Networks, flows and actors

Promoting sustainability in globalising food provision

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Esteemed Rector Magnificus, dear colleagues, family and friend

Introduction

Food is farming; food is processing and trade; food is nutrition and calories. But food is also a highly social phenomenon. Or, in the words of the sociologist Simmel (Symons, 1994):

the most common people have in common is that they must eat and drink but this is oddly enough also a most egoistic activity because what the individual eats no one else can eat.

These are crude physiological facts but they can, nevertheless, be the starting point of fascinating sociological research as Simmel and later Elias (1939) have shown when they analysed the daily meal. I want to build on their and other sociological insights to analyse global food provision.

In this lecture I will explain what my intentions are in contributing to the social sciences' study of the global provision of sufficient, sustainable and healthy food.

First, I summarize my assessment of the current situation of food provision and formulate the key challenges that constitute the basis for my academic work. Then, I explore in more detail two distinct but related topics to which I want to make a particular contribution:
• Global networks in food provision and their sustainability governance
• Sustainable food consumption in a globalized world

I use sociological and political science theories to characterise contemporary food provision, and to discuss the governance of food in global modernity both from a theoretical and an empirical perspective. Two illustrations will clarify more in detail what kind of projects my research program entails. The first example is on palm oil and the second one on seafood.

Before concluding with some words of thank I will explain how I intend to combine the analysis of global food provision with that of the everyday practice of food consumption.

Characterising contemporary food provision

I use the term 'food provision' to emphasise that we should not only look at farmers or at food production in isolation but at the whole system of supplying food and also include consumers, NGOs, political institutions and environmental regulations.

Contemporary food provision is transforming and three core aspects characterising its complex dynamics are guiding my scientific research: globalization, sustainability and equity

Globalisation

The first aspect is *globalisation*: our food today is global in many respects. Most obvious is the continuous increase in international food trade[1] and, although most food is still consumed in the country where it is produced, many people[2] live in countries that are net-food importing (See Figure 1). Also in the future, global food trade will remain necessary to secure access to food for food-deficit countries and to ensure income for farmers (Fader et al., 2013). The global character of food provision is not only evident in international trade but also in the complex logistics involved in processing (Kjaernes et al., 2005; Reardon et al., 2012) and transporting food as well as in the rapid speed that food risks may travel with (d'Amour et al., 2016; Oosterveer, 2002).
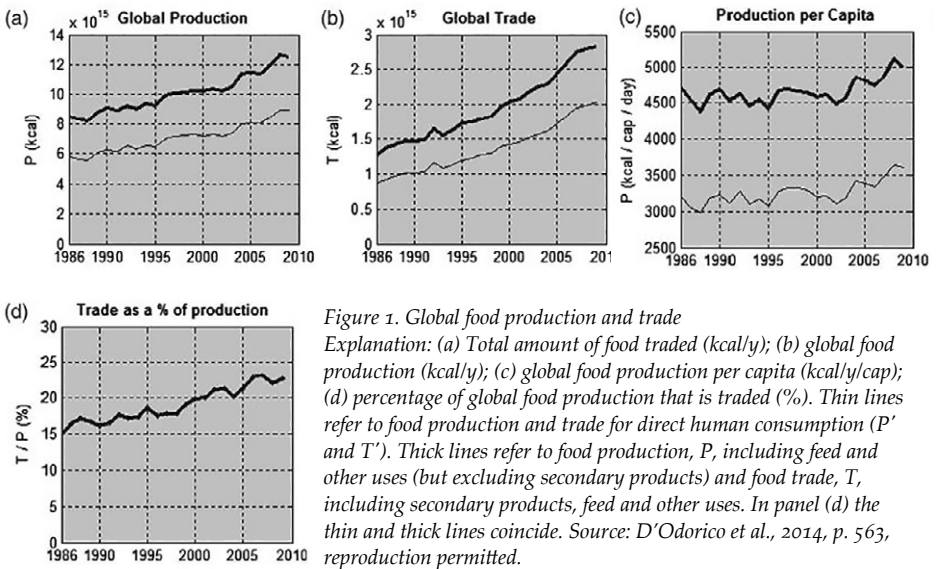
Globalisation should not be simply equated with uniformity and homogeneity or a series of different spatial levels from the local to the global (Massey, 2004), but rather with a process of creating connections over time and place at increasing speed and intensity. As Manuel Castells (2016, p. 8) has argued: globalization is 'the process of global networking in every domain of human activity' leading up to the creation of a global network society.

All food may be seen as global, connected across time and space at sometimes large distances through information and trade, through science and technology, through politics and also through the (moral) obligation to feed the world's population and to improve equal access to safe and sustainable food. At the same time all food can also be seen as local, bounded by time and place through the specifics of climate and soils;

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1 *Today more than 500US$ billion per year (MacDonald, et al., 2015).*

2 *About 80% of the world's population (Porkka et al., 2013).*

Figure 1. Global food production and trade
Explanation: (a) Total amount of food traded (kcal/y); (b) global food production (kcal/y); (c) global food production per capita (kcal/y/cap); (d) percentage of global food production that is traded (%). Thin lines refer to food production and trade for direct human consumption (P' and T'). Thick lines refer to food production, P, including feed and other uses (but excluding secondary products) and food trade, T, including secondary products, feed and other uses. In panel (d) the thin and thick lines coincide. Source: D'Odorico et al., 2014, p. 563, reproduction permitted.

through the possibilities and limitations of the available physical, social and institutional infrastructures; and through the particular cultures of production and consumption. See Figure 2.
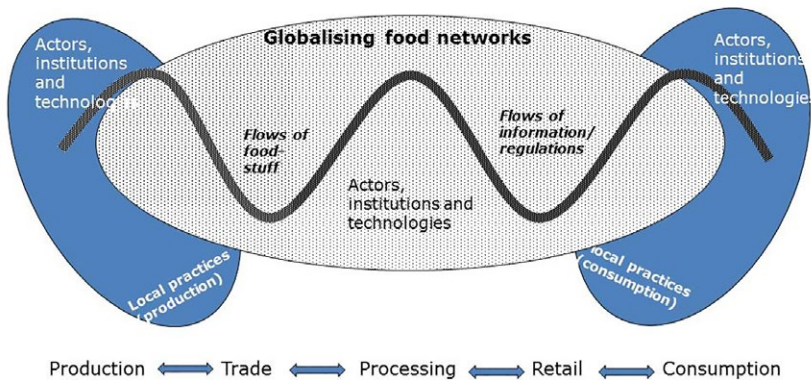

Figure 2: Globalising food networks
Source: Oosterveer, 2012, p. 29.

The interactions, including the tensions, between the local and the global dimensions of food provision constitute an important building block for my research.

Sustainability

The second aspect I want to elaborate here is *sustainability*.

Most people agree that the future of food has to be sustainable but there are many challenges in achieving this objective. Food depends on natural resources in its production, processing and trading stages and these resources, such as land, water, energy and fertilisers are becoming increasingly scarce. Other environmental problems have direct impacts on food production: climate change through rising temperatures and volatility in the weather conditions; degrading soil quality; and reduced biodiversity.

At the same time, the current food system is also responsible for environmental problems. For instance, about 25% of total greenhouse gas emissions originate from food (Godfray et al., 2014; Wirsenius et al., 2011). Intensive production depends on fossil fuels and contributes to biodiversity loss; the use of GMOs in agriculture remains controversial (Oosterveer, 2007); and the continued and widespread use of pesticides has negative environmental and social consequences (Hoi, 2010; Mengistie et al., 2014).

Hence, it is essential to promote sustainability in food provision but it is also very difficult to define sustainable food in a clear and unambiguous manner. Numerous competing definitions and operationalisations of what sustainability actually means exist (Redclift, 2006).[3] Definitions of sustainability are also changing over time as new challenges come up. Moreover, we need to recognize that the necessary trade-offs between economic, social and environmental concerns are controversial; that innovative knowledge and technologies are being developed but often contested as well; and that unfamiliar environmental and social challenges may come up and result in public debates that cannot be decided by scientists only.

In other words, sustainability of food is and will remain a socially contested phenomenon and in my work I intend to better understand the dynamics involved.

Equity

The third aspect of contemporary food provision that I want to mention here is *equity*. Promoting access to food for all people in an equitable manner needs in-depth understanding of how global food provision operates. Access to food means we should look at people's capabilities to buy, produce or exchange food. Herein we are not just concerned with securing access to sufficient calories but also to the right mix

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3 *One way of dealing with this challenge is to define sustainable food not as a steady state but as a continuous process of increasing sustainability, also understood as ecological modernization (Mol and Spaargaren, 2000).*

of nutrients[4], including micro-nutrients. Access to food in this respect is not assured for all people. Currently there are substantial inequities in access to sufficient, sustainable and healthy food as the persistent hunger and growing obesity problems around the world illustrate. Nearly 800 million people go to bed hungry and some 600 million people are considered obese.

These problems may become even more prominent in the future when an additional two to three billion people will live on the earth. Continued economic development and rapid urbanisation will change diets (Godfray et al., 2014) and intensify the challenges of securing equal access. Therefore, one of the sustainable development goals that the United Nations formulated in 2015, SDG 2, addresses this problem. This sustainable development goal calls all countries to take action to 'end hunger, achieve food security and improved nutrition and promote sustainable agriculture'[5]. Equity in access to sustainable food means that we should not only look at sustainability in producing food but also to distribution and consumption. A particular challenge for my research is that access to sustainable food tends to be more difficult for disadvantaged groups of consumers because often they need to pay more when buying it, is it more difficult to find and sometimes it is also more challenging to prepare (Wiggins and Keats, 2015).

These characteristics of contemporary food provision drive my research to take a global perspective and analyse sustainability dynamics in food supply. In my research I want to use the repertoire of social sciences to analyse the institutions, actors and networks involved in providing access to food. In particular, I want to study the recently emerging networks and institutions which are being designed to incorporate sustainability in food provision and make it accessible to consumers. Next to this analysis of networks and institutions, I focus on everyday ordinary practices of food consumption to show how sustainable food is accessed by situated social actors; by people like you and me.

Global food governance

Like in many other domains of our economy, also in food, national governments are no longer the only or central regulatory agent. Since the 1980s, multilateral institutions such as the World Trade Organization (or WTO), and local authorities, such as city governments have become active in steering food provision. Also, non-state actors, such as private companies and NGOs are more and more involved in food governance.

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4 *'Food and nutrition security should be the top development goal': see FAO, 13 February 2013: http://www. fao.org/news/story/en/item/169830/icode/.*

5 *United Nations Sustainable Development Goals: Goal 2.*

For example, the WTO imposes strict limitations to what national governments can do and cannot do in promoting sustainability in international food trade. The famous dolphin-tuna dispute between the US and Mexico is a clear illustration of the problems involved[6].

And, there is a growing number of cities that develop their own urban food policies because they argue that cities 'have a strategic role to play in developing sustainable food systems and promoting healthy diets' as formulated in a global pact in Milan last year (2015).[7]

Also multiple private and public-private governance initiatives have been developed in recent years. We can categorise these initiatives in three groups (Bush et al., 2015).
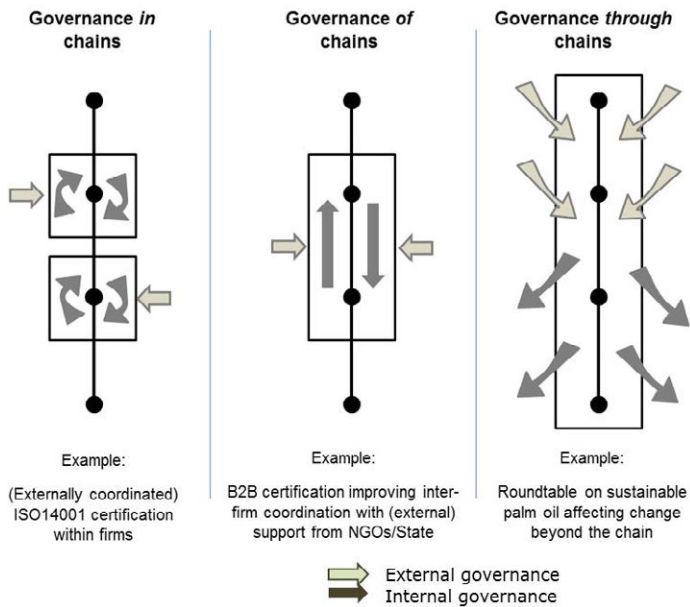

Governance *in* chains	Governance *of* chains	Governance *through* chains
Example:	Example:	Example:
(Externally coordinated) ISO14001 certification within firms	B2B certification improving inter-firm coordination with (external) support from NGOs/State	Roundtable on sustainable palm oil affecting change beyond the chain

External governance
Internal governance

Figure 3. Governance and sustainable commodities
Source: Bush et al., 2015, p. 11.

First, sustainability *in* food provision may be organized within a particular company through its environmental management system and certified through an independent scheme such as ISO 14001.

6 *Baird & Quastel, 2011.*

7 *See: http://www.milanurbanfoodpolicypact.org/.*

Second, environmental governance *of* supply chains may be organized by covering the multiple companies in a particular supply chain and GlobalGAP-certification is often used as a tool to achieve this.

Finally, sustainability governance in food provision may be organized *through* a scheme that intends to create a sustainability standard for all actors involved in that same sector, for example the RSPO was established to secure sustainability in the worldwide palm oil sector as I will explain later.

Each of these initiatives leads to its own particular steering arrangements and to different roles for public and private and for chain and non-chain actors.

Global food governance, is thus addressed by a complex array of diverse arrangements involving many different public and private actors, each with their own particular goals, strategies and instruments. And although nation-states have not become irrelevant (Sassen, 2006), they are being complemented and partially replaced by other forms of authority which are not restricted to the national scale. So, today we are faced with a fragmented, differentiated, hybrid and contested constellation of global food governance arrangements (Spaargaren and Mol, 2008).

The concept of networks is most appropriate for analysing how these multiple forms of governance try to steer global food provision. Global food networks and flows show great complexity and high geographical variation (Glin et al., 2014; Henderson et al., 2002; Sriwichailamphan, 2007). Global food networks are not formal relationships but as Prandini observes (2015, p. 4), networks are 'structures of meaning that develop through the sequence of (ongoing) *communicative* events'. They are networks that are not already complete but continuously in-the-making, constituted and reconstituted by human agents through their interactions (King, 2010).

Using this global network perspective allows us to analyse contemporary food provision and to recognize the emergence of yet unknown forms of power. There is no longer a unified power elite in the world of food because nowadays power mechanisms operate more subtly. Contemporary power relations are more complex and they are negotiated through networks (Castells, 2009, 2016). Power in global networks operates in particular through the mechanism of in- and exclusion, and through programming and switching. Programmers constitute and program a network and switchers connect different networks and ensure cooperation between them.

Global food networks include actors and institutions and material and immaterial flows. The (governmental and non-governmental) actors involved in steering food networks are not necessarily located in the same place and may not even be in direct contact but they interact through the network.

Relevant material flows are inputs and food products that connect production and consumption and financial flows going the other way. But there are also immaterial flows involved, such as information on how sustainability, quality and safety have been dealt with during the preceding production and processing stages of the final food product, and information about consumer concerns going the other way.

The multiple global food networks and their different, often competing governance arrangements (Lenschow et al., 2016) constitute an important field of study for social scientists. My interest is in particular in the ongoing interactions between civil society organisations, the food industry (in particular retailers) and public authorities in the creation of global sustainable food governance arrangements.
Questions to be answered in the study of such arrangements are:
a   Who is included in the network and who is excluded?
b   What are the aims and concerns in the network and how are these institutiona-
     lised through the network programs?
c   What are the roles of programmers in connecting the different actors in the
     network and in steering interactions between them?
d   How do switchers connect different networks?

My work on these questions is both theoretical and empirical. Theoretically, I am involved in further refining and operationalising these concepts in collaboration with other food sociologists. Empirically, these questions are guiding my contribution to interdisciplinary research on sustainability in global food provision.

Illustrating governance in global food networks
I will illustrate the relevance of some of these questions for my research with the help of two cases: palm oil and seafood.

The global palm oil network
Palm oil is a controversial product in global food provision. Its production, mainly from Southeast Asia, Indonesia and Malaysia, is continuously increasing and about 75% of all palm oil is traded internationally. Palm oil is the most used vegetable oil in the world today. Palm oil is an ingredient of one in every two products in the supermarket, although few consumers are aware of this because it is not immediately visible. Palm oil is attractive because oil palms produce more vegetable oil per hectare than other crops such as soybeans or rapeseed and against low costs. In processing, palm oil is very flexible and it can quite easily be transformed into food products, cosmetics, chemical substances and biodiesel. Oil palm cultivation has also been an important contributor to economic development in countries in Southeast Asia. It is important to realise that about 6 million smallholders are involved in growing oil palm.

On the other hand, palm oil production is criticised for its environmental and social impacts. Expanding the palm oil industry meant burning and cutting large tracks of pristine tropical forests to establish oil palm plantations. Environmental impacts include deforestation, reduced biodiversity, threats to wildlife (as often symbolised in the Orang-Utan). Other problems are ecosystems that are under pressure, pollution from haze, soil erosion and a large contribution to global warming from draining peat lands. These environmental impacts are brought to the attention of the global public opinion through campaigns by NGOs such as Greenpeace and WWF. Social impacts include conflicts on land ownership and the expansion of plantations putting local communities under pressure.

This situation creates a demand for effective regulation to reduce the negative and secure the positive impacts (Oosterveer, 2015). However, in the context of complex and globalised palm oil provision effective regulation is not straightforward. Most criticism is found among consumers in palm oil importing countries and most support among governments and producers in palm oil producing countries.

In reaction, the Roundtable for Sustainable Palm Oil, (the RSPO), was founded in 2004 as a voluntary membership association by investors, processing firms, growers and NGOs. Today the organisation has over 1400 members.[8] The RSPO intends to promote sustainability in the production and use of palm oil and for this purpose the organisation has developed a standard for sustainably produced palm oil. The RSPO standard is adopted by a growing number of producers and today about 17% of the global palm oil production is RSPO-certified.
At the same time, the RSPO is criticized for its focus on consumer concerns in Europe and the US, for its limited impact and for the difficulties for smallholders to get included.

When looking at palm oil provision from a global food networks perspective we can see that the palm oil-related flows connect multiple actors at different locations leading up to the creation of several regional and global networks. These networks are complex and difficult to steer towards more (social and environmental) sustainability because of the controversies on how to balance different concerns and interests.
The RSPO is one of the programmers in the sustainable global palm oil network and derives its power from its capacity to define what sustainable palm oil is and how this should be produced and traded. Switchers, such as committed staff members and auditors, link this sustainable palm oil network with processing companies and

8 *See:* http://www.rspo.org/members/all *last visit 25 August 2016.*

producers. The RSPO network broadened the immaterial flows in the already existing global palm oil network by including information about social and environmental impacts in the primary production stage. Thereby, the RSPO network strengthened the power of private actors in steering global palm oil supply. Linking this sustainable palm oil network with government networks in Indonesia and Malaysia proved problematic because effective switchers were lacking. Currently, UN-organisations are trying to fill this gap.

As a private organisation, the RSPO defined sustainable palm oil as a global public good and this illustrates the blurring of lines between the private and the public. And, although criticised, the RSPO program remains a point of reference for other initiatives in palm oil provision.

With this illustration I showed that bringing in a global networks perspective contributes to better insights in the dynamics going on in sustainability governance of global food provision. It offers us conceptual tools for understanding interactions between different actors.

The global seafood network
The second illustration, I want to present here, is seafood, or fish.
Fish means jobs and incomes for millions of people around the world and an important source of food security and protein supply for billions of people. In fact, fish has become, in absolute as well as in relative terms, one of the most important globally traded food products. Over 40% of the world's fish production enters international trade (OECD, 2010). The increasing global demand for seafood leads to a pressure on many marine fisheries and a push to farm fish (also known as aquaculture). See Figure 4.
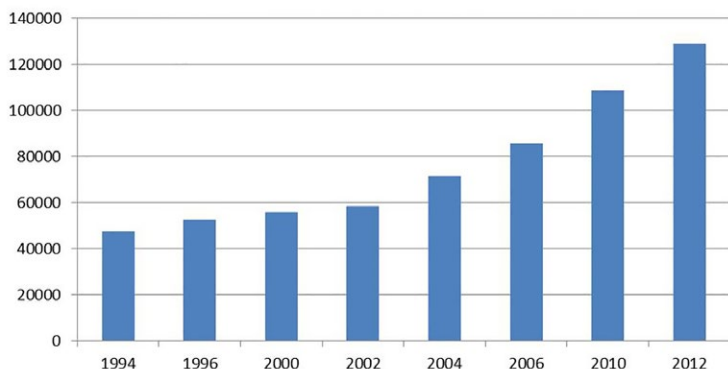

Figure 4. World seafood exports (million US$)   Source: FAO different statistics

Both fisheries and aquaculture are becoming contested because fish stocks are being depleted, biodiversity reduced and natural ecosystems threatened. See Figure 5. Like palm oil, also seafood has become a globally traded product without an adequate, well-functioning set of governance arrangements. For instance, overfishing is a pressing environmental problem that demands collective action at the global level, but so far this challenge has not effectively been dealt with.
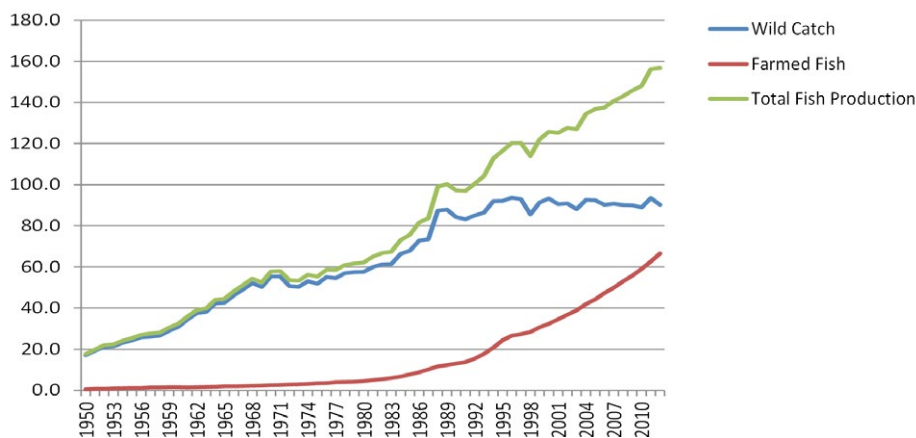

Figure 5. Global seafood production from 1950 to 2014 (million tons)
Source: FAO, different statistics.

In response, a range of voluntary, private-led sustainable global governance arrangements, has been introduced (Bartley, 2007) using price signals, access to attractive markets and information provision as incentives for changing production practices. Examples are the Marine Stewardship Council (MSC), the Aquaculture Stewardship Council (ASC) and the Friends of the Sea (FoS).[9] Around these labels, multiple global sustainable fish supply networks are being developed.
Consumer facing labels and certification schemes are interesting (Bartley, 2010) because they allow fish consumers to trace sustainability along the supply chain. When buying certified fish products consumers may intend to contribute to environmental change. Labels and standards offer them essential information on how sustainability has been dealt with during the production process because this cannot be simply observed from the final product itself. Consumer labels create an information flow within different global seafood networks.

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9 More widely, the number of labels has steadily increased since the late 1980s and recently the global ecolabel index reported 465 ecolabels in 199 countries, in 25 industry sectors, including food. See ecolabelindex.com last visit 10 August 2016.

Labels and certification schemes are part of global seafood governing networks. These initiatives include certain actors and particular concerns and exclude others. As they are dominated by Western NGOs and retailers mostly European and US consumers' concerns are addressed. The interests of other groups, such as local fishing communities and Asian consumers, are considered less in these schemes (Hatanaka, 2009/2010). The program when defining and operationalizing sustainability in these networks is oriented towards effectiveness on the European and US markets. As Bush et al. (2013) clearly showed: the current process of labeling sustainable seafood is selective with regard to the species involved, and therefore also limited and biased in its environmental impact. Social impacts are hardly considered at all (Jonell et al., 2013).

A global networks perspective may guide us when analyzing the connections between different networks or parts of networks. That means we need to look for switchers and the way they operate. For instance, the choice a retailer makes among the different available certification schemes depends less on the content of the scheme itself but rather on its relevance in the local context. We found that large retailers in the Netherlands demand certification to ensure the sustainability, quality and safety of their products and to protect their corporate image. Which label they finally choose depends however on the social networks surrounding that label. Supermarket chains request the importer, the key switcher in this network, to select the label that is best recognised and accepted among their consumers and that involves an NGO-driven network that is strong enough to protect the retailer in case of criticism on the standard (Vasilev, 2014).

This illustration shows that using a global network perspective generates interesting insights in the dynamics and the challenges that arise when developing and using labels and certification schemes. When trying to understand the transformations going on in global networks we should not focus only on the key economic actors. We should include other public and private actors as they may take up powerful steering roles. This case also clearly illustrates that we should study dynamics in global networks not only downstream but also upstream. We should not only start at the supply side of the chain to understand governance dynamics but also at the demand side and hereby include consumers.

In the future I want to expand this research further. I intend to identify global arrangements that address sustainability issues in a more balanced way, through developing area-based approaches (Foley and **Hébert, 2013)** and through involving primary producers and sustainability concerns of other groups of consumers.

Consumers and food consumption practices

These, more institutional, insights need to be connected with the everyday reality of the actors involved. Understanding the role of actors is necessary when trying to identify dynamics and change in global food provision. Many different actors are involved but in this presentation, I want to focus on consumers.

Next to other social actors, also consumers are part of global food networks, for instance through their buying behaviour and through their involvement in NGOs, etc.

Consumers are critical actors in sustainable food provision but they have often been ignored because they are seen as unmanageable, difficult, and untrustworthy. For instance, many researchers have observed a gap between what consumers intend to do and what they actually do with respect to sustainability and food (Grunert et al., 2014). In reaction, few consider consumers to be potential contributors to more sustainability in food provision and they therefore focus more on industries or supermarkets. However, ignoring the relevance of what actually happens during the phase of food consumption and neglecting the wider social and political roles consumers may have, means also losing important opportunities for environmental change in food provision.

In order to analyse the role consumers play we need to have a good understanding of what consumers actually are. I opt for studying food consumption as a social practice, instead of looking at consumers as individual actors or consider them to be subjected to social structures.

As a social practice, food consumption, is being enacted by consumers in their everyday lives (Warde, 2016). This means, I consider food consumption to be a standardized way of sayings and doings (Nicolini, 2012; Reckwitz, 2002; Schatzki, 2002; Shove et al., 2012; Spaargaren, 2011). Every day we are involved in such, often routinized, consumption practices and in performing them we reproduce them but we also change them. When studying food consumption as a social practice (Warde, 2014), we look at the food consumed, at how consumers actually access, prepare and consume this food and to what they do with the waste (Jackson et al., 2009). We are also interested in the meanings (safe, sustainable, healthy, etc.) consumers give to their food.

My interest is in particular in the dimensions of access. When buying food, consumers link up with the rest of the food network, thereby connecting the private sphere of consumers with the system dimension of food provision networks. The private sphere is dominated by the nexus of household practices and the particular concerns and interests of householders. The sphere of food provision is dominated

by global food networks and their related practices characterised by system rationalities such as efficiency and effectiveness. In shopping practices these two spheres meet and they have to accommodate each other.

Information and trust are essential elements in these shopping practices and in accommodating these two spheres (De Krom, 2010). This can be illustrated in the case where trust is undermined and consumers are confronted with crises and uncertainty. During the melamine-scandal, the poisoned baby-milk powder in China some years ago, consumers were forced to reconsider what food to buy and where to buy it (Zhang et al., 2016). Their main consideration in shopping for food was the health of their children and they searched for ways to regain trust in the food supply system. Some radically changed their shopping practices and decided to import baby-milk powder from abroad. Being imported proved to be a source of trust in food for these consumers. Others looked for ways to establish direct contact with producers. They considered personal relationships to be a reliable source of trust in food.
This example illustrates the importance of trust. It also shows that that routinized shopping practices are not always reproduced but may also be transformed and not necessarily in the same direction.

Introducing a consumer-facing sustainability label on a food product in a supermarket is a means to give consumers extra information about the practices performed during the production process. It may help to build trust and it is an additional resource for consumers in the balance of power with the retailer (Sahakian and Wilhite, 2013). Consumer concerns about the production process may be linked with dynamics in other parts of the food network. Food labels may contribute to reconfiguring deeply embedded consumption practices but this does not happen automatically.

For example, consumer guides, such as fish wallet cards, intend to steer consumer practices when shopping for food (Oosterveer and Spaargaren, 2011). By providing information about the sustainability of a particular food product, the NGOs behind the guides intend to influence consumer buying practices.
However, in everyday reality, consumers may not have access to information at the right time and place (although mobile phones have made a large difference here). Or, they may not be able to connect the, sometimes complex, information with the actual food product available in the shop or the restaurant. Moreover, it may require quite some time investment to really understand the considerations included in the guide and the choices that result from this.
So, in the end it is only a small group of consumers that actually uses such guides because they are not meaningfully embedded in common practice.

Consumers themselves may also pro-actively organize change in their everyday consumption practices by boycotting certain products and buying others on purpose, also known as *buycotting*. This form of activism is known as political consumerism. Even more actively involved are consumers engaging in reorganizing food retailing practices themselves. For instance, in her research on sustainable food retailing in Bangkok, Kantamaturapoj (2012) showed how people set up their own shops and restaurants to ensure access to sustainable food.

People can buy food at fresh markets, large scale supermarkets, convenience stores, e-commerce, farmers' markets, etc. Worldwide these retailing channels transform through urbanisation and economic development but not necessarily following the standard trajectory of modernization from fresh markets to large scale modern hypermarkets.
The multiple and transforming retailing channels and the varied groups of food consumers establish different social practices in accessing food, including of sustainable food. We lack understanding about these practices.

To better understand them we need to study actual shopping practices. First, we study them in how they are performed in everyday life. Then we know what consumers actually do when they buy food and how they select particular products. These elements of the shopping practice need to be connected with a well-founded understanding of the roles of the other participants: the staff selling the food, the managers, the logistics' staff and others. Together the consumers and these other participants create the situated shopping practice and connect this with the wider networks of food provision. Such a study would generate knowledge on how the practice works, how it transforms, on the power relations involved and on the inclusion of sustainability considerations.

I intend to develop this research as a comparative international program, including studies in different parts of the world. One part of this will be implemented in Hanoi as I will explain below[10].

Shopping practices are not uniform around the world, neither do they always change through the same stages of modernization (Wertheim-Heck, 2015; Wertheim-Heck et al., 2014). International comparative research is therefore very informative in

10 *See project document accepted by Bill and Melinda Gates Foundation (2016). Title: Retail diversity for dietary diversity. Preventing nutrition deserts for the urban poor within the transforming food retail environment in Vietnam.' Led by Fresh Studio Innovations Asia Ltd. Project Director and contact person: Dr Sigrid Wertheim-Heck.*

understanding these variations and to challenge standard views on supermarketization. The social practice perspective provides useful conceptual tools for doing so.

For instance, in Hanoi, the capital of Vietnam, most poor people buy their foods on a day-to-day basis. Most of them have temporary jobs and their daily incomes are irregular and fluctuating. They buy their food on fresh markets in their local neighborhood.

Recently, the government is developing a policy to improve food security and food safety for the urban poor by promoting supermarkets and repressing traditional retail structures such as fresh markets and mobile street venders. However, supermarket development is dependent on private sector investments, so consequently supermarkets may be found in the richer districts outside the reach of poor urban households. Moreover, the fixed quantities, fixed prices in supermarkets does not fit easily with the practice of buying small quantities at negotiated prices on open markets most urban poor rely on.

So modernization of the food retail environment may, although unintentionally, have a negative impact on the food choice and dietary intake of the poor. By studying why poor people in Hanoi eat the food they do and how they access this food we want to understand in what way conventional retail modernization through supermarkets impacts the diets of the urban poor. This research may generate arguments for considering alternative strategies of transforming retail to better address the need to secure a safe, healthy and sustainable diet for the urban poor in Hanoi and other cities.

These examples show that consumers do not have to be seen as passive and subjected to the dynamics in the rest of the food network. Consumers are more or less actively being involved in the reproduction and transformation of everyday food consumption practices.

These food-related practices find their place next to other, non-food related, practices in the everyday lives of consumers. So practices, such as consuming food or shopping for food, should be studied in themselves but also in their connections with other social practices.

At the same time, food-related consumer practices are also connected with other actors and other social practices that together form the global food network. Different global food networks are constituted by the nexus of practices of consumption, production and processing but also of certification, standardization and governance. These social practices are embedded units in global networks, hanging together in a particular manner which can be studied through an institutional analysis.

Connecting networks and social practices

In this presentation, I have first explained the importance of using a global network perspective to study sustainability in contemporary food provision. Then, I underlined the value of applying a social practice perspective to understand, in particular, the role of consumers in food provision. Studying practices gives us understanding of agency and change in everyday life and the networks perspective helps us to understand how bundles of practices[11] are more or less stabilized, what global dynamics occur in food provision and what role different forms of power play within this.

In my future work, I intend to build on these insights and to focus on studying the processes that lay behind the routinization and the transformation of everyday food-related practices. In particular on how these practices hang together in the globalising networks of food provision and to contribute to a theory of institutionalisation.

It's my conviction that such an approach delivers an original, inspiring and theoretically well-founded, perspective on sustainability in global food provision. Thus, I hope, this research will contribute to the identification of innovative pathways to secure equitable access to sufficient, sustainable and healthy food for the present and for future generations.

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11 *Other terms used are 'practice complexes', 'constellations of practice', 'systems of practice', 'nexus of practices' and 'socio-technical systems and societal rhythms'. Practices are patterned and configured on a supra-practice level (Welch and Warde, 2015).*

Some words of thank

Let me conclude with some words of thank.

First, I would like to thank the tenure track committee and the director of the Social Sciences Group for their trust in me and for advising the Board of Wageningen University to award me this personal professorship. Sincere thanks also to the Board of Wageningen University for nominating me in this position. I will do my best to fulfil their expectations.

As a student at the Landbouwhogeschool, I have learned the possibilities of using sociology and in particular of sociological theory for understanding the world and for changing it. An important source of inspiration during that time was Rien Munters and I'm very happy he is here in the audience. Rien also started a social theory reading group, the so-called 'Giddens-group', that is still active today and that has been a permanent inspiration for reflecting on social theory. Thanks Rien.

Nearly 20 years separate my graduation as a student from Wageningen University and my return as a staff member. During those 20 years I've had the pleasure to collaborate with many different people in many places around the world. Novib, now Oxfam-Novib, was important during that time and I'm happy to see several former colleagues present here. Thank you.

Since my arrival at the Environmental Policy Group, I have received enormous support from all colleagues there. You make this a wonderful group to work in, with a great atmosphere, pleasant and open but also motivating and hard working. Thanks Corry for being at the heart of it. Simon good luck in leading this group. Special thanks go to my promotors Arthur Mol and Gert Spaargaren, you have supported me before and after and we have been collaborating successfully on many occasions. Thanks for your friendship and I am looking forward to continue this collaboration in the future.

One of the important reasons why Wageningen University is an attractive place to work at is the intensive contact one has with students, especially with thesis students. I want to thank all BSc and MSc students I have had the pleasure to supervise during their thesis work. Working with you has been very inspiring.
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Thanks to all my friends and colleagues who make 'Wageningen', in the broadest sense of the word, such a pleasant environment to live and work.

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Finally, there is an empty chair where Suzan should have been sitting. She has been my partner for more than 35 years but just two months ago she passed away. She has always been a source of energy for me to go further, to find new ways and to take another, critical, look at my work. I will always be very grateful for having been together with her. Luckily she was still there when my nomination as a personal professor came through and I'm sure she is here in the hearts and minds of myself and many of you present here.

Ik heb gezegd.

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'Interactions between civil society organisations, governments, the food industry, consumers and producers constitute dynamic fields of environmental change in global food provision. Promoting sustainable food provision builds on changing the social practices of producing, processing, trading and consuming food and on transforming the relations between these practices. Understanding processes of transformation, evolving roles of different societal actors and interactions between local and global dynamics constitute an important challenge for social science research.'