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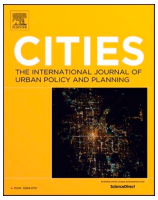

Working across boundaries in regional place-based food systems: Triggering transformation in a time of crisis☆

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ABSTRACT

Drawing on research exploring food system change in a region in the North of England during the Covid-19 health pandemic, in this paper we explore how a "managerial" approach to food system governance and provisioning embedded in national food systems and international supply chains was suddenly supplanted by a more "open" approach. By enabling understanding of how food system change unfolded as a diverse range of hidden practices unexpectedly became visible, it contributes to food systems thinking through the development of a regional place-based perspective. We use this approach to understand the outcome of these processes and to investigate how embedding change across administrative and geographical boundaries can enable food system transformation to improve food security for future generations.

1. Introduction

The COVID-19 health pandemic made visible the multiplicity of food system networks operating in place, thus bringing into sharp focus the strengths and vulnerabilities of these different networks and the ways in which they manifest in place (see special issue on Agriculture & Covid-19, 2020). In this paper, we draw on the work of Massey (2005) and Gibson-Graham (2016) and those inspired by them to develop a place-based understanding of regional food systems. We use this lens to examine change within a regional food system in the North of England at the start of the pandemic in 2020, and to consider how we can embed change to enable food systems transformations that improve food security for future generations.

While recent food systems research has started to engage with progressive understandings of place in their investigations of how different food systems are organised (e.g., Morgan & Sonnino, 2010; Moragues-Faus & Sonnino, 2019: Sonnino et al., 2019), we shift the lens to explore how multiple food networks overlap and intersect in place to generate regional place-based food systems. Of particular concern to us are the processes through which places are made and remade through mutually orientated and co-dependent groups of people coming together in dynamic constellations of interdependence. These constellations give rise to coordinated human activities that operate alongside and offer avenues for disassociation and re-association by food system actors. To this end, we distnguish between what we term "managerial" and "open" approaches to food system governance and provisioning. Because the focus is on identifying and understanding dynamism and multiplicity, the approach offers opportunities to capture the regional food system changes that emerged during the COVID-19 health pandemic in 2020 while exploring what we can learn from this process about preparing for future crises.

In England, as *just-in-time* delivery systems faltered and supermarket shelves emptied at the start of the pandemic, the extent of food insecurity suddenly came to the fore, as people became unable or unwilling to access food from supermarkets because of health vulnerabilities and access limitations. At the same time, many community-based emergency food providers struggled to meet the increased demand for food brought about by job losses and reduced incomes (Power et al., 2020; Blake, 2021). Furthermore, and despite statements by UK government officials that *'we are all in this together'*, the effects of these failures and the resultant experiences of food insecurity were not evenly distributed across place (see Moretti et al., 2021). From the moment measures were

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imposed to stop the spread of the novel coronavirus on March 23rd, the only valid reasons for people to leave their home or place of residence were: (1) to shop for necessities (i.e. food and medicine); (2) to exercise once a day (i.e. run, walk, or cycle alone / with family members); (3) for medical needs or to avoid harm; (4) to provide care for vulnerable persons (older persons and those in ill health); and (5) (where it was impossible to work from home) to travel to and from work. Once outside the home, people were required to stay at least two meters from people who did not live in their household.[1]

Under these new crisis conditions, central government delegated responsibility for food support to local governments[2] through national government grants totalling £750 million (Boons & Mylan, 2020), which forced council agencies to collaborate with existing third sector organisations and networks. In many instances, local governments redeployed workers from other services to support local COVID-19 food responses (see Blake, 2021; Lambie-Mumford & Silvasti, 2020). Supermarkets also employed new staff to cover vacancies left by those unable to work, monitor COVID-19 restrictions and support increased demand for food delivery. While these processes were unfolding, a diverse range of actors in local and regional food systems simultaneously adjusted their approach to food distribution to keep up with increasing demand. Almost overnight, box schemes and veg box sales doubled, and a plethora of new sales channels emerged to link farmers more directly to consumers via shorter supply chains and new online delivery services (Farming UK Team, 2020a, 2020b; Wheeler, 2020). Community-supported agriculture schemes (CSAs), small scale farmers and peri-urban food growing projects were particularly innovative (LWA, 2020; Mert-Cakal & Miele, 2020), with initiatives such as Farms to Feed Us[3] suddenly emerging. Farm shops also demonstrated remarkable resilience, providing access to fresh seasonal produce sourced directly from family-run farms (Barker, 2020). Alongside this, new mutual aid groups collaborated with civil society initiatives to deliver food to vulnerable and difficult to reach populations on a hyper-local basis (Blake, 2021; Covid-19 Mutual Aid UK, 2020; Mould et al., 2022).

In this paper, we unpack how these different food systems coalesced across place in a region in the North of England during 2020 and how, taken together, the insights that emerge outline a framework for understanding the potential of regional place-based food systems. The paper proceeds as follows. In the next section, we develop our conceptual framework and understanding of place-based food systems. We then describe the research context and the methods employed in our research, before turning to our empirical case, which illustrates the nature of regional food systems as dynamic, overlapping and interdependent. We conclude with some reflections on improving food security for future generations.

2. Conceptual framework and research context

2.1. Re-thinking place-based food systems

Accounts of place-based food are often aligned with local spaces in cities, towns and communities, where the concept of 'alternative food networks' is used describe aspirations to reconnect producers and consumers via 'shorter food supply chains' (SFSCs) (Renting et al., 2003). The notion of regional food, by contrast, has been used much less sparingly and consistently. Sometimes it has been used interchangeably with notions of local food (Kneafsey, 2010), as in Maye & Ilbery, 2007 notion of 'regional economies of local food production. A distinction can also be drawn between 'regional foods' associated with specific 'qualities' (or designations of origin) within a distinct geographical region (Morgan et al., 2008; Tregear et al., 2007) and 'regional food networks', where food production, processing, retailing, and consumption are organised in (though not limited by) regional networks of primary food production. The latter may also include local food networks and community-supported agriculture, for example, as well as farmers' markets and urban agriculture (Kneafsey, 2010).

More recently, cities (Morgan & Sonnino, 2010; Sonnino et al., 2019) and city-region food systems (Blay-Palmer et al., 2018; Battersby & Watson, 2019) have become central to debates about lessening the distance between producers and consumers. Contributing to these debates, we propose that a better understanding of food systems is achievable through what we are calling a regional place-based approach. Furthermore, we argue that this approach can progress our understanding of how overlapping food systems manifest in place. While specificity and proximity are central to many of the debates outlined above, we argue that a regional place-based approach can offer a more nuanced emphasis on the socio-environmental specificities of food and agriculture across diverse histories and geographical scales (O'Neill, 2014; Hinrichs, 2016; Lever et al., 2019). We contend that regional place-based food systems are created in and through interactions with other places and through the experiences of those who move through and inhabit these places in their everyday lives (Bosco & Joassart-Marcelli, 2018).

As Massey (2005) highlighted, the uniqueness of "place" emerges from its historical connections (and disconnections) across space that connect it with other places. This focus on the relationally constituted notion of "place" and its attendant spatial, temporal, and socio-political processes is beneficial for our purposes, not least because it provides insights into how a regional place-based food system can crystalise very quickly when there are common goals (Feenstra, 2019; Sonnino et al., 2016) – much as there were during the Covid-19 health pandemic. We draw on Massey's (1991) progressive notion of place, which emphasises how the interplay of local and global dynamics produces and shapes all place-making processes to enhance our understanding of the contingent and dynamic nature of these processes as they unfold, and how, at the same time, power flows across place and geographical scales to shape and mediate socioeconomic relations (Lever et al., 2019; Rosol, 2020). We will argue that this sense of place blurs and recombines boundaries to foster more inclusive and collective regional identities.

While Massey broadens understandings of place-based processes to include the politics of place, Gibson-Graham's (2016) notion of "reading for difference" provides a language for place-based political and ethical negotiations. This approach complements Massey's fluid notion of place nicely by encouraging us to look past what is "normal" at what is hidden or invisible. Working in this way, scholars of diverse economies have focused on the heterogeneity of economic enterprises, transactions, and practices and the unpredictable nature of the connections and alignments. A valuable element of this approach is the diverse transactions identifier (Dombroski et al., 2020; Gibson-Graham et al., 2013), which helps reveal a range of hidden economic, social and ecological practices. As Barron et al. (2020) note, it is only when we consider how places change that hidden and invisible practices become visible, thus potentially broadening interactions within wider networks to sustain diverse places in distinct and overlapping ways.

These insights are critical to our analysis, not least because they allow us to explore fluctuating regional food system dynamics during the Covid-19 health pandemic; between what we term a "managerial" food governance and provisioning system constrained by power asymmetries and hierarchies that weaken citizen empowerment (Davies, 2012; Moragues-Faus & Sonnino, 2019) and a more "open" approach that emerged *within* and *across* the administrative and geographical boundaries of Kirklees at this time. Lever et al. (2019) explore this distinction in greater depth. They contend that a "managerial" approach bypasses regional producers and retailers in favour of alliances through which

[1] In the coming months, these restrictions fluctuated to varying degrees (see: https://www.instituteforgovernment.org.uk/sites/default/files/timeline-lockdown-web.pdf.

[2] The terms local government, local authority and council are used interchangeably throughout this article.

[3] https://farmstofeedus.org.

local authorities work with supermarkets and international supply chain actors in hierarchical, structured relationships based on transactional collaborations. An "open" approach, by contrast, is one in which more informal and negotiated regional food system collaborations challenge "managerial" ways of working in diverse ways (see Fig. 1).

A key element of open systems, some have argued, are hybrid combinations of food system actors that forge connections characterised by mutuality and interdependence within and across administrative boundaries and geographical scales to connect sustainable food system niches and place-based actors in new and innovative ways (Ilbery & Maye, 2005; O'Neill, 2014; Lever et al., 2019). In this context, Feenstra (2019) points to the significance of sustainable infrastructure and distribution channels such as food hubs and school meal programs, for example, while Moragues-Faus and Sonnino (2019, 13) discuss the notion of *'convergence spaces'* where diverse worldviews can come together to *'codify place-based knowledge'* (see also Routledge, 2003). These insights are beneficial for our purposes because they allow us to identify where diverse economic practices fostered regional place-based solutions to the challenges posed by the Covid-19 health pandemic.

2.2. Case location: Kirklees, West Yorkshire

The Metropolitan Borough of Kirklees, which emerged through the 1972 Local Government Act, covers a mixed urban and rural area of 408.6 km^2 in West Yorkshire in the North of England. The borough has a well-established local governance framework comprising eleven former local government districts centred on Huddersfield—located close to several larger urban population centres (Manchester, Leeds and Bradford, and Sheffield) and various rural food-producing regions (the Yorkshire Dales, the Peak District and Dales in Derbyshire, and North Yorkshire) (see Fig. 2). It has a diverse population of almost 440,000, of which 16 % are British Asian (Kirklees, 2019). As well as its primarily disconnected government districts, there is a strong urban-rural divide, with residents in the more affluent areas of rural south Kirklees reported to have a life expectancy of up to five years more than residents in the towns of Batley and Dewsbury in the urban north (Kirklees, 2013). Recent estimates of vulnerability to food insecurity confirm that Kirklees is an area with high need (Moretti et al., 2021).[4]

In the last decade, which has been a period of intense financial austerity, Kirklees Council has oscillated between a "managerial" approach to food governance and provisioning and the desire for a more "open" approach (Lever et al., 2019). Throughout this period, there were many attempts to forge links between local and regional food producers, food cooperatives, independent retailers, artisanal food producers and farmers' markets to facilitate access to local retail and institutional networks. To further the potential of these ways of working, from 2012 onwards, the council took part in the Food for Life (FfL)[5] partnership and attempted to position itself within the Sustainable Food Cities Network (SFSN).[6] Kirklees Public Health Directorate also developed a new local food governance framework revolving around *The Food 2020: From Farm to Fork Strategy* (Kirklees, 2014a, 2014b) and a *Kirklees Food Charter* (Kirklees, 2014a).

Despite being highly successful in FfL, positioning the region within SFCN was much more challenging. Some things worked well regionally, others less so, and it was often challenging for relevant actors to bridge the divide between competing food systems actors and different ways of working within and beyond rural and urban regional geographies. On the one hand, Kirklees Council Catering Service had turned the region into something of a hotspot for sustainable school meal provision. Across the lifetime of the FfL commission, around 100 schools enrolled in FfL and two schools in the urban north achieved a FfL gold award, which involves schools acting as food hubs for local communities, growing food on-site for school lunches, working closely with local farms, sourcing locally grown food, and buying from regional wholesalers. On the other hand, expanding these working methods within regional food networks was far more challenging. There was often a lack of understanding among farmers and growers in rural South Kirklees about what FfL was trying to achieve in the urban north. These challenges were compounded by competing national food policy priorities and regional economic pressures emanating from the Leeds City Region (Jensen & Orfila, 2021), which prioritised land for housebuilding rather than food growing. The lack of support for the regional food economy meant that many independent producers and food artisans had to look outside the boundaries of Kirklees to build sustainable alliances that were largely invisible to those operating within the prevailing "managerial" model (Lever et al., 2019).

As negotiations to position Kirklees within SFCN and further a more "open" approach to food governance and provisioning moved forward in the five years up to 2017, the council came under increasing pressure to address the constraints imposed by financial austerity and local authority funding cuts (BBC, 2015). Things came to a head in 2017, when the FFL commission (and funding) on which an unofficial food partnership (based on the FfL and SFCN steering groups) stood, ended. Rather than extending the FfL work and developing community food hubs across the region via an official food partnership, Kirklees Council began working with national supermarket chains on food insecurity issues. This strategy enhanced the "managerial" approach considerably, and the attempt to develop and pursue a more "open" approach that could position Kirklees within SFCN suddenly disappeared from view.

Given the ongoing pressures of financial austerity, this was not unexpected. A food insecurity focus was one of the only ways local authorities could get political support and national funding for 'sustainable' food issues (Lever et al., 2019). While towns and cities within SFCN had formal convergence spaces (i.e. partnerships) where diverse knowledge, resources and stakeholders could shape collective agendas (Moragues-Faus & Sonnino, 2019), those working within Kirklees' informal convergence spaces were much less able to resist national policy pressures. Consequently, instead of building on the success of FfL to develop and strengthen connections between distinct places and sustainable food system niches within and beyond the administrative and geographical boundaries of the borough, the *Food 2020 Strategy* was jettisoned in favour of a reinvigorated "managerial" approach to local food governace and provisioning (Lever et al., 2019). This is the context in which the Covid-19 health pandemic struck in 2020.

3. Research methods

This paper draws on research conducted between April and December 2020. The research set out to understand; 1) the regional pressure points in food supply and demand that emerged during the Covid-19 crisis; 2) the solutions that emerged in response to these challenges; and 3) the innovations required to enhance food system sustainability across the Kirklees region after the pandemic.

The Covid-19 crisis presented many challenges, and data were generated via video calling (e.g., Skype or Zoom) and informally via text messaging (e.g., WhatsApp) and mobile phone conversations. From April 2020, using a purposive recruitment and sampling strategy initiated with pre-existing contacts, we conducted approximately 30 semi-structured interviews with key food system and policy actors within

[4] Approximately 22 % of adults indicated some level of food insecurity, and an estimated further 12 % of the population were worried about whether they had enough food.

[5] Food for Life is a national school food program that aims to make healthy, tasty and sustainable meals more widely available by reconnecting people and communities with food provenance and food production (www.foodforlife.org.uk).

[6] Now called Sustainable Food Places, this network supports cities, towns and counties to establish cross-sector food partnerships across all aspects of the food system to solve interconnected social, environmental and economic issues (https://www.sustainablefoodplaces.org).

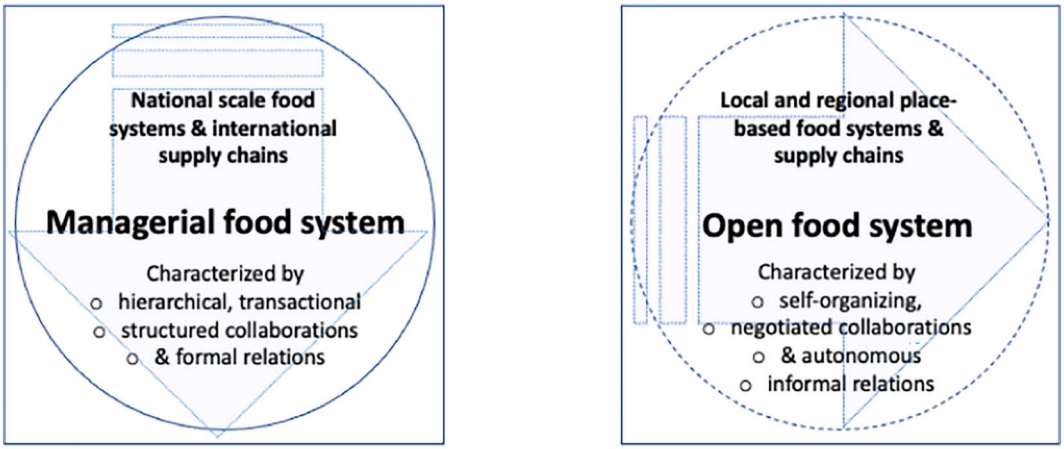

Fig. 1. "Managerial" and "open" food systems.

Fig. 2. Map of Kirklees
Kirklees (2019).

the Kirklees region; each lasted between 30 and 60 min and were digitally recorded and transcribed verbatim. Following the workings of the regional food system meant that we also interviewed several food system actors from outside Kirklees, who either supplied food into, had relationships with, or advised food systems actors within Kirklees; given the evolving nature of the pandemic, several repeat interviews were also conducted (see Appendix 1 for a complete list of interviewees). We also used online methods to keep abreast of rapidly changing developments during the pandemic, which involved checking websites and other online sources for new economic practices, changing delivery patterns and new collaborations.

Data analysis involved reading and rereading all interview transcripts to identify rich text passages before conducting coding using NVivo to identify the key themes that inform our analysis. People were willing to talk about their experiences during the pandemic. However, our research raised specific ethical issues, because it involved those working with vulnerable groups and small business owners and artisan food producers, many of whom were struggling to keep their businesses viable. Throughout the project, the health and well-being of participants were key concerns and efforts were taken to limit harm and distress.

4. Results and discussion

4.1. Crossing boundaries during a crisis

At the start of the pandemic (during what was subsequently termed 'lockdown' by the UK media), the extent of food insecurity in Kirklees was exposed very quickly, much as it was across the UK. Low-income households were particularly vulnerable. Incomes were reduced as other expenses increased, and they were also unable to stockpile in the way that other groups were. With the usual supply of cheap food suddenly unavailable in supermarkets, and more expensive products unaffordable, food banks were quickly inundated with requests for help. As one food bank volunteer noted:

> 'Families… the schools closed, so… they weren't getting free school meals. So families started struggling, they came on to our books. Certain individuals, because of job losses and so on, you know, income dropped… It was very quick.'
>
> (Interview 19)

An interviewee at a national retailer concurred, stating that the pandemic: *'really exposed those that probably always had these needs'* (Interview 4). Indeed, it was widely reported at the time that three million people in the UK had to skip meals (Boons & Mylan, 2020; Power et al., 2020).

Across the wider region, local authorities were directly involved in searching for solutions. However, the response was uneven (Blake, 2021) and dependent on how local authorities were embedded in national redistribution networks. In Barnsley, for example, which borders Kirklees to the south, and in Manchester to the West, partnerships emerged with FareShare and other national food surplus redistribution partners. Things were more complicated in Kirklees, where food banks are part of the Independent Food Aid Network,[7] and thus not able to access the same volumes of food as those in the national food redistribution network overseen by Trussell Trust[8] and FareShare.[9] Instead, they depended heavily on donations from the public and weekly purchases from supermarkets.

Serval interviewees argued that (the supermarkets) Morrisons,[10] and to a lesser extent, Aldi,[11] responded well to requests for help during the pandemic, providing regular support across the region. Morrisons were highly active across the region, creating new community partners to reach vulnerable groups. Other supermarkets were less involved, and in the early days of lockdown, several interviewees noted that it was an ongoing struggle for food banks to source enough food. Some farmers and food producers linked this situation to Kirklees Council's lack of strategic and spatial planning and to their decision, over many years, to let old food system infrastructure (such as markets) fade away in favour of pushing through planning for supermarkets and out of town shopping centres. As a farmer argued:

> 'The way local government has ended up structuring retail, you know, whether they've done it intentionally or unintentionally, all you've ended up within Kirklees, is a network, you know, of supermarkets.'
>
> (Interview 36)

As the problems of sourcing food from supermarkets continued, emergency food providers started to approach independent retailers for help. One independent retailer in Honley in South Kirklees responded by donating regular supplies of fresh fruit and other packaged foods free of charge, as a food bank interviewee noted:

> 'I phoned Coop and said can we put an order in for this many loaves to collect on the Tuesday morning. She said, oh, I can't do that… so I contacted an independent retailer… [and] they've given us our weekly food order free… I mean when they did it once, we were quite overwhelmed, but then, you know, they did it again'
>
> (Interview 13)

Another independent retailer in nearby Slaithwaite was heavily involved in new mutual aid networks, working closely with local public service providers (i.e. food banks, fire stations, and local resilience groups) to facilitate the coordination and delivery of meals and food parcels to vulnerable households via new socioeconomic practices. In line with national government funding directed at local government, similar working methods popped up across the region. In North Kirklees, Mosques also provided food services for the region's South Asian communities alongside food banks.

As these processes intensified, surprise at the extent of need across the region's communities and towns grew considerably. Interviewees spoke of their surprise at the realisation that there were around 60 foodbanks operating across Kirklees during the height of the first lockdown. The public also appeared unaware, particularly in some of the region's wealthier areas, of the extent of food insecurity within their communities, as a food bank volunteer in South Kirklees noted: *'I mean… we've had comments… surely you wouldn't need a food bank in Holmfirth'* and *'we've been going eight years'* (Interview 13). Established (but largely hidden and visible) socioeconomic practices were, we could say, suddenly revealed in all their complexity.

At the same time, the reliance of vulnerable groups on cheap food via supermarkets, food banks and wider redistribution networks was also questioned much more openly than it had been previously (Lever et al., 2019). Discussing how quickly national government support had been put in place for vulnerable groups when the pandemic struck, an interviewee at a major food bank raised the question as to why there are so many people in food poverty in the UK:

> 'The level of state welfare and support that has been exacerbated by Coronavirus has shown what we're capable of providing to people as a country and … It brings … to the fore … more than ever, that question of why there are people who can't afford to eat week to week when we could put provision in place.'
>
> (Interview 2)

As noted above, at the start of the pandemic, food redistribution and food aid networks, supported by Government funding, received vast quantities of surplus food destined for food service markets in volumes and packaging they had not previously seen or encountered, which made it extremely difficult to redistribute. In many instances, catering sized containers were distributed to charity food projects, which they had to process to be suitable for distribution to households. An interviewee working in national food redistribution networks suggested this returned their efforts to *'a Victorian philanthropic model of disaster food aid relief'* (Interviewee 22). While these ways of working were necessary and welcome in a crisis, they were also problematic, it was argued, not least because they also undermined a lot of the more nuanced thinking that has recently emerged in local food aid networks, which aim to enhance resilience by reducing vulnerability. In general, these approaches adopt an asset-based approach that builds capacity and capitalises on locally held capabilities and resources by working with communities to develop new practices rather than filling a gap through charitable giving to households (Blake, 2019).

Given government support and funding, Kirklees Council was forced to continue developing new socioeconomic practices. Very quickly, they began mapping out all support services across the region, and throughout the summer of 2020, they opened old (and previously disregarded) food infrastructures such as markets in towns such as Batley, Dewsbury and Huddersfield as coordination and distribution points. As was the case in most local authorities around the UK, they also seconded public health workers into these spaces to help facilitate the development of a centralised system of support through which those requiring help could order a food parcel online. This worked well, and new place-based connections and labour practices began to emerge within the pre-existing "managerial" model.

The council also offered support for a rapidly emerging network of mutual aid groups across the region, which by this time were rapidly self-organising and developing new practices. These groups were closely linked to a range of regional food system actors, including independent

[7] https://www.foodaidnetwork.org.uk.
[8] https://www.trusselltrust.org.
[9] https://fareshare.org.uk.
[10] Headquartered in Bradford in West Yorkshire, Morrisons is the fourth largest supermarket chain in the UK.
[11] Aldi is a family-owned German discount supermarket chain with over 10,000 stores in 20 countries.

retailers, food banks and other local service providers in combinations that helped to coordinate food donations and deliveries to regional communities. A Kirklees police officer explained the local authority's approach:

> 'What we're trying to do is coordinate… so that those smaller organisations feed into the three main foodbanks, so there's a relationship there, just to ensure that we've got equitable access across communities really and that we're coordinating things across… place… and that the support… is available locally.'
>
> (Interview 25)

This collaborative approach differed somewhat from the prevailing "managerial" model whereby services had been commissioned by the council and delivered through private providers. Where previously relationships were functional and transactional, the emerging "open" approach sought to facilitate more partnership working and reciprocity. Alluding to this work, another policy officer suggested that this was a clear reminder '*that we shouldn't always be so reliant on big supermarkets,*' and that while '*it might be a bit harder… looking for those local solutions*' it '*can sometimes really pay off*' (Interview 24). As this discussion illustrates, and as we observe in more detail below, access to food is shaped by entrenched inequalities and by the diverse forms of labour and enterprise on which food production and distribution practices stand (Dombroski et al., 2020).

4.2. An emergent place-based regional food system

In a period of rapid self-organising, a largely invisible network of regional food system actors was also responding to the pandemic by developing new economic and community-based practices, thus adding another layer of possibilities to the "open" model of provisioning that was beginning to consolidate regionally. As the pandemic unfolded, this heterogenous assemblage of actors (who had previously been seen to lack resilience in retail and institutional networks) suddenly came into their own, adapting quickly to a rapidly changing situation.

When cafes, restaurants and hotels closed and locked down in early 2020, farmers and food producers across the region were extremely worried about the future. But as the crisis unfolded, many began to proposer, as local people turned to independent retailers, box schemes, home delivery services, and farm shops in increasing numbers. The regional food system, many people soon realized, had the capacity and flexibility to adapt to the crisis in new and innovative ways. A local dairy farmer and food producer provided key insights into the changes that emerged during this period. At the start of the pandemic, the farmer admitted that he was extremely worried for the future of his business, with predicted losses of £1 million. As the crisis unfolded, however, the business began to flourish, the farmer argued, primarily because it wasn't completely locked into supermarket supply chains:

> 'I mean obviously we do have supermarket business, and we do have export business as well. But I've been keen to try and retain a traditional distribution system'.
>
> (Interview 3)

Very quickly, these short food supply chains evolved and began to develop new and innovate ways of working to get food to market. The farmer explained the emergence and expansion of these new economic practices:

> 'What has absolutely gone through the roof has been things like farm shops, local shops, home deliveries, recipe boxes, online selling. All that kind of stuff has absolutely gone bonkers. So we've actually been running absolutely flat out trying to keep up with the demand.'
>
> (Interview 3)

Regional farm shops experienced a similar surge in demand, with many demonstrating remarkable resilience and innovation to provide access to fresh, seasonal produce via new (or previously hidden or disregarded) regional networks of rural and urban food system actors.

Discussing the problems faced by supermarkets dependent on complex global supply chains, a farm shop owner explained the experiences of many regional food businesses succinctly:

> 'Obviously… we could adapt straight away with being so much smaller, as did many butchers and other food retailers, and we've benefitted from it.'
>
> (Interview 12)

In general, supply was not a problem regionally, as another farm shop owner explained:

> "You know… we only sell us own grown reared produce, or things we do buy are from local businesses, and we didn't really have a supply problem."
>
> (Interview 8)

There was also great innovation. Some farm shops converted to accommodate social distancing, while others changed to delivery only, often across administrative boundaries and broader geographical scales than where they had previously operated. Others developed new services for the elderly, vulnerable and those advised to self-isolate, as another interviewee explained:

> 'They can ring up and can pick anything out of the shop, fruit, veg, confectionery, pies, pastries, meat, whatever they've seen in the shop… We've had a lot of new people who've never been in before and had home deliveries off us.'
>
> (Interview 10)

Some farm shops differentiated their offer, providing access to a wider variety of grocery products alongside their traditional ranges of dairy, meat, and organic products, both from within Kirklees and from places in nearby counties (such as Derbyshire) and other food-producing regions within Yorkshire (the Yorkshire Dales and North Yorkshire).

Given the lack of poultry arriving through international supply chains, one farm shop began delivering Sunday lunches using their own produce and locally sourced chickens and turkeys. Others bagged-up pasta, rice and flour, the latter being particularly difficult for the Pakistani community in the urban north of the region to source; many of whom were using farm shops for the first time. Because of their agility and ability to adapt at very short notice, some farm shops were also able to take bulk food from wholesalers (which would usually go to food service customers, wholesalers, and caterers) and repackage it quickly in ways that supermarkets and larger retailers could not. They were not, however, supported in these endeavours with government funding in the way that larger retailers locked into national supply chains and food redistribution networks were.

Significantly, many of the new socioeconomic practices that emerged at this time were developed informally by those working and living in the region (Bosco & Joassart-Marcelli, 2018). A farm shop manager noted the impact of this work:

> "It's not just the management… it's been the staff as well… The chefs in the coffee shop have come along with the ideas as well, you know, they've wanted… to come up with new ideas as much as we have."
>
> (Interview 8)

Independent retailers across the region found themselves in a similar situation to farm shops. As they became more visible, some adapted and innovated to develop new practices, as an interviewee noted:

> 'A lot of independent high street food retailers have adapted a lot quicker and… been able to get food to a lot of people. I'm not saying

they'd be able to compete with supermarkets, but they've definitely adapted faster.'

(Interview 18)

These retailers played a critical role in forging new connections within and across regional communities, and virtually overnight, demand for weekly veg box schemes at some independent retailers went through the roof. While one food cooperative's small shop closed temporarily because of this increasing demand and a lack of space for customers, an interviewee argued that their shop still *'didn't suffer like the supermarkets'* (Interview 11) because they were able, much like farm shops, to source most products from local suppliers as and when the need arose. There were some problems with supply when a three-month heatwave at the start of the pandemic limited supplies of regionally grown vegetables, and the prices of some items increased significantly. However, these gaps in provision were often filled by local people and allotment owners, who began sharing locally grown produce in communities.

What seems clear from these brief insights is that the "managerial" approach to food system governance and provisioning that had existed prior to the pandemic was suddenly accompanied (and at times supplanted) by diverse groups of food system actors embracing a more "open" approach. In some instances, this included larger retail outlets adjusting their managerial structures to become more open and integrated with local producers and community organisations (Blake, 2021). At other times, regional change was more spontaneous and self-organising, although many existing economic practices (which were viewed as unnecessary and unsustainable before the pandemic) remained beyond the sope of the local authourity's ambitions. To be sure, as Jensen and Orfila (2021) note, despite food being a key economic sector across West Yorkshire, very little is known about how much food is grown regionally and how much of it gets to market. In this context, the ability of place-based food system actors to contribute to the regional economy has long been overlooked in favour of larger businesses locked into national-scale food systems and international supply chains. Significantly, however, as the developments outlined above were unfolding, other crises were emphasising the importance of developing and building on the possibilities offered by the heterogeneous assemblage of actors and colliding practices that had suddenly become visible (Gibson-Graham, 2020) within the region's increasingly entangled "managerial" and "open" food systems.

4.3. The convergence and impact of multiple crises

In the post EU referendum period leading up to the pandemic, many farm labourers (who were primarily) from eastern Europe left the UK (Salyga, 2020). Although there were schemes aiming to bring guest workers into the country to harvest produce throughout 2020, many workers did not arrive due to the travel bans put in place to control the spread of the novel coronavirus. At the time, backed by the national Government, the UK farming industry urged university students and furloughed workers to form a new "land army" to pick and pack fruit and vegetables (Farming UK Team, 2020a).

A regional grower in West Yorkshire supplying fruit and vegetables into Kirklees recognised the challenges this presented:

'A lot of farms do rely on workers from aboard, our next-door neighbour they rely on them a lot because of their strawberries… and they need about 120 people… so I think they had problems with that.'

(Interview 20)

Despite widespread media interest after the initial plea for help, in general there was minimal take-up of the request to form a "land army", and labour shortages started to emerge on farms across the country. We were informed andecdotally that despite applying for this work, many students and young people found it all but impossible to make contact with those organising the new scheme.

Another reoccurring vulnerability discussed in our fieldwork was the growing threat posed by climate change. Referring to the same three-month dry spell mentioned above, another grower confirmed that the price of fruit and vegetables had increased dramatically because of extreme weather and further that this was becoming a regular occurrence:

'It seems to be all or nothing really; you don't seem to get a happy medium anymore, you never get rain and sunshine, you get either rain or sunshine, it's not sort of in-between. That's the problem I think we're getting these days, extremes.'

(Interview 34)

Interestingly, for some regional growers, this was a double-edged sword. While they lamented the impact of climate change, they also welcomed the high prices they were receiving to combat the constant downward price pressure from supermarkets:

We observed earlier how a regional dairy farmer was able to play a key role in the expansion of the regional food economy during the pandemic because his business was not completely tied to supermarket supply chains. When farmers *are* locked into supermarket supply chains, things can be very different, and we were informed that one of the biggest growers in West Yorkshire had stopped growing thousands of acres of vegetables in 2019 because of the low price that supermarkets were willing to pay, which had made the business unviable. It was also argued that if supermarkets continue to operate like this, playing farmers off against each other on price and sourcing produce from contracted farms all over the world at different times of year to undermine producers, the UK food supply chain will struggle to survive.

Outlining the problems national food policies create by encouraging farmers and growers to produce cheap food for supermarkets, a livestock farmer based in Kirklees emphasised the knock-on effects of these ways of working:

'It's on a very, very fine line, and it concerns me greatly … food security in the long term. I mean, you know, farmers are always… I don't know, price-wise, I would say they're always just kept just there, like a carrot… they are walking a tight rope in terms of the national food policy.'

(Interview 38)

Such examples illustrate the vulnerabilities that derive from a "managerial" approach to food governance and provisioning that is characterised by transactional and hierarchical relationships. Although there has since been a re-articulation to previous levels of distribution as the national economy opened up and restrictions have been lifted, our research clearly illustrates the significance of these vulnerabilities. Importantly, and at the same time, our work suggests that these limitations will continue to create opportunities to pursue reform and create a more balanced place-based regional food system.

4.4. Towards a regional place-based food system

When combined with the strengths and resilience of the "open" system, most notably its ability to adapt quickly, it is our contention that the limitations of the "managerial" food system can be strengthened to create a more balanced and resilient place-based regional food system overall. Our research uncovered numerous examples of this potential. For instance, discussing how he had recently stopped selling vegetables to supermarkets because of price-related issues, a regional grower noted how it is possible to work in new ways by bringing together previously disconnected food system actors:

> 'We grow about 125 acres of field vegetables now, and… all but four go to the wholesale markets and sort of catering companies and shops we supply, and that's how we carry on with that now, rather going to supermarkets with it.'
>
> (Interview 34)

There was also recognition that there are areas across the West Yorkshire region where different types of products could be grown in larger quantities if the incentives are there to make it worthwhile for farmers and growers. It was also possible some argued for the Government to invest in new infrastructure such as greenhouses to grow 'fruit and veg' at different times of the year, thus potentially reducing the UK's reliance on imports and improving food security.[12]

In recent decades, infrastructure has been increasingly aligned with the national food system and with the food redistribution network underpinning the "managerial" model. A policy officer from Sustain confirmed this when juxtaposing the potential for food system transformation with the requirement for new regional infrastructure:

> 'Infrastructure is probably one of the biggest blockers because I think a lot of it has been underfunded recently, and a lot of it has just been centralised into big warehouses and big facilities in, you know, a smaller number of regions.'
>
> (Interview 31)

Farmer's cooperatives, food hubs, community fridges, and mobile abattoirs were all identified as ways of developing and embedding place-based regional food systems in Kirklees and beyond.

Discussions to join up existing food partnerships across Yorkshire and neighbouring regions also emerged at this time, the benefits of which were alluded to by an interviewee from Sustainable Food Places:

> 'There's all sorts of different geographies… that overlay… the actual food system. So, you know, you can organise in different ways and there's probably not one right answer… in some areas they're starting to look at regional food strategies.'
>
> (Interview 32)

Although "open" food systems are likely to remain more limited in scope and scale than the "managerial" model, several interviewees suggested that if those working in each system were more aware of what each could offer the other, a more balanced place-based regional food system could potentially emerge (see Fig. 3). Partnership and better collaboration must be central to this agenda.

Indeed, there is evidence that the distinctions between managerial and open food systems can be considered more as a continuum rather than a harsh dichotomy. In some organisations, functions can be managerial, while in others, practices are more open. A local food manager at a national supermarket chain recognised this when discussing how the community partners they had put in place during 2020 to access vulnerable and challenging to reach groups have since *"become really central to our business in… meeting… new needs that we didn't know about"* (Interview 4). Similarly, a farmer in Kirklees argued that *"if you want to develop a local food economy*" (Interview 36), it is essential to find new ways for regional farmers and growers to distribute their products to retailers operating within the formal structures of the "managerial" model. While innovations such as *'click and collect'* and *'direct sales'* helped farmers and growers to get food to market during 2020 and will continue to do so, our interviewee argued strongly that being *'allocated shelf space in a supermarket'* (Interview 36) is essential if place-based food actors are to contribute to the development of a more resilient regional food system.

Considered alongside the role played by farm shops and independent retailers during 2020, and the understanding that regions like Kirklees should not be entirely dependent on big supermarkets, there is clearly scope to build on the diverse economic practices that suddenly became visible during this period. As we have seen, however, moving in this direction is very much dependent on the development of new food infrastructure and on finding new ways to involve local people with the commitment and passion for developing and making viable a more balanced and resilient place-based regional food system.

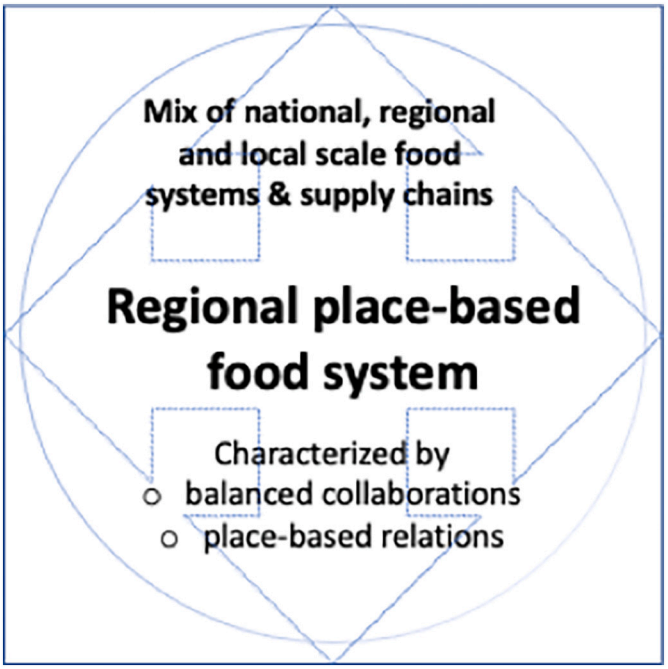

Fig. 3. Regional place based food system.

5. Conclusions: transforming place-based regional food systems for resilience

Throughout this paper we have seen how a dominant "managerial" system of food governance and provisioning left the Kirklees region largely unprepared for the problems that emerged during the early stages of the Covid-19 health pandemic. Very quickly, as these limitations were exposed, the emergence of a more "open" approach to food governance and provisioning (with supported and self-organising elements) lessened the impact of these problems considerably. In many instances, the boundaries between the heterogeneous assemblage of actors spanning these two systems were fuzzy, overlapping and characterised by asymmetrical power relations. Nevertheless, those involved were often engaged in endeavours with similar and shared goals, thus potentially strengthening, we contend, the wider networks underpinning the regional foodscape.

By combining the notion of alternative economies with Massey's sense of place, our analysis has enabled seemingly fixed food system boundaries to be understood as fluid, permeable and subject to ongoing processes of socioeconomic change. Going forward, as the growing threat of climate change illustrates, there is a genuine need for policy-makers to embed the place-based relations and practices characteristic of "open" food systems more closely with the more formal structures of the "managerial" model. It is, we contend, only by strengthening connections across places that new alliances can be built and negotiated across administrative and geographical boundaries. There is no one size fits all, and it is when places become something different, as we have seen, that previously obscure practices display the potential to trigger transformation. This paper contributes to these debates by making visible the processes through which places are made and remade

[12] In the four years to 2018, less than 50 % of unprocessed food consumed in the UK was grown in the UK (Lang, 2020).

through the activities of people, activities that provide avenues, we conclude, for diverse groups of place-based food actors to work more closely in ways that can potentially improve food security for future generations.

CRediT authorship contribution statement

John Lever: Funding acquisition, Management and coordination responsibility for the research activity planning and execution, Investigation, Writing – Conceptualization, Formal analysis, Original Draft, Writing- Reviewing and Editing.

Megan Blake: Formal analysis, Writing - Reviewing and Editing,

Dillion Newton: Writing - Reviewing and Editing,

Gareth Downing: Funding acquisition, Management and coordination responsibility for the research activity planning and execution.

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Declaration of competing interest

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Appendix 1

1. Family Farmer 1
2. Food Bank 1
3. Large Dairy Farmer 1
4. National Supermarket Local Food Manager
5. National Farmers Union Representative South Kirklees
6. Business Network Manager
7. Food Artisan (Cheesemaker)
8. Farm Shop 1
9. Coffee Processor and Supplier
10. Farm Shop 2
11. Farm Shop 3
12. Farm Shop 4
13. Food Bank 2
14. Coffee Processor and Coffee Shop Owner
15. Food Artisan (Oil Producer)
16. Food Artisan (Chutney Producer)
17. Independent Retailer 1
18. Independent Retailer 2
19. Food Bank 3
20. Medium Sized Vegetable Grower
21. Community Shop Executive
22. Non-Executive Director of Food Redistributor
23. Family Farmer 2
24. Kirklees Council Councillor 1
25. Kirklees Council Councillor 2
26. Kirklees Council Councillor 3
27. Sustainable Food System Expert
28. University Sustainability Officer
29. Family Farmer 3
30. Family Farmer 4
31. Sustainable Food Places Policy Officer
32. Sustain Food Policy Officer
33. National Farmers Union Regional Officer
34. Regional Mixed Farmer and Grower
35. Family Farmer 2a
36. Large Dairy Farmer 1a
37. Medium-sized Dairy Farmer 1b
38. Medium-sized Livestock Farmer
39. Fish Farmer

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