



UNIVERSITY OF LEEDS

This is a repository copy of *Unpacking food to go: Packaging and food waste of on the go provisioning practices in the UK*.

White Rose Research Online URL for this paper:

<https://eprints.whiterose.ac.uk/id/eprint/229182/>

Version: Accepted Version

Article:

Hirth, S. orcid.org/0000-0002-6719-1214, Boons, F. and Doherty, B. (2021) Unpacking food to go: Packaging and food waste of on the go provisioning practices in the UK. *Geoforum*, 126. pp. 115-125. ISSN 0016-7185

<https://doi.org/10.1016/j.geoforum.2021.07.022>

© 2021, Elsevier. This manuscript version is made available under the CC-BY-NC-ND 4.0 license <http://creativecommons.org/licenses/by-nc-nd/4.0/>. This is an author produced version of an article published in *Geoforum*. Uploaded in accordance with the publisher's self-archiving policy.

Reuse

This article is distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs (CC BY-NC-ND) licence. This licence only allows you to download this work and share it with others as long as you credit the authors, but you can't change the article in any way or use it commercially. More information and the full terms of the licence here: <https://creativecommons.org/licenses/>

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

Unpacking Food to Go: Packaging and Food Waste of on-the-go Provisioning Practices in the UK

Abstract

In the emergent literature, food ‘on-the-go’ (OTG) tends to be addressed as a consumption trend. However, considering that it entails significant amounts of packaging and food waste and has seen enormous growth in the UK since the 1990s, it is not sufficiently understood how OTG emerged as a sector. Conceptualising OTG as a provisioning practice and adopting a ‘Learning History’ approach, we aggregate journalistic columns and expert interviews into lineages that explain sectoral developments over time, and we ask how stakeholders frame OTG’s emergence and linked waste issues. We first show how OTG derives from an interplay of actors and shifts in socio-spatial organisation within the four areas of domestic economy and convenience, health and environment, urban space and policy, and corporate economy and technology. Subsequently, we outline typical understandings of packaging and food waste and shortcomings therein. Extending debates on consumer responsabilisation, we identify narratives that sideline producers’ focus on growth and their role in shaping OTG provision. Stakeholders often frame (1) OTG as demand-driven by reference to an ostensible ‘convenience culture’, (2) material waste as an issue of the ‘consumer-facing’ end of the supply chain, i.e. concerning food wrappers rather than materials used ‘back-of-store’ for logistics, processing, and hygiene and (3) food waste as a matter of avoiding leftovers while taking for granted resource-intensive, “wasteful” foods as part of businesses’ portfolios. We conclude that addressing waste higher up the supply chain may allow for a more nuanced account of causes of, and solutions to, unsustainable provisioning practices.

Keywords

Food sustainability; convenience food; food waste; plastic packaging; consumer responsabilisation; provisioning practices;

1. Introduction: ‘People start pollution. People can stop it’

Until recently a sector of strong economic growth, food on-the-go (OTG) embraces immediate, convenient, and multi-tasking consumption, but also raises social-ecological concerns over excessive resource use and waste. While its increased salience over the last decade conveys an impression of novelty, the historical outlook we take in this paper suggests that OTG can be seen as part of the ‘ubiquitous megatrends in food and beverage consumption’ (Benoit et al., 2019, p. 268) that emerged from the second half of the 20th century. This involves the long-term trends of eating out in the UK (Cullen, 1994; Warde and Martens, 2000; Yates and Warde, 2015) and the rise of convenience food in the Global North (Jackson et al., 2018; Kelley, 1958; Shove and Southerton, 2000). Emerging since the 1990s, the OTG sector is often portrayed as a convenient lifestyle choice and everyday practice of *consumers*. However, there is as yet little evidence to which degree the growth of OTG is led by consumer demand. Since a lot of material and energy is put into the convenience and immediacy that modern food conveys, this paper also addresses food OTG as a *corporate* provisioning practice and explores how it is linked to highly moralised waste problems and socio-environmental crises, including stakeholders’ allocations of responsibility as to how and by whom the packaging and food waste problems linked to OTG are to be tackled.

Our longitudinal outlook begins with rehearsing the aim and effect of an advertisement in the 1970s that became known as the story of the ‘Crying Indian’. Initiated by Keep America Beautiful (KAB), a consortium of chemicals and consumer goods corporations¹ formed in 1953, the launched campaign became in KAB’s own words an ‘iconic symbol of environmental responsibility and one of the most successful PSA [public service announcement] campaigns in history’ (KAB, 2020). The “Indian” seen in the campaign’s televised advert, who was really an Italian-American actor, disembarks his canoe and tears up when litter is thrown towards him from a passing car. The advert closes with the remark ‘People start pollution. People can stop it’. Whilst back then this seemed to convey a strong socio-environmental attitude, the advert is now seen as infamous because the members of KAB prevented regulative legislation to resolve the problem at the production end while inducing guilt in viewers (Brodsky, 2019; Lerner, 2019). The documentary *Broken*² puts the intention behind the campaign in a nutshell by suggesting that it ‘shielded corporate polluters from blame by shifting responsibility onto individuals’ (more generally, see also Ehgartner, 2018; Evans et al., 2017). By deliberately focussing on littering, key players put the issue of single-use packaging into a behavioural context and created guilt in consumers which, from the practice theoretical perspective we draw on, was not only unlikely to significantly change behaviour towards environmentally friendly practices, but also left the system of single-use packaging unaddressed (unlike, for example, zero waste initiatives; Vilella, 2018).

More recently, a UK government report still focuses on ‘reducing litter caused by food on the go’ (Defra 2004) and draws on the Keep Britain Tidy campaign which, just as its transatlantic equivalent KAB, is financed by the food and beverage industry. Today, food OTG, but also other novel modes of food provision (such as digital delivery platforms; Bissell, 2020; Dablaoui et al., 2017; Oncini et al., 2020), are still associated with single-use packaging and other wasteful practices but over the course of decades and through debates on producer responsibility major companies are now eager to emphasise that they are working on these problems, for example, together with WRAP (2020; 2019). Considering the food and beverage industry’s past attempts at diverting attention from their own production practices and preventing environmental action, this paper fills a knowledge gap on how stakeholders address waste issues in the more recently emerging OTG sector. However, we recognise that waste issues are addressed in complex cycles of problematisation and responsabilisation (Maye et al. 2019), and that consumer responsabilisation is neither straightforward nor necessarily a conscious, malicious act by corporate stakeholders or authorities.

Therefore, our aim and theoretical contribution is to extend the understanding of the notion of consumer responsabilisation. Conceptually, by understanding OTG not only as an everyday practice of consumers, but also as a corporate provisioning practice that is driven by a complex of trends. Empirically, by adopting a longitudinal ‘Learning History’ approach that explores the emergence of food OTG as a phenomenon. By drawing on the geographical context of the UK, we use online archives and stakeholder interviews to unpack the evolving and interacting social, spatial, and economic lineages in which food OTG and its waste issues emerged. Our approach adds complexity to an understanding of the emergence of OTG and achieves two objectives:

- 1) Interrogating the OTG development to assess the framing of it being ‘demand driven’ is warranted.

¹ The consortium included beverage giant *Coca-Cola* and tobacco company *Phillip Morris* (Brodsky, 2019). Both have stayed active until today, and a look into KAB’s current board of directors reveals involvement of, amongst others, the *American Chemistry Council*, *Dow Chemical*, *McDonald’s*, *Nestlé Waters*, and *PepsiCo*.

² USA, 2019, season 1, episode 4: 11min 30sec

- 2) Assessing the implications of a more complex background to OTG's development to shed light on ways to successfully deal with waste generated by the sector.

By unpacking the emergence of OTG our findings shed light on the ways in which consumer-focused biases towards individual behaviour change persist in stakeholders' sustainability debates. As a result of these biases, we argue, debates underrepresent important parts of OTG's waste stream, particularly those accruing 'back-of-store', which prevents addressing the full systemic extent of the packaging and food waste problem.

In the following sections, we first provide a more detailed definition of food OTG and its most recent growth (section 2). Against the background of the packaging and food waste problems, we then rehearse literature on consumer responsabilisation in sustainability debates (section 3). After outlining our methods (section 4), we unpack the phenomenon of food OTG (section 5) by illustrating lineages within the four areas of domestic economy and convenience (5.1), health and environment (5.2), urban space and policy (5.3), and corporate economy and technology (5.4). Further findings elucidate hidden dimensions of waste (section 6). Plastics and cardboard waste tend to be addressed from the consumer end, whereas waste accruing 'back-of-store' as part of the supply chain is neglected (6.1). Food waste debates focus on avoiding leftovers and, thereby, take for granted the predominantly animal-based offer while neglecting its biophysical implications such as excessive land, resource, and energy use (6.2). Finally, we discuss how the consumer-facing bias in waste debates mirrors the broader narrative of OTG as symptom of a 'convenience culture' and how a more nuanced understanding of its emergence and waste issues may help to address sustainability problems (section 7).

2. Growth of the Food OTG Sector: Celebrated until Disrupted

Defining food 'to go' or 'on-the-go' – usually, and here too, used interchangeably – is a challenge. With a focus on 'on-the-go consumption' (Benoit et al., 2016), the phenomenon has been described as overlapping with, yet distinct from, the consumption of convenience food and eating away from home. Whilst eating out can also involve a sit-in restaurant, OTG suggests a spatial element of transit from one place to another; but confining the phenomenon to eating on the run or inside moving vehicles would exclude behaviour such as eating in parking cars (see Butler, 2008), on a park bench, or at a workplace desk. Therefore, rather than only being *literally* about eating while moving, it implicates some multi-tasking, that is, a 'complementary activity' beyond eating (Sands et al., 2019). Moreover, there is a temporal element of *immediate* consumption which, for example, distinguishes it from ready-meals that require heating up.

However, by framing the phenomenon solely as a 'behavioural phenomenon' of consumers, Sands et al.'s account falls short of (infra)structural elements on the side of suppliers. As a practical phenomenon, food OTG embraces practices of both consumption *and* production. Hence our particular concern in this paper for the different types of waste that are integral parts of enabling food OTG as part of the supply chain. For the scope of this paper, we define food OTG as a corporate practice of food provision for prompt and potentially mobile out-of-home consumption. Furthermore, food OTG is a phenomenon of urban(ised) areas, particularly yet not exclusively in the Global North, channelled through supermarkets, quick service restaurants, coffee and OTG specialists, forecourts, and convenience stores (Benoit et al., 2019; IGD, 2019).

The latter type of stores indicates that food OTG is part of a broader long-term trend towards "convenience". As such it resonates with "modern" time-saving and time-shifting socio-technical practices, e.g. households using freezers or microwaves and buying ready-frozen foods from

supermarkets (Shove, 2003; Shove and Southerton, 2000; Strasser, 1999). Although a contested and similarly hard to define category (Jackson and Viehoff, 2016), convenience foods go beyond ‘semi-convenient’ processed, partially-prepared, or preserved meal components in that they usually involve full and fast meals for both home consumption and eating out, but also ready-to-eat snacks (Daniels and Glorieux, 2015). Food OTG, too, usually involves time-saving full meals or snacks with processed components, whereas, per definition, it excludes home consumption.

Since our focus is not confined to consumer convenience, we emphasise how food OTG is also “convenient” for producers to capitalise on. Not only has food OTG seen exceptional rates of growth over the past years, but among market analysts its growth also tends to be taken-for-granted as a positive development or, at least, a quasi-natural necessity. Comparing the OTG market with “ordinary” grocery retail, IGD (2019, p. 5) provides estimations of the economic value of both markets for 2019 in the UK. While the value of the food OTG market is £18.5bn, grocery retail is still more than ten times bigger accounting for £193.6bn. Within grocery retail most of the predicted growth between 2019 and 2024 is to be achieved online or by discounters, but larger growth is promised outside of grocery retail in the food OTG market. With a growth prediction (prior to the pandemic) of 26.4 per cent in the next five years, the growth projections of food OTG are interpreted as ‘particularly attractive’ for retailers ‘given the structural and growth challenges being faced by UK supermarkets and hypermarkets right now’ (IGD, 2019, p. 5). Assertive of further economic growth in the ‘out-of-home market’, the Bakery Market Report predicted it to ‘outperform grocery retail’ (British Baker, 2016, p. 61). Defra (2018, p. 103) states that in 2016 the gross value added (GVA) by caterers, that is, restaurants, cafes, and canteens (£32.4bn) outperformed food and drink retailers (£29.8bn). While its specific share remains unclear in the latter statistic, food OTG must have contributed significantly to the financial success of the eating out market. As such, the emergence of food OTG must partly be positioned in the wider dynamics of the capitalist political economy and key players’ dependence on financial growth (e.g. Daly, 2013). This background matters for critically evaluating the ecological consequences of growing a sector that entails waste, along with reductive conceptions of OTG as a consumption trend evoking its growth simply derived from consumers’ demand for convenience.

From March 2020, the COVID-19 pandemic disrupted social and economic practices (Anonymous, 2020a), exposed vulnerabilities and exacerbated inequalities of the food system in the UK (Anonymous, 2020b) and around the globe. While the economic lockdown and more working from home entailed a suspension of its growth and the resource-intensive lifestyle that was the basis for food OTG, food deliveries are now flourishing more than ever (Anonymous, 2020a; Phillipson et al., 2020), the net effect of which seems to be no let-up in terms of avoiding waste.

3. Packaging and Food Waste as Part of Everyday Consumption

Against the background of various social ecological crises such as climate change and mass extinction (e.g. Ceballos et al., 2015) the necessity of a transformation or transition of the food system towards sustainable practices is commonly accepted in academia and policy (Bhunoo and Poppy, 2020; Brand and Wissen, 2017; Defra, 2020; Geels, 2010; Willett et al., 2019). While avoiding waste is part of these debates and receives attention even in public and industry-internal contexts (Strasser, 1999), the required nature and profundity of system(at)ic changes remains controversial. Perhaps understandably, packaging and food waste are moralised topics. Similarly moralised, however, are the choices of consumers who are expected to make “better” ones. Moralising choices and waste and relating them to consumers not only resonates with our objective to assess the framing of OTG

as a consumer-driven phenomenon, that moralisation might also weaken the profundity of systemic changes actors consider.

The pollution of oceans and soils by plastics is, without a doubt, a serious environmental problem (Andrady, 2015; Bläsing and Amelung, 2018; Derraik, 2002; Ilyas et al., 2018; Ryan, 2015). 79 per cent of all the plastic waste ever generated ends up in land-fills or the environment, and only 9 and 12 per cent, respectively, are recycled or incinerated (Geyer et al., 2017, p. 2; Kosior et al., 2018). These sobering facts raise questions about producer responsibilities for waste management (da Cruz et al., 2014; Hage, 2007; Pires et al., 2015; Zero Waste Europe, 2015), replacing fossil-based plastics with biobased ones (Eerhart et al., 2012; Grumezescu, 2017), or technological “smart” packaging innovations (Butler, 2008). Whilst important debates are led on letting material resources circulate to reduce waste to zero (Burgess et al., 2021; Ten Brink et al., 2018; Vilella, 2018; Watkins et al., 2017; Zero Waste Europe, 2015), the affected industries are eager to avoid financial repercussions. For example, looking at links and trade-offs between plastics waste and food waste, it has been argued that plastic packaging is important to extend the shelf-life of products and prevent food waste (American Chemistry Council, 2015; Guerrero et al., 2015). Generally, in face of hunger and malnutrition, harms to ecosystems, and animal rights and welfare concerns, wasting food is a highly moralised issue. It is relevant to both the global scale of food losses and waste (Gustavsson et al., 2011) and food waste as part of everyday consumption practices (Evans, 2014). As waste is moralised, it is precisely the implied allocation of responsibility, also exemplified by the aforementioned ad of the ‘Crying Indian’ and implicit assumptions that waste is mainly caused by littering consumers (cf. Defra 2004), that require analytical scrutiny.

The conceptual and theoretical background we draw on is the rich array of literature that identifies “the consumer” as a rhetoric figure mobilised to individualise responsibility for both creating and solving today’s social-ecological crises (Ehgartner, 2018; Evans et al., 2017; Sassatelli, 2007; Schwarzkopf, 2011; Trentmann, 2005). Critical agri-food studies show that, rather than a genuine transformative force towards sustainability, the idea that consumers “vote” for more or less “ethical” or “sustainable” production exhibits ‘a neoliberal anti-politics that devolves regulatory responsibility to consumers’ via their dietary choices’ (Guthman, 2007, p. 264). Sociologists of consumption have contested the individualising focus on choice by emphasising that consumption, rather than a choice, is often inconspicuously embedded in routinised practices (Halkier, 2010; Spurling et al., 2013; Warde, 2005). Furthermore, consumers cannot change their food environment through their purchase behaviour alone as all consumption takes place in socially and spatially structured ‘foodscapes’ (Goodman et al., 2010), but by moralising and inflating consumer agency, businesses may distract – deliberately or not – from their own responsibility and prevent the implementation of regulatory policies.

Importantly, this does not necessarily involve linear processes of governance through simple, uncontested responsabilisation. Rather, as Maye et al. (2019) illustrate by example of the single-use plastics debate, the relations between problematisation and responsabilisation manifest in cycles. For the context of food OTG, this paper dissects how responsabilisation comes about, but also how OTG is an outcome of socio-spatial and political-economic processes not always directly linked to the responsabilisation dynamic. As such our perspective resonates with more recent discussions on practice theories that critically review the analytic separation between economically-connoted production, on the one hand, and culturally-connoted consumption, on the other, and seek to reconcile this divide by locating consumption within political economy and addressing the systemic and material conditions for existence of practices (Evans, 2020; Warde, 2014; Welch et al., 2020).

4. Methods

The empirical research on which this paper grounds uses a qualitative process approach (Anonymous 2014) which builds on the systematic exploration of sequences of events (Anonymous 2016) with a ‘Learning History’ approach (Reason and Bradbury, 2012; Roth and Kleiner, 1995; Gearty et al. 2015). This approach is rooted in organisational learning and meant to ‘capture and convey the experiences and understandings of a group of people who have expanded their own capabilities’ (Roth and Kleiner, 1995, p. 2). Directed against the traditional ethnographic separation between insiders (‘the “naïve” native being studied’) and outsiders (the anthropologist developing an understanding of a cultural system from a distance), a Learning History is seen as a ‘jointly told tale’ (1995, p. 5). We build on Gearty, Bradbury, and Reason, who have extended the approach to larger systems, and in their work give examples of developing learning histories of networks of organisations involved in building sustainable futures (Gearty et al. 2015). In our case, a joint effort by, on the one hand, food OTG stakeholders such as corporate practitioners, non-governmental campaigners, and academic interviewees and, on the other, our own existing and expanding knowledge of the matter, our reflexions, articulations, and writing skills. The latter is also an example of exploiting ‘longitudinal immersion’ (Wells and Nieuwenhuis, 2017) in the food system of one of the authors.

Our approach thus takes a temporal approach to better understand how a certain situation (in this case, the widespread diffusion of OTG as a mode of food provision) has been produced through interacting historical processes. This requires the collection of data on sequences of events, each of which forming a distinct lineage in the overall process of diffusion of food OTG. Data was collected as textual material from an online archive, and combined with semi-structured interviews with respondents who represent actors in the OTG food provision system. The aim was to aggregate socio-economic elements of food OTG and explore their spatio-temporal dimensions (as well as links to other modes of food provision such as digital delivery platforms). Each of the lineages generated was discussed by the authors to reach consensus on their inclusion as constituting part of the overall process of diffusion of food OTG.

Given the approach taken, there is a risk of bias in the historical description generated due to involvement of a limited set of respondents. This is especially true as a temporally extended description relies on the memory of respondents. We have sought to minimize bias first of all through triangulation with document analysis (which repairs obvious mistakes and omissions in dating of events), and secondly through outside validation. This allows for an assessment of the completeness of the overall narrative that the learning history provides. The outside validation took the form of a draft research report being shared and discussed internally with members of the Sustainable Consumption Institute. This generated further validation, leading to the report providing the basis for this paper. Our own role as ‘learning historians’ was thus to complement our initial knowledge of the field through continuous corrections by incoming input from texts, stakeholders, and colleagues. The data collection can be divided in three parts.

[Fig. 1 about here]

Firstly, the authors’ initial knowledge of the topic manifested in the creation of a mind map which, very crudely, pictured relevant elements of food OTG as a phenomenon and its wider entanglement in a timeline from the 1960s to the present. Mapping, for example, the emergence of chippies, Chinese takeaways, and fast food and linking that to disappearing canteens, the trend towards smaller shops in city centres and, last but not least, more recent trends towards “healthy” fast foods and food OTG obtaining shelf dominance. This raw map can be seen as a qualitative equivalent to a working hypothesis which had to hold up to the scrutiny of the subsequent steps. However, rather than simply verifying or falsifying it, the picture was continuously refined in an open-ended process.

[Tab. 1 about here]

Secondly, our preliminary lineages were substantiated by ‘incidents’ from relevant articles on the online archive Factiva. We draw here on Abbott (2001: 296) assuming that stable phenomena or entities ‘emerge from [the] soup of events as lineages, as events that keep happening the same way’. Patterns of single ‘incidents’ were then aggregated to bigger ‘events’ that allow to present lineages of how relevant phenomena emerged (Anonymous, 2014). The search term ‘food on-the-go’ rendered 4,781 articles fully retrieved by 7 January 2020. Due to the nearly exponential rise in reporting (see Fig. 1), all articles from the first one in 1987 to 2000 were considered, then only the months of February and October until 2010, and only October for the most recent articles (N=119 in total). This was followed by search terms snowballing out such as ‘home meal replacement’ and more specific searches on corporate stakeholders such as McDonald’s, Greggs, Pret a Manger, Tesco, and Asda. Other sources of data include statistical services such as Statista and Mintel as well as the websites of Pret a Manger, Greggs, and LEON. A variety of published documents included industry-led reports (British Baker, 2016; PlasticsEurope, 2017, 2015, 2013), governmental (Defra, 2018) and non-governmental reports or policy documents (Heinrich-Böll-Stiftung, 2019; WRAP, 2019; Zero Waste Europe, 2017, 2015), and research conducted by market analysts and consultancy (Footprint Intelligence, 2019; IGD, 2019).

Thirdly, nine semi-structured interviews were conducted in January 2020 (Tab. 1). From the third author’s email list of 53 contacts with expertise in food-related plastic packaging six corporate representatives, two nongovernmental, and one nonprofit organisation sector specialists were recruited for an interview; one additional contact involved a former employee of OTG specialist chain Pret a Manger. Except for two interviews conducted face-to-face at the environmental nongovernmental organisations (NGO) in London, all of them were phone interviews. The audio recordings were transcribed via a professional transcription service. The interviews were designed to begin with relatively open requests to define food OTG, draw a timeline, and identify factors of how this provision emerged. Subsequent questions aimed at testing the lineage derived from the archival research against the stakeholders’ perceptions (e.g. how food OTG relates to the “traditional” fast food sector’s emergence in the 1980s). Other questions generated narration on how work, cities, and technologies are organised, and hence addressed background factors of the food OTG sector and its waste issues on a societal level.

5. Unpacking Food to Go: Demand- vs. Supply-led Emergence

To identify social and economic factors of food OTG’s emergence, the collected ‘incidents’ as part of the texts and narratives were aggregated to bigger ‘events’ that resulted in the lineage plots we detail in this section. In the following subsections, we present the lineages which are also visualised and consecutively numbered in Figure 2. These 18 lineage plots are derived from and as such mingle with the narratives on food OTG taken from columns and interviews. They show trends paralleled by, leading to, or otherwise related to food OTG, including approximate time spans. Rooted in the 1980s, the OTG sector establishes itself in two steps: a first surge in the late 1990s and a second phase of strong growth linked to the era of the smartphone. While the exercise of creating a Learning History involves some degree of temporal marking of events, the chronology of the lineages is derived from rough estimations and does not literally represent occurrences with a clear-cut beginning and end. Therefore, rather than chronologically (as in Fig. 2), we now illustrate our findings by grouping

developments of the OTG sector into the four areas of domestic economy and convenience, health and environment, urban space and policy, and corporate economy and technology.

[Fig. 2 about here]

5.1 Domestic Economy and Convenience

The first area used to explain sectoral developments of OTG are alleged domestic inclinations towards convenience. As one manager of a big retailer outlines, it was towards the end of the 1990s that ‘we were really starting to see the convenience lever from the consumer and the demand for food OTG’ (Gff; see also Fig. 2, lineage 11). Assuming that ‘people want convenience and I think they want health’, another stakeholder believes ‘that convenience in stores is the future of retail in the UK [...] because they [consumers] haven’t got the time [to prepare foods]’ (Im). A sustainable materials specialist of an environmental NGO identifies this as a common narrative in which ‘we talk about how we have a convenience culture’ (Af).

As part of this broader narrative, columnists in the late 1990s depict consumers as increasingly ‘lazy’ breakfasters or ‘breakfast skippers’ (lin. 9). Evoking the undesirable, if not unhealthy, option of not having breakfast, this narrative not only made those lifestyles appear unreasonable, but also created a case for companies to offer new OTG breakfast products and induce growth. This is a first indicator that the narrative of a convenience society or culture may in fact – at least partly – be corporate-driven rather than a mere expression of consumers’ desire for an efficient domestic economy.

Indeed, interviewee Af questions that we ‘inherently have a convenience culture’ and suggests that the ‘so called convenience culture was created by marketeers’. These marketeers, she elaborates, were confronted with the following question:

‘How do you innovate in what has been quite a traditional sector, i.e. the grocery and food sector, and push people in a direction with their lifestyle which means you can exploit that and make money out of it? I’m being quite cynical here. [...] Do we inherently have a convenience culture or has that convenience culture actually been created by some really clever people who have pushed an idea upon us? 10 years ago, did we know we wanted to have an app on our phones that went “I’ll just order a pizza”? Probably not, but someone identified the opportunity there.’ (Af)

In the mid and end of the 1990s, columnists pick up a debate on Home Meal Replacement (HMR) which precedes OTG’s first surge and lasts until the early 2000s (lineage 4). Unlike food OTG, HMR can be defined as consumers bringing home a ready-made meal and decanting it onto plates. But just as OTG, HMR entails increased packaging and grounds in the convenience culture narrative of people preparing less food from scratch at home. Despite the presence of that narrative, the columns also exhibit a rhetoric that suggests the phenomenon cannot be demand-led only: With a ubiquitous emphasis on competition, the retail and catering sectors are described as competing in a ‘fight for the share of stomach’. As big retailers lose ‘share of stomach’ to caterers profiting from the trend towards eating out (including OTG), HMR is described as becoming a new ‘battleground’. Similarly, a Datamonitor report suggests that ‘the evolution of food on the go is eroding traditional boundaries between food categories and bringing previously unrelated manufacturers into direct competition with each other’ (Eurofood, 1998, p. 4). In sum, this rhetoric supports interviewee Af’s point that the convenience “culture”, rather than a societal phenomenon linked to consumer desires and demand, might be significantly induced by a corporate economy, with businesses competing out of desire for growth and profits (see 5.4).

While there is strong competition, particularly between bakery suppliers and retailers, the sector also cooperates. Greggs cooperates with Iceland to sell frozen sausage rolls, and with Costa Coffee machines in Tesco supermarkets a shop-in-shop model, also referred to as brand hosting, emerges. This illustrates the creativity in supplying for an ostensible consumer culture of convenience – conjured, at least to some significant extent, by the OTG sector itself.

5.2 Health and Environment

Traditional fast food – by marketeers also referred to as quick service restaurants (QSR) – has acquired a bad reputation in face of the obesity crisis. From the 1990s onwards, when fast food chains establish themselves in the UK and eventually saturate, health debates around fast food increase and public concern rises (lineages 1 and 2). Distinctive features of food OTG must be seen against this background. Firstly, from the late 1990s, there is a process of maturing through which food OTG increasingly incorporates ‘full’ meals which are arguably more nutritious than mere snacks (lineage 10). While snacking remains a big market, the offer of food OTG is no longer confined to ‘unhealthy’ snacks such as chocolate, crisps, and sweets or ‘healthier’ snacks such as nuts. This implies it has typically become a lunch time phenomenon, although a survey of OTG customers shows that snacks still outweigh lunch time items (Mintel, 2019). Secondly, particularly from the 2010s, the OTG sector emphasises and introduces ‘quality’ options such as Greggs’ ‘healthy range’ called ‘balanced choice’ aimed particularly at female customers (yet comprising no more than 10 per cent of sales) and more vegan options coincide with this (lineage 14). Similarly, vending machine operators offer ‘low sugar’ and ‘high-protein’ options, and the Bakery Market Report (British Baker, 2016, p. 61) announces that the ‘days of quick and easy are gone; consumers now demand quick and quality and at the right price’.

As shown in the introduction, environmental concerns about plastic waste and corresponding reactions by plastics manufacturers and the food and beverage industry exist since the 1950s. When environmental concerns further rise from the 2000s (lineage 15), the packaging industry increasingly develops products for OTG retailers which are depicted as environmentally friendly, for example, from recycled polyesters. In 2016, the Liberal Democrats demand charging customers for disposable cups. Public concerns reach unprecedented levels after David Attenborough’s nature programme *Blue Planet II*, aired on BBC in November 2017. One representative of an environmental nonprofit organisation emphasises ‘the Blue Planet effect, where most of our supermarkets and brands will say that their inboxes on a weekly level are crammed with people complaining about food waste and certainly packaging waste and what are they going to do about it’ (Cf). However, the alleged singularity by which this programme induced change is put into perspective by interviewee Af who suggests that ‘we were already [...] maybe about a year and a half into the whole coffee cup debate before *Blue Planet* hit’ (see also Maye et al., 2019 making the same observation). In reaction to rising public and political pressure Starbucks now offers discounts for bringing back one’s own cup. Next to established OTG players’ reactions, recent years have seen a wave of start-ups, new initiatives, and policies on reusable packaging (lineage 18). The *UK Plastics Pact* by WRAP and participating companies (2019) is a collaborative example for increased calls to action, although one informant, Cf, observed that companies which find it easy to switch to non-plastic alternatives – e.g. Pizza Hut – were eager to commit, whereas companies relying heavily on plastics were not so keen to participate. In conclusion, the OTG sector is now under pressure to respond to environmental concerns; however, they tend to rely on voluntary “good” consumer behaviour, and companies hesitate committing to changes if profitability is at risk.

5.3 Urban Space and Policy

An important societal aspect shaping the provision of food OTG is people on-the-go. While the weekly purchase by car in big supermarkets has become less typical (lineages 7 and 12), the growth of drive-through takeaways is a significant trend (lineage 5). Outlets on roadsides have increased in the 1990s, supermarkets such as Asda invested in drive-in takeaways, and even in 2017 food OTG specialist Greggs and coffee specialist Costa are reported to have expanded these outlets. Similar to the growth of drive-through outlets, the growth of motorway service stations around the late 1990s is equally a sign for convenience associated with cars.

Another aspect of socio-spatial organisation, here particularly in urban areas, is the downscaling of shopping units in the early and mid-2010s (lineage 12). This involves peri-urban giant supermarkets, or hypermarkets, to decline while for all other forms of retail such as average-sized supermarkets, convenience stores, discounters, and online shopping strong growth is expected (IGD, 2019). Larger supermarkets also retreat from inner-urban high street areas where ground rents or operating leases are particularly high. As it nonetheless remains important that sites are in high-footfall areas, the new focus is on small-scale shops near workplaces and transport focused sites. Avoiding high streets and downscaling reduces rent costs while maintaining opportunities to sell people food on-the-go with high margins. The trend towards food OTG thus has an impact on how urban space and its inhabitants' food provision is organised.

However, it is important to note that not all spatial changes in retail organisation can be attributed to decisions in the food OTG sector or convenience. An academic informant mentions the role of the Planning Policy Guidance (lineage 7):

‘PPG 6 (on out-of-town retailing) was published in 1993 and revised in 1996, making it harder for supermarkets to buy land and build out-of-town shopping centres, arguably leading them to favour reinvestment in smaller in-town formats (Tesco Express, M&S Simply Food etc)’ (personal email communication).

An account of how food OTG came into being thus needs to be wary of wider practices and policies that may affect stakeholders' decisions and possibilities.

5.4 Corporate Economy and Technology

OTG emerges and becomes a strong, conscious trend (lineage 8) after the fast food sector saturates (lineage 1) and small corner shops struggle (lineage 3) in the 1990s. Thus, rather than just consumers demanding convenient, healthy, or environmentally friendlier food, the gastro industry's economic situation itself suggests that stakeholders saw OTG as a way to ‘innovate in what has been quite a traditional [and at the time barely dynamic] sector’ (Af). In other words, OTG can also be seen as producer-led modernisation brought forward by an industry hungry for growth.

Between 1985 and 2000 small, independent shops decline while growth potential is seen in refurbishments and food OTG options. A Spar manager dissociated his company from ‘corner shops’ by depicting them as ‘old fashioned’ with ‘darkened windows’ struggling to survive. Although certainly similar in size and arguably also in terms of the offer, the convenience store is thus seen as different from and more modern than the corner shop (lineages 3 and 11). In 1998 Spar increases investment in food OTG which is depicted by its wholesaler AF Blakemore as a ‘food to go revolution’. Tesco Express is a reminder not to think of convenience stores as “independent” small shops, but also in terms of big retailers using the concept as a business model by opening small outlets in areas of high footfall.

The high profitability of the OTG sector is highlighted by stakeholders regarding their own conventional offers as less and less profitable. Reported as ‘struggling’ around 2013, Greggs turns away from its ‘traditional’ bakery business model to specialise fully on the OTG sector (lineages 16 and 17). Greggs also wins the UK’s Brand of the Year award 2019 for successfully marketing that shift. While Greggs’ bread business is taken over by supermarkets, the supermarkets in turn indicate to ‘struggle’ with their ‘traditional’ grocery sales due to the trend towards food OTG. Former Waitrose CEO Mark Price ranks the shift from eating at home towards OTG as a ‘fundamental’ one happening once in 50 years. The future, or so this seems to suggest, will be devoid of foods prepared at home. However, mediated statements have to be treated with scrutiny as interviewee Em suggests – it is unlikely that people will fully stop to cook at home, and stakeholders who see an opportunity might rhetorically inflate certain trends in order to induce the growth they desire.

The growth-oriented influence of marketers and corporate practices, highlighted by Af (see 5.1), is further exemplified by the ‘2020 Vision Design Challenge’ called out by Total Processing and Packaging for 2004 (Murphy, 2003). As part of this competition for innovative packaging design, marketing agency Fitch predicted that in 2020 packaging will become a ‘fun and interactive experience’, rather than just having a protective function, with food OTG as an ‘ultimate style statement’ (Murphy, 2003). Considering that this prediction from the early 2000s arguably turned out as not far from the current status quo, what Fitch promise on their website today could be interpreted as holding up to reality: ‘Designing the future: Online, offline and in person. We don’t predict the future, we influence it and we design it’ (Fitch, 2020). This is a marketing agency promoting themselves as highly effective in driving consumer trends which, in reality, is inherently their job. In their position as customers of marketing agencies, the packaging industry, food retailers, and caterers are in a different situation. Conversely, they have an interest in creating the appearance that, rather than companies, it is external societal factors and particularly the demanding consumers themselves who drive convenience trends such as food OTG. The narrative of a convenience society allows the food industry to pretend that they are only “helping out”. The common parlance that we have a ‘convenience culture’ (see 5.1) thus sidelines practices of marketing, strategizing and financing, i.e. corporations’ role in creating, rather than merely responding to, that demand.

Moreover, the growth of the sector is paralleled and advanced by technological shifts. In a column from 1995 a mother of two is reported to be using a new home delivery service based on phone calls (lineage 6). The contradictory, playful wording of ‘eating out without leaving her home’ (Mitchell, 1995, p. 1) suggests that convenience is considered as part of an ‘efficient domestic economy’ (Shove and Southerton, 2000, p. 301). The domestic framing suggests that interpretations by which the existence of convenience food is demand-induced sideline the possibility that it is also supply-induced. Another, probably deeper, incision relevant to sectoral development is the era of the smartphone (lineage 13). On first sight, telephonic delivery services emerging in the 1990s may not appear so different from today’s delivery platforms, but they lacked the technological capacity to concentrate many different cuisines, restaurants, or dishes in one medium. The popularity of the iPhone – introduced in 2007 – is followed by the launch of food delivery apps such as Grubhub, Deliveroo, JustEat, and UberEATS. In 2016, food OTG specialist Greggs also establishes a delivery service aimed at workplaces. The argument of deliveries helping customers to lead an easier life features prominently.

6. Hidden Dimensions of Waste

By outlining the main lineages characteristic for OTG’s emergence, the previous section showed that OTG is not only a phenomenon attributable to consumer culture but also emerged from modern

socio-spatial organisation of cities and work life as well as gastro businesses' attempts to innovate and profit from higher margins and growth. This section specifically looks at the material waste and food waste associated with OTG and adopts a similar lens. Insights from the interviews suggest that waste debates mirror the broader bias which reduces OTG to a practice the consumer wants, and they do so by typically approaching waste issues from a consumer-facing angle. Shedding light on underrepresented dimensions of waste, we first address waste accruing 'back-of-store', higher up the supply chain. Another subsection highlights that food waste debates are typically centred on avoiding leftovers or giving them a second purpose while taking for granted what type of food is produced in the first place which, in turn, downplays the significance of meat reduction for avoiding the waste of land, resources, and energy.

6.1 Beyond 'consumer-facing' waste: Addressing the 'back-of-store waste'

When most stakeholders and columnists speak about plastics and packaging waste, they usually refer to the materials in which foods are contained for customers to unwrap, or, in the words of interviewee Af, the 'consumer-facing' waste. In turn, this subsection explores the significance of producer-facing waste, or, in her words, the 'back-of-store' waste. These forms of waste occur higher up the supply chain but tend to remain largely obscure or entirely unaddressed in waste debates.

Af is an OTG sector and sustainable materials specialist of an environmental NGO who was formerly employed at Pret a Manger for two years. She explains that for any retail operation such as technology, clothing, or food

'I know the back-of-store waste, whether it be plastic, cardboard, etc. will overshadow the consumer-facing waste. This was a debate we had at Pret. Because customers come into contact with the pots and the sandwich cartons, that's where their focus is going to be, but actually looking behind the scenes is more interesting.' (Af)

The other interviewee formerly working at Pret a Manger, sandwich maker Jm, provides that look behind the scenes. Based on his account we can distinguish two types of back-of-store waste. Firstly, the plastic and cardboard that protects ingredients as part of the logistics:

'Nothing comes just in plastic because it would get smashed then. If you send [...] anything soft, it must be in something rather solid that will preserve the shape. That's why obviously there's plenty of cardboard as well. Then, obviously, you've got all these bizarre sauces. It all comes in quite solid, plasticky bottles and containers.' (Jm)

Secondly, there is waste due to food hygiene and safety measures: 'You've got aprons, you've got hairnets and so on. For one use. Gloves, one use' (Jm). He then elaborates on the extent of waste the total back-of-store waste amounts to:

'Maybe what could speak for itself is the fact that there's a room, a whole room, just for the packaging waste with massive cages on the wheels. They are filled a few times a day with garbage, basically, that then is thrown away.' (Jm)

While the precise extent of back-of-store waste remains unclear here, the mere assurance that it will always 'overshadow' (Af) the consumer-facing waste should suffice as a reminder to scrutinise debates that, by predominantly focusing on the recycling of end product wrappers (and individualising the problem of littering: "people start pollution"; KAB, 2020), only touch the surface of a complex waste issue driven by industrial socio-technical practices, neoliberal capitalism's development dynamics intractably conjuring up financial growth.

6.2 Beyond avoiding leftovers: Food waste higher up the supply chain

Generally, there seems to be a consensus that letting food decay and throwing it away is morally wrong, threatening the social fabric, and also ecologically unsustainable. Likewise, the last decades have brought increased awareness about meat and dairy's socio-environmental footprints. This subsection elucidates how businesses specialised on food OTG portray and practically address the issues of food waste and animal products.

First of all, the interview with a former sandwich maker at Pret a Manger provides insights in the temporality and materiality of the productive process and its waste issues. Asked about his position and tasks he responds that

‘Basically, the whole set up is that you make sandwiches that are sold during the day, so you do the whole produce basically the night before. When I say night, really I mean probably morning. It’s 2-3am [...] You open the packs. One, two, three packs maybe with all the ingredients and you make a bloody sandwich.’ (Jm)

When the conversation turns towards the relation between food waste and shelf life of products, he claims that ‘if you don’t sell it, let’s say before midday, it goes to the bin’. Asked to elaborate on this he responds that

‘Obviously, different products will have different shelf lives. It’s a bit of a double-edged sword, this freshness. They do throw away a lot of food just because it’s older than 12 hours, 20 hours. I don’t know the numbers for the exact sandwiches and whatever they sell, but it’s significant’ (Jm)

Importantly, this is not necessarily related to any visible decay of the product because ‘even if absolutely nothing is wrong with the sandwich, it goes to the bin after certain hours’ (Jm). The main reason for this, he explains, are food hygiene and safety measures in protection of the company’s reputation ‘because it’s a massive company. One article that would describe them in quite a negative way and maybe, I don’t know, two thousand shops are affected’. Against the moral concerns throwing away food nonetheless evokes, companies are urged to rather give food away to people in need. However, in the interviewee’s case, this strategy is practically prohibited through the specific location of the branch at an airport:

‘Pret a Manger used to claim and are maybe still claiming, I’m not sure, they give their food to food banks [...], but obviously nobody can be bothered at the airport [...] You’re in a security area and if you want to save the sandwiches and give them to whatever charity, you need to take them outside of the security zone at the airport. [...] There’s all the gates and you need plenty of passes, and they are really strict. [...] so, in this sense it would be, I believe, pretty time-consuming, and obviously it’s paid labour, so they will never be bothered with this.’ (Jm)

A second theme, which emerged from analysing Greggs’ and LEON’s websites, serves us to identify indirect links between food waste and the trend towards a more ‘plant-based’ or vegan offer. While calls for a shift towards plant-rich diets (e.g. Willett et al., 2019) are increasingly salient and recognised, we find that some businesses do so only indirectly through extending their offer, yet without conveying a semantic connection to sustainability. For example, Greggs have very successfully introduced a ‘vegan sausage roll’ and a ‘vegan steak bake’, but their website for environmental sustainability³, which does address climate change and a commitment to plastic

³ <https://corporate.greggs.co.uk/social-responsibility/environment>

reduction, omits informing about the increase of their vegan offer. If they did address what that entails in socio-environmental terms, they would inescapably draw attention to the instance that the bulk of their range relies on animal-sourced foods. This may not surprise, but as a consequence reducing meat and dairy is rendered as more of a consumer choice than a producer response to the sustainability challenge.

By contrast, LEON has specialised on offering dishes that deliberately contain small quantities of meat, and one third of its menu is vegan. Using the slogans ‘naturally fast food’ and serving ‘food that tastes good, does you good, is affordable and kind to the planet’, their sustainability website – next to other aspects such as local and seasonal provision, responsible sourcing, or reducing, reusing, and recycling – explicitly aims at serving ‘more veg and better meat’, yet without specifying *why* that is more sustainable.

In other words, what is withheld is any reference (in whatsoever simplified form that could be expected on a corporate sustainability website) to the corresponding scientific evidence. Namely, that it is ultimately due to a negative feed efficiency ratio that, in terms of emissions as well as land, resource, and energy use, the environmental ‘impacts of the lowest-impact animal products typically exceed those of vegetable substitutes’ (Poore and Nemecek, 2018, p. 1). Whilst we are aware that food waste is not commonly defined by these terms, excessive production of animal-sourced foods could reasonably be framed as “wasting” land, resources, and energy – or ultimately: food. While throwing food away is perceived as morally wrong, the conventional framing of food waste leaves unchallenged which types of food are produced in the first place, and whether they are entirely plant or animal based.

The way in which the imperative ‘waste no food’ is addressed on LEON’s website is focused on avoiding leftovers, sending leftovers to anaerobic digestion, or involving charities to pick leftovers up. LEON makes no semantic connection between the environmental benefits of ‘serving more veg’ and the biophysical issue of “wasting” less energy, resources, and land by serving less animal-sourced foods. This may not surprise in face of the common definition of food waste, but it illustrates that neither the scope of common understandings of food waste nor concerns over it usually reach as far as to question the vitally important differences specific kinds of foods exhibit. In conclusion, avoiding food waste is commonly about not wasting taken-for-granted products, while the profound material reasons for avoiding animal products – their wasteful biophysical characteristics – remain obscure. Ultimately, this reduces the reasons for providing and eating plant-rich dishes to a contingent menu ‘option’, consumer choice, and expression of lifestyle, as is much more clearly the case at Greggs, rather than an indispensable precondition for sustainability.

7. Discussion and Conclusion

The starting point of this study was to challenge that – even in academic definitions – OTG tends to be construed as a lifestyle choice by consumers. By looking at the phenomenon in terms of a broader practice, we have widened the scope towards its emergence as a system of food provision. Indeed, as much as a lifestyle, OTG is rooted in social and economic shifts in the organisation of labour and cities, and it is also a business model. This perspective is relevant necessary given the history of how waste has been addressed by the food and beverage industry as something caused and to be solved by consumers, resulting in ineffective and guilt-inducing attempts at ‘reducing litter caused by food on the go’ (Defra 2004). These debates are unlikely to address the systemic causes of the waste problems associated with modern convenience foods. However, as consumer responsabilisation is

neither straightforward nor necessarily a conscious, malicious act by stakeholders it requires empirical scrutiny.

Against this background, we identified a knowledge gap on how stakeholders in the more recently emerging food OTG sector address waste issues. Our aim was to better understand how OTG emerged and, thereby, add complexity to issues of problematisation and responsabilisation in the context of packaging and food waste. By sketching lineages of OTG's emergence and sectoral developments over time, we shed light on the questions to which degree OTG is led by consumer demand (or depicted as such) and how waste problems related to OTG are to be tackled.

In relation to our first objective, which is to interrogate the OTG development to assess whether the framing of it being 'demand driven' is warranted, we have shown that OTG has its origin in the saturation of the traditional fast food sector, becomes established towards the end of the 1990s, and the era of the smartphone initiates a second period of growth in the 2010s. As such OTG is, on the one hand, still a "novel" development within long-term trends towards eating out and convenience. On the other, rather than just new, it can also be seen as a business model innovation of *existing* players in the market of food provision – retailers and caterers, coffee and bakery chains, corner and convenience stores. What unites these players is their quest for new ways of increasing their 'share of stomach' within – yet moving away from – the traditional, competitive sector of groceries which, just as fast food, ceased pelting businesses with profitable economic growth.

Fast food also plays a role in that it serves as a benchmark for the OTG sector in positive and negative ways. On the one hand, OTG promises to be as 'quick and easy' as fast food. That endorsement of convenience expresses itself materially and spatially in drive-throughs and roadside outlets, with car users saving time on their commute between residence and workplace. City centre outlets are focused on convenient short walks during a lunch break or a shopping trip. Cleanly wrapped and ready-to-eat, the meal OTG is, of course, itself convenient. On the other hand, OTG players dissociate their products from fast food. OTG's distinction lies in the 'healthy ranges' and 'vegan options' untypical for what is considered as fast food. This trend resonates with Boltanski and Esquerre's (2016) work on the increased offer of 'exceptional', 'enriched', or 'distinctive', yet clearly industrial, products as part of capitalism's shifting dynamics.

While this premiumisation could easily be reduced to something consumers – concerned about their health and the environment – demand nowadays, it is important to consider the benefits for businesses as 'many outlets catering to OTG consumption (e.g. convenience stores) charge a *premium* price for products' (Sands et al., 2019, p. 400; italics added). Compared to selling groceries, processing and catering foods allows for higher margins as it involves labour, costs, and hence opportunities to reduce these through automation. Moreover, the packaging itself saves labour costs by increasing the speed of production and service. Being in control of formerly domestic practices enables companies to externalise labour and resource costs and putting them onto humans and the environment – ultimately, 'the industry is not paying the net financial cost of packaging waste management' (da Cruz et al., 2014, p. 298).

Highlighting how OTG entails "convenience" for businesses enables a reconsideration of the narrative of a 'consumer culture'. Mirrored by some of the interviewed stakeholders and examined columns, yet challenged by one interviewee emphasising the role of marketeers in 'pushing' that 'idea upon us', that narrative conveys that OTG is culturally- and demand-driven, i.e. rooted in the need for an 'efficient domestic economy' (Shove and Southerton, 2000, p. 301). Telephonic orders in the 1990s, but also more recently emerging delivery services are framed as helping customers to lead an easier life. That OTG ostensibly better responds to consumers' concerns about health and environment (than fast food) is still compatible with the idea that OTG is largely driven by

consumers. However, our lineages highlight that the lifestyle OTG food represents is not just individual choice but also connected to shifts in the social and spatial organisation of urban space and in policy. High rents in city centres, but also policies against out-of-town shopping centres, turned out to be incentives for downscaling the size of retail outlets. Furthermore, our data illustrates that OTG is also a producer-led project of modernisation, with much of the stakeholder debates on consumer demand preceding the surges in demand, as in the example of the marketing agency emphasising how they not simply ‘predict the future’ but ‘influence’ and ‘design’ it. It is understandable that direct OTG players, other than the agencies they employ, have no interest in emphasising how marketing, strategizing, and financing contribute to *creating* the demand for OTG; they rather promote themselves as just responding to a seemingly pre-existing demand.

We can now turn to our second objective, which is to assess the implications of a more complex background to OTG development to shed light on ways to successfully deal with OTG waste generated. The tendencies that construe OTG as demand-driven not only do injustice to an understanding of how the phenomenon emerged, they also entail that sustainability debates remain consumer-facing and superficial. We have provided two examples which show that waste debates do not reach far into the socio-material dimensions of provision higher up the supply chain. Firstly, in the case of material waste, debates often imply that the materials at stake are the wrappers – plastics or cardboard – which preserve customers’ food. However, our evidence suggests that ‘back-of-store’ waste, which accrues due to processing, logistics, and hygiene measures, exceeds the waste from customers unwrapping their food. While differentiating between ‘consumer-facing’ and ‘back-of-store’ waste is a beginning for a more nuanced debate, future research could further unwrap the extent of waste accruing higher up the OTG supply chain in quantitative terms. Secondly, food waste debates tend to be consumer-facing by being centred on avoiding leftovers, thereby taking for granted *which* foods are on offer and produced in the first place. This sidelines deeper biophysical reasons for “wasteful” patterns of food provision, namely that animal-sourced foods inevitably involve losses of energy, resources, and land compared to entirely plant-based foods. In this context, Kolasi (2019) identifies reductive understandings of “energy” prevalent in economics and suggests a more thorough consideration of the laws of thermodynamics, particularly processes of energy conversion. Simply put, that producing a beef patty requires more energy and resources than a bean one is not conceived of as “waste”, and the examined websites of OTG consider the ‘ecological hoofprint’ (Weis 2013) at best implicitly.

Illustrating common understandings of and debates about waste, our data suggest that, in the framings of the examined stakeholders and columnists, waste itself appears as something that accrues at the consumer end, with littered or unrecycled food wrappers and leftovers at the heart of the packaging and food waste problem. The consumer-facing bias in waste debates mirrors the broader narrative of OTG as part of a convenience culture. Leading to a titanic inflation of consumer choice and demand as root causes of food OTG, that narrative only problematises the tip of the iceberg, and prevents navigating towards zero waste regulation and sufficiency-led domestic and corporate economies rather than convenience- and growth-oriented ones. Again, despite undeniable lobbyism of the food and beverage industry and plastics manufacturers, the consumer-facing bias is not necessarily a malicious or conscious act. Recognising that as a system of food provision, OTG emerges from an interplay of actors and shifts in socio-spatial organisation has also helped to shed light on underrepresented types of waste accruing ‘back-of-store’ or higher up the supply chain. Incorporating these insights might allow for a more nuanced account of consumer and producer practices, their respective responsibilities, and political economic reasons for wasteful modes of food provision. Despite an attempt to address the entire food chain, from field to fork, the new National Food Strategy (Defra 2021) fails to tackle the complexities of waste in the OTG sector. Unpacking

food OTG shows the need for a multi-pronged policy framework across the sector not just targeted at consumers.

References

- [Anonymous 2014] Details omitted for double-blind reviewing
[Anonymous 2016] Details omitted for double-blind reviewing
[Anonymous 2021] Details omitted for double-blind reviewing
[Anonymous 2020a] Details omitted for double-blind reviewing
[Anonymous 2020b] Details omitted for double-blind reviewing
[Anonymous 2019] Details omitted for double-blind reviewing
[Anonymous 2014] Details omitted for double-blind reviewing
- American Chemistry Council, 2015. How Can Plastics Help Curb Food Waste? Plastic packaging addresses people's hatred of waste. *Plastics Engineering* 71, 42–44.
- Andrady, A., 2015. *Plastics and Environmental Sustainability*. John Wiley & Sons, Ltd, Hoboken, NJ.
- Benoit, S., Evanschitzky, H., Teller, C., 2019. Retail format selection in on-the-go shopping situations. *Journal of Business Research* 100, 268–278.
- Benoit, S., Schaefer, T., Heider, R., 2016. Understanding on-the-go consumption: Identifying and quantifying its determinants. *Journal of Retailing and Consumer Services* 31, 32–42.
- Bissell, D., 2020. Affective platform urbanism: Changing habits of digital on-demand consumption. *Geoforum* 115, 102–110.
- Bläsing, M., Amelung, W., 2018. Plastics in soil: Analytical methods and possible sources. *Science of The Total Environment* 612, 422–435.
- Boltanski, L., Esquerre, A., 2016. The Economic Life of Things: Commodities, Collectibles, Assets. *New Left Review* 98, 31–54.
- Brand, U., Wissen, M., 2017. Social-Ecological Transformation, in: Richardson, D., Castree, N., Goodchild, M.F., Kobayashi, A., Liu, W., Marston, R.A. (Eds.), *International Encyclopedia of Geography*. John Wiley & Sons, Hoboken, NJ, pp. 1–9.
<https://doi.org/10.1002/9781118786352.wbieg0690> (accessed 04.02.21).
- British Baker, 2016. Food-to-go Analysis: Sandwich evolution and booming B-products, in: British Baker (Ed.), *Bakery Market Report 2016*. British Baker, pp. 59–61.
- Brodsky, S., 2019. Stop shaming and start empowering: advertisers must rethink their plastic waste message. *The Conversation*. <http://theconversation.com/stop-shaming-and-start-empowering-advertisers-must-rethink-their-plastic-waste-message-123579> (accessed 12.02.19).
- Burgess, M., Holmes, H., Sharmina, M., Shaver, M.P., 2021. The future of UK plastics recycling: One Bin to Rule Them All. *Resources, Conservation and Recycling* 164, 105191.
- Butler, P., 2008. Consumer Benefits and Convenience Aspects of Smart Packaging, in: Kerry, J., Butler, P. (Eds.), *Smart Packaging Technologies for Fast Moving Consumer Goods*. John Wiley & Sons, Ltd, Chichester, pp. 233–245.
- Ceballos, G., Ehrlich, P.R., Barnosky, A.D., García, A., Pringle, R.M., Palmer, T.M., 2015. Accelerated modern human-induced species losses: Entering the sixth mass extinction. *Science Advances* 1, e1400253.
- Cullen, P., 1994. Time, Tastes and Technology: The Economic Evolution of Eating out. *British Food Journal* 96, 4–9.
- da Cruz, N.F., Ferreira, S., Cabral, M., Simões, P., Marques, R.C., 2014. Packaging waste recycling in Europe: Is the industry paying for it? *Waste Management* 34, 298–308.
- Dablanc, L., Morganti, E., Arvidsson, N., Woxenius, J., Browne, M., Saidi, N., 2017. The rise of on-demand 'Instant Deliveries' in European cities. *Supply Chain Forum: An International Journal* 18, 203–217.
- Daly, H., 2013. A further critique of growth economics. *Ecological Economics* 88, 20–24.

- Daniels, S., Glorieux, I., 2015. Convenience, food and family lives. A socio-typological study of household food expenditures in 21st-century Belgium. *Appetite* 94, 54–61.
- Defra, 2004. Reducing litter caused by ‘food on the go’ – A Voluntary Code of Practice for local partnerships. London.
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/221084/pb10243-fastfoodcop.pdf (accessed 7.23.2021).
- Defra, 2018. Agriculture in the United Kingdom 2017.
<https://www.gov.uk/government/statistics/agriculture-in-the-united-kingdom-2017> (accessed 1.13.21).
- Defra, 2020. The Path to Sustainable Farming: An Agricultural Transition Plan 2021 to 2024.
<https://www.gov.uk/government/publications/agricultural-transition-plan-2021-to-2024> (accessed 1.13.21).
- Defra, 2021. National Food Strategy. <https://www.nationalfoodstrategy.org/the-report/> (accessed 7.23.21).
- Derraik, J.G.B., 2002. The pollution of the marine environment by plastic debris: a review. *Marine Pollution Bulletin* 44, 842–852.
- Drexler, D., Mokry, S., Dufek, O., 2017. Consumer Perception of Food-To-Go Products. *Acta Univ. Agric. Silvic. Mendelianae Brun.* 65, 1895–1900.
- Eerhart, A.J.J.E., Faaij, A.P.C., Patel, M.K., 2012. Replacing fossil based PET with biobased PEF; process analysis, energy and GHG balance. *Energy Environ. Sci.* 5, 6407–6422.
- Ehgartner, U., 2018. Discourses of the food retail industry: Changing understandings of ‘the consumer’ and strategies for sustainability. *Sustainable Production and Consumption* 16, 154–161.
- Eurofood, 1998. Are formal meals on their way out?, Eurofood, 5 November 1998, 4.
- Evans, D., 2014. *Food Waste: Home Consumption, Material Culture and Everyday Life*. Bloomsbury Academic, London, New York.
- Evans, D., Welch, D., Swaffield, J., 2017. Constructing and mobilizing ‘the consumer’: Responsibility, consumption and the politics of sustainability. *Environ Plan A* 49, 1396–1412.
- Evans, D.M., 2020. After Practice? Material Semiotic Approaches to Consumption and Economy. *Cultural Sociology* 14, 340–356.
- Fitch, 2020. Designing the future. <https://www.fitch.com/about> (accessed 03.02.21).
- Footprint Intelligence, 2019. The future of foodservice packaging. <https://www.foodservicefootprint.com/the-future-of-foodservice-packaging/> (accessed 03.02.21).
- Geels, F.W., 2010. Ontologies, socio-technical transitions (to sustainability), and the multi-level perspective. *Research Policy* 39, 495–510.
- Geyer, R., Jambeck, J.R., Law, K.L., 2017. Production, use, and fate of all plastics ever made. *Science Advances* 3, e1700782.
- Gearty, M. R., Bradbury-Huang, H., Reason, P., 2015. Learning history in an open system: Creating histories for sustainable futures. *Management Learning*, 46, 44-66.
- Goodman, M.K., Maye, D., Holloway, L., 2010. Ethical foodscapes?: premises, promises, and possibilities. *Environment and Planning A* 42, 1782–1796.
- Grumezescu, A.M. (Ed.), 2017. *Food Packaging*. Academic Press, Cambridge, Mass.
- Guerrero, P., Arana, P., O’Grady, M.N., Kerry, J.P., de la Caba, K., 2015. Valorization of industrial by-products: development of active coatings to reduce food losses. *Journal of Cleaner Production* 100, 179–184.
- Gustavsson, J., Cederberg, C., Sonesson, U., 2011. *Global food losses and food waste: extent, causes and prevention*. Food and Agriculture Organization of the United Nations, Rome.
- Guthman, J., 2007. Commentary on teaching food: Why I am fed up with Michael Pollan et al. *Agriculture and Human Values* 24, 261–264.
- Hage, O., 2007. The Swedish producer responsibility for paper packaging: An effective waste management policy? *Resources, Conservation and Recycling* 51, 314–344.

- Halkier, B., 2010. *Consumption Challenged: Food in Medialised Everyday Lives*. Taylor & Francis Ltd, Farnham, Burlington.
- Heinrich-Böll-Stiftung, 2019. Plastikatlas: Daten und Fakten über eine Welt voller Kunststoff. <https://www.boell.de/de/2019/05/14/plastikatlas> (accessed 03.02.2021).
- IGD, 2019. UK food-to-go 2019-2024. Five-year forecasts for market growth. IGD RetailAnalysis.
- Ilyas, M., Ahmad, W., Khan, H., Yousaf, S., Khan, K., Nazir, S., 2018. Plastic waste as a significant threat to environment – a systematic literature review. *Reviews on Environmental Health* 33, 383–406.
- Jackson, P., Brembeck, H., Everts, J., Fuentes, M., Halkier, B., Hertz, F.D., Meah, A., Viehoff, V., Wenzl, C., 2018. Reframing convenience food. Palgrave Macmillan, Cham.
- Jackson, P., Viehoff, V., 2016. Reframing convenience food. *Appetite* 98, 1–11.
- KAB, 2020. Mission & History. Keep America Beautiful. <https://kab.org/about/approach/mission-history/> (accessed 22.01.20).
- Kelley, E.J., 1958. The Importance of Convenience in Consumer Purchasing. *Journal of Marketing* 23, 32–38.
- Kolasi, E., 2019. Energy, Economic Growth, and Ecological Crisis. *Monthly Review: An Independent Socialist Magazine* 71, 29–46.
- Kosior, E., Mitchell, J., Crescenzi, I., 2018. Plastics Recycling, in: Harrison, R.M., Hester, R.E. (Eds.), *Issues in Environmental Science and Technology*. Royal Society of Chemistry, Cambridge, pp. 156–176.
- Lerner, S., 2019. How the Plastics Industry Is Fighting to Keep Polluting the World. *The Intercept*. <https://theintercept.com/2019/07/20/plastics-industry-plastic-recycling/> (accessed 20.11.20).
- Maye, D., Kirwan, J., Brunori, G., 2019. Ethics and responsabilisation in agri-food governance: the single-use plastics debate and strategies to introduce reusable coffee cups in UK retail chains. *Agriculture and Human Values* 36, 301–312.
- Mintel, 2019. Convenience Stores - UK - June 2019. <https://reports.mintel.com/display/919542/#> (accessed 03.02.21)
- Mitchell, J., 1995. Delivery service lets people stay in while eating out. *Thousand Oaks Star & News Chronicle*, 18 October 1995, 1.
- Murphy, M., 2003. Some food for thought. *Packaging Magazine*, 9 October 2003, 22.
- Oncini, F., Bozzini, E., Forno, F., Magnani, N., 2020. Towards food platforms? An analysis of online food provisioning services in Italy. *Geoforum* 114, 172–180.
- Phillipson, J., Gorton, M., Turner, R., Shucksmith, M., Aitken-McDermott, K., Areal, F., Cowie, P., Hubbard, C., Maioli, S., McAreavey, R., Souza-Monteiro, D., Newbery, R., Panzone, L., Rowe, F., Shortall, S., 2020. The COVID-19 Pandemic and Its Implications for Rural Economies. *Sustainability* 12, 3973.
- Pires, A., Martinho, G., Ribeiro, R., Mota, M., Teixeira, L., 2015. Extended producer responsibility: a differential fee model for promoting sustainable packaging. *Journal of Cleaner Production* 108, 343–353.
- PlasticsEurope, 2017. *Plastics - the Facts 2017: An Analysis of European plastics production, demand and waste data*. Bussels.
- PlasticsEurope, 2015. *Plastics – the Facts 2015: An analysis of European plastics production, demand and waste data*.
- PlasticsEurope, 2013. *Plastics—the Facts 2013: An analysis of European latest plastics production, demand and waste data*.
- Poore, J., Nemecek, T., 2018. Reducing food’s environmental impacts through producers and consumers. *Science* 360, 987–992.
- Reason, P., Bradbury, H. (eds.), 2012. *The SAGE Handbook of Action Research*. 2nd edition. SAGE, London. <https://uk.sagepub.com/en-gb/eur/the-sage-handbook-of-action-research/book228865#description> (accessed 03.07.21).

- Roth, G., Kleiner, A., 1995. Creating a Learning History. MIT Center for Organizational Learning, Cambridge Mass.
- Ryan, P.G., 2015. A Brief History of Marine Litter Research, in: Bergmann, M., Gutow, L., Klages, M. (Eds.), *Marine Anthropogenic Litter*. Springer International Publishing, Cham, pp. 1–25.
- Sands, S., Maggioni, I., Ferraro, C., Jebarajakirthy, C., Dharmesti, M., 2019. The vice and virtue of on-the-go consumption: An exploratory segmentation. *Journal of Retailing and Consumer Services* 51, 399–408.
- Sassatelli, R., 2007. *Consumer Culture: History, Theory and Politics*. SAGE, London.
- Schwarzkopf, S., 2011. The Consumer as “Voter,” “Judge,” and “Jury”: Historical Origins and Political Consequences of a Marketing Myth. *Journal of Macromarketing* 31, 8–18.
- Shove, E., 2003. Users, Technologies and Expectations of Comfort, Cleanliness and Convenience. *Innovation: The European Journal of Social Science Research* 16, 193–206.
- Shove, E., Southerton, D., 2000. Defrosting the Freezer: From Novelty to Convenience: A Narrative of Normalization. *Journal of Material Culture* 5, 301–319.
- Spurling, N., McMeekin, A., Shove, E., Southerton, D., Welch, D., 2013. *Interventions in Practice: Re-Framing Policy Approaches to Consumer Behaviour*. Sustainable Practices Research Group.
- Strasser, S., 1999. *Waste and want: a social history of trash*, 1st ed. ed. Metropolitan Books, New York.
- Ten Brink, P., Schweitzer, J.-P., Watkins, E., Janssens, C., De Smet, M., Leslie, H., Galgani, F., 2018. Circular economy measures to keep plastics and their value in the economy, avoid waste and reduce marine litter. *Economics Discussion Papers* 1–15.
- Trentmann, F., 2005. Knowing consumers - histories, identities, practices: an introduction, in: Trentmann, F. (Ed.), *The Making of the Consumer: Knowledge, Power and Identity in the Modern World*. Berg Publishers, Oxford, UK, pp. 1–27.
- Vilella, M., 2018. *Zero Waste Circular Economy: A Systemic Game-Changer to Climate Change, Ecology*. Heinrich Böll Foundation, Berlin.
- Warde, A., 2016. A Spotlight on Practice Theory. *European Sociologist* 1, 8–9.
- Warde, A., 2014. After taste: Culture, consumption and theories of practice. *Journal of Consumer Culture* 14, 279–303.
- Warde, A., 2005. Consumption and theories of practice. *Journal of consumer culture* 5, 131–153.
- Warde, A., Martens, L., 2000. *Eating Out: Social Differentiation, Consumption and Pleasure*. Cambridge University Press.
- Watkins, E., Gionfra, S., Schweitzer, J.-P., Pantzar, M., Janssens, C., 2017. *EPR in the EU Plastics Strategy and the Circular Economy: A focus on plastic packaging*. Institute for European Environmental Policy, Brussels.
- Welch, D., Halkier, B., Keller, M., 2020. Introduction to the Special Issue: Renewing Theories of Practice and Reappraising the Cultural. *Cultural Sociology* 14, 325–339.
- Wells, P., Nieuwenhuis, P., 2017. Operationalizing deep structural sustainability in business: Longitudinal immersion as extensive engaged scholarship. *British Journal of Management*, 28, 45–63.
- Willett, W., Rockström, J., Loken, B., Springmann, M., Lang, T., Vermeulen, S., Garnett, T., Tilman, D., DeClerck, F., Wood, A., Jonell, M., Clark, M., Gordon, L.J., Fanzo, J., Hawkes, C., Zurayk, R., Rivera, J.A., De Vries, W., Majele Sibanda, L., Afshin, A., Chaudhary, A., Herrero, M., Agustina, R., Branca, F., Lartey, A., Fan, S., Crona, B., Fox, E., Bignet, V., Troell, M., Lindahl, T., Singh, S., Cornell, S.E., Srinath Reddy, K., Narain, S., Nishtar, S., Murray, C.J.L., 2019. Food in the Anthropocene: the EAT–Lancet Commission on healthy diets from sustainable food systems. *The Lancet*. [https://doi.org/10.1016/S0140-6736\(18\)31788-4](https://doi.org/10.1016/S0140-6736(18)31788-4)
- WRAP, 2020. Food surplus and waste in the UK – key facts. <https://www.wrap.org.uk/content/all-sectors> (accessed 03.02.21).
- WRAP, 2019. The UK Plastics Pact report 2018/2019. <http://www.wrap.org.uk/sites/files/wrap/The-UK-Plastics-Pact-report-18-19.pdf> (accessed 03.02.21).

- Yates, L., Warde, A., 2015. The evolving content of meals in Great Britain. Results of a survey in 2012 in comparison with the 1950s. *Appetite* 84, 299–308.
- Zero Waste Europe, 2017. Extended Producer Responsibility - Creating the Frame for Circular Products (Position Paper). Brussels. <https://www.zerowasteeurope.eu/wp-content/uploads/2017/01/EPRpolicypaper.pdf> (accessed 03.02.21).
- Zero Waste Europe, 2015. Redesigning Producer Responsibility - a New EPR Is Needed for a Circular Economy (Study Report). Brussels. <https://zerowasteeurope.eu/wp-content/uploads/edd/2015/10/EPR-Final.pdf> (accessed 03.02.21).