Redistributing surplus food: Interrogating the collision of waste and justice

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Introduction

Food *in toto* is highly mobile. Not only does it get moved around from sites of production to sites of processing, consumption and, ultimately, divestment and disposal, as a biological entity it is also characterized by molecular mobilities as it grows, matures and decomposes (Davies, 2012). This movement has led some scholars to characterize food as a hypermobile object that is "good to think mobilities with" (Gibson, 2007, p. 4). However, while the dynamic processes of relocation (moving food about from farm to fork), rematerialization (the reworking of food by technology or through decomposition) and revalorization (the assigning of a new or renewed worth or importance to food products through the food chain) are well documented in relation to food transport logistics, food safety and food markets respectively, they have rarely been studied through an explicit mobilities lens. Equally, the effects of these extrinsic and intrinsic movements of food are far from neutral; they are mediated by entanglements of power and social exclusion that shape how and when people gain access to particular types of food. These entanglements, Cook and Butz (2016, p. 400) suggest, articulate "the intersection of mobility and justice" or mobility justice.

While mobility justice research has been dominated by justice issues related to the mobility of people (e.g., Sheller, 2015; Vukov, 2015), there is scope to consider its

implications in relation to other flows and movements (Hannam, Sheller & Urry, 2006; Urry, 2007), including that of food. Despite productivity gains and more efficient resource use, it remains the case that more than a billion people still experience hunger or nutrient deficiencies, and more than a third of food grown for human consumption is lost or wasted before it can be eaten (FAO, 2017). In this context food mobilities rub up against matters of justice with respect to accessing food, which is shaped by the racist, classist and sexist characteristics of the food system that unfairly privilege the wealthy and powerful at the expense of the poor, exacerbating poverty, hunger and food insecurity (Alkon & Agyeman, 2011). Indeed, Dierterle (2015) argues explicitly that when food is unavailable and people experience hunger and food insecurity as a result, it is more than a regrettable inefficiency of the industrial food system. It is, in keeping with multiple theorists from Locke to Rawls, an injustice.

This chapter interrogates one contemporary collision of extended food mobilities and social justice concerns that emerges when surplus food that would have previously gone to waste is redistributed to people for consumption. Such redistribution can take diverse forms, including the illicit liberation of edible food from bins and the informal person-to-person gifting of unwanted food. Here I consider the practice of redistributing surplus food from businesses to charities. This focus is timely, as such business-charity surplus food redistribution is a growing activity, particularly within the Global North (EC, 2017; FAO, 2017), stimulated by a suite of social, economic, political, environmental and technological factors. The core question for this chapter is how actors involved in surplus food redistribution – including the donors, recipients and the intermediary redistribution initiatives – articulate their goals, practices and impacts at the food mobility-justice nexus. This question is approached first by outlining the current practice of, and governing context for, surplus food redistribution, and then by drawing on empirical evidence from a mobile

ethnography of an Information and Communications Technology (ICT)-mediated business-to-charity surplus food redistribution assemblage operating transnationally in both the UK and Ireland. My analysis attends to the institutional context for surplus food redistribution, incorporating attention to dynamic relations, processes and differential capacities to act that is characteristic of mobility justice analyses (Cook & Butz, 2016). As a result, the chapter makes an empirically-grounded contribution to better understanding the logics of surplus food redistribution for human consumption, and develops contingent insights into food redistribution's benefits and limitations for simultaneously reducing food waste and food injustice.

The practice and governance of surplus food mobilities

Redistributing surplus food is neither a new nor homogenous activity. Existing literature has documented evidence of surplus food redistribution through the ages from ancient to contemporary eras (Dikovic, 2016; Hussey, 1997). And my study that maps and analyzes more than 400 surplus food redistribution initiatives across 100 cities from around the globe (Davies et al., 2017a, 2017b) demonstrates the heterogeneity of contemporary redistribution processes. Focused on initiatives that use some form of ICT (e.g., social media, websites, apps, platforms) to mediate their activities, we found that nearly two-thirds of the initiatives identified were driven by environmental concerns about food waste and the emissions from landfill that it generates. Approximately half of the initiatives focused on providing food for hungry people, while around a third were explicitly committed to achieving both environmental and social outcomes simultaneously, often articulated simply as "connecting businesses that have too much food with charities that have too little" (Food surplus redistribution initiative (RI), Ireland). We identified that the flow of surplus food from businesses to charities makes up more than a third of all redistributive activities with retailers,

and in particular supermarkets, providing an accessible point to regularly intercept sufficient volumes of surplus food to establish a reliable redistributive stream of food to charities (see also Ciaghi & Villafiorita, 2016). Our study also showed that the majority of the redistribution initiatives that connect donors and recipients are non-profit organizations. However, within the jurisdiction of the European Union at least, even non-profit redistribution initiatives are considered to be "food business operators, placing food on the market" (EC, 2017, p. 6).

Legislation that mediates the flow of surplus food provides an important formal framing of the context within which much redistribution operates and the legal boundaries of practice. These legislative rules have become even more important over the last decade in relation to growing concerns about the level of food waste, what the Food and Agriculture Organization (FAO) calls "a widely recognized global shame" (FAO, 2013, p. 11). Guidelines from the European Commission (EC) state categorically that, "[w]hen food surpluses occur, the best destination, which ensures the highest value use of edible food resources, is to redistribute these for human consumption" (EC, 2017, p. 2), and that, "food donation not only supports the fight against food poverty, but can be an effective lever in reducing the amount of surplus food put to industrial uses or sent for waste treatment and ultimately to landfill" (EC, 2017, p. 2). While there is no explicit mention of justice in these documents, the practice of moving surplus on in order to feed people in need is presented as feasible and desirable. However, in interpreting both of these statements we are left to imagine the boundaries of the 'value' articulated and the ways in which food donation might support the fight against food poverty, generally defined as the inability to access a nutritionally adequate diet (Dowler & O'Connor, 2012).

Despite its claimed benefits, surplus food redistribution currently mobilizes only a small fraction of available food surplus, with legal and operational challenges facing potential

donors and recipients. One key barrier is the infrastructures for food surplus disposal, which are far more established than redistribution processes. Those organizations with surplus food often perceive it to be simpler and cheaper to send food waste to landfill, along with the other waste materials they generate. In many places the infrastructures of waste disposal – bins, trucks, dump sites and incinerators – provide a relatively frictionless channel for surplus food to follow, although increasing landfill charges may change this in the future. Equally, disposing of food surplus rather than redistributing it avoids any risk of liability associated with consuming mishandled surplus food that has been donated. In response, many governments are developing regulations aimed at protecting donors from criminal and civil liability on the one hand, and incentivizing donations on the other (FAO, 2011).

While the governing landscape for redistribution is becoming better defined, the justice implications of such enhanced practices have not been the focus of legislation to date. International, national and sub-national legislation governing surplus food donation assumes that redirecting surplus food leads to positive outcomes for both food waste reduction and food poverty alleviation, if conducted according to food safety guidelines. While a FAO report on food waste notes that, "it is not advocated that food donations are the solution to food wastage or poverty", it also claims that, "food redistribution can help alleviate the impacts of food poverty. It is the best option in terms of dealing with unavoidable food surplus from environmental, ethic and social perspectives" (FAO, 2013, p. 61). No further details are provided in relation to the substantiation of this judgment, save that, "the poorest benefit from nutritious food, and the planet benefits from putting food already produced to its proper use" (FAO, 2013, p. 61). Such sweeping statements are hard to substantiate given the fragmented and poor quality data on food surplus, which means its nutritional value is poorly understood (Stenmark et al., 2016).

Under European law, redistribution organizations are seen as engaging in 'retail', and charities that receive food are considered to be conducting 'mass catering' activities, and, therefore, have the same obligations as commercial operators (EC, 2017). Both redistributors and charities are required to record the suppliers of products they receive (one step back) and recipients of the products they redistribute (one step forward), except with respect to the final consumer. This monitoring of redistributed food's journey – its 'traceability' in legislative terminology – occurs under the auspices of technical systems of food risk and safety governance such that the beneficiaries of surplus food redistribution are afforded the same procedural protection as consumers in mainstream marketplaces.

While legislation states that food surplus can help alleviate the impacts of food poverty, the concept of food poverty is rarely well defined in national legislation. In some nations, ratification of the International Covenant on Economic, Social and Cultural Rights (ICESCR) means states have undertaken to tackle poverty, including food poverty, through a human rights framework. This Covenant recognizes that, "the roots of the problem of hunger and malnutrition are not lack of food, but lack of access to available food, inter alia because of poverty" (UNESC, 1999, p. 3). Redistributing surplus food, then, provides one potential means of generating improved access, providing the food is of sufficient quality and quantity to meet needs, and is provided in "ways that are sustainable" (UNESC, 1999, p.3). While the UNESC acknowledged in 1999 that realizing the right to food could only be achieved progressively, nearly twenty years later translating this obligation into practice has remained largely elusive. Indeed, in 2015, the special rapporteur on the right to food stated that, "many countries have failed to develop a judicial culture of recognition in practice or the necessary legal frameworks required to ensure that the rights enshrined in the ICESCR are justiciable" (Elver, 2014, p. 2). For example, the EU food donation guidelines make clear that food is to be traceable and edible, but they do not clarify the relative roles and responsibilities of the

various actors involved in ensuring that happens. Who provides and pays for the new logistics infrastructures required for the expanded volumes of surplus food redistribution, and who will evaluate the qualities of surplus food and its appropriateness for consumption? With no clear answers to these questions, food justice activists and scholars are concerned that lubricating the flow of surplus food through legislation is focused primarily on the needs of the donors, which creates greater risks and dependency for those who are hungry without resolving the underlying causes of either food poverty or food waste (see Carahar & Furey, 2017). The following section provides empirical substance to examine these concerns through a mobile ethnography of surplus food redistribution in Ireland.

Mobile ethnography: Following surplus food in Ireland

A mobile ethnography of the assemblage of actors engaging with one surplus food redistribution initiative (RI) in Ireland was conducted between 2015-2017, and included formal interviews and informal conversations with key actors – donors, intermediaries, recipients and regulators. These interactions were supplemented by observations of, and participation in, surplus food redistribution, to examine what happens during the transport of food and at transfer points.

Established in 2012, the RI began as a pilot study between one store and one charity in Dublin, and has developed into an international operation connecting more than 4,000 retailers and food industry partners with more than 7,000 charity and community partners across Ireland and the UK in 2018. Utilizing an app and other forms of ICT (including a website, twitter feed and text messaging), the RI has redistributed more than 13,500 tons of food equivalent to more than 28 million meals for charitable causes, saving them considerable financial expenditure, as well as 43,000 tons of CO². How this level of redistribution relates to the total amount of food surplus generated is unclear, for while the

Environmental Protection Agency (EPA) estimates food waste in Ireland to be around 1 million tons per annum, there is no mandatory reporting on what proportion of that is edible. However, voluntary reporting on food waste data by large retailers in Ireland will start in 2018, with one multinational already reporting that it donates 17% of its edible surplus annually, with the remainder sent for anaerobic digestion.

In Ireland, the Waste Management (Food Waste) Regulations 2009 specify that most businesses that sell or serve food must segregate their food waste at source, and it must not be sent to landfill. There is no reference to redistributing surplus food to people in this legislation. Instead, it is the Food Safety Authority of Ireland (FSAI) that has incorporated the 2017 European Guidelines on food donation in their published short guidance notes for charities, donors and redistributors that explain food safety standards. The Chief Executive of the FSAI has said that the aim of these guidance documents was to help participants comply with food law:

The FSAI must commend the outstanding work being done by charity organizations and commercial food businesses...These partnerships have the best intentions to help people, but with this, there also comes a great degree of responsibility. Food safety is paramount and all food businesses, including food banks/food redistribution centers, are required to put in place and maintain a food safety management system so they protect the people who ultimately will benefit from the food donation (FSAI, 2017).

Although Ireland has signed on to the UN International Convention on Economic, Social and Cultural Rights (discussed above), one in eight people remain food insecure (DSP, 2017), and state interventions around food security have long been criticized as limited, fragmented and uncoordinated across a range of government departments (see Dowler & O'Connor, 2012). For example, the updated National Action Plan for Social Inclusion developed by the Department of Social Protection has no food remit, while government visions for agri-food futures are dominated by expansionary plans for commercial food exports (DAFM, 2015) rather than food security. In the following sections I examine the ways in which the RI navigated this policy landscape and addressed the food waste-justice nexus.

Facilitating movement

The RI examined here uses a range of technology innovations, including a dedicated mobile app and integrated point of sales system (with 'donate' options on barcode scanners used in stores to monitor food flows through the store), to connect retailers with charities, and facilitate the donation of surplus food. It is this technological architecture that is often emphasized in media coverage as the reason behind the RI's success. Retailers use an app or web-based platform to post notifications of surplus produce, and charities then receive an automatically generated text message indicating the available food surplus and a timeframe in which they must identify what food they require from that surplus.

To comply with the legal frameworks around food safety, the RI trains all staff, volunteers and charity recipients in food safety, and augments this training through the use of ICT to ensure full traceability of all donations one step back and forward, as required by EU Food Law. This traceability also ensures that those organizations that offer poor quality food, or claim food but do not collect it, can be quickly and easily identified, and that relationships can be managed to minimize such instances in the future. ICT then facilitates the generation of reliable data and feedback on impacts and financial gains, which can be an attractive feature to food businesses. Certainly, the RI hopes that the enhanced data on surplus food flows captured through their systems will motivate donors to reflect on their broader purchasing and distribution systems, and reduce persistent and avoidable surplus. This is the RI's main contribution towards food waste prevention, the most desirable option with regards to the management of food in terms of the Irish and EU waste policy frameworks. While there is little evidence to date that this data shifts retailers' practices, both the technology and relationships formed by the RI are at least opening a space for dialogue in this regard.

Ensuring quality control mechanisms for redistributed food also has been an important motivation for the RI, to counter charities' negative experiences of poor quality surplus food donations. One charity recounted their experiences prior to connecting with the RI:

What [the retailer] was donating, we would have saved them a lot of money. But we ourselves would take on that cost, because we would have to waste all of it. Like say 80% of what they gave us. A large proportion of what they gave us was baked goods, pastries and things, and the rest were vegetables that looked, seriously looked like someone might have stood on them. And why would they donate that? Oh the homeless will eat it. What nonsense (Charity 1, Ireland).

Certainly, while the prospect of not having to purchase good quality food is attractive to cash-strapped community groups and charities, accepting surplus food donations also draws on their limited resources. A common difficulty for charities is the inability to respond to and manage unpredictable offers of surplus food (Caraher & Furey, 2017). In response, the RI moved away from its initial plan in which food was advertised on the app and claimed on a first come first served basis, to a more process-driven system that informed charities about scheduling, and allocated days for collections and deliveries. "You might think 'oh it's just food coming in the door', but it takes a lot of organization... Any little bit of help is great, as long as it's structured" (Charity 2, Ireland).

The RI also has worked with many charities to navigate uneven access to and differentiated capabilities with ICT, facilitating a range of basic interactive mechanisms using non-smart phones. In other cases, charities did not have the ability to collect produce from donating stores, so the RI developed a food rescue volunteer operation that manages more than 200 volunteers who collect and deliver food to charities unable to collect it themselves. In 2017, this volunteer operation was supported by Opel, which partnered with the RI by providing seven refrigerated vans to ensure food was efficiently transported and safely preserved in transit. So, while its novel ICT component has generated the most media attention, the RI facilitates a suite of socio-technical interactions that go far beyond the app in

order to maintain relations between donors and recipients: "If you don't understand the charity and the food business you can't just give them an app...and think oh sure just put it up, somebody will accept it. If you don't have the supporting processes it does fall down" (RI, Ireland).

The RI's position as an intermediary has not only made donating simpler for retailers; it is also disrupting the traditional power balance between donors and beneficiaries. Acting as an external quality control agent, the RI acts as a filter for poor quality produce. Moreover, it addresses charities' concerns that if they reject donations, then their future ability to gain access to surplus food might be affected (Tarasuk & Eaken, 2005). Charities are only expected to take what food they have agreed to collect, and can report sub-standard foods to the RI, which reduces the potential for food wastage at the charity level, and mitigates against charities being used as dumping grounds by powerful multinational supermarkets seeking to make social gains by avoiding landfill costs.

Motivations for participation

Donors and intermediaries overwhelmingly employ instrumental narratives to explain why they participate in the redistribution of surplus food. Indeed, none of them made explicit reference to justice as a motivating force during the ethnography. Even the charitable organizations focused on the ways in which the redistributed food supports their services (which may or may not have a food poverty alleviation agenda), rather than resolves any bigger picture concerns with food justice. Many, however, referred to the importance of the social and relational elements of the redistribution process: "We were an early partner with [RI] and [retailer], and the difference it has made to our residents is terrific! The food brings the women who live with us together, and we've seen strong friendships develop as they swap and share food and recipes...not only does this service assist in terms of cost, but it's

brought our residents whether new or long term together, creating lifelong bonds" (Charity 4, Ireland).

When asked directly about the social impact of their operations, the RI founders expressed concerns about their ability to accurately establish what difference they are making to the ultimate consumers of the food. As an intermediary between business and charities, the RI has less access to those who consume the food they move around. Ad hoc individual case studies are the main mechanism through which the RI captures some sense of the difference the food makes to consumers. However, they focus mainly on documenting and reporting outputs rather than outcomes, providing the number of charities that participate and the weight of food mobilized, rather than relations or capacities. The RI regularly surveys charities to collect data on the operational elements of the redistribution process which reveals that charities already purchasing food for their clients have reduced their food bills by between 50% and 100%, while other charities have benefitted by adding a food service to their operations for the first time, something that would have been impossible without participating in the redistribution ecosystem. Infrequent and ad hoc case studies of individual experiences within charities provide another mechanisms through which the RI captures some sense of the difference the food makes to the people who consume it, but the RI are cognizant of the dangers of making unsubstantiated claims about solving hunger with redistributed surplus food. They acknowledge the social responsibility they create by bringing those in need of food into their food waste reduction initiative. As one founder noted, "You are creating a dependency from people who are accepting the food, and if you decide after a couple of years that you are either going to sell your technology or get out and move on, then you have built up a dependency and you're kind of gone. And that...is a lot of responsibility" (RI, Ireland).

Only on one occasion during the mobile ethnography did a charity talk explicitly about the moral crisis of food waste and hunger, in this case framed through its religious beliefs: "How could you waste food? And according to the word of the lord it's a sin, when your brother or sister or community person is hungry, and you have this food waste. And then you dump it in the bin when this person is going hungry, cannot feed. That is a sin. So [RI] is a blessing. It's a blessing in Ireland" (Charity 5, Ireland). More charities emphasized the importance of ensuring participants are treated in a dignified manner with regards the quality of food donations: "Our clients, yes they are in homeless accommodation, and yes they are facing different challenges in life, and they welcome charitable donations...But they are still humans and citizens and whatever else. What we were getting in just wasn't good enough. So when RI came along, it was hugely beneficial... The food we get is second to none, it's perfect. But the only issue is it's going out of date" (Charity 1, Ireland).

A key challenge for the RI in assessing their effect on food consumers is that few charities involved in the redistribution network have the capacity to report on the impacts of the surplus food they receive, outside the cost savings they make as a result of receiving it.

The RI, as a result, is increasingly emphasizing its core mission as a logistics intermediary that keeps good food edible and out of the bin, rather than its food poverty alleviation credentials. However, this framing does not mean their work in moving food around has no justice implications, intended or otherwise.

Surplus food redistribution: Attending to the food waste-justice interface

Despite the coalition of forces supporting greater donation of surplus food from retailers to charities, there are also critical voices arguing that such practices may actually work against reducing structural incidences of food surplus and injustice (e.g., Caraher & Furey, 2017). As evidence, they point to the persistence of 'emergency' non-state food banks that have become

an enduring feature across many countries, demonstrating that surplus food distribution is making little inroads into reducing food poverty. Critical accounts provide a clear picture of structural failures to eradicate hunger, and highlight the dangers of relying on corporate donations without simultaneously holding such corporations accountable for how their business practices – low wages, weak benefits, precarious employment – contributes to food insecurity (Fisher, 2017). Critics rightly argue that both states and corporations have a responsibility to address these underlying causes of food insecurity; the same can be said with respect to addressing the underlying causes of food waste. Participating in surplus food redistribution does not release either states or corporations from these obligations, but does it obscure persistent socially and environmentally unjust practices?

The mobile ethnography found that the RI positions itself as a pragmatic logistics social enterprise working to keep the by-products of a flawed commercial food system available for human consumption. As one founder said, "the whole thing was around matching food-reducing food waste on one side, and saving costs for charities on the other" (RI, Ireland). They think they have limited capacity to address the underlying causes of food poverty, which requires confronting the operation of the global agri-food industry and structural inequalities related to labor and income. Instead, the RI focuses on acting where it thinks it can achieve tangible, measurable impacts in the short term with respect to reducing food waste, utilizing accessible and effective technology as the means to take immediate action. Narratives around efficiency, safety and value optimization hold center stage. However, whether actively seeking food justice or not, the actions of surplus food redistribution do create a new constellation of benefits and burdens for participating actors, that will need to be mapped and tracked over time in order to establish whether they are enhancing distributional justice with regards the right to food. For example, already powerful retailers benefit in multiple ways from the work of the RI; they gain information on the

surplus they generate and the surplus redistributed by the RI, make financial savings from landfill tax avoidance and gain public capital by marketing their activities to reduce waste and feed people. Retailers additionally benefit from the increasing protection provided through an expanding governance architecture around food donations that sets out clear requirements for safe redistribution.

Of course, charity recipients also profit from surplus food and their engagement with the RI. If they were already providing food for their clients, then they benefit by reducing food costs. And groups that previously did not offer food have been able to extend their services as a result of connecting with the RI. However, new burdens accompany these benefits; charities become legally responsible for the food they accept, its collection and safe storage, its preparation and its ultimate disposal. Charities unable to shoulder these burdens – those with limited mobility capacities (Cook & Butz, 2016) – are unable to participate.

While the RI has responded to these limited capacities in a number of ways, including setting up a volunteer collection system to assist recipients, it too has a limited ability to manage a growing cohort of unpredictable volunteers alongside their existing activities.

Conclusion

In summary, while surplus food redistribution provides greater circulation of edible, safe food to people who are hungry, thereby opening up new channels through which to access food and perhaps contributing to distributional justice on one level, such interventions are alone insufficient to move towards food justice in its broader sense. It is, as Fisher (2017) would say, a 'band aid' response. Equally, while it keeps more food out of the bin, at least temporarily, more data is required to explore whether the work of the RI and similar initiatives are contributing to a downward trend in the levels of food surplus retailers generate. To evoke Iris Marion Young (1990), attending to distributional food justice alone –

such as access to food – is necessary, but alone insufficient to develop food mobility justice. Ongoing pressure on retailers and legislators to respond to overproduction and surplus will be required if commitments to food waste reduction by surplus food redistribution initiatives are to be achieved. Greater dialogue with recipients around the impacts of participating in surplus food redistribution is also required. Certainly, unjust food mobilities, with their entanglements of power and social exclusion, will not be resolved with technical fixes alone. Much deeper engagement with the socio-political realities of the global food system and its links to food waste and poverty are required, and not only by grassroots organizations at the coalface of waste and hunger. Echoing Mullen and Marsden (2016), mobility justice in relation to surplus food redistribution cannot be reduced to technical questions around the scale of access or speed of distribution. Greater collective thinking about how food should be grown, moved, accessed and used is required, as well as greater dialogue among scholars working on food, waste, mobilities, social practices and justice.

Mobility justice provides a useful way to talk about the different relations that structure the movement of surplus food, highlighting power differentials that shape that practice and provide the context within which current food waste and food injustice collide. Schemes that rely on voluntary donations collected and redistributed by an assemblage of non-state organizations do not in isolation offer a long term, reliable source of food, and nor do they necessarily hold governments to account with respect to their obligations around ensuring a right to food. To avoid becoming part of the problem of food injustice, redistribution initiatives must ensure they continue to monitor and report on their impacts, and to call for upstream action from both states and corporations to address unsustainable food systems.

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