

Private Agri-food Standards: Contestation, Hybridity and the Politics of Standards

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Introduction

Standards are an omnipresent yet generally taken-for-granted part of our everyday life (Higgins and Larner, 2010a; Timmermans and Epstein, 2010; Busch, 2011). Until recently, standards within the agri-food sector were typically dismissed (if thought of at all) by social scientists as rather benign, technical tools, primarily of interest to specialists concerned with facilitating markets and trade. Over the past decade, however, this assessment has changed considerably and many agri-food scholars now view standards as a useful entry point for analysing and understanding our social and material world. The degree of interest today is reflected in the fact that our call for papers on private agri-food standards attracted so many high-quality submissions that we are publishing this special issues in two parts.¹ In part, this shift in interest reflects the influence of science studies and its concern with studying 'mundane' and taken-for-granted objects and practices (Higgins and Larner, 2010b). Here scholars take inanimate objects seriously, to understand, for example, how non-human actors such as standards allow humans to 'act at a distance' (Latour, 1987), thereby ordering relations across time and space. Many agri-food researchers are also concerned with the rise of private food standards developed by global retailers and non-government organizations, including understanding the role that these standards might play in coordinating and governing production and consumption relations within the context of globalization (Giovannucci and Ponte, 2005; Hatanaka et al., 2005; Mutersbaugh, 2005; Tallontire et al., 2011).

Within this context, agri-food researchers have focused on standard-makers as well as the nature and implications of private forms of governing and regulatory relations within the context of global trade. Scholars are grappling with a variety of new social, political and normative questions, whose answers, they believe, are increasingly important for understanding our heterogeneous world. For example, who is included or excluded in the standard-setting process? How are the benefits and burdens of standards distributed? In what way are trust, accountability and legitimacy created? How are conflicts negotiated and reconciled? What and whose values are reflected in the standards? How do standards act to make some concerns

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Specifically, standards are agreed-upon criteria or rules intended to measure a product, person or service's performance or specific characteristics (e.g. the amount of pesticide residue on apples) or the process through which the good was produced (e.g. an organic apple) (Nadvi and Waltring, 2004). By providing a common language and rules of measurement, standards are used to classify and categorize in order to create uniformities and equivalences between people and things. Through this process it is argued that relationships are ordered and disciplined across time and space: 'made to work' despite the heterogeneity that exists between cultures, languages, political systems, and markets (Busch, 2000; Higgins and Larner, 2010b; Timmermans and Epstein, 2010; Busch, 2011; Ponte et al., 2011).

Public standards are understood as those established by government authority and embedded in laws and regulations. Private standards are often referred to as voluntary because compliance is enacted through the market and not via public authority. In addition, where market signals or drivers do not exist, or are weak, companies may choose to use private standards to protect their reputation or show to the public that they are a socially and/or environmentally responsible business. There may also be overlap between the two where public regulations incorporate private standards (for example, see Fisher and Sheppard in this issue who focus on public officials' incorporation of fair-trade standards in procurement practices) and where private standards incorporate public standards (e.g. public food safety standards are often incorporated into private food safety certification systems, such as ISO 22000).

Formal standards are tied increasingly to a hierarchical monitoring and compliance infrastructure that includes standard setting, certification (often through thirdparty certifiers), and accreditation. Loconto and Busch (2010) refer to this as the tripartite standards regime (TRS). With the expansion in standards and standardmakers, third-party certifiers (TPC) emerged to assess, evaluate and certify safety and quality claims against a particular set of standards and compliance procedures (Hatanaka et al., 2005). Similarly, as the number of certifiers and certifications expanded, accreditation organizations were developed to standardize TPC and regulate their practices (Loconto and Busch, 2010). This rise in the 'control of control' is intended to promote self-regulation in the management of risk (Power in Campbell et al., 2006) as well as to help stabilize networks through the creation of trust and legitimacy (Loconto and Busch, 2010).

The Rise of Private Standards

Within the agri-food sector, standards are part of the institutional infrastructure that coordinates the production and distribution of agricultural products. Until the 1990s, bulk commodities, such as grain, cotton and cocoa, dominated world trade. To facilitate the creation of such commodity markets, reduce transaction costs and increase market efficiency public standards were developed. Here the focus of attention was on product standards (e.g. pesticide residues, colour, moisture content), which could easily be measured and would ensure uniformity and consistency (Ransom, 2007; Daviron and Vagneron, 2011).

However, over the past two decades a confluence of forces have challenged this paradigm, creating new opportunities for non-state actors, including food retailers, business associations, non-governmental organizations, and multi-stakeholder groups, to develop standards and use them, together with labels and certification systems, to accomplish a range of objectives. These drivers include, for example, the expansion of global value chains in the wake of the establishment of the World Trade Organization (WTO), the rise of neo-liberal economic and social policies, the consolidation of food retailers, consumer concerns about food safety and quality, and activist concerns about corporate social responsibility within the context of globalization (Busch and Bain, 2004; Lawrence and Burch, 2007). Proponents of private standards argue that within this changing economic and political climate the nation state alone was no longer capable – or willing – to regulate the behaviour of businesses (Giovannucci and Ponte, 2005).

As the importance and promulgation of standards has increased so has scholarly interest in who develops and controls standards and for what purpose. Influenced by frameworks such as global value chain analysis (GVCA), scholars argue that power within the market has shifted from producers and manufacturers to retailers (Reardon et al., 2003; Henson and Reardon, 2005; Bair, 2009). Mammoth food retailers, such as Tesco in the UK or Walmart in the US, have benefited from the changes described above and are using their oligarchic position in the marketplace, together with their ability to source products from around the globe, to establish themselves as the primary gatekeeper to consumer markets.

Researchers utilizing a GVCA framework have been particularly concerned with understanding the distributional effects of retailer-led standards and their implications for power and inequality, especially for small-scale producers in developing countries (Dolan and Humphrey, 2000; Freiberg, 2004; Ransom, 2011) and to a lesser degree farm workers and women (Bain, 2010; Prieto-Carrón and Larner, 2010). Here, a focus on governance is viewed as valuable for revealing the social relations inherent in the production of commodities (Guthman, 2009). The concept of governance focuses our attention on understanding the tools, techniques and activities, such as standards and audits, that food retailers utilize to influence and coordinate production and consumption within the value chain (Higgins and Larner, 2010b; Tallontire et al., 2011). For example, retailers use standards to shape the division of labour within the agri-food system, which has important implications for how financial, material, and human resources, as well as costs, risks and rewards, are distributed (Ponte and Gibbon, 2005).

NGOs have also emerged as important actors in setting standards and shaping the governance of global value chains (Barrientos and Dolan, 2006). Media and activist exposés have drawn public attention to examples of negligent behaviour, such as the use of child labour, by suppliers to the major retailers. Recognizing that the brand name and corporate reputation of retailers is vulnerable to such negative campaigns, NGOs have pressured – or worked with – retailers to establish standards and certification systems designed to minimize the threat of liability and scandal for retailers while enhancing the social and environmental performance of actors throughout the value chain (Barrientos and Dolan, 2006; Fuchs et al., 2009). In addition, NGOs, have sought to challenge what they perceive as the destructive environmental and social production and consumption practices inherent within the conventional agri-food market by developing alternative systems of standards and certification. Perhaps best known is the example of fair trade, which through its social and environmental standards seeks to transform inequitable North–South relations, empower producers, and encourage ethical consumption (Raynolds, 2012).

Agri-food scholars have also been influenced by conventions theory (Boltanski and Thévenot, 1991) and the economy of qualities approach (Callon et al., 2002). One of the central ideas here is that competition within the food sector has shifted from a focus on price and quantity to one that emphasizes notions of quality. Retailers or NGOs are concerned with creating standards that can communicate information to the consumer about particular attributes, such as safety or production process, embedded in a product. For example, standards can be used to communicate if a banana is organic, something that a consumer cannot determine objectively for themselves (Ponte and Gibbon, 2005). A conventions approach is focused on understanding the role of norms and values in determining how particular assessments of quality are made as well as the rules, procedures and organizational forms that coordinate exchange relations (Raynolds, 2004). Raynolds (2004, p. 728) argues that through an analysis of conventions, researchers can appreciate 'the constellations of ideas, practices, and institutions' that comprise and guide 'relations of production, exchange, and consumption'.

In sum, private standards are no longer simply about reducing transaction costs and increasing market efficiency. Instead, private standards have emerged as tools used strategically by both businesses and NGOs to achieve a range of objectives. These objectives include access to new markets, coordination of operations, quality and safety assurances to consumers, and the establishment of new brands, niche products and markets.

One recent area of enquiry has been to analyse the discursive and organizational mechanisms through which private standards and standard-makers achieve and maintain legitimacy. Public standards derive their authority and legitimacy from the state and the democratic decision-making process (Bain et al., 2010; Fuchs et al., 2011). The issue for these scholars is to understand how standard-makers convince potential standard-users to view *their* standards as credible and trustworthy (Ponte et al., 2011). The legitimacy of governance mechanisms is especially relevant within the context of global trade where rules and regulations are largely voluntary and authorities policing non-compliance are largely absent (Henson, 2011). Fuchs et al. (2011) assess legitimacy based on the degree to which standards enhance stakeholder participation as well as their transparency and accountability. Konefal and Hatanaka (2011) argue that the use of public, private or public–private hybrid TPC organizations has become de rigueur for enhancing the trust and legitimacy of claim-making related to standards, largely due to its perception as a compliance tool that is transparent, independent and objective.

Proponents assert that standards are grounded in techno-scientific practices, such as value neutrality, consistency, and transparency, as well as the objectivity of independent third-party certifiers. Influenced by science studies, especially actornetwork theory, agri-food scholars of standards have sought to challenge this view. Drawing on understandings of how techno-scientific development works in practice (Latour, 1987), these scholars argue that standards are not simply an objective means to address technical compatibility issues. Rather, standards and TPC are socially mediated and are 'examples of disciplinary power' (Higgins and Larner, 2010a). Standards are not absolute, universalist tools imposed on local actors and sites, instead the ongoing work of standardizing – making people and things commensurable and calculable – is a process of negotiation, revision and strategic design (Higgins and Larner, 2010a). From this perspective, standards inevitably embody the interests, values, and asymmetrical power relations of different actors involved in the process. One of the useful insights that have emerged is that science, politics and ethics are not mutually exclusive. Standards are normative because the very process of creating classifications and categories involves choices over what or who to include and exclude (Ponte et al., 2011; Silva-Castaneda, 2012). Busch argues that standards are normative because they not only define 'what (who) is good and what is bad', but also discipline 'those people and things that do not conform to the accepted definitions of good and bad' (2000, p. 273). Similarly, Ponte et al. argue that standards are norms through 'which people, objects or actions (including government regulation itself) can be judged and compared' (2011, p. 1). Standards have political and moral

significance because they order relationships among people by defining their rights and their exposure to the rights of others. Thus, we can understand techno-scientific practices, such as standards, as 'politics by other means', which play a role in (re) producing social structures and informing issues related to ethics, social justice and democracy (Tanaka and Juska, 2010, p. 36).

Outline of the Special Issue

The articles in this first issue of the IJSAF Private Agri-food Standards special issue expand on the body of literature that has focused on the enactment and standardization of standards. In particular, this issue focuses on the contestation, hybridity and the politics of standards. Specifically, several articles investigate and complicate the divide between so-called public versus private standards. While private standards have correctly been identified as coinciding with the rise of neo-liberalism and an audit culture (Campbell and Le Heron, 2007; Higgins et al., 2008), it is somewhat 'premature to assume that *all* non-governmental standards have the same political, social and cultural impacts' (Kimura, this issue, emphasis in original). The diversity of the operations and outcomes of private standards becomes particularly salient when focusing on different locations and contexts. Several of these articles allow us to see how private standards operate differently in different commodity chains and different cultural and institutional contexts (e.g. Argentina, Japan, Russia, Saint Vincent, United Kingdom).

Several authors in this collection also call attention to the ways in which agricultural and food procurement practices occur in contested spaces. These spaces provide opportunities for agency and unscripted outcomes, despite the presence of TSRs. Spaces of contestation occur because situations are often not fully knowable (e.g. the day-to-day practices of organic producers). Thus, individuals must often provide interpretations for appropriate courses of action to follow, and it is argued these interpretations present a specific type of standardizing work. In addition, these interpretations become further complicated when multiple standards regimes are being enacted in the same space (see Aasprong this issue; Berman, this issue). Yet, far from being passive, it is clear that some commodity chain actors seize the opportunity to selectively engage with standards and standardization practices of various standards regimes.

Contestation of standards also occurs because standards and standardization represent a contestation over values. Thus, the implementation and enactment of standards are 'situated in an edgy relationship as actors seek to transform institutional practice' (Fisher and Sheppard, this issue; also see Renard and Loconto, this issue). Expanding on earlier work that emphasized people's agency in commodity chains, a social interactionist approach 'reveals the complexity of implementing global quality standards in local contexts, and it highlights the significance of multiple interpretations and of degrees of engagement of social actors with the global expansion of standards' (Viteri and Arce, this issue). Below we provide a brief overview of the articles in this issue and the ways in which they expand upon our understanding of the contestation, hybridity and the politics of standards.

The first three articles in this issue (Kimura, Fisher and Sheppard, Renard and Loconto) all focus on the issue of developing democratic standards. Citing Busch (2011), who argues that standards are not only about expertise, but also about values, Kimura argues in 'Standards as Hybrid Forum: Comparison of the Post-Fukushima Radiation Standards by a Consumer Cooperative, the Private Sector, and the Japanese Government' that standards should be evaluated based on the amount of democratic dialogue behind them. Using Callon's metric of a 'hybrid forum', she evaluates the degree to which democratic standard setting for safe radiation levels in food occurred after the Fukushima accident in Japan. Based on her analysis of government, corporate, and a non-governmental organization, the Seikatsu Club Consumer Cooperative (SCCC), she concludes quite persuasively that scholars have been far too quick to critique all private standards (as opposed to public standards). Rather her research finds that SCCC standard-setting processes reflected democratic values more than corporate standards *and* more than the government's process of standards development. Kimura concludes that her findings counter 'the common assumption that public standards are better than private ones'.

In 'Pushing the Boundaries of the Social: Private Agri-food Standards and the Governance of Fair Trade in European Public Procurement', Fisher and Sheppard also engage with the issue of the contestation of values within global agri-food trade. They explore the ability of public sector actors to use private standards in their day-to-day work. Specifically, they focus on public procurement professionals in the Wales government and their ability to source fair-trade goods. Due to legal requirements of non-discrimination in procurement policies and very little case law on fair-trade procurement, public procurement officers must weigh the desire to procure sustainable goods (e.g. Fairtrade tea) with the risk of possible legal action for discriminatory procurement practices. Fisher and Sheppard explore why different courses of action are followed by different procurement professionals. The diverse decision-making processes of various procurement officials reveal the situated ability to govern, with actors experiencing a dynamic environment within which they must interpret different claims to legitimacy to serve the common good.

Emphasizing that standards development reflects values, in 'Competing Logics in the Further Standardization of Fair Trade: ISEAL and the Símbolo de Pequeños Productores' Renard and Loconto reveal the increasingly contested set of standards behind Fairtrade, one of the oldest standardized systems of private agriculture governance. The authors analyse two fair-trade groups, the large ISEAL group and the newly formed splinter group Símbolo de Pequeños Productores (SPP). Their case study demonstrates that SPP was created in protest to the perception that ISEAL's standards are increasingly performance based to the detriment of supporting the values and principles upon which fair trade was originally founded. SPP formed due to the perceived mission drift of ISEAL and as a means to advance a more valuesbased set of fair-trade standards. Not coincidently, SPP's principles challenge the assumption that third-party certification must be distant from producers involved in the system or, alternatively, it is argued that the very rationale of fair trade depends upon certifiers working in close proximity with producers. Simultaneously, producers are concerned that this greater proximity will negatively impact the credibility and reputation of the newly developed fair-trade organization. Ultimately, Renard and Loconto argue that a conceptual and empirical link is missing in the literature between what is achieved through standards and the underlying process by which private governance is developed, adopted and implemented.

The final four articles in this issue explore the ways in which standards and their accompanying audits and third-party certifications are enacted or performed, with particular attention focused on the experiences of specific actors within the commodity chain. In Berman's 'Make It *What* Way? The Impact of Multiple Standards Regimes' and Aasprong's 'Entangled Standardizing Networks: The Case of GLOBALGAP and Fairtrade in Saint Vincent's Banana Industry', each author focuses on the experiences of *producers*. Whereas, in 'Inferring the Unknown: Enacting Organic Standards through Certification', Van der Kamp observes the performance of actual *certifiers* within a certifying body, Viteri and Arce describe *retailers*' negotiations over quality despite increasingly global, homogenizing standards in 'The Negotiation of Quality Standards: A Social Interactionist Approach to Fruit and Vegetable Distribution in Argentina'. All four articles highlight the importance of paying attention to the day-to-day practices of enacting TSRs, while also forcing us to recognize the ways in which context shapes the amount of discretionary power various actors have within a commodity chain.

Berman's study takes us to Russia and focuses on the fast-food industry, the fastest growing segment of Russia's food-service industry, and the industry's suppliers, particularly potato, poultry and lettuce producers. Berman focuses on the ways in which multiple standard regimes in the same space contribute to producers responding in partial and selective ways to standard adoption and implementation. While previous studies have compared how similar standards play out differently in diverse cultural contexts (e.g. Friedberg's study of British versus French green bean supply networks), Berman notes that few studies have focused on diverse standards and how they play out in one cultural context. In the case of Russia, she observes that producers' responses to any given standard are often contingent on other standards at play and that, when multiple standards regimes are enacted in the same space, producers identify the ambiguities inherent in each set of standards. Ultimately, Berman's study sheds light on the ways in which Russia and its unique cultural context shape acceptance of and adherence to various standards of producers and other members of the value chain. She notes that corporations may grant suppliers (including producers) more flexibility in the Russian context where the rule of law with respect to contract enforcement is perceived to be weaker than in other countries. The weak rule of law when combined with widespread corruption means that the audit culture, which is so prevalent in the enforcement of standards, easily obscures the day-to-day practices of food suppliers, thereby allowing them to only partially comply with standard regimes. Finally, Berman shows that far from perceiving themselves as victims in a system of proliferating standards, most Russian producers perceive themselves as active participants in the system, making strategic decisions about what standards to adopt and the degree to which they will fully implement the standards.

Focused on the impact that multiple certification systems have on producers, Aasprong examines the role of interpretation in standardizing. Similar to Berman, Aasprong is explicitly interested in the producers' experiences and perspectives when they are subject to two or more sets of rules and governance structures, in this case GLOBALGAP and Fairtrade for banana production. He argues that the entanglement of certification systems in production demands more attention be given to how many actors involved in implementation processes collectively make sense of the standards. Due to 'the chain of interpretative authority', which emphasizes the involvement of a chain of actors with diminishing privilege in establishing interpretations, the author discovers that Saint Vincent banana producers are often encouraged to adopt a stricter interpretation of a standard than may be necessary. The adoption of a stricter interpretation of a standard occurs during a space in which there is an absence of authoritative interpretations, which has consequences for the amount of time and resources invested by producers. Aasprong also finds that in the case of the banana industry on Saint Vincent the entanglement of multiple certification systems means that actors from one standardizing network often end up having a stake in another network and consequently seek to influence the standardizing work. It is increasingly common for producers to be required to co-implement multiple certification systems, and Berman and Aasprong give scholarly attention to the ways in which farmers engage with and adapt to these standardizing networks.

While Berman finds that in the case of Russia producers still have the ability to make their own decisions, Van der Kamp asserts that the discretionary space to find interpretations of standards has shifted from farmers to certification bodies in the case of UK organics. In 'Inferring the Unknown', Van der Kamp analyses the day-today practices of certifiers who are responsible for certifying organic farmers in the UK. He finds is that the certification process involves dealing with uncertainty on an almost routine basis, something he phrases as a systemic absence of knowledge in the certification process. However, despite the systemic absence of knowledge, certification of farmers occurs and it is this occurrence that Van der Kamp interrogates. He observes that certification proceeds, and the decisions made by the certifiers are not haphazard or arbitrary. Rather the certification process is highly formalized and documented in part as a response to the uncertainty of certification. Utilizing Knorr Cetina's concept of epistemic practice, Van der Kamp admirably demonstrates that certification is a process in which the day-to-day operations of an organic producer can never fully be known. Instead certifiers rely on the 'unfolding of one empirical case' as sufficient for representing the way a producer 'does' organic production. In the process of documenting the response to uncertainty, Van der Kamp also demonstrates the ways in which sustainability standards are modified based on local cases, thereby allowing him to conclude standards are endlessly rewritten. Indeed, it is the ability to interpret and tinker with the standards that allow for the standards to work in specific locations. Most importantly, his work reveals that this adaption of standards to specific cases and localities is accomplished by different actors in the commodity chain working together, not simply by a single actor in a local setting.

Finally, while many of the articles in this collection are concerned with the operation of multiple global standard regimes in specific locations, Viteri and Arce argue that despite global standards, quality remains negotiated and definitions diverse within local contexts. Seeking to call attention to how the quality economy is established in markets, specifically how actors' social interactions and experiences shape quality standards, the article features three case studies of retailing practices within the Buenos Aires Wholesale Central Market (BAWCM). Utilizing a symbolic interactionist approach, the authors' case studies emphasize that prime consideration must be given to the differing interpretations, social relations, and materialities of quality in 'real' markets and, therefore, to subsequent negotiation and conflict that occurs between different actors. By using a social interactionist approach, their work reveals 'the complexity of implementing global quality standards in local contexts, and it highlights the significance of multiple interpretations and of degrees of engagement of social actors with the global expansion of standards'. Moreover, through this approach, the authors demonstrate that new types of agency and new materialities are created in the midst of negotiated quality.

Note

1. Part 2 will be published as vol 20, no. 2..

References

- BAIN, C. (2010) Structuring the flexible and feminized labor market: globalgap standards for agricultural labor in Chile, *Signs: Journal of Women in Culture and Society*, 35, pp. 335–370.
- BAIN, C., RANSOM, E. and WOROSZ, M. (2010) Constructing credibility: using technoscience to legitimate strategies in agrifood governance, *Journal of Rural Social Sciences*, 25, pp. 160–192.
- BAIR, J. (2009) Global commodity chains: genealogy and review, in: J. BAIR (ed.) Frontiers of Commodity Chain Research. Stanford, CA: Stanford University Press, pp. 1–34.
- BARRIENTOS, S. and DOLAN, C. (2006) Ethical Sourcing in the Global Food System. London: Earthscan.
- BOLTANSKI, L. and THÉVENOT, L. (1991) De la justification. Les economies de la grandeur. Paris: Gallimard.
- BUSCH, L. (2000) The moral economy of grades and standards, Journal of Rural Studies, 16, pp. 273–283.
- Busch, L. (2011) Standards: Recipes for Reality. Cambridge, MA: MIT Press.
- BUSCH, L. and BAIN, C. (2004) New! Improved? The transformation of the global agrifood system, Rural Sociology, 69, pp. 321–346.
- CALLON, M., MÉADEL, C. and RABEHARISOA, V. (2002) The economy of qualities, *Economy and Society*, 31, pp. 162–184.
- CAMPBELL, H. and LE HERON, R. (2007) Supermarkets, producers and audit technologies: the constitutive micro-politics of food, legitimacy and governance, in: D. BURCH and G. LAWRENCE (eds) Supermarkets and Agri-Food Supply Chains: Transformations in the Production and Consumption of Foods. Cheltenham: Edward Elgar, pp. 131–153.
- CAMPBELL, H., LAWRENCE, G. and SMITH, K. (2006) Audit cultures and the antipodes: the implications of EurepGAP for New Zealand and Australian agri-food industries, in: J. MURDOCH and T. MARSDEN (eds) Between the Local and the Global: Confronting Complexity in the Contemporary Agri-Food Sector. Oxford: Elsevier, pp. 69–94.
- DAVIRON, B. and VAGNERON, I. (2011) From commoditisation to de-commoditisation...and back again: discussing the role of sustainability standards for agricultual products, *Development Policy Review*, 29, pp. 91–113.
- DOLAN, C. and HUMPHREY, J. (2000) Governance and trade in fresh vegetables: the impact of UK supermarkets on the African horticulture industry, *Journal of Development Studies*, 37, pp. 147–176.
- FREIBERG, S. (2004) French Beans and Food Scares: Culture and Commerce in an Anxious Age. Oxford: Oxford University Press.
- FUCHS, D., KALFAGIANNI, A. and ARENTSEN, M. (2009) Retail power, private standards, and sustainability in the global food system, in: J. CLAPP and D. FUCHS (eds) *Corporate Power in Global Agrifood Governance*. Cambridge, MA: MIT Press, pp. 29–59.
- FUCHS, D., KALFAGIANNI, A. and HAVINGA, T. (2011) Actors in private food governance: the legitimacy of retail standards and multistakeholder initiatives with civil society participation, *Agriculture and Human Values*, 28, pp. 353–367.
- GIOVANNUCCI, D. and PONTE, S. (2005) Standards as a new form of social contract? Sustainability initiatives in the coffee industry, *Food Policy*, 30, pp. 284–301.
- GUTHMAN, J. (2009) Unveiling the unveiling. commodity chains, commodity fetishism, and the 'value' of voluntary, ethical food labels, in: J. BAIR (ed.) *Frontiers of Commodity Chain Research*. Stanford, CA: Stanford University Press, pp. 190–206.
- HATANAKA, M., BAIN, C. and BUSCH, L. (2005) Third-party certification in the global agrifood system, *Food Policy*, 30, pp. 354–369.
- HENSON, S. (2011) Private agrifood governance: conclusions, observations and provocations, Agriculture and Human Values, 28, pp. 443–451.

- HENSON, S. and REARDON, T. (2005) Private agri-food standards: implications for food policy and the agrifood system, *Food Policy*, 30, pp. 241–253.
- HIGGINS, V. and LARNER, W. (2010a) From standardization to standardizing work, in: V. HIGGINS and W. LARNER (eds) Calculating the Social: Standards and the Reconfiguration of Governing. New York, NY: Palgrave Macmillan, pp. 205–218.
- HIGGINS, V. and LARNER, W. (2010b) Standards and standardization as a social scientific problem, in: V. HIG-GINS and W. LARNER (eds) Calculating the Social: Standards and the Reconfiguration of Governing. New York, NY: Palgrave Macmillan, pp. 1–17.
- HIGGINS, V., DIBDEN, J. and COCKLIN, C. (2008) Neoliberalism and natural resource management: agri-environmental standards and the governing of farming practices, *Geoforum*, 39, pp. 1776–1785.
- KONEFAL, J. and HATANAKA, M. (2011) Enacting third-party certification: a case study of science and politics in organic shrimp certification, *Journal of Rural Studies*, 27, pp. 125–133.
- LATOUR, B. (1987) Science in Action: How to Follow Scientists and Engineers through Society. Milton Keynes: Open University Press.
- LAWRENCE, G. and BURCH, D. (2007) Understanding supermarkets and agri-food supply chains, in: D. BURCH and G. LAWRENCE (eds) Supermarkets and Agri-food Supply Chains: Transformations in the Production and Consumption of Foods. Cheltenham: Edward Elgar, pp. 1–26.
- LOCONTO, A. and BUSCH, L. (2010) Standards, techno-economic networks, and playing fields: performing the global market economy, *Review of International Political Economy*, 17, pp. 507–536.
- MUTERSBAUGH, T. (2005) Fighting standards with standards: harmonization, rents, and social accountability in certified agrofood networks, *Environment and Planning A*, 37, pp. 2033–2051.
- NADVI, K. and WALTRING, F. (2004) Making sense of global standards, in: H. SCHMITZ (ed.) *Local Enterprises in the Global Economy: Issues of Governance and Upgrading*. Cheltenham: Edward Elgar, pp. 53–91.
- PONTE, S. and GIBBON, P. (2005) Quality standards, conventions and the governance of global value chains, Economy and Society, 34, pp. 1–31.
- PONTE, S., GIBBON, P. and VESTERGAARD, J. (2011) Governing through standards: an introduction, in: S. PONTE, P. GIBBON and J. VESTERGAARD (eds) Governing through Standards: Origins, Drivers and Limitations. New York: Palgrave Macmillian, pp. 1–24.
- PRIETO-CARRÓN, M. and LARNER, W. (2010) Gendering codes of conduct: Chiquita bananas and Nicaraguan women workers, in: V. HIGGINS and W. LARNER (eds) Calculating the Social: Standards and the Reconfiguration of Governing. New York, NY: Palgrave Macmillan, pp. 38–55.
- RANSOM, E. (2007) The rise of agricultural animal welfare standards as understood through a neo-institutional lens, International Journal of Food and Agriculture, 15, pp. 26–44.
- RANSOM, E. (2011) Botswana's beef global commodity chain: explaining the resistance to change, *Journal of Rural Studies*, 27, pp. 431–439.
- RAYNOLDS, L.T. (2004) The globalization of organic agro-food networks, World Development, 32, pp. 725–743.
- RAYNOLDS, L.T. (2012) Fair trade: social regulation in global food markets, *Journal of Rural Studies*, 28, pp. 276–287.
- REARDON, T., TIMMER, C.P., BARRETT, C.B. and BERDEGUE, J.A. (2003) The rise of supermarkets in Africa, Asia, and Latin America, American Journal of Agricultural Economics, 85, pp. 1140–1146.
- SILVA-CASTANEDA, L. (2012) A forest of evidence: third-party certification and multiple forms of proof a case study of oil palm plantations in Indonesia, *Agriculture and Human Values*, 29, pp. 361–370.
- TALLONTIRE, A., OPONDO, M., NELSON, V. and MARTIN, A. (2011) Beyond the vertical? Using value chains and governance as a framework to analyse private standards initiatives in agri-food chains, *Agriculture and Human Values*, 28, pp. 427–441.
- TANAKA, K. and JUSKA, A. (2010) Technoscience in agriculture: reflections on the contributions of the MSU School of Sociology of Food and Agriculture, *Journal of Rural Social Sciences*, 25, pp. 34–55.
- TIMMERMANS, S. and EPSTEIN, S. (2010) A world of standards but not a standard world: toward a sociology of standards and standardization, *Annual Review of Sociology*, 36, pp. 69–89.