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Chapter One:

Grassroots initiatives in food system transformation: The role of food movements in the second 'Great Transformation'

Colin Sage, Irene Antoni-Komar, Cordula Kropp

1.Introduction

It has become increasingly apparent that the current global food order has led us into a rather perilous place. While its proponents proclaim that never have so many eaten so much so cheaply, those who count the hidden costs remind us of the consequences of this abundance. Today more than two billion people worldwide are considered obese and therefore at risk from three of the four leading causes of non-communicable diseases (Swinburn et al 2019). Meanwhile, the food supply chain creates 26 percent of anthropogenic greenhouse gas emissions (that excludes non-food agriculture); while contributing one-third of global terrestrial acidification and almost four-fifths of eutrophication (Poore and Nemecek 2019) and places huge demands on freshwater resources and the world's stock of biological diversity. Little by little the lens of rigorous scientific analysis has begun to join up these multi-dimensional issues utilizing transdisciplinary approaches that have revealed the deep interconnection of human health and wellbeing with planetary equilibrium. This has brought a new emphasis upon dietary practices linked to the structures of food supply and the need to move sharply away from production and consumption patterns that are prevalent in rich and upper middle-income countries around the world.

It is in this context that the notion of sustainability has come to play a hugely significant role in debates around the food system and has become a key term linking environmental performance: 'living within planetary boundaries' (Steffen et al 2015, Rockstrom et al 2020) with human nutrition and other vital considerations (including rights-based social justice). At its most basic level we might suggest that the application of sustainability to food production and supply is to secure diets with low environmental impacts, yet which deliver nutrition security and wellbeing both for present and future generations. Working towards the achievement of such a goal will require nothing less than a complete transformation of the existing global food system. This is a challenge given the enormous economic power and

political influence wielded by those major corporations ('Big Food') which will wish to maintain 'business as usual' albeit by appropriating the language of sustainability ('greenwashing'). However, we are witnessing the emergence of a loose coalition of diverse actors – including peasants, urban dwellers, scientists of many disciplines, and people who eat and who are concerned about their food – that is beginning to offer a new vision for food production, supply and consumption. This coalition no longer operates entirely as protest: it *performs* opposition to the status quo, demonstrating that alternatives are not only practically feasible, they also deliver a host of other co-benefits including ecological regeneration, community building and improved wellbeing.

While this volume builds upon the significant body of work that has documented, critically evaluated and richly illustrated alternative food networks (AFN) (Goodman et al. 2012, Matacena 2016, Maye 2013, Renting et al. 2012), we argue that a 'second generation' of new food initiatives now requires attention. In part due to the capacity of the mainstream food system to adapt to new challenges while extending its reach across the globe, it is clear that 'first generation' alternatives were able to effect only a limited transformation in agrifood practices. Indeed, a remarkable process of corporate consolidation continues such that the top 100 companies now account for 75% of all packaged food sales worldwide (Clapp & Scrinis 2016). This ascendancy of 'Big Food' has arguably helped stimulate a multiplicity of community initiatives that seek to wrest back some part of the food system from corporate control.

Consequently, this volume offers insights into a range of practical, community-led initiatives that are aimed at transforming the non- environmentally sustainable, socially unjust and economically fragile food economy into resilient sustainable food systems. To this end, they start at very different social, political, technical and economic levels; may organize themselves as a movement, network or enterprise; and in all cases seek to weave a global, relational carpet of sustainable food practices that cannot be described in terms of a simple either/or of modern economic understanding (Gibson-Graham 2008). Further on we provide an insight into the individual chapters, but first we review some foundational concepts and thereby establish the key parameters of this volume.

2. Sustainability and Transformations

A common definition of a sustainable food system is one that "delivers food security and nutrition for all in such a way that the economic, social and environmental bases to generate food security and nutrition for future generations are not compromised" (FAO 2018). Such a definition draws attention to the three pillars model so frequently cited in relation to

sustainable development since the Brundtland Report (WCED 1987) and where economic performance (meaning growth and profitability) usually remains at least as important as maintaining vital ecological services for planetary survival. Yet we contend that food is ill-served by such narrow generic definitions and that to speak of 'sustainable food' means going well beyond the way many might regard it through the lens, say, of Goal 2 of the United Nations Sustainable Development Goals (SDGs). While "Zero hunger" is, indeed, a vital aspiration, the elimination of under-nutrition stands alongside other goals where food must be regarded as inseparable. These include 'Good Health and Wellbeing' (Goal #3); the elimination of poverty (Goal #1); understanding the role of food in enhancing 'Gender Equality' (Goal #5); to 'Responsible Consumption and Production' (Goal #12); and, of course, 'Climate Action' (Goal #13) given the food system's contribution noted in the opening paragraph. More immediately, with relevance to this volume, we also highlight food's role in building 'Sustainable Cities and Communities' (Goal # 11) and in contributing to 'Peace, Justice and Strong Institutions' (Goal # 16).

If food is such an important thread running through the SDGs then it requires us to adopt a generously broad frame of analysis recognising that societies should seek to recover an appreciation of food's multidimensional roles beyond that as a global commodity. The pursuit of productivism since mid-twentieth century has contributed to the world's current ecological predicament, yet many diverse voices are heralding sustainability as providing a compass bearing for the way forward. But who will steer the course? This is the challenge for all societies as they navigate their way out of a succession of food crises, a global pandemic and years of austerity which brought such widespread insecurity and poverty to even the richest countries. Hence sustainability in relation to food can no longer be adequately framed by the three pillars model noted above, but must now be extended at the very least to embrace the broadest conception of human and planetary health and wellbeing, and the capacity to accommodate a new ethical frame of reference. Moreover, we refer to the emergence of a new philosophical approach that is not just about improved animal welfare standards but begins to re-evaluate the relationship of humans with all other forms of life. This more-than-human ontology has been most cogently outlined by Timothy Morton (2018, 2019) who has argued that our current predicament in the Anthropocene can be traced to the 'Severing' that took place in the Neolithic with the development of agriculture. As one might guess, this more broadly-conceived understanding of sustainability goes well beyond the 'greening' of production and consumption in an effort to achieve greater resource efficiencies but, rather, speaks to a more profound transformation of our relationship with the Earth. As the famous aphorism of Albert Einstein reminds us, if we cannot solve our problems with the same level of thinking that created them then it is unlikely that planetaryscale thinking will entirely resolve our global predicament. Rather, it will require a

commitment to local-level actions that demonstrate through everyday practices our willingness to change. Through many of the case studies represented in this volume we see such efforts as communities attempt to pilot their own path to a different food future; not one where business as usual prevails but, rather, a more democratic, participatory, and engaged system where human and non-human life is respected.

If we deploy sustainability in this more expansive sense, then equally we should bring the same attention to the term 'transformation'. This, also, is a word prone to careless deployment and so we use it here cautiously, deliberatively and in a rather interrogative sense as a way of signalling the potential power of this emerging new social order around food. We recognise that the word carries significant weight because of its associations with economic history particularly its resonance with Karl Polanyi's 'The Great Transformation' (1944) that heralded the triumph of the market economy and its ideology. Polanyi described this great transformation as a long-term decoupling of market activities from social relations and values through the progressive commodification of all social structures, i.e. through commercialization that turns the production factors of labor, capital, land, and knowledge into commodities. He highlighted the resulting disembedding of an emerging independent economy that effectively reduced national societies to "an appendage of the market". This process is no better demonstrated than in the application of Fordist principles to the realm of food and agriculture, most especially the huge investments in chemical, mechanical and biological innovations and associated developments in infrastructure and marketing, that were to radically transform the production of this most basic and essential human requirement. Consequently, we concur with Allaire and Daviron (2019a) who regard the post-1945 era of agricultural productivism not only to form part of a Polanyian transformation, but to constitute the first Great Transformation of the food system.

The past 70 years have witnessed remarkable changes throughout the entire food system beginning with farming practices, particularly the adoption of labour-saving technology, in specialization and in the scale of farm operations. These have been accompanied by extraordinary developments in plant and animal breeding programmes that arguably reached an apogee in the 1960s and 1970s with the Green Revolution, though have long been overtaken by more recent scientific 'advances' at the cellular level. However, beyond the farm-gate radical changes have taken place in food processing and assembly line technologies designed to increase the volume of output in accordance with economic efficiency thus giving rise to a deluge of cheap and convenient products. A growing share of these are then purchased by the public from an increasingly concentrated sector of corporate retailers which have come to exercise enormous influence back up the food chain given practices of standardisation and their control of 'point-of-sale' data (Busch 2019).

These developments representing the advance and consolidation of capitalism in agri-food have created a global food economy estimated at US\$8 trillion in 2015 representing 10 percent of global GDP and around one-third of the global workforce (Clapp 2016). Yet the deleterious consequences of this system have been recognised for some time and have particularly impacted farm families as well as many food consumers. Going back to the 1950s the economic pressure on farmers to adopt new technologies and scale up operations in the pursuit of efficiencies was labelled the 'agricultural treadmill'. This metaphor is less about the 'speeding-up' of production (though this has been a feature of animal rearing) than the squeeze on farmers facing rising input costs as a consequence of intensification while experiencing – at best – static prices for their commodities (Sage 2012). The agricultural treadmill has consequently seen a major reduction in the size of the farm population and in the number of agricultural enterprises as the global food economy has expanded under trade liberalization measures, exposing and fatally undermining many producers to a flood of cheap food imports.

The success in raising output volumes of undifferentiated commodity crops that could be shipped around the world and serve as inputs for the manufacture of processed foodstuffs represents a massification and deculturalisation of food and eating practices. The ubiquity of fast, convenient, and 'tasty' refined products in many different societies under the combined forces of corporate promotion, advertising and low price witnessed the dominance of 'western-style' eating practices, particularly involving processed meat. Yet from the 1980s onward public health began to fall victim to the consequences of food massification with the emergence of a series of food safety scares. The appearance of listeria and salmonella in eggs, poultry and cooked meat was accompanied by growing concern around pesticide residues, most notably in the case of Alar in apples. Recent experience of the corona virus pandemic has made it abundantly clear that the number of zoonoses have increased steadily as a consequence of the penetration of the remaining refuges of wild creatures. Through the 1990s the issue of genetic engineering became a touchstone of concern and since 2012 has intensified due to the far-reaching possibilities of genome editing. Meanwhile e-coli outbreaks and episodes of dioxin and other contaminants have arisen on occasion threatening food safety. However, it was the emergence of BSE in cattle ('mad cow disease') that arguably did most damage to the food industry in the wealthiest countries.

3. Alternative food networks

The success of the first Great Transformation in agriculture is invariably measured by volumes of output, the value of exports, and the continued expansion of global trade in commodities. Given this, it is fair to say that the contemporary food system has become

entirely decoupled from parameters such as the numbers of people fed healthily and sustainably. In other words, it is apparent that human health – and the wellbeing of the planet – has not been an objective of the food system and that agriculture is not aligned with nutritionally optimal diets. The episodes of public health failures noted above serve to mark the inevitable consequence of a profit-seeking system designed to cut costs at every turn. It is little surprise, therefore, that since the 1980s this era has become something of a turning point in public sensibility, one where localism, quality and territorial embeddedness emerged as key criteria amongst those able to spend more on their food.

Arguably triggered by the twin but unrelated disasters of Chernobyl and BSE, a first generation of 're-localising' food can be observed, possibly best captured by the expressed desire of consumers to 'know where their food comes from'. Frequenting farmers' markets and other short supply chain outlets, buying regional specialty foods and other products that were territorially 'embedded' or ethically sourced (eg Fairtrade), these alternative food networks (AFN) were heralded as representing a new emancipatory resistance to the corporate dominated world of industrial food (Kirwan et al 2013). Yet while closely tied to issues of quality, transparency and trust (Maye & Kirwan 2010), attributes that were regarded as entirely absent from the mainstream food system, these terms quickly became appropriated by Big Food interests in order to reassure consumers and ultimately, despite the promise of alterity, AFN offered little challenge to the prevailing logic of capitalism.

Yet the unreflexive use of the term 'local', as Goodman et al (2012) carefully interrogate, is not innocent and can quickly establish a set of normative standards that privileges certain analytical categories, excludes democratic and participatory agendas and disregards the politics of place. Moreover, the celebration of territorially embedded 'quality' food that secured premium prices while retaining value in the locality served to enhance the status of the market as a neutral venue of transaction. With economic drivers remaining hegemonic albeit with a veneer of local 'authenticity' (a favoured term) it was unsurprising that many new entrants to this 'alternative' universe came from thoroughly conventional backgrounds. This helps to explain the 'conventionalisation' of organic farming (Carolan 2012) that saw growing numbers of mainstream producers seize the opportunity to go into organic conversion (often with the help of a relaxation of certification rules) and supply the volumes needed by corporate retailers. A cynical view of AFN might then be that it revealed the desire of consumers to eat well but that the capability of the mainstream food system to adapt so as to maintain its hegemony effectively won out.

Yet mounting environmental problems, the deeply intractable issue of social justice and other demands including greater transparency of production methods has kept the spotlight on the global food system. So while first generation AFN had limited traction in leveraging a

transformation of the prevailing food order it nevertheless served to create the conditions for a wider debate around food which became a legitimate focus of public interest. In the past decade or so, however, we have begun to witness a new civic spirit emerge with a different kind of narrative around localism, one that is being forged partly from a pragmatic municipal politics and a strong dose of post-material environmentalism. For Schlosberg and Coles (2016) these new movements are moving beyond passive resistance and are creating and constructing alternative circulations of power and material nature in new collectivities. One of the features of these movements, that extend beyond the realm of food getting, is an evident sense of collective self-interest and of empathy with others - human and nonhuman – rather than individual altruism. Underpinning it lies a belief in a better world and an unwillingness to accept the claims of corporate actors to be working hard for our children's future. The rejection of business as usual brings with it, however, a responsibility to create not only a positive vision but a sense of action, to find ways of harnessing identification with one's community into ways of making a difference. Given the lower entry barriers to food production (over say community energy generation (Sage 2014)) very diverse movements have emerged sharing similar goals that challenge power, creating alternative institutional arrangements and building food systems that embody sustainable material relationships between human communities and the natural world that supplies our needs (Schlosberg and Coles, 2016).

Consequently, initiatives are emerging around the world that develop and test agroecological, economically and socially fair production, processing, and marketing options. One of their central features is co-production as a bridge between production and consumption, e.g. in food cooperatives. Transparent relations and a reorganization of economic relations captured by the term "prosuming" are intended to create opportunities for a fair and sustainable food supply for present and future generations, to promote local and manageable economic cycles, to make possible well-balanced and secure nutrition for all, to improve food sovereignty, to commit oneself against food waste and to limit the destruction of rainforests. The actors involved in this new food movement are breaking out of anonymous structures of food supply, taking care of themselves but within a developing sense of solidarity and collective unity. This may be expressed as self-provisioning through urban gardening, the collective procurement of food products through buyer co-operatives, or engagement in community supported agriculture. Here the cooperation between consumers and producers, based on the joint funding of operating costs, is most apparent. Food is no longer simply a commodity exchanged for monetary value, rather the risks of production are spread between producers and eaters exemplifying a shared responsibility and solidarity between those within a connected community. These aspirations and evolving practices demonstrate a significant step forward from the primarily local concerns of 'firstgeneration' AFN and so these new initiatives might justifiably be regarded as the emergence of a 'second generation' food movement.

4. Steps towards a second 'Great Transformation'

Drawing on the work of Allaire and Daviron (2019a,b), we noted above some of the characteristics of the first Great Transformation that so fundamentally altered the course of agricultural development and gave rise to a global food system. What is most intriguing in their work, however, is their reference to a second Great Transformation that must necessarily emerge to resolve the deep structural contradictions that confront the global agri-food system. Working within a political economy tradition, albeit a highly heterodox one influenced by various French schools of social and economic thought, Allaire and Daviron are tentative and ambivalent about the shape and direction of this new epochal transformation but which they believe will be characterised by a growing concern with global health and ecological issues. To speak of transformation implies something more than a process of ecological modernization where new technologies and practices are adopted to improve efficiency of resource use and mitigate the worst aspects of environmental damage. Rather, it must not fall into the trap of environmental governmentality (Fletcher and Cortez-Vazquez 2020) but must involve system redesign and institutional restructuring to rectify the injustices that underpin current food inequalities and to restore damaged ecosystems. But above all, this second Great Transformation will feature a broad spectrum of actors, most especially grassroots movements, which will lead the way in developing a multiplicity of civic initiatives, many of which might fail but some of which will thrive and offer the prospect of a new social order where human flourishing replaces work dominated materialistic lifestyles characterised by 'getting and spending' 1

As noted, Daviron and Allaire (2019b) are somewhat reluctant to sketch out the concrete features of a second Great Transformation and as social theorists seem more comfortable in discussing globalisation through the lens of food regimes, regulation and conventions approaches, and its possible pathways. Clearly, science and technology will continue to play a dominant role in shaping financial value in agri-food and where the bio-economy is likely to occupy a leading edge of global economic growth. While continuing to draw heavily on land and polyvalent biomass resources this sector will be the source of a variety of

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¹ The world is too much with us; late and soon, Getting and spending, we lay waste our powers;— Little we see in Nature that is ours; We have given our hearts away, a sordid boon! William Wordsworth 'The World Is Too Much With Us' (1807)

interchangeable feedstocks including human food, animal feed, fibre, renewable energy, plastics, chemicals and pharmaceuticals (Wilkinson and Goodman 2019). Yet we suspect that these global-scale processes of speculative investments in advanced technologies (including in genomics and microbiome research (National Academies of Sciences 2019)) will create further polarisation and opposition. So, while the outputs of the bio-economy will provide much of the energy and material baseload for societal metabolism, it will also likely be met by resistance and the articulation of alternative visions for meeting social needs. Opposition to such technologies will be rooted in deep-seated ecological and social justice concerns that will renounce consumer-driven technologies in favour of creating more sustainable and resilient communities capable of withstanding the challenges of the immediate future. Such demands will, we believe, become the hallmark of 'second-generation' food movements.

Even before the current corona virus pandemic, resilience had increasingly found its way into policy narratives as a guiding concept for decentralized transformation scenarios (Holling 2001): "not necessarily as a substitute for, but as a supplement to the concept of sustainability" (Raith et al. 2017, p. 11). Resilience refers to the ability of supply systems to deal with exogenous disturbances and the capacity to adapt to changed framework conditions - creatively (Voss 2010; Folke 2006). Although resilience cannot replace the original focus of the concept of sustainability, it adds a vital dimension of stable and crisisresistant structures. For resilience science, transformations, "usually result from a loss of resilience in the old regime and involve (re-)establishing resilience in a new one" (Milkoreit 2018: 457) which may be the only route to allow for human flourishing. Consequently, the search for greater resilience may be a primary driver of the second Great Transformation as small territorial units (the city-region) capable of functioning and surviving within themselves (Hanke 2014) emerge as more autonomous areas largely providing for the needs of their citizens. New social movements particularly those focussed upon food, are likely to play a critical role in this process and the contributions in this volume show what this system redesign can begin to look like.

Although food movements continue to have a niche character, they can now be observed as a global phenomenon. What is different to first generation AFN is that these new local initiatives are aware of their ubiquitous presence, refer and connect with each other, and consider themselves to be part of a heterogeneous but widespread movement. Against this background, it is the task of social scientists to grasp the multidimensional nature of the initiatives and to examine their efforts in terms of the different contexts in which they operate, the networks they build, and the difficulties they overcome. To this end, all cases presented in this volume were ethnographically researched with a focus on the relational

practices of alternative doing, framing, organizing and knowing (cf. Haxeltine et al. 2016; Kropp 2018). The book attempts to capture the significance of this movement in the face of the major challenges for humans and the more-than-human worlds with authors exploring what kind of transformation is taking place in the new practices. A key question is how local food initiatives and economies may contribute to solving global food problems more than symbolically. Are they forerunners of new ways of thinking both politically and economically, representatives of a new type of post-national movement in an era of global warming? Or are they to be regarded as modernized variants of earlier environmental movements? What role does the close relationship play with regard to local (urban) spaces?

5. The transformative potential of grassroots food initiatives

In the manifold projects of grassroots food movements, local spaces are consciously and "collaboratively" redesigned and redefined in order to directly enforce previously hidden concerns in the local space. Their practices take place where social reality translates into visible positions, and are about many things at the same time: a green infrastructure, healthy food, regional production and consumption processes, meaningful employment opportunities, community with like-minded people, the connection to nature and its forces, as well as the re-appropriation of civic places in which to meet given the forces of privatization and enclosure of public space. For activists, self-sufficiency in urban gardens and agriculture is not associated with backwardness, exclusion, and poverty, but with a postmaterial quality of life, urban ecology, mutual sensitization, and the regaining of public space in times of neoliberal urban development policy. They pursue strategies of place-based and collaborative re-appropriation of spaces for the benefit of the public good. In doing so, food production has a powerful 'awakening' function, because it reveals people's sense of alienation around the ways in which food is produced and, secondly, how access to natural resources and open spaces without consumption is also unequal and limited for different groups of inhabitants.

Under the contemporary food system most farmers produce for the global market and only a few for regional demand. Meanwhile everyday life for the majority of urban dwellers is alienated from natural cycles and cities are shaped by the continued deepening of a competitive global capitalism with its attendant consequences for urban space. Taking this into consideration, what does it mean when places of common food production and exchange are created in the very heart of cities, even occupying high value locations? These interventions by civil society activists serve to irritate, even to disrupt, the process of spatial production revealing the separation, the alienation, that exists between residents and powerful financial interests. Such actions open up new possibilities for alternative visions of

an urban future, where inner cities, particularly, need not be characterized as 'industrial wastelands' but as new spaces of hope.

Such actions as occupying and using land for food growing can be powerful: "these processes are transformative for those involved" (Smith and Seyfang 2013: 827). They generate valuable and new forms of knowledge, empower citizens to articulate their basic aspirations, and thereby also redefine citizenship. They open up networks for mutual support and cooperation at the local level and make citizens aware of the distortions in food markets across national borders. They initiate processes of collaborative learning and organizing, which sometimes translate into cascades of initiatives (Kropp 2018). They train institutional entrepreneurs in their capacity as promoters of emancipatory projects. In the networks of various actors that grow in these processes, more cooperative and inclusive relations of trust and consensus making are developed beyond the internal logics of sectors. Such relations foster the values of solidarity and social fairness and trigger institutional flexibility inside the public and private organizations involved.

Whereas isolated initiatives produce little change but restrict their action to the provision of services, the more comprehensive and networked landscapes of the global food movement promote the consolidation of new policies, linking provision systems more closely to the common interest. Accordingly, two central characteristics can be identified in the case studies presented in this book which play a central role in many of the projects. First, there is a strong politicization of food, which is connected with the striving for fundamentally different natural conditions and thus also different social conditions. The participants leave the self-understanding of an industrial "food from nowhere" regime (Schermer 2015) behind them and try out alternatives to solidarity-based and ecological co-production of food, markets, societies. They do not do so with political demands on elected representatives (alone), but through their proto-political action in the public space, where they open up alternatives and question the status quo. Refusing to succumb to the destructive tendencies within industrial modernity, they cultivate creativity and responsibility reminiscent of Hannah Arendt's philosophy of new beginnings. Secondly, they address the global-local problem pragmatically. With their strong awareness of global interdependencies and the ominous role of Western extractionalism, they act less and less in favor of parochialism, but look for locally appropriate, place-based solutions. This contextualization results in strong differences between initiatives that can only be captured in an internationally comparative way through the gathering of case studies from different social worlds and the cases that are presented here reveal the significance of different actor constellations, discourses, markets and technical innovations.

Yet many of the case studies are marked by considerable ambiguity as a consequence of their experimental nature. It is often difficult to develop new forms of organization and relationship without falling into old routines of evaluation and hierarchization. Many projects leave the initiators burnt out and exhausted and cannot be stabilized and, to date, none of them has reached a size that would threaten the established food industry. However, the heterogeneous effects of transformative initiatives and enterprises become visible in their respective contexts: they re-construct social reality with unusual means and revitalize thinking around relationships, networks, and exchanges. The contributors to this volume focus on the concrete challenges, the contexts, and the political significance of the initiatives they recount. This scientific examination allows us to reflect on points of friction, to evaluate their significance in the larger context, and to ask what opportunities exist for other new beginnings elsewhere. In such a way, "telling stories together with historically situated critters [that is humans, animals, plants and machines] is fraught with the risks and joys of composing a more livable cosmopolitics" (Haraway 2016: 14).

6.Structure of the book

The book is divided into three parts, highlighting first *transformative food movements* (I), then *transformative food economies* (II), and finally *transformative local networks* (III).

In the first section, we examine local projects that can be seen as part of a social movement. Since the turn of the millennium, and increasingly since the global financial crisis, we have been observing a new wave of social movements in North and South, in urban and rural contexts, in civil society networks, organizations and neighborhoods (della Porta 2015). While social movements in the past first politicized social issues and then focused on environmental, peace and emancipation issues as "new social movements", today they focus on issues such as nutrition, housing, climate, financial markets, democracy and integration.

By definition, their claim to social change as a whole, their character as a network, their collective identity and their protest actions are regarded as constitutive characteristics of the new social movement. These characteristics also describe the initiatives considered in the book which, with their strategies, narratives, alliances and practices, are primarily active in the field of food, but, on closer examination, strive to transform the relationship to nature and production and models of life and care that are judged to be unsustainable in society as a whole. We therefore regard it as part of the movement that has emerged in the field of food and ecology, and which, with commitment and creativity, is driving pilot projects forward in order to create new lifestyles, economies, spaces and communities. Beyond isolated protest actions and social milieus, these enterprises institutionally stabilize the

movement and enable new syntheses of food production and supply, distribution and demand, economy and participation, self-sufficiency and collective action.

Isabelle Hillenkamp analyses the emergence of the agroecology movement and its feminist components in southeastern Brazil against the background of the traditional dual model, opposing a modernized, export-oriented, male agriculture based on the intensive use of synthetic fertilizers and pesticides, and a so-called "family" farming, responsible for food security in the hands of women. Based on fieldwork with a network of women farmers, Hillenkamp discusses how the network changes the understanding of economy, market and social cohesion, and translates into a politically, socially and economically embedded option for the economic emancipation of women.

Cordula Kropp and Clara Da Ros focus on the use of urban spaces facing the challenges of structural change in order to create new socially and climate-friendly worlds. It becomes clear that local accents can vary greatly: thus, in the city of Leipzig in eastern Germany the movement is more strongly oriented towards ecological forms of economic activity, and the comparable city of Nantes in France is oriented towards overcoming social inequality and exclusion. In both cases there is a close connection to the concrete urban experience and to an emancipative policy.

Andrea Baier and Christa Müller highlight the complex interaction between the experimental generation of other food realities on the one hand and bureaucratic administrative routines on the other. They trace how traditional roles of the citizen as a governed subject are decentered and partially de-hierarchized and how new demands of co-design emerge. On the way towards becoming more sustainable cities, the movements are struggling with the different time and decision regimes on the administrative side.

The second section of the volume is devoted to transformative food economies. For a long time, it seemed beyond question that food would only be produced in rural areas and then transported to the cities in ever longer, more fragmented and more complex supply routes in order to be consumed there - alienated from the conditions in which it is produced and processed. This perception is also cemented by a food industry that, under the conditions of a highly concentrated retail trade with high levels of pressure from international competitors, has successfully promoted a profit-optimizing organization of the value chain.

It was only at a late stage that the interdependence and relativity of urban and rural food landscapes (foodscapes), producer and consumer practices, ecological and social relations, food culture, economics and politics came into the focus of the social sciences with the help of an approach known as "post-disciplinary". From a critical perspective, this work is attentive to different economic forms that not only integrate social and ecological objectives

into their business model, but also combine production practices with responsible and fair relationships and food sovereignty. This approach expands the view of the diversity of socio-culturally and spatially significant relationships between production, trade and consumption, which has for too long been narrowed down to natural raw materials, their processing and trade, as "entangled journeys from farms to plates and beyond" (Cook 2006: 658). Moreover, diverse (community) economies came into view from a feminist-inspired perspective, and the diversity of alternative economic and exchange processes beyond the dominant focus on capitalist market relations, wage labor and profit maximization has been explored (Gibson-Graham 2006; Kneafsey et al. 2008).

Julien Vastenaekels and Jérôme Pelenc examine the capacities of diverse food cooperatives to challenge the dominant principles of the conventional food systems by bringing together different actors like citizens, producers, entrepreneurs and distributors. In a qualitative study involving three food cooperatives of different kinds in Belgium, they explore in which ways they are helping to "re-embed" food economy in society.

Allison Marie Loconto explores the role of intermediaries in assembling techno-economic networks (TENs) that enable sustainable consumption and production, using examples from France, USA, Benin, and South America. By differentiating between 1) information-rich, 2) diversified, 3) interactive and 4) socio-cultural TENs, she illustrates what a focus on the organizational innovations and the knowledge of techniques can contribute to the expansion of markets for agroecology and to effectively kick-start this transition process.

Niko Paech, Marius Rommel and Carsten Sperling discuss the opportunities and challenges facing transformative enterprises in terms of cost effects and social diffusion based on supply chain analyses. They highlight the specific upper size limits of transformative enterprises, which make social stabilization difficult if exceeded. The diffusion process compatible with this follows the principle of a decentralized and autonomous multiplication of the organizational model rather than the concept of traditional entrepreneurial growth.

In the third and final section of the book we focus on transformative local networks. Here, we see how community building can play a prominent role in local food enterprises. The initiatives and enterprises studied form local networks of heterogeneous actors who can participate in a variety of community activities, such as harvesting campaigns, workshops or farm festivals. They work together in these transformative communities with the aim of breaking new ground in the globalized and anonymous food system. People voluntarily choose to participate in these post-traditional neo-communities (Goulding et al. 2002; Hitzler 2008; Davies 2012) because they are "culturally attractive, open and dynamic" (Reckwitz 2017). In contrast to traditional "forced communities", respect for the diversity of actors is crucial for a successful balance between individual freedom and solidarity. To

distinguish oneself individually and to develop creativity in community, the "building" of new social certainties in new constellations of social coexistence (Baier et al. 2011: 282) is put into practice in these situations. In this way, the desire for collaborative, creative action does not just bring together the most diverse actors. Encouraged by the enterprises, spaces and possibilities are created to leave traditional economic consumption and production and to explore solidarity with one another in prosuming practices. In summary, the transformative communities in local networks are voluntary cooperatives of heterogeneous actors (founders of enterprises, employees, customers, etc.) that unite the ethical goal of changing the unsustainable global food system in local economies. They emerge within or next to local enterprises as networks that promote community building. They are socially cohesive and driven by the desire to meaningfully work together with the cooperation of very different actors.

Irene Antoni-Komar and Christine Lenz study how culturally, participation in transformative enterprises is based on new forms of collaborative, creative doing for social change, that is the common integrative goal and therefore the shared vision and identity. They highlight that the creation of meaning and the opportunities to participate (participative aspects) are crucial for stabilizing the networks, which focus more on self-efficacy for common goals instead of self-fulfillment.

Cristina Grasseni describes context-specific notions and practices of 'solidarity' in food procurement networks based on ethnographic fieldwork conducted in Lombardy (Italy) and Massachusetts (USA). In order to rethink the global food system and to try and propose putting local solutions into practice, there are different sociocultural dimensions of solidarity identified. In Italy, the Solidarity Economy Network establishes direct transactions between consumers and producers by networking with food producers, in the USA SEN focuses on short food chains as a way of increasing food sustainability, interpreting their activity as 'coproduction'.

Iris Kunze explores the everyday practices in a German ecovillage from an insiders' perspective in order to check whether and how more sustainable food practices are emerging. The case study examines the practices in terms of their contribution to less resource-intensive, more sustainable local production and consumption and the interlinkage between governance and organization with sustainable food practices. The chapter also aims to find answers to the further potential of ecovillages for solving unsustainable food problems in Western societies.

Robin Smith investigates from an anthropological perspective whether urban gardening inspires a new form of citizenship that generates new forms of collaborative social relations and opens-up possibilities of a different belonging. In this way, urban gardening projects

make it possible to get to know neighborhoods, imaginary worlds and common citizenship projects from another point of view.

7.Conclusions: Food system transformation requires social movements, more localized economies, collaborative networks

In this chapter we have sought to make a case for a second Great Transformation in agrifood given the multiple challenges faced by the existing food system across ecological, human health and ethical fields. We have not explained these challenges here given the rising volume of scientific evidence available in the public domain and which continues to drive home the truth of the statement that "business-as-usual is no longer an option" (IAASTD 2009: 3). Yet the question remains how — and by whom - this transformation will be undertaken: whether Big Food remains hegemonic in guiding a transition through the technologies of the bio-economy; or whether we will witness the more rhizomic spread of grassroots initiatives effectively *performing* this transformation that will birth a food system that works within planetary boundaries to deliver healthy food for all.

Here, each of the subsequent chapters will show that social and environmental dimensions are delicately inter-twined and that the grassroots initiatives they describe demonstrate the need to re-politicize food and to call into question existing forms of production and value creation. They also underline that by embarking upon a new initiative in a certain place there is a sense that even on a micro-scale an effort is being made to counter the effects of destructive agriculture on a global scale. But it requires effort: new networks have to be established, opening new urban spaces for food cultivation, upskilling people, and ultimately changing eating practices to adapt everyday meals to regional and seasonal production. New alliances of actors emerge – not only between producers and consumers, but perhaps involving local authorities, the media and the creative sector. The emerging network may indeed sprawl across many different actors, requiring careful management to integrate newcomers and adapt to their interests and needs. The interdependencies resulting from this entanglement and their difficult integration shows just how ingrained is the industrial mode of production and supply where mind-sets of consumerism are tied to an imperial way of life that is less easily abandoned. Indeed, it becomes clear how comprehensively the transformation of the food sector must be thought out in order to be effectively re-shaped. While food in the industrial economy is detached from its cultural and material contexts, many products become symbolically re-encoded in the context of family consumption. Will it be so straightforward, then, to replace the ubiquitous brands and products that have become so deeply ingrained in modern consumption practices, with local foodstuffs?

As we noted earlier on in this chapter, and as all the contributions to the book demonstrate, we must learn to broaden our frame of reference and appreciate how experimental food initiatives may trigger developments beyond the immediate field of action. Such movements may not only open up new ways to experiment with sustainable food production but create new economic forms of exchange, new constellations of actors and new spaces of action (Kropp & Da Ros; Loconto; Vastenaekels; Hillenkamp). On an individual level they change food routines and knowledge; but at the collaborative level, they create opportunities oriented towards social justice and sustainability, working not only against the globalized food system but attempting to change the character of food in favour of socially re-integrating production and consumption processes (Antoni-Komar & Lenz; Paech, Rommel & Sperling; Grasseni). This makes visible the heterogeneous phases of production, but also the concrete spaces, translation processes and decisions in the production chains around which the new networks are built. What we find in the cases examined is a willingness to engage with policy structures and institutions (Baier & Müller; Loconto), to envision new forms of organization and community building (Hillenkamp; Antoni-Komar & Lenz; Kunze), to explore the role of placemaking as well as of new technologies (Kropp & Da Ros; Loconto) and to bind solidarity into co-production (Kunze; Grasseni). While attentive to the importance of 'good food' as the basis of a healthy diet, many of the initiatives are attuned to questions of social justice and to the emancipatory possibilities that a degree of control can bring to those who are otherwise largely disempowered by the mainstream food system. This is why we believe such a multiplicity of convergent, synchronous developments occurring around the food system deserves to be regarded as a potential Great Transformation. Moreover, that these are being led by a highly heterogeneous collection of grassroots initiatives, which we characterize here as a 'second generation' of food social movements, makes this especially novel and worthy of our attention.

By considering various international examples, the book shows that although these are individually geographically confined initiatives often with only a few hundred participants, in aggregate they represent the tip of an international movement promoting an alternative food future. Collectively, though in different ways, these initiatives represent a shift from a mindless consumerism driven by individualized commodity fetishism, to the search for a cosmopolitan and responsible society of informed citizens. Arguably, then, it is less about the distinctiveness of local qualities – the clarion call of first generation AFN - but more about re-politicizing the significance of the local as part of global change and the development of a reflexive world society (Beck 2016). The case studies make it conceivable that alternatives to the existing food order are possible and can be implemented in ways that benefit diverse communities around the world, though less by reforming the regime (Geels et al 2010) than by circumventing it, inventively. Moreover, the existence of these

alternative practices serves to remind the food industry of its shortcomings which is why limited efforts at improving its own performance through incremental sustainability innovations are introduced. If it does nothing else, the global food movement serves as a moral compass to Big Food. But, of course, it is a great deal more than that which is why this volume provides a rich tapestry of cases revealing how they are experimenting with local solutions for advancing claims for greater food sovereignty and sustainability.

In each chapter that follows the authors demonstrate great empathy for the communities and individuals with whom they have conducted research. The cases are not good examples of a detached objective science but rather present engaged insights into the struggles of people working collaboratively to translate their aspirations into an everyday lived practice for a better world. The collective capacity to act is assumed instead of a collective powerlessness vis-à-vis established structures and systems. To them we offer the words of Margaret Mead: "Never believe that a few caring people can't change the world. For, indeed, that's all who ever have".

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