5	<0.5
Panama	–	<0.5	<0.5	<0.5	<0.5
Philippines	–	1	1	1	<1
Sri Lanka	–	–	–	–	<0.5
Uruguay	–	<0.5	<0.5	<0.5	<0.5
Total Share	3%	4%	3%	3%	2%

a minority of plantation crops come from the ratifying countries. As might be expected, then, subsequent ILO resolutions related to agricultural labour have included appeals to non-signatory members to ratify the Convention. Such appeals typically separate the 'core' conventions (which commit signatories to the protection of workers' fundamental rights), from those conventions focusing on agricultural labour as such. Some of these agricultural conventions relate to aspects of work on farms (e.g. wages or occupational health), to the personal status of workers on farms (e.g. gender, age, migration) or to the organization of workers on farms, but there is only one other ILO convention apart from the Plantations Convention that is comprehensive in its treatment of all aspects of workers' conditions in an agricultural setting, namely the Labour Inspection (Agriculture) Convention (referred to here as the Agricultural Labour Inspection Convention).[3]

Since its adoption in 1969, the Agricultural Labour Inspection Convention has been ratified by 43 countries,[4] including three Plantations Convention signatories: Côte d'Ivoire, Guatemala and Uruguay. Applying to agriculture anywhere in the world, the Agricultural Labour Inspection Convention nevertheless offers a potentially effective alternative to the Plantations Convention to protect commercial agricultural workers in the global South. Unlike the coverage of only specified crop production under the Plantations Convention, ratification of the Agricultural Labour Inspection Convention means that a country will subject all its agricultural undertakings to inspection. On the other hand, whereas the Plantations Convention recognizes that there are workers whose conditions of social existence as well as work demand protection in the plantation's more or less total institutional setting, the Agricultural Labour Inspection Convention pertains to a system of inspection that would expose adverse working – but not living – conditions in virtually any farming context. Bearing in mind these differences, it is instructive to assess the application of the Agricultural Labour Inspection Convention to the ILO-defined plantations discussed in this article.

Again, I use volume of production, this time to compare the relative impacts of the Plantations Convention and the Agricultural Labour Inspection Convention. In the case of six of the 12 plantation crops examined here, the early 2000s saw a greater volume produced by workers in countries that have ratified the Agricultural Labour Inspection Convention than by workers in countries that have ratified the Plantations Convention (see first two data columns of Table 13). The most striking differences concern tobacco leaf (where almost five times more was produced by Agricultural Labour Inspection Convention signatories than by Plantation Convention signatories) and groundnuts (where almost four times more was produced by the former than the latter). Similarly, but with smaller differences, the Agricultural Labour Inspection Convention signatories exceeded production by the Plantations Convention signatories in the cases of citrus, coffee bean, tea and palm oil fruit production. To give this a positive interpretation, it may be said that ILO-defined plantations producing these six crops (i.e. tobacco leaf, groundnuts, citrus, coffee beans, tea and palm oil fruit) in countries that have ratified the Agricultural Labour Inspection Conven-

Table 13. ILO Conventions 110 & 129 and plantation crop production.

Plantation crops	Share of 2002–2004 world production by Plantations Convention signatories (average % per annum)	Share of 2002–2004 world production by Agricultural Labour Inspection Convention signatories (average % per annum)	Share of 2002–2004 world production by countries that are not signatory to either Convention (average % per annum)
Bananas	21.7	11.9	68.1
Citrus	7.7	17.8	75.0
Cocoa beans	39.6	36.9	58.8
Coconuts	32.7	1.2	66.6
Coffee beans	13.0	19.1	73.0
Groundnuts	1.1	4.3	95.0
Palm oil fruit	2.8	3.8	94.7
Pineapples	19.1	15.4	67.6
Rubber (natural)	4.6	2.2	95.3
Sugar cane	10.0	9.4	82.1
Tea	9.5	13.1	77.4
Tobacco leaf	2.4	11.9	86.2

tion are open to regular labour inspections even though the Plantations Convention has not been ratified there.

These comparative numbers may not have direct significance for ILO policy-making, particularly as the two Conventions were differently conceived and therefore cannot strictly be regarded as alternates. What does have significance is that the overwhelming bulk of plantation crop production is performed by workers whose countries have ratified neither the Plantations Convention nor the Agricultural Labour Inspection Convention (see third data column of Table 13, noting that three countries have ratified both Conventions so that row totals exceed 100). Cocoa bean production is best off in the sense that no more than 59% of the world's annual crop in 2002–2004 came from countries that have ratified neither Convention; at the worst extreme is natural rubber, where 95% of the world's annual crop in 2002–2004 was produced in countries that have ratified neither Convention.

With ratification behaviour around the Plantations Convention and the potentially complementary Agricultural Labour Inspection Convention shown above to hold such limited benefit for ILO-defined plantation labour, the ILO's definition of the plantation and plantation labour finally warrants some further discussion in the light of recent ILO approaches to agricultural labour in the global South.

Sajhau's review of plantation labour two decades ago contained an acknowledgement that the ILO's definition of the plantation 'had not yet earned universal acceptance' (Sajhau, 1986, p. 73). Aside from Kirk's (1987) comprehensive bibliography based on a similar definition, it is questionable whether universal acceptance has been earned to date. Usage of the term within the Organisation itself suggests that the formal definition has given way to a more general reference to the plantation as a farming type. This accords with the move within the ILO towards a more general treatment of workers, including those in agriculture. As far as plantation workers are concerned, this shifting policy approach has been reflected in the dissolution of the ILO Committee on Work on Plantations: it was constituted and began meeting in 1950 and it served the plantation sector until its tenth session in 1994 (ILO, 1994a).

But even as the Committee on Work on Plantations was coming to the end of its days, the Plantations Convention's continued viability was not doubted. At the opening of the tenth session of the Committee on Work on Plantations, after the Secretary General of the ILO had drawn attention to the changes over recent decades in the 'geography of production and trade in plantation commodities' (ILO, 1994b, p. 8), the Worker Member of the Governing Body's delegation encouraged the Committee to call for the ratification of the Plantations Convention by 'all relevant member States' (ILO, 1994b, p. 9). In the course of its final session's subsequent proceedings, the Committee on Work on Plantations resolved to invite the ILO's Governing Body (in the manner of such procedures) 'to facilitate the implementation of the Plantations Convention' (ILO, 1994b, p. 52).

Thereafter, we usually see the ILO considering all agricultural workers together as a single class of labour. This was apparent at the ILO's 1996 Tripartite Meeting on Improving the Conditions of Employment and Work of Agricultural Wage Workers in the Context of Economic Restructuring, and then again in 2000 at the Tripartite Meeting on Moving to Sustainable Agricultural Development through the Modernization of Agriculture and Employment in a Globalized Economy (ILO, 2003, p. 2). Despite this tendency towards more generalized approaches to agricultural labour, the Plantations Convention continued to be promoted as a relevant labour standards setting instrument. Thus, although the aforementioned 1996 Tripartite Meeting considered a report containing the acknowledgement that '[t]he level of ratification of … various instruments differs considerably and the trend towards more general instruments that apply to all categories of workers has led to many of these instruments being revised' (ILO, 1996, p. 21), it went on to resolve to invite the ILO's Governing Body to urge member countries to ratify a range of fundamental rights conventions as well as the Plantations Convention and several others 'of particular significance to the agricultural sector' (ILO, 1997). The Plantations Convention had not been revised and nor was there any suggestion that revision was in the offing.

There was no direct reference to the Plantations Convention in the 2000 Tripartite Meeting's proceedings, but it was resolved to invite the Governing Body to urge member countries to 'ratify the eight core Conventions and other relevant, up-to-date labour standards concerning the agricultural sector' (ILO, 2000, p. 47). It was not clear whether the Plantations Convention was seen as one of these 'up-to-date labour standards'. In any event, if the Plantations Convention went without direct mention at the 2000 Tripartite Meeting, references indeed were made to plantations and also to 'farms and plantations', without explaining the distinction. These references implied that plantations were understood to be a type of commercial agricultural setting in which workers also lived, possibly accompanied by dependant children. Although the ILO's definition of the plantation and plantation labour was neither invoked nor contradicted in the report on the 2000 Tripartite Meeting, the 2003 paper entitled Decent Work in Agriculture evidently did not hold to – and thus indirectly challenged – the ILO's definition.

Decent Work in Agriculture seems to regard plantations essentially as residential workplaces, and accordingly makes references to 'plantation communities'. This per-

spective allows for discussion of traditional and non-traditional plantation crops alike and for statements, for example, about 'plantation agriculture, particularly non-traditional export crops' (ILO, 2003, p. 8). While the ILO's Plantations Convention might actually accommodate some elements of these recent analyses, its specific geographical and crop parameters are not necessarily heeded by those writing for or within the Organisation today. The definitional ambiguities are heightened when Decent Work in Agriculture notes of 'waged agricultural workers' that they are 'engaged predominantly in cultivation and harvesting in plantations, commercial agriculture, horticulture and primary agricultural processing' (ILO, 2003, p. 6), and later when child labour is seen as having been 'very much part of employment in plantations and commercial agriculture' (ILO, 2003, p. 27). It would appear that these work settings are regarded as mutually exclusive types, yet the possibility cannot be denied that plantations might subsume primary processing or even non-traditional horticulture, let alone that plantations are actually commercial agricultural enterprises. Confusion reigns in the absence of comprehensive formal definitions.

Conclusion

Struggles for amelioration, recognition, inclusion or any other social reforms are rooted in the hope that human agency will triumph over structural conditions. The global division of labour is one of those contexts where, paradoxically, the triumph of reform can mean the eventual weakening of the beneficiaries' structural position. Where a workforce – typically workers in a country of the global South – occupies a position in a global value chain and participates in the global division of labour on the basis of its comparatively low cost or ease of control, reform can mean reducing these 'comparative advantages'. On the other hand, although the post-war restructuring that has come to be denoted as globalization depends upon and leads to the undermining of workers' rights (Tilly, 1995), there is a structural imperative for the stability of at least some workforces of the global South. In this context, instruments of global reform such as ILO conventions potentially play a moderating role.

The Plantations Convention, however, is of limited value as a standards setting instrument for labour employed in the production of the crops contained in its definition. In the time since its adoption, the Plantations Convention has lost (or rather, not gained) relevance in terms of:

1. the extent of ratification – at any one time there have been no more than 10 ratifying countries, the last addition having been over a decade ago;
2. the share of production accounted for by ratifying countries – the upper limit of world share of designated plantation crops ever attributed to these countries is 40% of all cocoa bean production in the early 2000s; and
3. the undermining of its definitional scope by changes in the global division of labour – the diversification of crops and of labour forms in tropical and subtropical agriculture has seen a relative decline in the significance of the activities to which the Plantations Convention applies.

The nature of commercial agriculture in the South, notably export-orientated agriculture, has so changed since the 1950s that lines of latitude or type of crop are hardly appropriate criteria by which to specify international labour standards. What the ILO's Plantations Convention regards as plantation labour would be better served if it were categorized according to its status in the global division of labour. Recognizing the inherent practical difficulties of matching global social criteria with national borders, this categorization might be along the lines of, say, agricultural labour in non-OECD countries or, perhaps, agricultural labour in countries whose income from agricultural exports exceeds a given proportion of total national income.

There is little prospect in the short term of the World Trade Organisation building ILO labour standards into its rules (Myers, 2004, p. 166). Moreover, analyses of recent employment codes and consumption codes have alerted us to the possible limitations of such attempts at regulation, whether the obstacles take the form of production-site politics, notably around gender (Tallontire et al., 2005; Barrientos and Smith, 2007), or wider political economic factors (Utting-Chamorro, 2005). Clearly further analysis and negotiation are called for and consideration has to be given to other labour codes and to fair trade and similar arrangements that might already involve the countries and crops that are targeted by the Plantations Convention.

The Plantations Convention and renewed appeals to ratify it may be unintentionally quite diversionary. Time has surely come for the Convention to be replaced by a formal international labour standard that more appropriately serves the South's agricultural workers.

Notes

1. Convention concerning Conditions of Employment of Plantation Workers, 1958 (No. 110) (Adopted 24 June 1958; came into force 22 January 1960).
2. Protocol to the Plantations Convention, 1958 (Adopted and came into force 18 June 1982).
3. Convention concerning Labour Inspection in Agriculture, 1969 (No. 129) (Adopted 25 June 1969; came into force 19 January 1972).
4. Signatories of the Agricultural Labour Inspection Convention: Argentina, Azerbaijan, Belgium, Bolivia, Bosnia and Herzegovina, Burkina Faso, Colombia, Costa Rica, Côte d'Ivoire, Croatia, Denmark, Egypt, El Salvador, Estonia, Finland, France, Germany, Guatemala, Guyana, Hungary, Italy, Kazakhstan, Kenya, Latvia, the former Yugoslav Republic of Macedonia, Madagascar, Malawi, Malta, Republic of Moldova, Morocco, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovenia, Spain, Sweden, Syrian Arab Republic, Ukraine, Uruguay, Zimbabwe.

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Appendix: Methodological Notes

The tables are based on data from the United Nations' Food and Agricultural Organization's statistical databases (FAOSTAT). The on-line source is archived primary crop production data at <http://faostat.fao.org>.

For each primary crop, annual production in metric tonnes was determined at one decade intervals over the course of the ILO Plantations Convention's existence. To minimize the possible impact of atypical change in any single year, these production data were averaged over the three years 1962–1964, 1972–1974, 1982–1984, 1992–1994 and 2002–2004 (2004 being the latest year of record in this particular FAOSTAT series). Each country's average annual production of each crop was then converted to a percentage of annual world production over the respective three year periods.

Percentages in Tables 1 to 12 have been rounded to whole integers, except those less than 1% of annual world production; these low percentages have been entered in the tables as either <1 or <0.5 or, where the FAOSTAT records show zero production, as 0. Percentages in Table 13 have been rounded to one decimal place for close comparisons.

Where a relevant country's name does not appear in a FAOSTAT list of a particular crop's producer countries it may be assumed to produce no or negligible amounts of that crop. In such cases, n.d. (no data) has been entered in the tables.

Only unprocessed primary crop data have been considered. Thus, where the Plantations Convention refers to coffee, green coffee bean data have been used; for palm oil, data on oil palm fruit; for cocoa, data on cocoa beans; for rubber, data on natural rubber; for groundnuts, data on groundnuts in their shells. The composite crop type 'fibres (sisal, jute and hemp)' has been excluded. No data are available in the same FAOSTAT primary crop data archive for cotton or for cinchona (whose bark yields quinine) and these crops are not considered.

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Who Killed Rural Sociology? A Case Study in the Political Economy of Knowledge Production

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Abstract. Rural sociology is examined as a case study in the social forces that shape and direct the production of knowledge. Knowledge production is viewed as the product of the nexus of three sets of forces. First, there are the rewards and punishments of any system of social control. While knowledge is produced under very different conditions than other commodities, concrete products ('research') are produced in a social milieu and in response to distinct forces. Forces that pull research in particular directions are represented by the availability of research funds and the clarity by which certain types of research are regarded as more important than others. Pushes are represented not only by the unavailability of research funds but also by discouragement of certain research trajectories. These range from friendly advice by senior faculty to graduate students, to impediments in career development, to active persecution. Second, the system of social control is embedded in an institutional network within which knowledge production occurs. Rural sociology is centrally linked to a clearly delineated institutional network composed of the U.S. Department of Agriculture and the land-grant college complex. This complex constitutes a dense institutional network influencing the knowledge production system directly. Third, rural sociology is influenced by its institutional relationship to sociology as a discipline. In this case, as long as it does not involve the mission orientation of the subdiscipline (e.g. the pushes and pulls), the general discipline has effects on what can be termed the 'autonomy' of knowledge production within rural sociology.

30+ Years Later: An Explanation for Delayed Publication

This paper was originally researched after my first encounter with rural sociologists in 1978. Almost by accident, I attended a 'day before', specially called session at the University of California, Davis campus before the annual meeting of the Rural Sociological Society in San

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Francisco in 1978. I had had only a few casual contacts with rural sociologists during my eight years at Cornell, and they had generated no interest on my part in learning more about rural sociology since there seemed to be little or no interests by rural sociologists about agriculture. The Davis meeting was composed mostly of American rural sociologists who were entirely focused on agricultural issues. This generated an intellectual problematic: why were these (mostly) younger rural sociologists wrapped up with agricultural issues when rural sociology itself had seemingly lost interest several decades earlier?

My focus on U.S. agricultural labor began in 1964, when the student rebellion in the U.S threw hundreds of American universities into turmoil after the initiation of the Free Speech Movement on the Berkeley campus of the University of California (UCB). I had completed my doctoral studies at UCB and joined the Cornell faculty in 1961 with a specialization in African trade unions, the subject of my doctoral dissertation. I considered myself an industrial sociologist with an African specialization, a reflection of my disappointment with American unionism. Searching for some way to bring relevance to my teaching after 1964, I found African-American migrant workers in upstate New York, Ithaca's hinterland, and opened a research project bringing me back to U.S. research. U.S. sociology also seemed interested in migrant labor. While I had no interest in rurality and what seemed like an intellectual vacuum with rural sociology about agricultural labor, the Davis meeting showed that some rural sociologists were interested in agriculture.

Walking into the Davis meeting was a genuine surprise; dozens of newly minted (and still being minted) rural sociologists, were debating the state of U.S, agriculture (later encapsulated in Buttel and Newby, 1980). Although I had explored the rural sociological literature after 1964, I had found that except for several rural sociologists — Bill Heffernan and Gene Wilkening stood out — U.S. rural sociologists were far more interested in agricultural issues in Malaya, the Philippines, and Bolivia than in New Jersey, Wisconsin, Iowa, or California. Something new had erupted in U.S. rural sociology that seemed unfathomable. There was now considerable interest in what was happening over the newest economic crisis leading to social turmoil, bankruptcies, suicides, and individual actions against local bankers.

Whatever was going on? Why had agriculture, as a topic, essentially disappeared from Rural Sociology*, the journal? Why, in the list of publications that* Rural Sociology *noted in various issues, was there no category for 'agriculture'? Yet why, at the Davis meeting, was there a raging debate about agricultural issues?*

From these contradictions emerged my first problematic. Why had rural sociological research, which had been concerned originally with the decline of agriculture after the turn of the previous century, stopped researching domestic agricultural issues and publication on that topic? Thus, my first study after the 1978 encounter became 'Who Killed Rural Sociology?'. This was to eventuate in the article that failed to get published after I had satisfied my curiosity and moved on to what I considered a more central issues: the structure of American agriculture. What had been the role of the land-grant universities and their governmental sponsors in the U.S. Department of Agriculture (USDA) in shaping U.S. rural sociology? What would be needed to get rural sociologists to abandon the idea of the rural homestead/community and realize that agriculture essentially consisted of a series of industrial systems of production?

'Who Killed Rural Sociology?' resolved my initial problematic of the historical account of what had happened; this was interesting but not central to my concerns. I was more interested in looking toward the future rather than the past. How can this system be changed? How can small units of agricultural production be protected rather than obliterated? I have always respected historical analysis, but it has also always served me in building the base for analysis of what can be done to change a system?

I therefore didn't stew over the rejections. (I have lost the original file of my submissions for publication. My memory is that I originally submitted to one of the sociological journals that looked like a good prospect — I was still identifying as an industrial sociologist and the paper as a sociology of knowledge paper — and after being turned down, sent it to Rural Sociology *where it was also rejected.) The main lessons I learned were that mainstream sociology was not interested in agriculture and that rural sociology, which was interested, continued to look on agriculture as it had been prior to the Second World War and did not see agriculture as a cluster of similar yet differentiated industrial production systems. I put 'Who Killed Rural Sociology?' aside and proceeded to what I considered to be the important agricultural issues.*

I always regretted the paper never having seen the light of publication. I included a summary in a later publication (Friedland, 1982). Occasionally colleagues who knew about 'Who Killed Rural Sociology?' would ask about the paper and I would shake my head: I had more important fish to fry. When enough colleagues had asked, I finally decided to see if the paper could be published and here it is. Except for several corrections to the References, the article below is reproduced as in the original.

Introduction

This article is based on an assumption that, while seemingly obvious, may become less obvious as its details unfold. The assumption is that bodies of knowledge are the products of social forces integrally tied to the political and economic systems, and knowledge production is therefore subject to the institutions of social control. Knowledge, in other words, is neither an autonomous activity having no relationship to social structure nor the product of individuals insulated from the social structure.[1] Rather, knowledge production is integrated with the control systems of a society so that certain knowledge gets produced and other knowledge does not.

By taking a case study of a single knowledge production system, *rural sociology*, I will argue that the body of knowledge is shaped in ways that conform to the political economy of our society. Three basic sets of forces will be elucidated.

First, all systems of social control operate through networks that provide rewards for some activities and punishments for others. The reward system in knowledge production functions to provide support to some forms of research as well as honor and status for the conduct of that research. The obverse side of the reward system involves either the formal indifference of the political economy to certain types of research (which takes the form of non-allocation of resources) or various punishments for conducting research considered inappropriate to the social system.[2]

Second, knowledge production takes place within a network of institutions and organizations. Sometimes this network is very 'loose', as exemplified by sociology. Although formally organized within an association, the discipline of sociology is probably less significant to most of us than our individual relationships to departments or specific universities, e.g. the organizational affiliations that provide us our wherewithal. Some networks are more highly organized; this is the case of rural sociology. While its associational relationships (the Rural Sociological Society) take on similar form to the general discipline (the American Sociological Association), the way in which rural sociology gets *done* is very different from the way other forms of sociology develop. This is because rural sociology is organized through a network of closely integrated formal institutions involving the U.S. Department of Agriculture (USDA) as well as organizational forms at the level of each state, the State Agricultural Experiment Stations (SAES). The SAES constitute a primary funding source for departments of rural sociology and individual rural sociologists. The operation of this institutional network is more crucial for rural sociology, as a subdiscipline, than any equivalent entity for sociology as a discipline. It is because of the way in which research is organized through the USDA and the SAESs that a distinctive political economy, more readily identifiable than with other disciplines or subdisciplines, becomes clearly delineatable.

There is a third force operative on the subdiscipline of rural sociology: sociology itself. Rural sociology developed within general sociology and maintains some attachments to the discipline. The relationship to general sociology manifests itself internally as a form of subdisciplinary 'autonomy'; that is, some knowledge gets produced that fits together with the general discipline and is unrelated to the pushes, pulls, and institutional connections that dominate the subdiscipline. These 'autonomous' forces, it will be argued, manifest themselves in arenas irrelevant to the mission orientation of the subdiscipline; they can come into existence and be significant as long as they do not involve the more direct relations of the subdiscipline.

The analysis begins by examining the historical development of the body of knowledge represented in rural sociology. I will show that rural sociology departed from its antecedents and developed new foci of research considerably different from its primordial interests. This will be demonstrated through an analysis of the changing trajectory of research within the subdiscipline since the formal organization of its journal, *Rural Sociology*. The specification of these changes will be made not only in terms of what *is* done through research but by indicating what has *not* been done. This will be followed by an examination of the punishments meted out to actors within the subdiscipline (and adjacent to it) who violated fundamentals. By controlling actors who propose distinctive trajectories of research, certain areas are delimited as being beyond the boundaries. This, in turn, provides indicators to other system participants as to which research trajectories *are* acceptable. I then turn to an examination of two major trajectories that have developed within rural sociology: diffusion and development research.

The forces producing the foci of what is researched (and what is not) are examined as sets of 'pushes' and 'pulls'. We then examine the 'autonomous' directions mani-

fested through the relationships that rural sociology has to the general discipline. The argument here is that rural sociology departed from its early concerns with collectivities (particularly with communities) and replaced them with concerns for individuals as the units of analysis. This is also manifested in a tendency toward quantifiable research.

The Demise of Rural Interests in Rural Sociology

The origins of rural sociology rest in the early recognition of the problems afflicting those who lived in rural surroundings and earned their living through agricultural pursuits. According to Nelson (1969), rural sociology developed indigenously in the United States with the growing recognition of the difficulties of rural life and agriculture as a way of making a living. The belief that a strong agricultural production system underlies democratic society traces its roots to the formation of the republic and was embodied in Jefferson's belief that a strong independent yeomanry was essential to preserve democratic institutions. At a later stage, this democratic urge became more focused in a belief in the need to develop a firmer economic base in agriculture, which took the form of a push toward the introduction of science into agriculture (Rossiter, 1975). In the middle of the nineteenth century, this orientation shaped the development of a scientific network (Rosenberg, 1976, Part Two) that grew into what is known as the 'land-grant complex' with the adoption of the Morrill Act of 1862. After the creation of the land-grant colleges, the need for rigorous scientific research was implemented through the Hatch Act of 1887, which gave rise to the State Agricultural Experiment Stations (SAES) network. In 1914, the final basic legislation of the complex was adopted in the Smith-Lever Act that created cooperative agricultural extension.

While the roots of concern about rural society extend back a long time, rural sociology as a subdiscipline is much younger. One major contribution to its development occurred when the United States shifted in population from a rural agricultural base to an urban base. The Country Life movement was simply one of a number of movements, this one composed largely of intellectuals, created within the milieu of agrarianism in the United States. As the rural population base declined and rural communities withered, there was a growing recognition that the strengthened economic base (resting on scientific research and development) was not strengthening rural society and that, instead, the population base and the rural institutions continued to erode.

The institutional base for rural sociology within the land-grant complex was established by the Purnell Act of 1925, which emphasized the importance of social and economic research (Nelson, 1969, pp. 86–89). While rural sociology predates the Purnell Act, it was this legislation – and the funding provided through the federal government – that created the basis for the modern institutional network of rural sociology.

I turn now to a consideration of the issues that have preoccupied the subdiscipline since the time it was formally organized as the Rural Sociology Society (RSS) and

began to publish its journal, *Rural Sociology* (RS). The most effective way to examine research trends in the subdiscipline is to consider the kinds of research that have been reported by *Rural Sociology*. Tables 1 and 2 undertake this assessment.[3]

Table 1 summarizes an examination of the cumulative indices of 40 annual volumes of *Rural Sociology*. Table 2, drawn from a survey of the content of materials in the journal over a 39 year period (Stokes and Miller, 1975, p. 415), reinforces the analysis in Table 1. While the analytic categories used in Table 2 are not identical to those of Table 1, the two tables show similarities and confirm the decline of a number of topics and the development of new research trajectories.

Table 1. Subject categories in *Rural Sociology*.

Subject	Vols. 1–20 1936–1955	Vols. 21–30 1956–1965	Vols. 31-40 1966–1975
Adoption/diffusion	22	51	47
Agrarianism[1]	16	2	4
Aspirations[2]	no entry	24	46
Community[3]	93	33	49
Family	49	16	19
Family Farm	10	no entry	no entry
Farm Labor	27	2	3
Farm Organizations[4]	9	4	15
Farmers	7	no entry	14
Farming part-time	no entry	5	3
Land Settlement (U.S./non-U.S.)	11	2	2
Land Tenure[5]	25	9	7
Modernization/Social Change	37	28	45
Stratification	19	6	13

Source: *Rural Sociology*, Cumulative Index, 1936–1966, 1956–1965, 1966–1975.

Notes: [1] During 1936–1955, the subject category was 'Agrarian Reform'. [2] In 1956–1965, three categories of aspirations were utilized – they have been consolidated here as a single category. In 1966–1975, five categories were used. [3] Includes two categories in 1936–1955 and 1956–1965 and four categories in 1966–1975. [4] In 1936–1955, the entry was called 'Social Groups – Formal'. For 1966–1975, I have incorporated an entry under 'National Farmers Organization'. [5] Incorporates two categories, including four for U.S. and three for non-U.S.

Table 2. Classification of articles in *Rural Sociology* by major area and topics (%).

Major Area	1936–1945 N=358	1946–1955 N=339	1956–1965 N=328	1966–1976 N=314
Agricultural Development	–	0.3	3.6	2.5
Aspirations	0.4	–	2.8	7.6
Community	6.9	9.8	4.6	6.7
Diffusion	0.4	4.7	7.0	7.0
Family	4.2	3.8	1.8	2.2
Land Tenure	1.7	1.8	2.1	0.6
Stratification	3.1	2.9	3.1	3.2
Social Welfare	33.5	16.8	7.9	8.7
Policy and Planning	8.6	0.6	0.6	1.3
Farm Labor	6.6	1.2	1.2	1.0
Housing and Level of Living	2.2	3.2	0.9	0.3
Rural Life Problems	5.8	2.9	0.3	1.6

Source: Stokes and Miller, 1975, p. 415.

Note: Numbers shown represent the percentage of articles within the subject category shown. Categories are grouped into larger classes, e.g. 'social organization', 'social change', etc. The table shows the total for one of these larger classes, 'social welfare', and for four categories within this class.

Table 1 shows the high concern with diffusion research. Modernization or social change research shows continuing preoccupation, but the Table does not show how concern with this subject has shifted from U.S. contexts to non-U.S. or Third World ('developing nations') situations. One interesting anomaly is the new importance of 'aspirations', a topic of some curiosity since the prospects for anyone aspiring to a living in agriculture have declined so drastically.

What is just as interesting as the foci of research are the topics that have declined or been ignored by rural sociologists. Two topics of original interest to early rural sociologists have declined significantly: agrarianism and farm labor were originally of concern but have virtually disappeared in recent times. Given the historical antecedents of the subdiscipline in the Country Life movement, one might have expected continuing interest to be manifested in the life conditions of rural people. Perhaps because of the decline in the rural population and the gradual adoption of urban lifestyles, this issue has become largely irrelevant. More important is the absence of much analysis of the rural population base; again, perhaps there is nothing much to be said since the rural population has largely disappeared.[4]

More significant, however, is the low degree of interest in social stratification and income distribution within agriculture. With the possible exception of Smith (1969) and Rodefeld (1979), little attention is given to this subject. It is almost as if a hidden assumption about the homogeneous family farm (and farmer) continues to exist and that, therefore, there is nothing to research. It also turns out that there is almost nothing known about land tenure in the United States; the subdiscipline has developed in such a way that far more is known about land tenure in Bolivia, Columbia, Peru, India, Malaysia and the Philippines than about land tenure in New York, New Jersey, Wisconsin, or California.

Other interesting gaps in the knowledge system also exist. What might be noted, for example, is the curious failure of most rural sociologists (with the notable exception of Morrison and Steeves, 1967) to study the agrarianist tendencies within U.S. agriculture. While it is true that social movements in and around agriculture have declined (as has the entire social sector), movements continue to develop but their analysis continues to be eschewed by the subdiscipline. Rather than being a subject for sociological research, this area has become the 'turf' of historians.

Two additional lacunae in the discipline are notable. First, the absence, with one notable exception (Goss et al., 1978), of any literature dealing with corporate organization within agriculture. This absence is notable not only because there has been such an outcry about the development of agribusiness in populist circles within and outside of agriculture, but because it takes a multiplicity of interesting forms that have been ignored assiduously by the subdiscipline. While much emphasis has been placed on the notion of the entry of large-scale corporations into agricultural production (e.g. Tenneco, United Brands, Castle and Cooke, etc.) by populist critics outside the subdiscipline, no attention has been given either to the incorporation of the family (the 'family farm corporation') and its consequences on family organization or the entry into agriculture of investment groups organized by promotors. While the final type resembles corporate agribusiness, the failure of rural sociologists to deal with

family incorporation and its consequences is quite amazing, especially considering that concern with the family not only formed a primordial interest to rural sociology but has been a topic of continuing research.[5]

The final major gap in the body of knowledge is in what can be called the sociology of agriculture. It is a peculiarity of rural sociology as a subdiscipline that, until the past few years, little interest been manifested in this topic. This absence of a sociology of agriculture is all the more peculiar in that crops get grown, harvested, processed, and marketed; all of this activity implies the existence of social organization. Indeed, since different crops require different ways of being produced, the basis for comparative analysis obviously exists. Despite the fact that the analysis of production originated with Adam Smith and Karl Marx and burgeoned within the general discipline of sociology as industrial sociology (following the rise of mass unionism in the 1930s and the Hawthorne experiments), no concomitant developments have been manifested within rural sociology except in the past few years.[6]

Social Control and the Institutional Network

Shaping Forces: The Pushes

How to account for the way in which the subdiscipline has developed? In this section, we will examine, through a number of specific cases, what has happened to individuals and ideas when certain trajectories of research have been undertaken.

One obvious way to discourage a particular trajectory of research is to 'starve it to death'. Researchers may like to do research but we really do not enjoy doing it by our lonely selves in the library. Most research requires resources and those resources are often not made available. An example of this can be found in California where, in 1966, a group of researchers in the University of California undertook to create a substantial research organization to examine the effects of the establishment of the California Water Project and the construction of the Interstate 5 highway on the west side of the San Joaquin Valley. These construction developments opened up hundreds of thousands of acres of dry land to intensive agricultural production. While similar projects in Africa, for example, gave rise to studies of the social effects of massive transformations of the environment, this was not the case in California. After a three-year start-up period, the California research project was mysteriously permitted to die. This may have been due to the fact that one subject proposed to be studied was the effects of the two projects on the 160 acre limitation on subsidized water. The project may have died because the national administration shifted from the Democrats to the Nixon Republicans. Although top officials of the University originally supported the project, when it died of lack of federal funding, they took no initiatives to continue it (Fagin, 1970a, 1970b, 1981 personal communication).

Sometimes, however, research trajectories are undertaken that turn out to be 'cans of worms'. Under such circumstances it becomes advisable to discourage their continuation. It also becomes exigent that impediments be placed in the way of those scholars that would like to give their work public exposure. This was the case in the celebrated Arvin-Dinuba studies conducted by Walter Goldschmidt during the 1940s.

Originally supported by the Bureau of Agricultural Economics of the USDA, the Goldschmidt study supported the argument about the vitality of the Jeffersonian ideal: small *was* better in that communities with small landholdings had richer social infrastructures than those with large landholdings. Goldschmidt's research was cut off and he was unable to finish his work; further, he was originally unable to publish his results and they finally emerged somewhat under a cloud. Goldschmidt, after a promising beginning with the BAE as an anthropologist of American society, departed for Africa and made a career in more traditional anthropological pursuits.[7]

One inevitable conclusion that can be drawn from the Goldschmidt case is that if one wants to publish (necessary if one is not to perish!) it is advisable to pick topics that do not arouse the ire of powerful, established economic interests.

A similar lesson can be drawn from the experience of the 'burning of the farm population estimates' (Rosenbaum, n.d.). Annually produced by the USDA, the farm population estimates show population trends on U.S. farms. In 1958, it was decided to incorporate into the report a selection of written comments from farmers gleaned when the population estimates were developed. This was a period in which the farm population continued to decline rapidly and the comments made by farmers were substantially critical of national farm policies. Through a series of misadventures, the document reporting this was published and distributed before top USDA officials realized what had happened. Every copy of the publication was retrieved and all copies were ultimately burned while a new, sanitized version was released.

Closer to home within the BAE, there was the experience following the commissioning of 71 county community studies in 1944. One such study of Coahama County, Mississippi found, unsurprisingly, that race relations between blacks and whites were somewhat less than happy. When a draft copy of the report came into the possession of Representative Jamie Whitten, in the process of becoming the 'informal secretary of agriculture' (Kotz, 1969), the BAE found itself beleaguered. Shortly afterward, it ceased to exist (Hardin, 1946). When reorganized, its successor agency did not carry on the kind of research for which BAE became notable. The elimination of the BAE must surely have percolated its way into the visible 'college' of rural sociology.

Although not involving a sociologist, the experience of Henry Anderson and the bracero program is also enlightening (Anderson, 1976; Draper and Draper, 1968, p. 32). Anderson was then a graduate student in the University of California's School of Public Health studying the health of bracero workers imported from Mexico to work in California agriculture. As public pressure built to eliminate the bracero program in the late 1950s, Anderson prepared a statement for a legislative hearing urging the abolition of the program. Anderson was subsequently forbidden to use a bracero center for interviewing and his report was suppressed. He was required to prepare a bowdlerized version and the original report did not appear until years later, in 1976. It should perhaps be noted that California's agricultural interests fought tooth and nail to retain the bracero program.

Although not experiencing the same kinds of pressures, a similar situation was experienced by Richard Rodefeld, one of the younger rural sociologists recently 'released' from the faculty of Pennsylvania State University. Rodefeld has been one

of the few rural sociologists interested in class structure in U.S. agriculture. In one of his studies, Rodefeld critiqued the methodology of the USDA in determining the numbers of corporative farms. Rodefeld was pressured by USDA officials to withdraw his methodological critique (*NFO Reporter*, 1972). While Rodefeld doubts that that USDA criticism had anything to do with his failure to win tenure in his first teaching post, it is worth noting that after this attack he had to relocate and, after several years on the faculty of Pennsylvania State University, failed to win tenure from that institution.[8]

As a final example, of a non-sociologist working in a social arena, the case of Robert Bradfield should be examined. Bradfield was a nutritionist employed by the University of California's Agricultural Extension. In the 1960s, Bradfield became interested in the nutrition of Chicano children. He was warned against studying this topic by the associate director of Extension on the grounds that Extension's constituency would not approve of the subject matter. Bradfield persisted nevertheles. Despite obtaining grants from prestigious foundations such as Rockefeller and Guggenheim, winning recognition through his professional association, his life was steadily made miserable as horror after horror was visited upon him. He was fired three times, ordered not to interact with professional colleagues at Berkeley or to participate in his association's affairs, his mail was opened. As a final indignity, after fighting his discharge from Extension, Bradfield agreed on a negotiated settlement with the University, which provided the equivalent of a golden handshake of farewell. A condition of the settlement was that neither party would make any further public comment. Thus Bradfield was effectively muzzled. Since that time, a USDA investigation was ostensibly conducted but its results too have apparently been suppressed.[9]

There is little point in simply relating the 'horror' stories of the rural sociological trade without drawing the necessary lessons; these examples indicate the experience of persons violating the established 'norms' of the knowledge production system. Through the punishment of people who raise critical or embarrassing issues or who produce data that undermine established and institutionalized relationships (such as embodied around the systematic violation of the 160 acre limitation), a normative climate is established within scientific disciplines. That climate makes clear which topics are controversial, difficult, not to be funded, and therefore to be avoided.

Shaping Forces: The Pulls

If there have been subject areas that have been actively discouraged in rural sociology, other areas of research have been strongly encouraged. Two such areas stand out: diffusion research and development studies. The former, concerned with the process by which new innovations are adopted by farmers and how they are diffused through the agricultural community, has generated an enormous literature.[10]

Rogers (1962) locates the origin of research on diffusion of innovations in the 1920s:

> 'when administrators in the USDA Federal Extension Service instigated evaluations of their program's effectiveness. One handy evaluation measure

> for this adult education agency was the adoption of innovations recommended and promoted by the Extension Service' (1962, p. 31).

After tracing the early development of diffusion research, Rogers notes:

> 'Since the mid-1950's, there has been a great proliferation of research studies by rural sociologists. Most of these studies have been financed by state agricultural experiment stations or the USDA (but also in very recent years by agricultural companies). Federal and state agencies spend sizable sums for research on agricultural technology. Their administrators have been convinced of the value of sociological inquiry to trace the diffusion of these research results to farm people. Most rural sociologists are employed by state agricultural universities, and the proximity of these sociologists to state Agricultural Extension Services has affected the tradition' (1962, pp. 36–37).

Rogers thus emphasizes the *utility* of this type of research for research administrators. Some want to know how innovations diffuse so that they can spread more effectively the innovations developed by agricultural researchers; others (in all likelihood those working for agricultural companies) want to know how to market their developments).

Rogers delineates six types of innovativeness research developed within rural sociology. These include: correlates of innovativeness, information sources at stages of the adoption process, norms on innovativeness, characteristics of innovations, opinion leadership, and the role of change agents (1962, pp. 37–38). At least two types of innovation/diffusion research, however, have *not* developed. These are studies that examine the social contexts and forces that produce different kinds of innovations, on the one hand, and social consequences of the introduction of innovations, on the other. Thus, while diffusion research proved to have utility to the institutional network of the land-grant system and provision was therefore made to support this kind of research, other forms of diffusion research were not supported.

Reference was made earlier to the fact that rural sociologists know more about land tenure outside than inside the U.S. Part of the explanation for this phenomenon rests on the 'discouragement' of research that would demonstrate how land concentration was occurring. Another part of the explanation, however, must take into account the attractions of other countries. Of course, there can be many explanations for this phenomenon. For example, as rural society disappeared in the U.S., for sociologists interested in rural phenomena (or having rural antecedents and being concerned about them), it becomes necessary to go elsewhere to conduct such research.

A more reasonable explanation for the development of interest in comparative studies, underdevelopment and development, or modernization[11] rests in the special relations that the agricultural organization has with the U.S. government.

Nelson (1969, p. 141) points out that interest by rural sociologists in things abroad goes back to the 1920s, when rural sociology was only beginning to take shape:

> 'The outbreak of World War II, however, abruptly brought into focus the relationship of the United States with other countries and particularly its

> neighbors to the south. As the war cut off traditional sources of jute, rubber, quinine, and other badly needed commodities, South America and the Caribbean assumed unprecedented strategic importance. The required products came from rural and often remote areas. Yet North America possessed little reliable information about the rural hinterlands of the capital cities, which had too often engaged the almost exclusive attention of embassy personnel' (1969, pp. 142–143).

Thus it was that the special relationship of U.S. rural sociology to Latin America began; just as 'trade follows the flag', sociology also follows. Before too long, a number of rural sociologists were recruited to work in Latin American countries and a knowledge base was built about 'Argentina, Bolivia, Brazil, Columbia, Costa Rica, Cuba, Guatemala, Mexico, Panama, Peru, and Venezuela' (Nelson, 1969, p. 149).

Following the war, rural sociologists worked abroad not only under the auspices of the U.S. government but also through the support of the Ford Foundation. Nelson notes (1969, pp. 149–150) that relatively little research was done in Europe and only slightly more in the Middle East. A considerable amount of research was generated about Asia, however, particularly Japan, Pakistan, the Philippines, India and Ceylon. Few rural sociologists were involved in African studies, a domain that tended to reflect more the urbane interests of the Ford Foundation on that continent.

Looking at the area interests of rural sociologists, what is notable is their involvement with those two arenas that were staked out, before the war and after, as being foci of interest of the United States as it entered its overt imperial phase. As a world power, the U.S. was concerned, of course, with Europe and Africa, but its most direct interests lay with its traditional 'sphere of influence', Latin America, and that enormously important continent in which a vacuum was created through the independence movements of the post-war era, Asia. Sociologists, in other words, continued to follow the flag.[12]

The flowering of development studies within rural sociology was thus related to the global knowledge-development needs of the United States. Development studies did not develop simply because people were curious or enjoyed travelling and living abroad but, because they fitted the material needs of the political economy, the incentives and rewards were made available and therefore attracted a sizable number of social scientists to generate new research trajectories within the subdiscipline.

Shaping Forces: General Sociology and Autonomy

I turn finally to a consideration of the social forces that have shaped rural sociology and its interests *external* to the land-grant network in which it is enmeshed. Here the primary constellation of forces have been focused on sociology as a general discipline to which rural sociology has been related.

Perhaps the best way to consider this relationship is to study that body of materials in which the subdiscipline has examined its relationship to general sociology. For these purposes, the most reflective analyses can be found in various addresses of presidents of the Rural Sociological Society published in *Rural Sociology*.[13]

Rural sociology has always suffered something of an inferiority complex in its relationship to the broader discipline. Benefited by funding levels that, by comparison to the discipline, seemed rich and lucrative,[14] rural sociologists have been 'rich but poor relations', something like second-class citizens within the discipline.

Examination of the RSS presidential addresses dealing with inner-subdisciplinary issues, while generally complementary of the accomplishments of the subdiscipline, have often indicated the problem of rural sociology's relations to the discipline. All too often, it has been stated, rural sociologists have been atheoretical or untheoretical and have lacked disciplinary rigor.

The search for rigor has contributed, at least from the viewpoint of this observer, to the development of a major focus on quantitative analysis, in which the individual became the unit of analysis.

Two distinct factors have produced this methodological emphasis. First, what has characterized much of the internal and external criticism, especially in the earlier period of rural sociology, has been its excessive empiricism and qualitative character. When this criticism was developing, the general discipline was undergoing a major transformation under the influence of structural functionalism, on the one hand, and quantitative empirical analysis, on the other.

Rural sociology could make a shift toward quantitative analysis because it fitted with the empirical antecedents of the subdiscipline. It was probably precluded from developing a theoretical orientation because of its institutional connections in the land-grant system, which emphasizes 'practical' and 'useful' research rather than theoretical work.[15]

With no reward structure within the SAES to sustain theoretical work, it is unsurprising that rural sociology did not resonate the theoretical demands of the Parsons-Merton period of the 1950s and 1960s. Instead, the subdiscipline turned to the quantitative orientations that became pervasive within sociology during this period.

A second factor contributing to this development rests in the relations that rural sociology has as a stepchild of the land-grant research organization, which has so heavily emphasized hard science and productionist orientations. If the 'hard' scientists (primarily biologists) of the agricultural science network could barely understand the 'mushy' qualitative community studies that characterized early rural sociology, they could at least read a table and understand a test of significance. Thus by moving towards quantification, rural sociology could relate itself simultaneously to the broader mainstream of the discipline while talking a language understandable to those elements dominating the institutional network of which it is a part.[16]

Conclusion

Perhaps the most pervasive social influence responsible for the demise of rural sociology has been the annihilation of rural society in the United States. With no social base left to study, what is there to do? Rural sociology responded to the destruction of its population base by shifting interests to subject areas serving the political-eco-

nomic interests of the land-grant network and its clients (or, more accurately, they should be characterized as patrons). This transition occurred with some pain and difficulty as individual rural sociologists (and some agricultural economists) fought the trends.[17]

Responding to the incentives of the productionist-oriented science establishment dominating the land-grant complex as well as recognizing the punishments of those that persisted in examining controversial issues, rural sociology as a subdiscipline departed its antecedents and became transmogrified into a very different subdiscipline, concerned with restricted issues and failing to raise critical questions about the changing character of rural society.

The burgeoning of Marxist and neo-Marxist trends within sociology, under the influences of the 1960s and early 1970s, has produced the beginnings of some change. One can note, for example, the work of a small number of younger rural sociologists reflecting a Marxist and/or populist orientation. Similarly, the issues of the clienteles and constituencies of the land-grant system have come under scrutiny from some rural sociologists (Flora and Converse, 1978). The formation of an informal grouping of (mainly) rural sociologists interested in the sociology of agriculture represents a development worthy of note. These new developments represent, in effect, the 'autonomous' features of the subdiscipline, e.g. the influences feeding rural sociology from the main discipline. These influences must contend with the day-by-day influences and pressures that exist at the departmental level in interaction with experiment station directors, deans of colleges of agriculture, and presidents of state colleges and universities linked to the land-grant complex.

A hard-nosed assessment of the institutional linkages indicates that where 'autonomous' tendencies come into conflict with the more direct relationships embodied in the land-grant system and *its* network of connections, autonomy comes in second place. No definitive statement of where emerging trends will evolve is possible but the examination of the development of the subdiscipline leaves this observer somewhat less than optimistic.

Notes

1. For a discussion of autonomy and accountibility in the agricultural sciences, see Nicholson (1977) and Busch and Lacy (1979).
2. There is no intention here to impute the existence of any conspiracy. Rather, following the structuralist formulation of some neo-Marxists (cf. Gold et al., 1975), the conceptualization is that social systems operate through generic structures irrespective of the intentions of actors. This is not to argue that there is no merit in the instrumentalist formulation of the nature of the state; there is ample indication that some formal and informal agreements are arranged by powerful individuals and organizations.
3. Of necessity, I will not elaborate on the methodological assumptions implicit in this procedure. An enormous amount of rural sociological research gets done that is not reported in *Rural Sociology*. However, as the pre-eminent journal of the subdiscipline, it is reasonable to assume that the material published in *Rural Sociology* represents what the subdiscipline regards as important.
4. See Note 11 below.
5. I know of no rural sociologist presently studying family incorporation. A small literature has developed on this subject but it deals with legal implications and arguments about its advantages (Levi, 1971; Davis, 1976; Harl et al., 1977).

6. Beginning in 1979, a group of predominantly younger rural sociologists began to raise issues around the sociology of agriculture. A first, informal meeting held at Davis in 1978 was primarily focused on the fate of the family farm (rather than on the sociology of agriculture). Subsequent meetings were held prior to each RSS meeting in 1979 and 1980. A continuing preoccupation of this group is with the fate of family or small-scale farming, although some tendencies have developed concerning the sociology of agriculture more directly. For an overview of these developments, see Buttel 1980. For a specification of the sociology of agriculture, see Friedland et al., 1981.
7. Goldschmidt's original studies have recently been republished with auxiliary materials (Goldschmidt, 1978a), including an attack on a historical analysis of his calvary (see Kirkendall, 1964); see also Kirkendall's response (1979) and Taylor (1976) on this matter. Goldschmidt (1978b), it should be noted, readdressed the issue of land tenure in the U.S.
8. On the substantive subject involved here, it is parenthetically curious to note that, among USDA social scientists, much effort is currently being invested to argue that a 'turnaround' is occurring in the rural sector with population moving out of urban into rural areas. While this population movement may indeed be occurring, USDA population specialists, by emphasizing the population movement, continue to obscure the trends towards decline in the agricultural population. At the same time, much of the 'turnaround' phenomenon fails to benefit rural populations. (for example, see Hansen, 1973).
9. The Bradfield case never found scholarly analysis. The story was covered in the press. For example, see the *Sacramento Bee*, 24 March 1978 and the *Los Angeles Times*, 10 April 1978. For a fully documented chronicle, see the *University Guardian*, of the United Professors of California (AFT), January–February 1978 and March 1978. For a discussion of the USDA repression of the investigation, see Schrag, 1978.
10. Rogers (1962, pp. 317–353) provides a very substantial bibliography of the literature of this field, much of which originates from rural sociology.
11. For the sake of briefness, I will refer to this congeries of studies as 'development' research.
12. I should emphasize that I am not claiming moral superiority in this analysis. I personally became part of the process by accepting a fellowship from the Ford Foundation for doctoral research in Africa. There is no question in my mind, in historical perspective, that I became part of an American knowledge base essential to the U.S. as it became the prime world power.
13. The presidential addresses of Larson (1959), Hoffsomer (1960), Hoffer (1961) John (1962), Kaufman (1963), Jehlik (1964), Beal (1969), Copp (1972), Ford (1973), Warner (1974) and Capener (1975) have been drawn upon in particular. Other presidential addresses were concerned with issues other than the state of the subdiscipline. Articles by Sewell (1965), Nolan et al. (1975) and Stokes and Miller (1975) as well as an overall assessment of the subdiscipline by Anderson (1959) have also proved helpful.
14. Parenthetically, it can be noted that while rural sociology is 'rich' compared to the general discipline, it is the poverty-stricken segment of the agricultural research community. Hathaway (1972) notes that the agricultural social sciences get only about 10% of the total budget dedicated to agricultural research and rural sociology obtains only 10% of the funds given over to social research. Thus, rural sociology is endowed only to the extent of about 1% of the agricultural research budget.
15. Considerable debate exists within the land-grant research network about basic vs. applied research. For example, see Mayer and Mayer (1974); Nicholson (1977); Busch and Lacy (1979). Rosenberg (1976, Part Two) has dealt with this tension historically within the land-grant research organization.
16. Additional analysis of the corpus of material embodied in *Rural Sociology* remains necessary to demonstrate part of this argument. This research remains to be completed.
17. Robin Williams, in a personal communication, points out that a number of rural sociologists fought to maintain a concern with the demise of rural communities. Unfortunately, while people such as C. Horace Hamilton and Carl C. Taylor have to be remembered, their legacy has tended to be buried by the overwhelming body of materials that represent the current preoccupations of rural sociology.

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