Systemic ethics and inclusive governance: two key prerequisites for sustainability transitions of agri-food systems

Sibylle Bui¹· Ionara Costa¹· Olivier De Schutter¹· Tom Dedeurwaerdere¹· Marek Hudon²· Marlene Feyereisen³

- 1 Centre for Philosophy of Law, Université catholique de Louvain, Louvain-la-Neuve, Belgium
- 2 Solvay Brussels School of Economics and Management, Université Libre de Bruxelles, Belgium
- 3 Département Sciences et Gestion Environnement, SEED, Université de Liège, Arlon, Belgium

Bibliographical reference

Bui, S., Costa, I., De Schutter, O., Dedeurwaerdere, T. Hudon, M. and Feyereisen, M. 2019. Systemic ethics and inclusive governance: two key prerequisites for sustainability transitions of agri-food systems. *Agriculture and Human Values*, Symposium/Special issue, 1–12 (2019). https://doi.org/10.1007/s10460-019-09917-2

Self-archived author copy

This copy is for your personal, non-commercial use only. For all other uses permission shall be obtained from the copyright owner.

Copyright: © Springer Nature B.V. 2019 – all rights reserved.

Agriculture and Human Values https://doi.org/10.1007/s10460-019-09917-2

SYMPOSIUM/SPECIAL ISSUE



Systemic ethics and inclusive governance: two key prerequisites for sustainability transitions of agri-food systems

Sibylle Bui¹ · Ionara Costa¹ · Olivier De Schutter¹ · Tom Dedeurwaerdere¹ · Marek Hudon² · Marlene Feyereisen³

Accepted: 21 January 2019 © Springer Nature B.V. 2019

Abstract

Food retailers are powerful actors of the agro-industrial food system. They exert strong lock-in effects that hinder transitions towards more sustainable agri-food systems. Indeed, their marketing practices generally result in excluding the most sustainable food products, such as local, low-input, small-scale farmers' products. Recently in Belgium, several initiatives have been created to enable the introduction of local products on supermarket shelves. In this article, we study three of those initiatives to analyse if the development of local sourcing in supermarkets opens up an opportunity for a transition towards more sustainable agri-food systems. We conceptualise transitions as a shift in governance and ethical values and adopt a pragmatist approach of ethics combined with the systemic perspective of transition studies, to evaluate the impact of these initiatives. Our analysis shows that they mainly contribute to the reproduction of the incumbent agri-food system. It also highlights that first, to be a driver for sustainability transitions, food ethics need to be systemic i.e. relate to a systemic understanding of problems and perspective of sustainability, including social justice. And second, it highlights that governance arrangements involving not only representative organisations of the various agri-food and non-agricultural actors, but also actors upholding ethical values that are currently missing in conventional supply chains and representing excluded and marginalised interests, favour the uptake of such systemic ethics by incumbent actors. Hence, systemic ethics and inclusive governance are key features for initiatives to contribute to a sustainability transition.

Keywords Sustainability transitions · Governance · Agri-food system · Food ethics · Local food · Retail corporations

⊠ Sibylle Bui sibylle.bui@uclouvain.be

Ionara Costa ionara.dacosta@uclouvain.be

Olivier De Schutter olivier.deschutter@uclouvain.be

Tom Dedeurwaerdere tom.dedeurwaerdere@uclouvain.be

Marek Hudon mhudon@ulb.ac.be

Marlene Feyereisen marlene.feyereisen@ulg.ac.be

Published online: 07 February 2019

- Centre for Philosophy of Law, University of Louvain, Place Montesquieu 2, 1348 Louvain-la-Neuve, Belgium
- Solvay Brussels School of Economics and Management, Université Libre de Bruxelles, Avenue F.D. Roosevelt 42, 1050 Brussels, Belgium
- Département Sciences et Gestion Environnement, SEED, University of Liège, Avenue de Longwy 185, 6700 Arlon, Belgium

Abbreviations

CSO Civil society organisation
FTE Full time equivalent
LAG Local action group
UK United Kingdom

Introduction

Corporate retailers play a prominent role in maintaining and expanding the agro-industrial food system. Their pivotal position in supply chains and their weight on markets provides them with a strong capacity to shape practices of most actors of the food system (Clapp and Fuchs 2009), as well as public policies and regulations (Marsden et al. 2000). From a sustainability transitions perspective, they are key actors of the sociotechnical system, crucially influencing the moving towards or away from more sustainable modes of production and consumption.

When discussing the development of agri-food systems, two paradigms can be distinguished: the dominant



agro-industrial paradigm is based on industrialisation, standardisation and globalization of agri-food supply chains; in contrast, the integrated territorial paradigm aims to support diversity and de-concentration of food supply, and to reconnect food to socio-cultural and physical territorial contexts (Wiskerke 2009). These two paradigms and their associated food geographies are Weberian ideal-types, generally combined in hybrid food geographies in real life (Lamine et al. 2012). Nevertheless, the contrast between the two paradigms usefully underlines the coexistence of different agricultural and food ethics. Pointing in opposite directions, they guide actors' strategies towards either incremental or more profound systemic change.

This contrast between the agro-industrial and the integrated territorial paradigms can also be found in the scientific literature. One strand of the literature remains within the dominant agro-industrial model: it emphasizes the potential of "ecological modernisation", which is seen as reconciling economic and industrial growth with environmental sustainability, by integrating environmental objectives (Spaargaren and Mol 1992; Jänicke 2008). Another strand of the literature, instead, focuses on alternative agri-food networks and emphasizes the need for more systemic change, putting forward the relocalisation of food systems as a solution to the problems generated by the agro-industrial food model (e.g. Renting et al. 2003; Lamine et al. 2012). In this paper, we examine whether these two paradigmatic propositions (and associated epistemologies) can be bridged, and under which conditions, by examining the impact of the introduction of local food in Belgian supermarkets.

Alternative food networks are generally conceived parallel to—and mostly in opposition to—the incumbent system (i.e. mainstream food chains, national and EU policies in European context). Most actors involved in such networks perceive working with supermarkets as a betrayal of the values² they defend, and as contradictory with the message they aim to convey. Yet, several initiatives aiming to introduce local food in supermarkets have emerged recently in Belgium.³ They have received strong support from local authorities and are becoming a flourishing activity. Considering "local food conveys strong meanings with the potential

³ This follows a global tendency (Costa et al. 2018).



to detach consumers from conventional food networks and attach them to alternative food networks" (Brunori 2007, p. 8), this unusual positioning at the interface of various actors, upholding different food ethics, raises an interesting question: does this original positioning favour the emergence of new values and practices within the dominant system, which could facilitate a transition towards more sustainable agri-food systems? Our hypothesis is that the nature (incremental vs. radical) and the transformative potential of these innovations depend on the uptake of (some of) the ethical values conveyed by "local food". In this article, we analyse the social construction of ethics associated with local food in three initiatives aimed at introducing local products in supermarkets in Belgium. We analyse whether and how the values of the various actors involved have changed, the governance arrangements the initiatives are based on, as well as their impacts on the agri-food system in terms of practices. Our aim is to identify under which conditions such initiatives open an opportunity for a transition towards more sustainable agri-food systems. We ask in particular: (1) what key ethical values from local agri-food networks are necessary to significantly enhance the sustainability of the dominant agri-food system, and (2) which forms of governance can foster the uptake of those values?

This paper is organised as follows. "Conceptualising sustainability transitions as a shift in governance and ethical values" presents our analytical framework and methodology. "Local food in Belgian supermarkets: transition or further lock-in?" describes the trajectory of our three case studies and examines their influence on the practices and ethical frames of the various actors involved, as well as the governance arrangements they are based on. "Discussion" provides a more in-depth discussion of the impacts of these initiatives on the agri-food system. This allows shedding light on key ethical values and governance features for agri-food sustainability, presented in the conclusion.

Conceptualising sustainability transitions as a shift in governance and ethical values

A lock-in situation associated with a backstage, retailer-led governance

Supermarkets are acknowledged to have a central role in the food supply chain and more broadly in the shaping of the global agri-food system. For instance, there is a broad literature on the impacts of private standards set by retailers, including on exclusionary effects on smallholders from developing countries (e.g. Henson and Humphrey 2010), as well as on the growing dependence of small-scale producers in developed countries (e.g. Richards et al. 2013). Yet, supermarkets have been generally neglected by transition

Multiple variants of these two paradigms can be found in political discourses and the scholarly literature. For instance, Levidow (2015), focusing on farming practices, knowledge and innovation systems, refers to life science (bioeconomy and sustainable intensification) versus agroecology, whose underlying economic models correspond to the agro-industrial versus the integrated territorial paradigms.

² By value, we understand an "enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence" (Rokeach 1973, p. 5).

studies. Analyses of lock-in effects have mainly focused on the production and innovation dimensions (e.g. Cowan and Gunby 1996; Vanloqueren and Baret 2008), overlooking the role of retailers. Some studies do indicate, however, that by imposing certain criteria on the upstream part of the food chain (e.g. homogeneity standards, volume and uninterrupted supply requirements), corporate retailers exclude from their shelves a significant part of the foods that are most sustainably produced, reducing their availability for consumers. For example, the socio-historical analysis of fruit production in France by Lamine et al. (2014a, b) shows these criteria force farmers to make intensive use of chemical inputs.

Retailers' oligopolistic power also undermines social sustainability either directly or indirectly: pressure on prices contributes to further restructuring agri-food production from a large number of small producers to a small number of large producers (Konefal et al. 2005) and the growing concentration of the sector reduces the number of alternative food outlets able to market products of small-scale farmers (McCullough et al. 2010).

The increasing market power of corporate retailers caused the governance of the agri-food system to become retailerled in the 1990s. Not only did retailers take over market governance; they also gained influence on food regulatory systems, including at the EU level (Marsden et al. 2000). The adoption and enforcement of private standards to address concerns expressed by increasingly aware consumers further contributed to the privatisation of agri-food governance. Processes of decision-making regarding food safety, health, and the social and ecological conditions of production and consumption thus shifted "backstage", out of reach not only of social movements and agricultural-environmental advocacy organisations (Konefal et al. 2005), but also of medium- and small-scale operators (Busch 2003). In this context, "questions such as who participates in decisionmaking practices on the backstage and what the character of such participation is [...] are critical to understand" (Konefal et al. 2005, p. 199).

Can local products foster a balanced governance of the agri-food system?

Considering the central role corporate retailers play in maintaining the lock-in, rebalancing power relations appears crucial. Some scholars believe social movements are best

A preliminary step for a rebalancing in the agri-food system is a better understanding of the relationship between changing consumer demands for sustainable food and the various responses of corporate retailers (Marsden et al. 2000). Oosterveer et al. (2007, p. 426) argued that "a significant growth of the sustainable food market depends on the inclusion of such products in supermarkets [...], opening up more alternatives for green-food production and consumption". However, the market of sustainable products is not necessarily a sustainable market. Indeed, retailers tend to appropriate consumers' demands selectively (Friedmann 2005), and to construct quality definitions that respond to their interests (Marsden et al. 2000). This has led, for instance, to a conventionalisation process in the organic sector: as organic foods populated supermarket shelves, the most sustainable agronomic and marketing practices organics are associated with were abandoned (Buck et al. 1997; Guthman 2004). Whether such dynamics contribute to a transformation of the agri-food system towards more sustainability or instead reinforce existing lock-in effects remains, therefore, an open question.

This paper addresses this question with the case of local sourcing by supermarkets. It does so for three reasons. First, by opening up new marketing opportunities to smallscale food producers and processors in supermarkets, these schemes could be a way to reverse the trend towards the concentration of production and the growing distance between food production and consumption, which characterise the agro-industrial food system (Friedmann and McMichael 1989). Second, such schemes articulate the local with the global. As such, they offer an opportunity to explore the transformative potential of going beyond the divide between conventional and alternative food chains in rebalancing power (Sonnino and Marsden 2006).⁶ And third, "local" is a polysemic term, which may bring together a number of values associated with sustainability (e.g. Brunori 2007; Dedeurwaerdere et al. 2017). It therefore holds strong potential of providing insights both on the social construction of food ethics, and on the way innovative governance arrangements may alter the sociotechnical trajectory of the agrifood system. Our focus thus isn't whether local products are

⁶ Keeping in mind that articulating local and global is not necessarily *the* solution to overcoming the conventional/alternative divide (Brunori and Galli 2016).

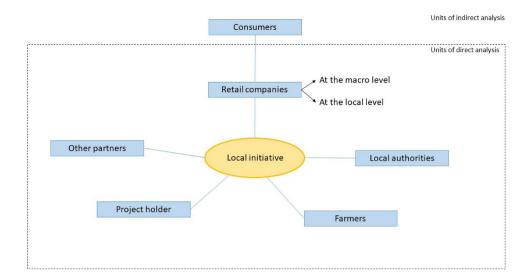


equipped to put pressure on incumbent actors to achieve such rebalancing (e.g. Buttel 1997; Konefal et al. 2005; Friedmann and Mcnair 2008), while others argue that this should be a responsibility of states (e.g. De Schutter 2009).⁵

⁴ As defined by van der Ploeg et al. (2008, p. 11): « market governance refers to the institutional capacity to control and strengthen markets and to construct new ones. This is related to the way in which specific supply chains are organized, how the total realized value is shared (between actors but also spatially) and how the potential benefits of collective action are delivered (Saccomandi 1998) ».

⁵ An option illustrated by a proposal of the European Commission (2018) for a Directive on unfair trading practices in business-to-business relationships in the food supply chain.

Fig. 1 Mapping of the actors of each case study



sustainable or not, but the process, conditions and outcomes of the social construction of their definitions.

Analysing the social construction of "local food" ethics

To open the black box of "local food" ethics⁷ and analyse their impact on the agri-food system, we combine approaches and insights from the literature on food systems change and transition studies. As suggested by Hinrichs (2014), such cross-fertilisation may broaden thinking in both research fields. Food systems change literature is generally focused on supply chains or single actors: it may be enriched by incorporating the sociotechnical, "whole system" approach from transition studies (Geels 2002, 2018). Conversely, by analysing the *social construction* of food ethics, we propose a way to assess social processes in transitions—generally a blind spot in transition studies (Wittmayer et al. 2017).

We adopt a pragmatist approach (Lamine et al. 2015) to ethics, combining analytical tools from pragmatist sociology (analysis of negotiations and controversies, shifts in alliances leading to changes in practices and visions) with the systemic perspective from transition studies. Our hypothesis is that the transformative potential of local food initiatives depends on the uptake by the actors involved of (some of) the ethical values conveyed by local food. In order to test this hypothesis, we study three initiatives which contributed to the introduction of local products in Belgian supermarkets. Considering that "actors involved in an innovation project [...] have interests and also values they bring in the negotiation, that make them accept some compromises, some adjustments, and reject others" (Callon et al. 1999, p. 122),

we collected a number of stories, records and outputs of the negotiations that took place within each of these initiatives, to identify the values upheld by the various actors and their evolution over time. To assess the impact of the initiatives on the agri-food system, we took into account, for each initiative, all the actors directly and indirectly involved (producers, processors, corporate retailers, independent outlets, public authorities, civil society organisations, consumers—cf. Fig. 1) and analysed their changes in values, practices and interactions. Each case study thus forms a sociotechnical subsystem.

The initiatives studied here unfolded in three Belgian provinces: Liège, Hainaut and Walloon Brabant. We selected these cases because they were the first ones to emerge in Belgium. Studying them with some benefit of hindsight allows understanding how the dynamics emerged and examining what they have provoked. The analysis is based on an ethnographic study, following a methodology developed in previous work (Bui 2015, 2018). 36 interviews were conducted with the various actors involved in the initiatives as presented in Fig. 1. They were transcribed for qualitative analysis and complemented with data from documentary sources (annual account of retailers, public authorities and civil society organisations; documents related to local sourcing and food hubs, such as contracts, charter, communication tools; websites of the various actors; media articles) and six participatory observations at discussion meetings where several of these actors interacted. For retailers, interviews were conducted with two of the three largest retail corporations in Belgium. Interviewees were chosen at various hierarchical levels (e.g. national and regional managers in charge of the

⁸ Translation by the authors.



⁷ For a general history of food ethics, see Zwart (2000).

⁹ We had initially targeted the three largest corporations in Belgium, but exploratory work revealed that one of them had no specific programme for local sourcing.

programme for local products, directors of supermarkets, store section managers) to understand how the programme for local products is organised and which transformations it has induced in each corporation. Within provincial agencies, we interviewed elected officials with responsibility for agriculture, and directors and officers in charge of the local product initiative. In the case of Walloon Brabant, where a dedicated civil society organisation (CSO) was created, we also considered the parent CSO. For each of these actors, ¹⁰ we examined:

- the values they claim to adhere to, the positions and objectives they made explicit during compromise building, the implicit positions which can be grasped through strategies pursued, and how these values and positions evolved through interactions with other actors;
- the implementation (or absence) of related practices, which (1) represent proxy indicators for objectives and strategies, and (2) allow assessing the impact of the initiatives;
- the interactions between actors, the governance arrangements they participate in, and their evolution since the early 2000s.

We chose this time span because it allows going back to the roots of the momentum. It is relatively short compared to historical approaches in transition studies and in regard of the slow evolution of ethical values (Costa et al. 2018), yet the recent character of these initiatives doesn't offer a longer time frame.

Local food in Belgian supermarkets: transition or further lock-in?

Genealogies of the 'local products' dynamics in Belgian supermarkets

Interestingly, the 'local products' dynamics in Belgian supermarkets was triggered neither by farmers, nor by grassroots movements or local authorities. It was initiated by Carrefour, one of the top three corporate retailers in Belgium and Western countries, wishing to build a more positive image in a context of increased competition and loss of market share.

As raised by several interviewees, the main barriers for small food producers and processors to work with retail corporations were not only their marketing practices, but also the profound mistrust stemming from these marketing practices and by past bad experience of some producers.

The efforts deployed by Carrefour to listen to the producers' concerns, to propose specific marketing and logistical conditions meeting these concerns, and to elaborate a simple, transparent contract (six pages instead of 256 in the standard contract), convinced all the members of the informal working group to participate in the pilot experiment. Carrefour, however, still needed support to be put in contact with more local farmers to supply its stores. Therefore, it turned to the Provinces (which are in charge of agricultural extension services in Belgium), particularly the Provinces of Hainaut and Liège. Once again, this was facilitated by the existence of prior personal relationships between the actors concerned. As both provinces were interested in increasing producers' incomes and outlets as a mean to strengthen local rural development—in line with their policies for agriculture and rural development of the past 15 years, and with mainstream national and EU policies for agriculture and rural development of the last 2 decades—they responded positively and with great enthusiasm. In May 2012, the project was experimented in one store in the province of Liège, and soon thereafter, in another store in Hainaut. These pilots proved to be such a success that Carrefour decided to extend the concept to all of its stores in these two provinces. ¹² Some more profound changes were then triggered, including: creation of dedicated management positions within Carrefour

¹² To all hypermarkets. Franchised stores are managed independently.



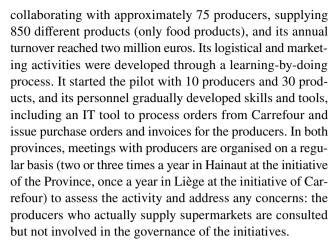
To overcome these obstacles, a director of Carrefour in charge of sustainable development contacted the main francophone farmers' union in Belgium, which was facilitated by the existence of prior personal relationships between the actors concerned. The farmers' union, interested in exploring new outlets for local farmers, set up an informal working group of about 20 farmers. 11 The group met regularly over a period of several months to come up with a proposal. This process resulted in Carrefour creating a new contract, offering local producers specific marketing conditions, based on direct relationships with supermarket stores, thus sparing them the need to go through Carrefour's central purchasing department. This allows circumventing the normal process of price negotiation (producers define their prices) and escaping other conditions such as back margins, payments for supply disruption and recovery of unsold products, which otherwise exert strong pressure on prices and exclude small producers. Financial and logistical issues were also tackled (e.g. payment within 30 days, appropriate setting for local producers at the delivery point), and a charter was elaborated. Once this arrangement was established, the farmers' union ceased collaborating on a regular basis with Carrefour, considering that further developments were beyond its remit.

 $^{^{10}}$ Except for consumers, whose values and practices were assessed indirectly, based on data collected from the other actors.

¹¹ Many union's members were invited: the small number of participants shows how profound the mistrust was.

and development of new skills; creation of new procedures, both internally (e.g. goods receipts via side door in priority for small producers) and at the level of the sociotechnical system (e.g. creation of a new modality in the national system for barcodes). Barcodes were unofficially lent by Carrefour to producers during the first months. This was an important incentive to encourage small producers to participate, as the minimum rate for being delivered a barcode was more than 600 euros (for 999 products)—a key hurdle for them to enter supermarkets. 13 The success of the concept convinced Carrefour and representatives of the two provinces of Liège and Hainaut to form an alliance to negotiate lower rates for small producers with the barcode institution GS1. This negotiation resulted in the creation of new modalities for Belgian small producers (two new rates below 100 euros for 5 and 10 products). Small producers were defined as family-size farms or businesses employing a maximum of 11 full time equivalent (FTE) jobs, excluding seasonal workers. Building on this, Carrefour clarified its definition of "local producers", as small producers located in a 40 kilometres radius from the store.

Each of the two provinces involved in these pilot initiatives developed its specific approach. The province of Hainaut engaged in an informal partnership: the province contacts producers and markets local products in the stores—e.g. providing posters with the producers' pictures, names and addresses and organising promotional events at which the producers themselves carry out tastings in stores. It also helps producers calculating cost-prices to define an appropriate selling price. By 2016, this project involved around 130 producers in Hainaut, providing some 3000 different products (mainly fresh products, products processed on farm and food products from family-size processors, but also non-food products such as CDs), and generating a turnover exceeding 2.5 million euros for Carrefour. In Liège, the province decided to create a food hub via Promogest, an already existing semi-public organisation dedicated to agricultural development, whose board is composed of elected officials and large-scale, conventional farmers. Promogest provides logistical solutions for producers and supermarkets, as it manages deliveries, orders, invoicing, payments, and also marketing, going even beyond the efforts of the province of Hainaut by also making available staff for promotional events. It also searches for new producers¹⁴ and carries out a regular monitoring to address farmers' and supermarket stores' problems and conflicts. By 2016, it was



In the early 2010s, the growing awareness about the negative outcomes of the agro-industrial model and the mounting concerns expressed in the public following some highly-publicized food scandals led retailers to show an increasing interest for local food. 15 Various attempts had been made in the past by other companies wishing to make available to their customers some local specialty products, such as honey, jam, craft beers and juices. However, those companies never agreed to adapt their marketing conditions, despite the intervention of provincial officers in the negotiation, so that their attempts remained fruitless. This situation changed as the result of the combination of the increasing demand for local products, the success of Carrefour's local products scheme (putting pressure on its competitors), and the precedent established by Carrefour's contract (a precedent on which producers could build in further negotiations). Emboldened by the Carrefour experiment, producers, with the support of the provinces of Liège and Hainaut, managed to negotiate similar marketing agreements with a significant number of other retailers, ¹⁶ which signals the diffusion of the innovation in the Hainaut and Liège subsystems. In parallel, Carrefour extended local sourcing to the whole Belgian territory: gradually, the concern for relocalisation came to percolate across the entire system.

It is against that background that the third initiative emerged in the province of Walloon Brabant. It results from an alliance between the provincial government (after it was approached by several retailers) and a Local Action Group (LAG).¹⁷ This LAG had led a box-scheme project



 $^{^{13}\,}$ Apart from barcodes, no other requirements are imposed on farmers in the scheme. Anyone meeting the criteria defining a « local producer » (criteria discussed below) may participate in the initiative.

¹⁴ Both in Hainaut and Liège, word-of-mouth caused the Provinces to be frequently contacted directly by producers wishing to work with supermarkets.

¹⁵ One example is the airing in November 2013 on the Belgian television of a documentary about how industrial bread, mostly imported from abroad, is manufactured. This generated a strong demand for local bread, as we were told by an artisan baker who was approached by several corporate retailers following that episode.

¹⁶ According to the provincial officers, with a majority of F1 retailers but a minority of discount corporate retailers.

¹⁷ LAGs are composed of public and private, social and economic actors, and manage the funds related to LEADER programmes (EU programmes for rural development). The LAG "Culturalités en Hes-

for 5 years and, as the funding programme was coming to an end, it was looking for a way to develop it so as to reach financial autonomy and at the same time enhance its transformative potential. It wanted to involve more producers and, considering one of its missions is to raise consumers' awareness, it wanted to reach supermarkets' customers who represent more than a 95% of the market share in Belgium. 18 Together the Province and the LAG decided to create a food hub and a dedicated organisation to carry it. A CSO called Made-in-BW was founded in 2015. Its board is composed of elected officials from the Province, small producers previously involved in the box scheme, and the LAG. It benefited from advice and experience of the two other provinces, particularly from Promogest. Its food hub works in a very similar way, but its objectives and impacts are very different. In Walloon Brabant, the objective of doing business with supermarkets is twofold. First, it is to reach economic viability, to be able to also work with more alternative stores. And second, it is to reach a broader customer base, so as to strengthen the relocalisation of the food system, to build awareness around social, health and environmental aspects of agri-food issues, and to make quality food accessible to the greater share of the local population. In 2016, Made-in-BW worked with 20 supermarkets and also had commercial relations with a diversity of stores, including a consumers' cooperative supermarket located in a working-class, multicultural neighbourhood, which also plans to collaborate with social welfare centres and day shelters for the homeless to provide quality food to the most deprived. Hence, the activity with supermarkets ensures the viability of the hub, so as to also support, via other collaborations, the development of very alternative food networks—which could not develop without this tool.

Radical innovations... contributing to the reproduction of the sociotechnical system

The collaboration between Carrefour, the two Provinces of Hainaut and Liège and local producers resulted in several innovations: a specific contract and a charter which guarantee small-scale producers fairer marketing practices; new logistical infrastructures; and new options in the barcode system. This helped removing the marketing and logistical barriers these producers have traditionally been facing, as it provided a basis for negotiation with other retailers which

Footnote 17 (continued)

baye Brabaçonne" gathers municipal, provincial and regional public authorities; local cultural centres and institutions; agricultural, rural and economic development associations mostly focused on tourism; private entrepreneurs including farmers.

gradually agreed to provide some producers similar marketing opportunities, as well as new know-how Promogest shared with other food-hub project holders. Thus, it created the conditions for many producers who were previously excluded from the dominant system to integrate it (e.g. more than 700 producers across Belgium supplying Carrefour in 2016), and it changed the way the total realized value is shared both spatially and between actors. Both in Hainaut and Liège, the local product initiatives have thereby contributed to some job creation and allowed the continuity and development of small farms and processing units.

However, assessing the overall impact of these dynamics requires putting them back in the context of the sociotechnical agri-food system. At Carrefour, a whole set of new sourcing and marketing practices has been created, but these practices still form a separate channel, disconnected from the mainstream sourcing chains which they haven't influenced. The proclaimed aim of Carrefour is to reach 2% local products in food sales: this means that a niche market is created, but that the dominant system shall remain unchallenged. In stores where local products already represent 2%, managers are asked to maintain this level, not to increase it, which indicates that Carrefour only seeks responding to the demand for local products and building a positive image on the value of solidarity with local farmers, not to drive changes in its food provisioning model. As to the other retailers, the changes they made to their practices are if anything even more marginal, as they express an interest only in a limited range of products.

As local products represent less than 1% of sales for the retailers we interviewed, one can assume that the impact on consumption practices is insignificant. Yet, the mere fact that local products benefit from increased visibility and from large, dedicated sales areas in Carrefour stores, may have contributed to raise consumers' awareness. Some producers involved in the project observe that several Carrefour customers have come to their on-farm store to experience the wider range of food items they produce, leading to a growth of on-farm activity. Hence, instead of marketing through mainstream retail outlets competing with on-farm selling, the two outlets appear to be mutually reinforcing. Moreover, promotional activities encourage networking between the producers and processors participating in these initiatives, and one spill-over effect is that some of these processors have subsequently developed local sourcing. Regarding the Provinces, the impacts are very similar in Hainaut and Liège. Both Provinces have implemented new communication and promotional activities, the only difference being the setting up in Liège of a food hub. However agricultural policies stay in line with the agro-industrial paradigm and seek to help farmers cope with the incumbent agri-food system.

More profound changes can be noted in the case of Walloon Brabant. Here, not only new marketing opportunities

¹⁸ Source: Nielsen, Grocery Universe 2017—Belgium.

Table 1 Impacts on practices in the three subsystems

Actors	Impact on practices					
	Subs	ystems of Hainaut and Liège	Subsystem of Walloon Brabant			
Corporate retailers	Low	Adapted marketing practices for a niche market (no impact on other marketing practices)	Low	Same as in Hainaut and Liège		
Producers	Low	Increased revenue, jobs creation and continuation for many producers (over 200 producers in 2016) Increased local sourcing	High	Same as in Hainaut and Liège (for 26 producers in 2016) + Participation of small producers in the food hub's governance		
Provinces	Low	New logistical and/or promotion activities	High	Same as in Hainaut and Liège + Participation in the food hub's governance + New training program and organisation of exchanges and debates on short food chains		
Consumers	Low	More local and seasonal consumption patterns for a small share of total purchases in supermarkets	Low, poten- tially higher	Same as in Hainaut and Liège + Development of radically new consumption behaviours (e.g. consumers' cooperatives)		
Local action group			High	Increasing commitment in agri-food issues Participation in the food hub's governance		

As the impacts in Hainaut and Liège are similar, they are jointly displayed. Impacts are "high" when new practices challenge the incumbent system. Impacts are "low" when new practices follow the same logic as pre-existing practices

for farmers and new logistical and promotional activities for the Province have emerged; the market governance itself was impacted. With Made-in-BW, small producers and alternative food networks acquired the capacity to construct new markets with the potential to deliver greater collective benefit. Moreover, the Province has adapted its training program for farmers, which was initially oriented towards mainstream agricultural issues, and is now proposing workshops promoting short food chains and the reconnection of producers and consumers. In other words, core activities of provincial extension services have unfolded in new directions; and new potentialities have been opened for consumption behaviours to evolve towards food citizenship.

Table 1 summarizes how the three initiatives impacted the practices of the various actors.

These contrasted outcomes can be explained by the governance arrangements the initiatives rely on. In Hainaut and Liège, both initiatives are implemented by already existing semi-public organisations, whose boards are composed of large-scale, mainstream farmers and representatives of the Province. Small producers are only consulted once a year. Also, at the very start of the dynamics, the farmers who were invited to the working group to define the charter and contract terms with Carrefour were farmers motivated by personal interest for new outlets and "with a certain level of production", according to the farmers' union officer who coordinated the process. The fact that there were initially no size criteria, and that the criteria of a maximum of 11 employees was later defined (which corresponds to medium-scale and intensive producers in Belgium) suggests that the intention was only to develop

local sourcing (and create market opportunities for farmers): the concept of solidarity with small-scale farmers was not a driver, neither for Carrefour nor for the Provinces. It was only at a subsequent stage that ethical concerns were turned into a communications strategy for Carrefour, when it started displaying posters saying "Help us support local producers!" in the supermarkets.

In contrast, in Walloon Brabant, the creation of a dedicated organisation (Made-in-BW) allowed for new interactions to take place between actors upholding different sets of values—small-scale producers previously involved in the box scheme, the LAG, and representatives of the Province. Their equal voicing in the board favoured the development of a more systemic, shared set of values, encompassing issues of social justice for both producers and consumers. This had a significant impact on the practices of all the actors involved (as illustrated by the fundamental change in the Province's training program), and also favoured the construction of a hybrid project. Here, as described above, the purpose of working with supermarkets was not only to create new outlets for local producers, but also to ensure the viability of a logistic tool to also support the development of alternative food networks, and thereby foster the development of a local food system, more sustainable consumption patterns, small-scale holdings and new forms of agri-food governance.

Table 2 assesses the impact of the initiatives on the ethical values of the various actors of the three subsystems, by looking at how their objectives and strategies have evolved.



Systemic ethics and inclusive governance: two key prerequisites for sustainability transitions...

Table 2 Impact on values in Hainaut, Liège and Walloon Brabant subsystems, assessed through changes in objectives and strategies

Actors	Impact on values						
	Subsystems	of Hainaut and Liège	Subsystem of Walloon Brabant				
	Magnitude	Objectives/strategies	Magnitude	Objectives/strategies			
Corporate retailers	Low	Image building/developing a niche market for small, local producers	Low	Image building/developing a niche market for small, local producers			
Producers	Low	Developing new outlets/working with supermarkets	High	Same as in Hainaut and Liège + building a territorial food system; raising more consumers' awareness; ensuring the food hub's autonomy/participating in the food hub's governance			
Provinces	Low	Supporting farmers via the development of niche markets	High	Same as in Hainaut and Liège, but also includ- ing reconnecting producers and consumers			
Consumers	Low	Buying quality food; supporting local produc- ers/developing more local and seasonal consumption patterns	Low, potentially higher	Same as in Hainaut and Liège +contributing to fairer food chains and consumption patterns (e.g. through consum- ers' cooperatives); development of food citizenship			
Local action group			High	Raising awareness on the social justice, health, environmental dimensions of food; supporting local development, in priority for the benefit of small-scale producers/creation of and participation in the food hub, collaborating with both alternative food chains and supermarkets			

As the impacts in Hainaut and Liège are similar, they are jointly displayed

Discussion

Marsden et al. (2000) indicate that in the 1990s in the UK "retailers and the state have evolved working relationships which maintain public legitimacy and market power through a coming together of their interest in privately and publicly needing to demonstrate their mutual role in serving the 'consumer interest". We witness symmetrical dynamics at the local level in Belgium in the 2010s: a coming together of retailers and local authorities' interest in having to demonstrate their mutual role in supporting local producers. For local authorities, these partnerships represent a new way to perform an old mission: new activities are implemented but they remain in line with what they have been doing since the 1990s within the mainstream agro-industrial paradigm. For corporate retailers, the fact that local food is managed as a niche market, i.e. that associated innovative sourcing and marketing practices are separate from conventional supply chains—and for Carrefour, that local products are displayed in a dedicated area, with extensive promotion-indicates that motivations are rather strategic than ethical.

The case of local sourcing by Belgian supermarkets thus clearly illustrates how capitalism feeds on its critique (Boltanski and Chiapello 1999). Carrefour's strategy to improve its image combines various innovations which build on the organising principles of alternative food networks: trust, embeddedness and place (Goodman 2003). In-store tastings

performed by local producers and posters with their pictures, names and addresses recreate the sense of community and trust generated through personal knowledge between producers and consumers traditionally attached to local food. The marketed products are thereby embedded both within a social network and place-based supply chains. Moreover, messages such as "Help us support local producers!" allow customers to altogether satisfy functional, social and political needs that consumption may be aimed at satisfying (Brunori 2007). Hence, the local product schemes implemented by Belgian supermarkets have allowed the social and political grounding (Marsden et al. 2000) necessary to maintain the accumulation process in corporate retailing (Wrigley 1994). From a sustainability transitions perspective, they help maintaining the agri-food system on its sociotechnical trajectory and hence favour the reproduction of the incumbent system.

It could be argued that conventionalisation is not taking place, since critical features of alternative food networks, such as better reward for producers and proximity, are preserved (Le Velly et al. 2016). Moreover, one could consider that the expansion of the range of choices within supermarkets paves the way to new politics and citizenry outcomes of consumption (Goodman et al. 2010): indeed, it could be argued that despite the low sales volumes local food represents, the awareness-building dimension and its impacts on diets and lifestyles may be significant in the long run. Due to



the fact that they are still relatively recent, our case studies don't provide insight on this latter topic. However, we may suppose that if corporate retailers were to stop proposing local food, their customers wouldn't cease buying at supermarkets and modify their purchasing behaviour.

Beyond conventionalisation, the issue raised by these arguments is that of the individual responsibility of consumers, linked to the debate on the purchase of ethical food being a new form of politics versus the need to *collectively* negotiate food ethics to rebalance market power. This debate echoes the ecological modernisation versus relocalisation academic debate and highlights another way of assessing whether a conventionalisation process is at stake. Food consumption being individualised is an outcome of the modernisation of the agri-food system (Brunori 2007). As stressed by Marsden et al. (2000, p. 79) "retailers are committed, for their own survival, to promote the constant and dynamic individuation of 'the consumer' through innovation and provision of new 'quality' choices". Considering that consumers' food choices are drivers for change and that those choices depend on what consumers know about food (Goodman and DuPuis 2002), the construction of the definition of 'local' is critical. Our three cases exemplify how the various possible meanings—and the related ethical values of 'local' may or may not be negotiated, depending on the governance arrangements implemented during the unfolding of the initiatives. In the cases of Liège and Hainaut, governance is unchanged, shared among incumbent actors; it is the retailers who define what they understand as "local"; and the ethical issues related to the environment and accessibility to quality food are set aside. The concern for social justice is present, but it is restricted to paying fair prices to producers. In contrast, in Walloon Brabant, shared governance between incumbent and marginal actors allowed both dimensions of social justice to be put forward, which provoked a different unfolding of the initiative—and consequently gave it a much stronger transformative potential (e.g. the capacity to support initiatives fostering food democracy). As stressed by Brunori (2007, p. 6), "people behave according to the meanings they give to things, and it is the capacity to control how meanings are created that allows one person to affect another's behaviour". Extrapolating this quote to collective actors, to the sociotechnical system and to the issue of competing paradigms, our case studies suggest that rebalancing market power necessarily requires redistributing the capacity to control how meanings are created.

Which governance features, then, may foster such redistribution? Both sustainability transitions and alternative food networks scholars have extensively analysed how the coming together of various actors of a sociotechnical system may allow the building of shared visions and shared interests. The importance of including non-agricultural actors in the network has also been stressed (Cardona 2012; Lamine

et al. 2014b; Bui et al. 2016). What combining an ethics perspective with transition thinking further highlights is that addressing the issue of sustainability implies asking not only "sustainable according to whom?" (Smith and Stirling 2010) but also "sustainable for whom?". The corollary is, first, that enhanced diversity in the agri-food system, which has been demonstrated to be the first step of a transition process (Bui 2018), requires the uptake of systemic ethics of food by incumbent actors; and second, that governance should involve not only the various agri-food and non-agricultural actors, through their representative organisations, but also excluded and marginalised interests (as those farmers initially involved in the LAG's box scheme), upholding ethical values that are currently missing in conventional supply chains. In other words, governance arrangements enabling a dialogic democracy (Callon et al. 2009), complementary to representative democracy, should be encouraged to foster the dissemination of a more systemic ethics of food.

Conclusion: inclusive governance and systemic ethics as prerequisites for sustainability transitions

The case of local sourcing by Belgian supermarkets provides a perfect illustration of the way the critique to hegemony—here, to the agro-industrial food system—can be absorbed and neutralised by incumbent actors. The original positioning of the initiatives we studied, bridging the antagonist propositions of the agro-industrial and the integrated territorial paradigms, definitely favours the construction of radical innovations and the uptake of new ethical values by incumbent actors. Still, the analysis of their overall impact shows that they mainly contribute to the reproduction of the inherited, dominant sociotechnical system. By helping corporate retailers to adapt to changing demand and mounting critique of the agro-industrial model, these initiatives may in fact slow down any transition process, rather than facilitate it.

Our analysis also highlights that to be a driver for sustainability transitions, food ethics need to be systemic, in two ways: they should guide the strategies and activities of most actors of the agri-food system; and they should relate to a systemic understanding of problems and perspective of sustainability, including issues of social justice for both producers and consumers. In the cases we studied, only the governance arrangement based on a model of dialogic democracy including minority views, facilitated the emergence of such systemic ethics. This enabled social, environmental as well as political implications to be taken into account. Hence, inclusive governance and systemic ethics are key features for the potential of such initiatives to contribute to a sustainability transition to materialize.



Acknowledgements We acknowledge co-funding of this research from the Belgian Science Policy Office, under the project FOOD4SUSTAIN-ABILITY (contract BR/121/A5) and from the European Commission, under the project GENCOMMONS (ERC Grant Agreement 284). We also wish to thank the editors of this special issue for giving very useful comments on an earlier version of this paper.

References

- Boltanski, L., and E. Chiapello. 1999. *Le nouvel esprit du capitalisme*. vol. 10. Paris: Gallimard.
- Brunori, G. 2007. Local food and alternative food networks: A communication perspective. *Anthropology of Food* [Online].
- Brunori, G., and F. Galli. 2016. Sustainability of local and global food chains: Introduction to the special issue. Sustainability 8: 765. https://doi.org/10.3390/su8080765.
- Buck, D., C. Getz, and J. Guthman. 1997. From farm to table: The organic vegetable commodity chain of Northern California. Sociologia Ruralis 37: 3–20.
- Bui, S. 2015. Pour une approche territoriale des transitions écologiques. Analyse de la transition vers l'agroécologie dans la Biovallée. PhD dissertation. Paris: AgroParisTech.
- Bui, S. 2018. A whole system approach to agency in transitions: Evidence of a combined effect of multiple niches. Paper presented at the 9th International Sustainability Transition conference. Manchester, UK, 12–14 June 2018.
- Bui, S., A. Cardona, C. Lamin-e, and M. Cerf. 2016. Sustainability transitions: Insights on processes of niche-regime interaction and regime reconfiguration in agri-food systems. *Journal of Rural Studies* 48: 92–103. https://doi.org/10.1016/j.jrurstud.2016.10.003.
- Busch, L. 2003. Virgil, vigilance, and voice: Agrifood ethics in an age of globalization. *Journal of Agricultural and Environmental Ethics* 16: 459–477.
- Buttel, F. H. 1997. Some observations on agro-food change and the future of agricultural sustainability movements. In *Globalising food: Agrarian Questions and Global Restructuring*, 344–365. New-York: Routledge.
- Callon, M., R. Lhomme, and J. Fleury. 1999. Pour une sociologie de la traduction en innovation. *Recherche & Formation* 31: 113–126. https://doi.org/10.3406/refor.1999.1574.
- Callon, M., P. Lascoumes, and Y. Barthe. 2009. Acting in an Uncertain World. An Essay on Technical Democracy. Cambridge, Massachusetts: MIT Press.
- Cardona, A. 2012. Territorial agri-food systems: relinking farming to local and environmental stakes to change farming systems. In Producing and reproducing farming systems. New modes of organisation for sustainable food systems of tomorrow. Proceedings of the 10th European IFSA Symposium.
- Clapp, J., and D. A. Fuchs. 2009. Corporate Power in Global Agrifood Governance. London: MIT Press.
- Costa, I., S. Bui, O. De Schutter, and T. Dedeurwaerdere. 2018. Learning for sustainability transitions: a discussion on the role of mainstream business actors towards more sustainable food systems. Paper presented at the 9th International Sustainability Transition conference. Manchester, UK, 12–14 June 2018.
- Cowan, R., and P. Gunby. 1996. Sprayed to Death: Path Dependence, Lock-in and Pest Control Strategies. *The Economic Journal* 106: 521–542. https://doi.org/10.2307/2235561.
- De Schutter, O. 2009. Agribusiness and the right to food. *New York, United Nations*.
- Dedeurwaerdere, T., O. De Schutter, M. Hudon, E. Mathijs, B. Annaert, T. Avermaete, and T. Bleeckx, et al. 2017. The governance

- features of social enterprise and social network activities of collective food buying groups. *Ecological Economics* 140: 123–135.
- Friedmann, H. 2005. From colonialism to green capitalism: Social movements and emergence of food regimes. *Research in Rural Sociology and Development* 11: 227.
- Friedmann, H., and P. McMichael. 1989. Agriculture and the state system: The rise and decline of national agricultures, 1870 to the present. *Sociologia Ruralis* 29: 93–117.
- Friedmann, H., and A. Mcnair. 2008. Whose rules rule? contested projects to certify'local production for distant consumers'. *Journal of Agrarian Change* 8: 408–434. https://doi.org/10.111 1/j.1471-0366.2008.00175.x.
- Geels, F. W. 2002. Technological transitions as evolutionary reconfiguration processes: a multi-level perspective and a case-study. *Research Policy* 31: 1257–1274. https://doi.org/10.1016/S0048 -7333(02)00062-8.
- Geels, F. W. 2018. Disruption and low-carbon system transformation: Progress and new challenges in socio-technical transitions research and the Multi-Level Perspective. *Energy Research & Social Science* 37: 224–231.
- Goodman, D. 2003. The quality "turn" and alternative food practices: Reflections and agenda. *Journal of Rural Studies* 19: 1–7.
- Goodman, D., and E. M. DuPuis. 2002. Knowing food and growing food: Beyond the production–consumption debate in the sociology of agriculture. *Sociologia Ruralis* 42: 5–22.
- Goodman, M. K., D. Maye, and L. Holloway. 2010. Ethical food-scapes? Premises, promises, and possibilities. *Environment and Planning A: Economy and Space* 42: 1782–1796.
- Guthman, J. 2004. The trouble with 'organic lite'in California: A rejoinder to the 'conventionalisation'debate. *Sociologia Ruralis* 44: 301–316.
- Henson, S., and J. Humphrey. 2010. Understanding the complexities of private standards in global agri-food chains as they impact developing countries. *The Journal of Development Studies* 46: 1628–1646.
- Hinrichs, C. C. 2014. Transitions to sustainability: A change in thinking about food systems change? *Agriculture and Human Values* 31: 143–155. https://doi.org/10.1007/s10460-014-9479-5.
- Jänicke, M. 2008. Ecological modernisation: New perspectives. *Journal of Cleaner Production* 16: 557–565.
- Konefal, J., M. Mascarenhas, and M. Hatanaka. 2005. Governance in the global agro-food system: Backlighting the role of transnational supermarket chains. *Agriculture and Human Values* 22: 291–302. https://doi.org/10.1007/s10460-005-6046-0.
- Lamine, C., H. Renting, A. Rossi, J. S. C. Wiskerke, and G. Brunori. 2012. Agri-food systems and territorial development: innovations, new dynamics and changing governance mechanisms. In *Farming Systems Research into the 21st Century: The New Dynamic*, 229–256. New York: Springer.
- Lamine, C., J.-M. Audergon, S. Penvern, S. Simon, and J. Pluvinage. 2014a. From genetics to marketing (... and through complex connexions and interdependencies): an integrative approach of the ecologisation of fruit production. In *Proceedings of the 2014* European IFSA Symposium—Farming systems facing global challenges: capacities and strategies. Berlin.
- Lamine, C., M. Navarrete, and A. Cardona. 2014b. Transitions towards organic farming at the farm and at the local scales: the role of innovative production and organisational modes and networks. In *Organic Farming, Prototype for Sustainable Agricultures*, 423–438. New York: Springer.
- Lamine, C., S. Bui, and G. Ollivier. 2015. Pour une approche systémique et pragmatique de la transition écologique des systèmes agri-alimentaires. Cahiers de recherche sociologique 58: 95–117.
- Le Velly, R., I. Dufeu, and L. Le Grel. 2016. Les systèmes alimentaires alternatifs peuvent-ils se développer commercialement sans perdre



- leur âme? Analyse de trois agencements marchands. *Économie Rurale* 6: 31–45.
- Marsden, T. K., A. Flynn, and M. Harrison. 2000. *Consuming Interests:* the Social Provision of Foods. London: UCL Press.
- McCullough, E. B., P. L. Pingali, and K. G. Stamoulis. 2010. Small farms and the transformation of food systems: An overview. In Looking East Looking West. Wageningen: Wageningen Academic Pub.
- Oosterveer, P., J. S. Guivant, and G. Spaargaren. 2007. Shopping for green food in globalizing supermarkets: Sustainability at the consumption junction. In *Sage Handbook on Environment and Society*, 411–428. London: Sage
- Renting, H., T. K. Marsden, and J. Banks. 2003. Understanding alternative food networks: Exploring the role of short food supply chains in rural development. *Environment and Planning A* 35: 393–411. https://doi.org/10.1068/a3510.
- Richards, C., H. Bjørkhaug, G. Lawrence, and E. Hickman. 2013. Retailer-driven agricultural restructuring—Australia, the UK and Norway in comparison. *Agriculture and Human Values* 30: 235–245. https://doi.org/10.1007/s10460-012-9408-4.
- Rokeach, M. 1973. The Nature of Human values. New-York: Free Press
- Saccomandi, V. 1998. Agricultural market economics: a neo-institutional analysis of the exchange, circulation and distribution of agricultural products. Assen, The Netherlands: Van Gorcum.
- Smith, A., and A. Stirling. 2010. The politics of social-ecological resilience and sustainable socio-technical transitions. *Ecology* and Society 15: 11.
- Sonnino, R., and T. K. Marsden. 2006. Beyond the divide: Rethinking relationships between alternative and conventional food networks in Europe. *Journal of Economic Geography* 6: 181–199. https://doi.org/10.1093/jeg/lbi006.
- Spaargaren, G., and A. P. J. Mol. 1992. Sociology, environment, and modernity: Ecological modernization as a theory of social change. *Society & Natural Resources* 5: 323–344.
- van der Ploeg, J. D., R. van Broekhuizen, G. Brunori, R. Sonnino, K. Knickel, T. Tisenkopfs, and H. Oostindie. 2008. Towards a framework for understanding regional rural development. In *Unfolding webs: The dynamics of regional rural development, European Perspectives on Rural Development*, 1–28. Assen: Van Gorcum.
- Vanloqueren, G., and P. V. Baret. 2008. Why are ecological, low-input, multi-resistant wheat cultivars slow to develop commercially? A

- Belgian agricultural 'lock-in' case study. *Ecological Economics* 66: 436–446. https://doi.org/10.1016/j.ecolecon.2007.10.007.
- Wiskerke, J. S. C. 2009. On places lost and places regained: Reflections on the alternative food geography and sustainable regional development. *International Planning Studies* 14: 369–387.
- Wittmayer, J. M., F. Avelino, F. van Steenbergen, and D. Loorbach. 2017. Actor roles in transition: Insights from sociological perspectives. *Environmental Innovation and Societal Transitions* 24: 45–56. https://doi.org/10.1016/j.eist.2016.10.003.
- Wrigley, N. 1994. Retailing and the arbitrage economy: market structure, regulatory frameworks, investment regimes, and spatial outcomes. Paper presented at the *Harold Innes Centenary Conference*. Toronto, Canada, 23–25 September 1994.
- Zwart, H. 2000. A short history of food ethics. *Journal of Agricultural* and Environmental Ethics 12: 113–126.

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Sibylle Bui is a Researcher at the Centre for Philosophy of Law, University of Louvain, Belgium.

lonara Costa is a Researcher at the Centre for Philosophy of Law, University of Louvain, Belgium.

Olivier De Schutter is Professor of law at the Centre for Philosophy of Law, University of Louvain, Belgium.

Tom Dedeurwaerdere is Professor of philosophy of science, theory of governance at the Centre for Philosophy of Law, University of Louvain, Belgium.

Marek Hudon is Professor of business ethics, social entrepreneurship at the Solvay Brussels School of Economics and Management, Université Libre de Bruxelles, Belgium.

Marlene Feyereisen is a PhD Student at the Department of Environmental Sciences and Management, University of Liège, Belgium.

