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Sustainable Food Systems <=> Sustainable Diets

Editorial Introduction to the Special Issue

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Abstract.
This Special Issue seeks to contribute to the debate around less resource-intensive sustainable diets demonstrating just how critical a social science perspective is in problematising and enriching the terms of that debate. There is general consensus that the global dietary transition towards westernized diets with high intakes of meat, refined fats, sugar and salt has unhealthy outcomes for people and the planet. Healthier and more sustainable diets are widely recognised as necessary to mitigate climate change, reduce the pressure on natural resources including aquatic and terrestrial ecosystems, and lower the global burden of disease. This editorial introduction presents eight articles selected from papers presented at the Conference 'Sustainable Food Systems <=> Sustainable Diets' held in October 2019 at The American University of Rome. Representing a diverse range of social science perspectives, the articles demonstrate the complexity in developing a shared understanding of what constitutes healthy and sustainable diets and which are likely to be inherently inter-connected with regenerative agriculture and sustainable food systems. To different degrees the articles also reflect upon policy experiences to date and identify obstacles to the introduction of measures that would facilitate changes in consumption practices. Demonstrating the vital role of critical social analysis in deepening our understanding of the institutional, social, and cultural dimensions of food systems, this Special Issue will fill an important gap in the literature around sustainable diets.

Introduction

There is broad scientific agreement today that the ways in which national economies have developed their food systems over the 20th and early 21st century has been a major factor in degrading ecosystems. A strong array of evidence has been assembled over the past two decades which demonstrates that food provisioning has had multiple and deleterious consequences. Land use change in favour of food growing and livestock rearing has led to deforestation, habitat destruction, biodiversity loss and likely greater biological insecurity. The expansion of high external input agriculture has resulted in the depletion of freshwater, soil fertility, and mineral resources and contributed significantly to climate breakdown and the disruption of global geochemical flows (Poore and Nemecek 2018). Moreover, the growing ubiquity of highly processed foods has been responsible for a worldwide increase in non-communicable diseases including type 2 diabetes and cardiovascular disease. While around 800 million people in the world are chronically food insecure, almost two billion are overweight or obese (Swinburn et al 2019).

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With global population projected to reach 9.2 billion people by 2050 and with pre-pandemic expectations that large parts of the world will likely experience higher household incomes, it is widely assumed that agricultural demand will be expected to increase by 50 percent by mid-century compared to 2013 (FAO, 2017). Under a business-as-usual scenario such growth will occur alongside an acceleration of the nutrition transition amongst many low- and middle-income countries, characterised by increased consumption of meat and of processed foods comprising higher levels of fats, sugar and salt (Popkin, 2006). Meeting such demand could increase the environmental effects of the food system by 50 – 90 percent if no major mitigation measures are taken or technologies devised, putting at risk the planetary boundaries that constitute a safe operating space for humanity (Springmann et al. 2018). Indeed, based on current trends food system emissions alone would prevent the achievement of the 1.5°C target established under the 2015 Paris Agreement - irrespective of fossil fuel emissions reduction (Clark et al 2020). This approach, of course, discounts the prospect of substantially reconfiguring the food system in order to reduce current volumes of waste and even changing patterns of consumption in the human diet (Rockstrom et al 2020).

The scale of this 'human – ecosystems health' negative spiral has led to rising public policy concern at global, regional, national, and local levels and a renaissance of interest in reshaping food systems to address some or all of these problems. In 2015 the United Nations set out 17 Sustainable Development Goals (SDGs) comprising 160 specific targets with around 70 connected to food. Concern with the slow progress to achieve these goals by 2030 led to the convening of the United Nations Food Systems Summit of September 2021. While its stated aim is to "unleash bold new actions to transform the way the world produces and consumes food" there is clearly considerable divergence in the way the shortcomings of existing arrangements are framed and in the solutions proposed to address them. Despite such diversity of perspectives there is widespread agreement that we should be setting a course towards 'sustainable food systems' and even 'sustainable diets'. That such terms conceal profound differences over interpretation and meaning highlight the caution that is needed in their use (Béné et al 2019), whether in the rush to appropriate them in the advance of technological 'solutions' to increased output or as indispensable targets in pursuit of reduced environmental and health burdens. Yet, it can be argued that in neither case are the social and cultural dimensions of dietary change explored as fully as they need to be. Just what are the social justice, equity and rights issues, or political economic factors which shape prospects for moving towards more sustainable diets? How do dietary guidelines and other food policies ostensibly framed by 'sustainability' emerge from complex governance arrangements where lobbying interests exert such powerful influences and where policy coherence across sectors proves so difficult? How does the design of the urban food environment shape consumption practices, and how can we enhance food justice and the right to food in cities? And, finally, what does the nutrition transition and the seemingly inexorable rise of cheap processed foodstuffs mean not only for human dietary health but for producers of crops with important cultural and/or ecological value that become increasingly marginalised? Such questions span the entire length of the food system and reveal just how critical a social science lens becomes in tackling the notion of sustainable diets.

Notwithstanding a relative paucity of critical social analysis (Jones et al 2016), there is consensus that less resource-intensive diets are absolutely necessary for mitigating climate change and that a shift towards diets with a lower environmental footprint will reduce the pressure on the use of land, blue-water and freshwater resources and reduce pollution of aquatic and terrestrial ecosystems (Willett, et al. 2019; Ripple et al 2019; IPCC, 2018; Springmann et al, 2018; Burlingame and Dernini, 2018; Mason and Lang, 2017; Tilman and Clark, 2014; Bioversity International and FAO, 2012). At the same time, it is recognized that changing

consumption habits is a complex endeavour that goes well beyond tweaking individual behaviour ('nudge') and will involve far-reaching collective social and institutional change.

The process of nutrition transition that has enrolled greater numbers of people into more westernised diets featuring higher intakes of meat, sugar, fats and salt is closely entangled with concurrent developments involving urbanization, globalization and the growing concentration and power of a small number of corporations, 'Big Food' (Clapp 2018, Howard 2016). Availability, convenience, taste and novelty all serve to win new consumers to these products shifting long-standing consumption practices. This has implications that spread in many directions – perhaps most visibly in relation to the urban food retail environment – but ultimately may affect domestic producers and the agrobiodiversity which they support.

As UNEP (2019) warns, despite all we've known for quite some time about the dangers of climate breakdown, there is still as yet no sign of GHG emissions peaking in the next few years. As a result of our continued inaction, rapid and profound decarbonization processes become more urgent yet require fundamental structural changes in systems of provision: changes which can only be affected and accompanied by "deep-rooted shifts in values, norms, consumer culture and underlying world views [which] are inescapably part of the necessary sustainability transformation" (UNEP 2019: 39). In this respect we need to construct alternative pathways capable of navigating the complexities, uncertainties and inherent 'wickedness' of unsustainability challenges, pathways that not only draw together diverse disciplines from the natural and social sciences but may derive transformative power from the deployment of narrative, myth and metaphor (Sage et al 2021).

Constructing the notion of a 'sustainable diet' is consequently a deeply challenging goal that is unlikely to be successful if founded on global prescriptions of what 'should' or 'should not' be eaten. There can be no a priori 'demon' or 'saviour' foods though the scientific evidence may point to more ecologically appropriate forms of consumption. Rather, we must begin by fully acknowledging the social, cultural, nutritional and medicinal dimensions of our customary food practices and the ways these have been transformed - or entirely lost – as a consequence of the modern, industrial food system. Undertaking such work has fallen to social scientists in the past who have the tools through which to interrogate the evolution of such practices. Yet while offering a critical perspective on the forces of social and economic change which have reshaped food consumption practices around the world over the past half-century or so, the urgent challenge now is how to influence policy and practice in a profound and rapid manner. For example, achieving more sustainable food systems may necessitate the hitherto increasingly separated and distanciated domains of production and consumption to become more closely interlinked: the strengthening of short food supply chains. By making more visible the methods of food production to citizen-consumers the ease with which their choices can hide behind presumed ignorance, convenience and price may become less effective cognitive barriers. In brief, can shortening food value chains enhance individual and even collective responsibility and restore a cultural dimension to the food system long driven out by productivism and industrialism? Can this, in fact, bring forth a new 'Great Transformation' in our food system? (Sage, Kropp, Antoni-Komar 2021)

This special issue therefore seeks to contribute to the debate around sustainable diets by drawing together a broadly social science perspective across a range of issues. The papers that comprise this thematic issue were selected from those presented at a one-day conference entitled 'Sustainable Food Systems <=> Sustainable Diets'held under the scientific patronage of the European Society for Rural Development at The American University Rome in October 2019. The deployment of the symbol conjoining the two terms was an invitation to contributors to explore the relationship between them and to consider, for example, whether a sustainable food system is ultimately a prerequisite for securing sustainable diets or vice versa. While Harriet Friedmann and Tim Lang were keynote speakers and Colin Sage offered some final

thoughts as discussant, 65 papers were presented that day across six thematic panels. Invitations were then extended to a dozen lead authors to contribute, with their co-authors, to this Special Issue. The result of a rather painstaking process of writing, review and revision has left us with eight articles that we believe offer a wide range of perspectives that reveal not only how complex and challenging is the task of securing sustainable diets but also how potentially powerful and redemptive is this narrative for change.

The articles in this Special Issue

In the first of the invited contributions, Tim Lang poses the question: "What is a Good Diet?" His paper starts by tracing the origins and subsequent efforts to devise an answer. This has not been easily achieved nor has it resulted in consensus given the range of disciplinary interests involved and where, as Lang points out, neither health nor environment are the only arbiters of worth. While the notion of a sustainable diet appears to be closely entangled with that of a sustainable food system, and while both carry moral and cultural weight, there are major practical implications in imagining how we are to achieve either. Given what we know about the human and planetary health consequences of the current food system, he enquires whether a sustainable food policy can effectively emerge from a twin-track focus on the counting of 'calories + carbon' or whether it is a far more multi-dimensional and complex challenge. Drawing on the experiences of a number of different countries and their efforts to construct national dietary guidelines, Lang suggests that we should eschew simplified criteria and recognize the altogether 'messier' aspects that warrant a "multi-lever, multi-actor, multi-sector, multi-disciplinary coherence" in policy making. He concludes that the immediate challenge is changing what and how food is produced and consumed if we are to flourish within environmental limits on a socially just basis.

Most analysts agree that optimizing human diets while minimizing environmental impacts requires the reduction of meat intake, particularly from ruminant animals. However, the livestock industry in the United States has aggressively defended its economic interests through a number of actions. In their paper Rose, Vance and Lopez outline the strategies taken by corporate political activity that seeks to influence sustainable diet policies.

First, they examine the way that the Dietary Guidelines Advisory Committee in its review of the scientific evidence concluded that a diet lower in animal-based foods and higher in plant-based foods would improve the health and reduce the environmental impact of the average U.S. diet. However, the inclusion of a recommendation in its 2015-2020 Dietary Guidelines for Americans (DGA) report to this effect was rejected and excluded by the Secretary of Agriculture and the Secretary for Health and Human Services. In their rejection these senior politicians argued that the nutrition scientists and physicians who composed the committee were not experts in environmental issues and that such matters were outside the scope of the Committee and not to form part of the DGA recommendations.

The second strategy that Rose and colleagues identify has involved efforts to reconfigure the evidence base in order to create a climate of meat-friendly dietary guidance. Here academic authors with financial ties to the meat industry publish articles where the research is narrowly framed so as to exclude wider considerations of environmental or health impacts - yet which reinforces the preferences of current meat eaters. Drawing on the efforts led by the National Dairy Council, their third strategy highlights the way in which sustainability is appropriated to include livestock products as an essential part of a healthy and sustainable diet. Seizing control of the narrative by appropriating key terms such as sustainability is not confined to the USA but has been a strategy used persistently by the Department of Agriculture in Ireland in its successive agri-food programs to justify the expansion and intensification of dairy and beef production (Sage and Kenny 2018; Kenny et al 2017).

Even if effective dietary guidelines have been agreed, they then need to be communicated to citizens in order to create a coherent message around healthier and more sustainable eating choices. In the European Union, there has been a long-running debate around farming, environment, food safety and dietary practice made more complex by its efforts to harmonize policies across member states and where much has been heavily shaped by the Common Agricultural Policy. However, with the launch of the Farm to Fork Strategy (FFS, May 2020) the EU has set out its commitment to design and promote sustainable dietary guidelines that are intended to make an important contribution to the bloc's environmental and public health goals. One of the key commitments of the FFS is to 'empower' consumers to make informed dietary choices and that means finding effective ways to communicate product information via front of pack (FOP) labelling. In their paper, Narciso and Fonte take us through the competing labelling systems – Traffic Lights, Nutri-Score and NutrInform – revealing some of the complex trade-offs involved in communicating the content of a food product to consumers who, ultimately, must evaluate its merits in relation to their overall food intake. Moreover, all seem to reinforce a focus on *nutritionism* at the expense of a more holistic approach to sustainability that should also accommodate social, economic, and cultural values. This is made more complex still when considering how new criteria will intersect with existing labelling schemes such as the EU system of Geographical Indication (Protected Designation of Origin (PDO) and Protected Geographical Indication (PGI)) which has come to act as a de facto mark of quality for designated products. Using the example of Parmigiano-Reggiano cheese, the authors highlight how this iconic cheese is a PDO with a high reputation for quality yet, according to the Nutri-Score algorithm it qualifies for an orange-red FOP label warning consumers that it is an unhealthy product due to its fat and salt content.

This reveals the problem of singular food truths. Though challenging the nutri-centric approach that reduces food to quantitative measures (calories or micronutrients) - but which could arguably be extended to the carbon-counting focus raised by Lang - Overend (2021) usefully problematizes the way that discursive labels narrowly frame foods. It is not, she argues, that empirical measures are untrue but that that they are incomplete stories about food, nutrition, health and the complex interactions between them. One issue that illustrates the discursive power of a singular truth is that of food waste, a matter that has come to prominence over the past decade or so. Unlike sustainable diets one might argue that food waste is a far less controversial issue that carries with it a certain universal moral weight: everyone can agree that it is something to be avoided or at least reduced (Campbell et al 2017). How much more powerful, then, is this discourse when combined with feeding hungry people. Consequently, surplus driven charitable food provisioning has now become a significant part of the food environment in many countries and is influencing the diets of large numbers of the most economically precarious and vulnerable people.

In their paper, Kenny and Sage draw upon empirical work undertaken in Cork city, Ireland, to examine the social and cultural forces influencing the governance of surplus food redistribution. The charitable food sector has grown significantly since the financial crash of 2008-10 and the scale of surplus food redistribution in Ireland is widely celebrated as a success in reducing waste and feeding hungry people. It has also allowed major food retailers to present themselves as philanthropic organisations committed to sustainability and improving people's lives. However, the empirical data presents a rather more complex picture in which the charities who work directly with clients are engaged in the task of moving ever greater volumes of largely processed foods to the 'deserving poor'. This raises important if under-researched questions around the connection between food poverty, nutrition and health as well as matters of human dignity and choice. In this regard, saving food waste seems to sharply diverge from the notion of a sustainable diet and raises important questions about the role of charitable food redistribution unintentionally reinforcing poor diet related health outcomes within low-income

communities. Ultimately, it might be argued that charitable redistribution depends upon an unsustainable food system committed to structural over-production and excess supply - from retailers, wholesalers, manufacturers, and processors - in order to maintain a continuous flow of 'surplus' products that unhealthily feeds the most vulnerable. It also makes clear that any notion of 'sustainable diets' must encompass a commitment to the principle of the right to decent food for all as well as to enshrine some dignity from personal choice.

In their systematic review of the literature around sustainable diets, Jones et al (2016) note how an examination of consumer preferences including cultural heritage and skills, equity, rights, and governance have been almost entirely lacking from serious analysis, especially in comparison to the space given to environmental impacts. These social dimensions, they argue, "are critical for understanding the capacity of communities to engage in defining, achieving, and evaluating who wins and loses as diets and food systems change in response to sustainability concerns." (Jones et al 2016: 658). This reminds us that the food environment in which individuals, families and communities find themselves is crucial in understanding the way that eating practices develop. For example, it is a long-established fact that low-income neighbourhoods in cities across much of the rich world are poorly served by supermarkets and grocery stores and that access to good quality fresh produce is extremely limited. Terms such as 'food deserts' have been used to describe this lack of provision, while 'food swamps' reflects the abundance of cheap takeaway and convenience food options. Consequently, the geography of food – who eats what, where – is heavily shaped by urban planning policies which, for much of the rich world as well as for LMICs – has been left to market forces (Clark et al 2021).

In her review article, Dalia Mattioni explores local-level policies involving different types of interventions that advocate for healthier diets. She argues that cities are the appropriate governance level for acting on the various components of the food environment, namely the relative prices of food, its quality, promotion, marketing, labelling, and retailing. The latter provides the primary focus of the article given the large amount of research undertaken on the link between retailing and dietary patterns.

She identifies two sets of policies based on empirical evidence gathered by community food environment studies primarily in the US and the UK. The first relate to the variety of initiatives promoted by local governments to introduce healthier food outlets in areas with few options for buying fresh fruits and vegetables. Results from such studies show that it is the density of outlets in a given area, rather than the proximity to one's own household, that has a significant impact on dietary patterns. The second set of policies reveal the relative success of local government efforts in providing financial and non-financial incentives in order to encourage the greater availability of healthier food options in fast food takeaways and convenience stores.

All the policy cases reviewed focus on enabling consumption of healthier foods in response to high obesity rates, particularly among the poorest segments of the population, but disregarding the sustainability of food production and procurement. This is a point that Mattioni identifies as the crucial contribution by civil society organizations that promote the consumption of local and organic products, paying attention to the environmental and social impact of their industrialized food system. In this way, they complement government policies by changing consumers' food purchasing practices thereby creating a demand to which manufacturers and producers will progressively respond. Scope is thus created for diets to be not only healthy but also increasingly 'sustainable'.

A rather different approach to thinking about the food environment is presented by Kata Fodor who believes that the field of spatial design may hold potential to facilitate a shift towards sustainable food system transformations. The purpose of her paper is to explore and understand the spatial logic operating in the food practices of the most affluent Western cities (New York, London, Copenhagen and Helsinki). She takes into consideration four food space

domains: (i) cyberspace – food as represented on IT platforms as well as the functions that virtual platforms can take on and perform, like online food trading; (ii) retail spaces - how grocery stores have functionally diversified and transformed their functions; (iii) the domestic realm – and the emergence of the connected kitchen which leads to a spectrum of models, from the 'diminished kitchen' to the 'hyper kitchen'; and (iv) compound food spaces – observed as shared food spaces in new urban offices or as compartmentalization and sharing in food courts of malls and markets or new lobby areas of hotels, office buildings, campus canteens, etc.

The key concept that Fodor utilizes to understand these transformations is that of the 'hybridization of food spaces' which serves to highlight, on the one hand, the functional diversification of physical food spaces and, on the other, their merging with virtual platforms. One consequence of these processes is the blurring of the division between different stages in the food supply chain. For example, she argues that retail and domestic food spaces may be increasingly difficult to separate from each other, and actually might be better regarded as compound territories with intertwined food practices. For Fodor, hybridization may lead to new ways to sequence food functions and practices across the urban food system. Indeed, it presents opportunities to create new configurations in the service of shortening food supply chains, reducing food waste and increasing transparencies, finally allowing more participation and re-engaging of urban citizens in the food practices with which they are most connected. The paper does not suggest that this will necessarily lead to more sustainable food systems, but Fodor argues that a better understanding of the spatial logic of 21st century urban food practices can help in re-configuring food spaces and serve as a strategic tool to move such practices in pursuit of a more equitable and sustainable food system.

The last two articles bring us back to the inter-relationship between sustainable diet and a sustainable food system. The first of these, by Balázs, Kelemen and Szakál, explores a paradox that lies at the heart of contemporary agricultural policy ostensibly concerned with sustainability: the declining status of legumes. Recognized for their nitrogen-fixing capabilities in soils and their protein contribution to the human diet, legume production and consumption has been in decline in Europe over many decades. This has been the case in Hungary, too, which is the focus of this paper that reports on findings from a major European research project. Concerned with identifying the constraints and socio-technical lock-ins that hinder a transition to greater levels of legume production as well as consumption, the authors report on the lack of investment in legume research and knowledge transfer; growing reliance on inorganic fertilizers; and the dominance of meat-based dietary solutions, alongside the ongoing industrialization of the food system in general.

Their analysis of the public food procurement sector, a large and important economic segment, is especially insightful when considering that Hungarian children consume between 35 and 65 percent of their daily energy intake in school canteens and where there are opportunities to shape life-long tastes and food consumption practices. A reform process of Hungarian public food provision began in 2010 with new dietary guidelines focused on restricting intake of salt, sugar and fat; yet it regarded meat and dairy as the sole daily sources of proteins, thereby neglecting to promote the inclusion of legumes. The paper identifies opportunities for improving and increasing legume production in the country, for example by further developing locally adapted landrace varieties as well as building new partnerships through new short, place-based supply chains. This work will require a stable network of niche actors who work in a systematic and coherent way for the promotion of a legume-based food system and sustainable diet.

The final article in this Special Issue, by Valentina Peveri, not only serves as a reminder to place diets in the context of the wider food system but in this case to understand that the local farming system largely determines what many people around the world mostly eat. Peveri's article draws on her extensive ethnographic field work in Ethiopia and highlights the

case of *ensete.* This perennial root tuber, for Peveri, is paradigmatic of the continuing reduction of genetic diversity in agriculture, reflects the wider neglect of indigenous plant species and the gradual disappearance of environmental and dietary knowledge. Ensete is cultivated by smallholders in home gardens traditionally intercropped in a polycultural system where crop composition varies from area to area, may comprise combinations of local varieties of maize and supplementary crops, and include those grown for cash. Yet this crop diversity is being displaced with hybrid maize varieties increasingly prevalent alongside commodity crops like tea and pepper that are promoted by government policies.

For Peveri, a polycultural system enables nutrition based on local biodiversity and where even a root tuber like ensete - with its minimal fat, protein and vitamin composition - can be a component of a good diet as a 'fringe food'. As an environmental anthropologist she draws to our attention the importance of recognizing, appreciating and defending local bodies of knowledge that understand the significance of variety in dietary composition as opposed to the narrower prescriptive boundaries of a 'scientific' nutritionism. Secondly, she stands for an ecological production system where crops do not become 'forgotten', 'underutilized' or 'neglected', as these are an essential part of nature's complex biodiverse systems. Indeed, such crops may be indispensable for the 'regeneration' of our food system rather than it being 'sustained' in its current form.

Concluding Remarks

In August and September 2020 Eurobarometer conducted a large-scale survey across all 27 member states (n=27,237) to evaluate citizens' expectations of the food system. The findings might serve as a cautionary lesson in the event of excessive optimism about the prospects for sustainable diets. Amongst the key conclusions were: that Europeans prioritise taste, food safety and cost over sustainability concerns when purchasing food; that the notion of sustainable food and diets are primarily associated with nutrition and health; that two-thirds of Europeans say that they eat a healthy and sustainable diet most of the time or always (though this varied significantly by country); and that they regard primary producers and food manufacturers as having primary responsibility in making the food system sustainable - with public agencies in third place and citizens themselves as having only a secondary role. However, nine in ten respondents agreed that food offered in public institutions should be sustainable while a similar number thought that information on food sustainability should be compulsory on food labels with one logo helping them choose healthy, sustainable food (EC 2020).

All of this suggests a rather more challenging task ahead in winning the confidence and willingness of consumer-citizens to change their dietary practices, particularly as we recall the UNEP quotation earlier for "deep-rooted shifts in values, norms, consumer culture and underlying world views" (UNEP 2019: 39). Clearly there remains enormous personal investment in existing eating habits and trust in product brands that deliver the tastes to which individuals have become accustomed. As we seek to build more sophisticated conceptual frameworks able to accommodate more robust measures of sustainable diets, it will be vital to acknowledge the work that is needed to bring about these 'deep-rooted shifts'. This does not mean, however, filling some 'knowledge deficit' that is often ascribed as the gap between recommended behaviour and everyday practices. Besides, in the Eurobarometer survey the role of education in helping citizens to adopt healthy, sustainable diets was cited by less than three out of ten respondents (EC 2020).

Perhaps, arguably, this serves to underline the complacency and privilege that surrounds the food system in rich countries and which demonstrates citizens' limited appetite for change. The Eurobarometer survey was conducted in late summer 2020 when there was

something of a lull in the coronavirus pandemic in Europe, although a few months before there had been borderline panic in some places as supply chains revealed weaknesses and vulnerabilities hitherto masked by structural over-production. The pandemic exposed the growing extent of food poverty in rich countries not only as a consequence of furlough or redundancy of waged employees but the extent of casualisation of labour practices more generally. This has served to reinforce a shared commitment to 'cheap food' – a narrative led by retailers but joined by politicians, manufacturers, and a large proportion of the population - thereby appearing to relegate the importance of healthy and sustainable diets. Yet, as the article by Kenny and Sage argues, building out a comprehensive understanding of sustainable diets must include enshrining the principle of a right to decent food for all.

It is important to note here that the papers in this Special Issue draw on research conducted prior to the pandemic and, clearly, much further work will be needed to fully evaluate the consequences of this global crisis for food systems around the world. There has been abundant anecdotal evidence to suggest that for those with means to do so, enforced time at home allowed many to change their customary food practices (by using local farmers' markets, more cooking from scratch etc). In this regard, do we intuitively imagine a role for future major disruptions - such as another global pandemic or harvest failures as a consequence of climate breakdown – to provide the stimulus needed to trigger a change in attitude by citizen-consumers?

Finally, we acknowledge that the papers included in this Special Issue largely reflect the circumstances of rich countries, with only Peveri's contribution shining a light on a part of the world where local agriculture most directly influences people's diets. This reflects the balance of papers at the Conference and should not disguise our recognition of the enormous inequities of the global food system. Yet the Ethiopian case reminds us that indigenous food cultures, and their associated agricultural practices and knowledge, survive in the face of globalisation: indeed they provide evidence of resistance and offer an alternative ontology from which there is much to learn. One aspect is that it might help us to reframe the narrative around industrial agriculture, recognising its fundamentally extractive, degrading and deskilling nature, while a regenerative food system offers better prospects for building healthy, dignified and sustainable alternatives (Anderson and Rivera-Ferre 2020).

In Europe and the USA, meanwhile, over-consumption and its attendant consequences for human and environmental health is a distinguishing characteristic, yet also fractured by considerable social and environmental inequalities. The accumulated scientific evidence has demonstrated a pressing need for policy interventions to reverse these processes though, as Lang observes this is likely to require a "multi-lever, multi-actor, multi-sector, multi-disciplinary coherence": not a distinguishing feature of most food policy making to date. Perhaps, as we inch forward in pursuit of sustainable diets embedded within regenerative and sustainable food systems, we should remind ourselves that "it is via food cultures, cooking and eating that most people still experience food and its politics" (Leach et al 2020). In this respect the work of critical social science will be an indispensable element in devising a robust and coherent sense of a socially just and sustainable food provisioning system.

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