

## **1. Introduction**

### **Digital food activism: Food transparency one byte/bite at a time?**

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#### **Food transparency by digital means**

How many food apps do you have on your mobile phone? How often do you share information on food via a tweet or a Facebook post? How often do you see or upload food photos on Instagram? Even if you do not actively post or seek information about food online, it is likely that you have encountered numerous food posts, images, and videos on various online platforms. Food is an increasingly prominent subject of engagement online, from the aesthetics of cooking to the ethics of shopping. In this volume, we contemplate what happens when food, this visceral and enlivening matter, goes digital – and particularly what happens when activism surrounding food moves into the digital domain.

In examining food activism within contemporary ‘digital food cultures’ (Lupton, forthcoming), this volume focuses on selected websites, mobile phone apps, and social networking platforms that offer digital modes of activist engagement with food. These new platforms provide diverse types of information: where foods or their ingredients are grown and manufactured, which ingredients or nutrients various foods contain, what health or environmental effects these foods are reported to have, and who owns food products or brands. Together, these strands of information reflect the growing interest in, and concern with, questions of food transparency in the context of food-related anxieties among consumers in the global North (Jackson, 2015).

What is unique about the ways in which food transparency is conceptualized in the digital realm? While food labels carry information on ingredients, nutrients and safety (e.g., sell-by dates), activists – both offline and online – have pointed out that other consequential information remains hidden or difficult to obtain. Prominent lacunae include the political alliances of food companies and their interconnectedness with other companies and the environmental impact of various foods (e.g., food miles, or the distance a food travels from its locus of production to its locus of consumption). Into this informational gap step digital food activists, who use the digital realm to redefine and/or expand food transparency, and to disseminate otherwise ‘hidden’ information to citizen-consumers who may share these concerns.

An example of the process of redefining appears in consumers’ use of the mobile app *Boycott*, which we studied as part of our project on digital food activism (see Eli et al., 2016). *Boycott* is a US-based barcode scanner app, with a global database that encompasses a range of retail products, including, predominantly, food. The app

adopts the term *buycott* – antonym of *boycott* – as its name which means to purchase a product or brand deliberately in order to signal support of companies’ or countries’ policies or practices (Sandovici and Davis, 2010: 329). This concept of political consumption is embodied in *Buycott*’s stated mission to ‘vote with your wallet’ (Buycott, 2016). Users of the app can generate their own activist campaigns, as well as provide data to inform other users’ activist campaigns. While campaigns may focus on any political issue, *Buycott* includes a number of prominent campaigns concerned with food, including ‘Pro GMO? Or Pro-Right To Know’, ‘Monsanto Products Boycott – Say Not to GMO’ and ‘Support Organic Dairy Products’ (Buycott, 2017).

In *Buycott*’s case, food transparency is visually depicted through corporate kinship charts (see Eli et al., 2016). When consumers scan a food product with *Buycott*, the app informs them which parent company owns the product or brand, producing a phylogenetic tree of corporate ownership structures. The app also alerts consumers to conflicts between the campaigns they have set up and/or joined and certain food production practices, such as the use of genetically modified organisms (GMO), in which either the company or its parent company engage. When we embarked on our research project, Tanja set out to test a couple of food apps, take notes and report back on her experiences to colleagues of the Oxford Food Governance Group (the co-authors of this introduction), which we later shared as an amended version on the group’s shared blog<sup>1</sup>. This is an excerpt of her report (Schneider, 2013) on learning how to buycott using *Buycott*:

*The first product I scanned was a water bottle that was sitting on my desk right beside me. The water I had bought and was drinking that day uses the name of a*

*Swiss thermal spring in its name and so I had assumed I was buying a local product and supporting a local company located in a Swiss mountain valley. To my surprise, I found out that the water brand was owned by Coca Cola, a company whose products I don't tend to buy very often. So, unintentionally, I had been spending money on one of their products.*

*My surprise and my researcher's curiosity led me to check out the water company's website and search for more information on who owns the company. Interestingly, there is no mention that the company is owned by Coca Cola under the 'company' tab on their website. So I suppose the use of the app was helpful right away in knowing more about the products I consume. However the information left me wondering what to do now. Being only an occasional drinker of bottled water but a frequent user of empty plastic bottles for tap water refills when I'm on the go, I knew that the clever solution would be to stop buying/using plastic bottles and buy a glass, metal or hard plastic water bottle for refill. That would have the positive side-effect of reducing plastic waste. On the other hand, it would have the negative side-effect that I wouldn't support jobs in a company located in a Swiss mountain village. [...].*

*Reflecting further about my experience with the app, I kept wondering how the app and the information it provided had altered my relationships to the products I buy and consume. [...].*

Here we see how the use of an app like *Buycott* resignifies a mundane bottle of water, connecting everyday consumption to broader ethical concerns such as local sourcing,

corporate profits and environmental sustainability. As the chapters in our volume suggest, digital food activism is enacted not merely through technologies, foods or ‘things’, but rather through the relationships between them, as they are mediated and transformed by digital network infrastructures. To study these relationships, we draw on our multi-disciplinary backgrounds in anthropology, sociology, and science and technology studies (STS) to address the overarching research question of this volume: *how do diverse actors, including activists, computers, mobile phones, digital network infrastructures and platforms, enact new relationships between food, its producers and consumers, with implications for food activism and food governance?*

With this question in mind, we first review the literature on food activism and digital activism. We then introduce the concept of *digital food activism*, which we have developed to capture diverse forms of digitally mediated practices of food activism, their distinctiveness and their constitutive effects. Next, we situate these practices within the larger multidisciplinary literature on digital devices, platforms and infrastructures, focusing on the affordances<sup>2</sup> of digital platforms; here, our aim is to explore the kinds of interactions these platforms enable and constrain, and what this means for digital food activism. We then consider digital platforms used for food activism as ‘infrastructures that give rise to ontological experiments’ (Jensen and Morita, 2015). Building on our own research and that of the contributors to this volume, we show the multiplicity (cf. Mol, 2002) and experimental nature of digital food activism and call attention to how food is ontologically respecified in the entanglements of diverse types of activists and digital platforms. To conclude, we discuss the implications of this ontological respecification for agency, democracy and

economy, and elucidate the similarities and differences between ‘traditional’ food activism and digital food activism (Counihan and Siniscalchi, 2014).

### **Digital food activism**

This volume stems from our three-year research project<sup>3</sup>, entitled ‘Understanding Emerging Forms of Food Consumption: The Role of Information and Communication Technologies (ICTs) in European Food Governance’. When we began our project, we encountered a surprising lack of engagement between extant research in food studies and research in digital sociology, anthropology and geography, as well as communication studies and political science. In response, we developed the concept of digital food activism, to bridge these previously disparate research realms. In developing this concept, we built on existing research concerning food activism and digital activism, as well as on STS, anthropological and related studies of infrastructure, with a specific focus on digital platforms.

### *Food activism*

In Counihan and Siniscalchi’s introductory chapter to their edited volume *Food Activism* (2014), they define food activism as ‘efforts by people to change the food system across the globe by modifying how they produce, distribute, and/or consume food’ (Counihan and Siniscalchi, 2014: 3). These efforts encompass ‘people’s discourses and actions to make the food system or parts of it more democratic, sustainable, healthy, ethical, culturally appropriate, and better in quality’ (Siniscalchi and Counihan, 2014: 6). They range from spontaneous and institutionalized, individual and collective and are performed by ‘political activists, farmers, restaurateurs, producers and consumers’ (Siniscalchi and Counihan, 2014: 6-7). *Food*

*Activism* is part of growing scholarship in the field of critical food studies that considers a set of multi-sited practices of ethical consumerism, commodity chains, local food, community-supported agriculture, food-focused social movements, peasant movements for food justice and social movements against biotechnology and agribusiness (Siniscalchi and Counihan, 2014: 4). Grounded in an ethnographic approach to food activism, the volume makes important contributions to our understanding of consumer citizenship and alternative food networks in specific cultural settings (see also Goodman et al., 2014; Grasseni, 2013; Kneafsey et al., 2008; Lien and Nerlich, 2004).

Though *Food Activism* examines multiple forms of food activism, the use of websites, blogs, social media and mobile applications does not feature prominently in the volume. This is surprising given the usage of websites and blogs by a range of food-focused social movements and alternative food networks (e.g., the Slow Food movement, the Fair Trade movement or Solidarity Purchase Groups) and the frequency with which activists employ social media as a key communication platform. In addition, a review of the wider literature in food studies reveals that examinations of how food production and consumption practices are portrayed and discussed online tend to focus narrowly on consumers' or eaters' food-related social media practices and the roles these play in individual identity formation, rather than on collective, organised activism aiming to change food practices or the food system as a whole. For instance, de Solier (2013) dedicates the final chapter of her book on *Food and the Self* to food blogging and argues that blogging is a meaningful and self-defining practice for foodies in post-industrial times. Blogging, according to de Solier (2013), enables people to share their culinary knowledge (about cooking, growing

food or reviewing restaurants) rather than merely to consume or acquire other people's (often food professionals') knowledge about food and eating. Rousseau (2013) illuminates the roles of social media in food procurement, cooking and eating, and the emergence of a digital food community, ranging from food professionals to, in her words, 'food amateurs' who participate in food-centred reviews, displays or conversations through Twitter, Facebook, YouTube, blogs and other formats. Both books provide important insights into the growing uptake of new media and the manifold roles they play in re-mediating food messages or even provoking new food practices (see also Leer and Povlsen, 2016). However, their focus on individualised consumption practices does not elucidate activists' uptake of ICTs to challenge and critique the current food system or propose alternative visions.

Thus far, there has been limited scholarly consideration of food activists' use of digital platforms to challenge, critique and change the conventional global agri-food system. One exception is the research of Alana Mann, who engages with food activism and explores some of the roles that new ICTs play in fostering alternative food networks' goals. In her book, *Global Activism in Food Politics: Power Shift*, Mann (2014) studies the transnational social movement La Vía Campesina, which acts as a global umbrella advocacy organization for peasant farmers and landless workers. The movement promotes food sovereignty with the goal that those producing, distributing and consuming food should be in charge of the mechanisms and policies of food production and distribution. Focusing on case studies of three member organizations of La Vía Campesina located in Chile, Mexico and the Basque country (Spain), Mann (2014) analyses how the realities and priorities of local chapters are translated into the global movement's agenda, and in the process

evaluates the capacities and limits of transnational advocacy. Mann (2014) shows how access to alternative media and digital platforms has become crucial for La Vía Campesina and its member organisations in challenging dominant narratives converging around food security – narratives which are driven by corporate actors favouring technological solutions to end global hunger. As an example of the digital contestation of dominant narratives, Mann (2014) discusses the online initiative *farmsubsidy.org*, which provides an alternative, virtual sphere where data on farm subsidies within EU states is made publicly available, thus touching on digitally enabled food activism.

Another study that engages with digitally enabled food activism is Cristina Grasseni's (2013) ethnographic research on *Gruppi di Acquisto Solidale* (GAS) (Solidarity Purchase Groups) in Italy, in which farmers and consumers connect directly (without intermediaries such as retailers) and negotiate the terms of producing, selling, buying and preparing food. Grasseni's (2013) research reveals that ICTs play a negligible role in these negotiations, in part because many GAS members refuse to place orders online via the organisation's website. These members emphasise the problem and, in their view, the paradox of using global digital network infrastructures to support local food provisioning infrastructures and farmers: they argue that digital platforms are another form of intermediation, albeit a digital one, that blocks direct forms of information exchange and communication. GAS members, then, foreground the value of direct, personal and offline communication to foster the affective relations central to the sort of 'solidarity economy' they seek to foster (Grasseni, 2013).

In a recent study exploring how alternative food networks draw on online spaces to foster ‘reconnection’ between producers and consumers, Bos and Owen (2016) emphasise that ‘there is scope to better understand the relationship between online space and reconnection, particularly in light of the increasing usage and embeddedness of online and social media activity across society’ (2016: 4). While they acknowledge existing studies (Cui, 2014; Fonte, 2013; Holloway, 2002; Reed and Keech, 2017) that have started to explore the online spaces used by AFNs, Bos and Owen (2016) argue that further research needs to be done. Based on their study of eight AFNs in England, they propose that online spaces (e.g., websites, Facebook and Twitter pages) offer ‘virtual reconnection’ – a supplementary realm for reconnecting producers and consumers. However, they do not identify any of these online spaces as substituting for socio-material reconnections, such as ‘the biological and tactile qualities of food (such as smell, touch, taste), as well as the social qualities of reconnection (founded on face-to-face interactions and notions of trust) and the embodied ways of knowing’ (Bos and Owen, 2016: 12).

In sum, our review of the literature on food activism reveals that, until now, critical food studies scholars have considered food activists’ uptake, adoption and use of digital platforms only to a limited extent. We find that the few studies that attend to the use of digital platforms for food activism focus on platforms that foster individualised forms of self-expression (e.g., food tweets, food blogs), or on how offline AFNs extend and supplement their work by “going online” and offering additional means of reconnection between producers and consumers. What is still missing is research that explores how digital platforms facilitate the exchange of information and communication on transnational food issues between disparate food

consumers and producers (but see Mann, 2014), and how online and offline activism on food issues is interwoven and the economic, political and social implication of these processes. These are the gaps we attempt to address in this book. Pivotal questions that emerge in relation to this are: to what extent do AFNs employ websites, blogs or social media platforms as new information and communication channels, with the potential to recruit new supporters? To what extent do these digital platforms generate new forms of interaction between a range of actors, online and offline, to enable digitally enhanced activism? How do different digital platforms facilitate diverse forms of activist engagement?

### *Digital activism*

This is the first volume to explore the emerging roles of digital platforms in food activism. In so doing, our volume extends debates in critical food studies to the digital sphere. In particular, we engage with literatures on digital activism that trace the divergences of digital and analogue activism (e.g., Bennett and Segerberg, 2012; Gil de Zúñiga et al., 2014; Mossberger et al., 2008). Scholarship on digital activism, however, rarely directs attention to the politics and practices of food production, distribution and consumption, and tends to coalesce around themes of political participation, technological innovation and new forms of citizenship. By grounding digital activism in the mundane negotiations of food provisioning and consumption, our volume offers a new approach within the literature on new media and digital activism.

Digital activism, as Edwards, Howard and Joyce define it, is ‘an organized public effort, making collective claim(s) on a target authority(s), in which civic initiators or

supporters use digital media’ (Edwards et al., 2013: 10). Digital activists employ digital network infrastructure such as social networks (most prominently Facebook), blogs, micro-blogs (frequently Twitter), email groups (e.g., Google, Yahoo), video (e.g., YouTube), alongside email and SMS, to achieve political and social change. Searching for a term to describe these practices, Joyce (2010) argues that digital activism – as opposed to, for example, cyber-activism, social media for social change, e-activism or info-activism<sup>4</sup> – best captures the scope of activities and tools. According to Joyce, ‘digital activism’ is ‘exhaustive in that it encompasses *all* social and political campaigning practices that use digital network infrastructure; [and] exclusive in that it excludes practices that are *not* examples of this type of practice’ (2010: viii).

In recent years, researchers from the fields of political science, media studies, geography and sociology have turned their attention to the uses of digital technologies by activists. Scholars have documented and analysed diverse digital activism campaigns and their democratic potentials and limits. Prominent examples include studies of local and global social movements that rely on digital technologies to instigate, inform, grow and coordinate protests with ambitious goals for social and political change, such as the Arab Spring, Occupy or Black Lives Matter (Bennett and Segerberg, 2012; Howard and Hussain, 2013; Tufekci and Wilson, 2012). Other researchers, however, focus on the uptake of digital technologies for political consumerism, i.e., citizens expressing their opinions about consumer products and seeking to influence business through boycotts and buycotts (Stolle and Micheletti, 2015). Food boycotts and buycotts are potent strategies in political consumerism; increasingly, consumer-citizens turn to digital platforms to search for or share

information about food products, as well as about food producers and their commitment to labour rights, ethical sourcing, and sustainability (Eli et al., 2016; Humphery and Jordan, in press; Schneider et al., forthcoming).

While studies have provided initial insights on the remit of digital activism, questions about the motivations that underlie digital activism and the predictors of its reach and success remain. To answer these types of research questions, a group of scholars based in the Department of Communication at the University of Washington in Seattle founded the Digital Activism Research Project (DARP)<sup>5</sup> in 2012. DARP's aim is 'to build our collective understanding of the effect of digital technology on political outcomes around the world' (Edwards et al., 2013: 6). To do so, the team created the first longitudinal datasets<sup>6</sup> of digital activism cases worldwide between 1982 and 2012, and developed software to collect additional data. The analysis of the datasets revealed three key findings (Edwards et al., 2013: 4): First, digital activism is civil, non-violent and rarely involves hackers. Second, Facebook and Twitter dominate global activism but there are many regional digital platforms. Third, the success of digital activism campaigns depends on target type and tool diversity, meaning that campaigns are most successful at galvanizing public protest when the government is the target, when the regime is more authoritarian or when the campaign utilizes multiple digital tools (Edwards et al., 2013: 15). These observations are informative for analysing existing and emerging forms of digital food activism; we return to this in the final section, where we consider the cases of digital food activism presented in this volume and how digital forms and formats mediate food activism.

In our analysis of digital food activism, we examine the overlaps between the food activism literature and the digital activism literature. Though the absence of food-related analyses in extant digital activism literature may seem to imply that digital activism, which focuses on challenging a political-economic order rarely targets food provisioning and governance, our research suggests that food activism plays a central role in the broader political work of NGOs, civil society groups and social entrepreneurs. Like ‘analogue’ food activists, digital food activists highlight food as highly political, with the production, distribution and consumption of food envisioned as entangled in dominant scientific, agricultural, economic, social, cultural and political dynamics.

### *Digital food activism*

Building on our review of food activism and digital activism, we define *digital food activism* as an internet-based, organised effort to change the food system or parts thereof in which civic initiators or supporters use digital media. Our definition emphasises the distinction between ‘internet enhanced’ and ‘internet based’ activism (Vegh, 2003). We consider this distinction crucial as digital food activism is shaped by and through the digital media platforms that activists employ. The chapters of this volume highlight the interweaving of digital platforms with the origins, development, and implementation of food activist projects. Through the case studies explored in this volume, we see that digital platforms are conceptualized not as *supporting* consumer action, but as *fostering* and *mediating* activism. Thus, examining the affordances of digital platforms is central to the study of digital food activism. In the next section, we review recent STS, anthropological and related studies of digital devices, platforms

and infrastructure, and consider what kinds of interactions these enable and what this means for digital food activism.

### **Digital (food) platforms and ontological experimentation**

Media scholar José van Dijck (2013), observes that the rise of social media platforms over the last decade has had profound effects on social interaction. Based on her historically informed study of the ‘ecosystem of connective media’ and detailed analysis of each of the five leading companies in the social media realm (at the time of her study) – Facebook, Twitter, Flickr, YouTube and Wikipedia – she argues that the development of social media has resulted in an increasingly mediated culture, which she describes as a ‘culture of connectivity’. Van Dijck describes this digital connectivity as ‘platformed sociality’ (2013: 5). To consider the conditions and consequences of the new ‘platformed sociality’, van Dijck analytically disassembles digital platforms:

By taking apart single platforms into their constitutive components, we may combine the perspectives on platforms as techno-cultural constructs and as organized socioeconomic structures. But disassembling platforms is not enough: we also need to *reassemble the ecosystem* of interoperating platforms in order to recognize which norms and mechanisms undergird the *construction of sociality and creativity*. (2013: 25, emphasis in original)

This enables van Dijck to study those aspects of a culture of connectivity that are usually backgrounded. Similar to anthropological and STS studies of infrastructure, such an approach foregrounds ‘embedded, often invisible technical support structures

that help to deliver services to a population or organization’ (Niewöhner, 2015: 119). These technical support structures can be conceptualised, then, as ‘transient embodiments of social, technical, political, economic, and ethical choices that are building up incrementally over time’ (Niewöhner, 2015: 119). As such, a historical perspective on social media platforms – like the perspective advanced by van Dijck – enables an analysis that ‘emphasizes the partial connections between structure and agency, and inquires into the ‘how’ of connecting and its implications.’ (Niewöhner, 2015: 119; cf. Star, 1999).

Plantin et al. (2016) have recently called for combining the perspectives promulgated in platform studies – as exemplified in van Dijck’s aforementioned research – with the perspectives developed in infrastructure studies, within STS and information science. They argue that ‘digital technologies have made possible a “platformization” of infrastructure and an “infrastructuralization” of platforms. Articulating the two perspectives highlights the tensions arising when media environments increasingly essential to our daily lives (infrastructures) are dominated by corporate entities (platforms)’ (Plantin et al., 2016: 3).

The process of ‘infrastructuring’ (or infrastructural connecting) has recently been described by Jensen and Morita (2015) as an ‘ontological experiment’. In their view, infrastructures are complex, heterogeneous assemblages that ‘[...] give rise to ontological experiments because they are sites where multiple agents meet, engage, and produce new worlds. Tracing these transformations is an effort to outline the contours of emergent ontologies’ (Jensen and Morita, 2015: 85). Inspired by Plantin et al.’s (2016) study, we aim to extend Jensen and Morita’s concept, from

infrastructuring to processes of platformization, and trace how digital platforms give rise to ontological experiments. As Jensen and Morita note, in recent years, the question of how the entities achieve ontological status has gained renewed attention in anthropology and STS (e.g., Gad et al., 2015; Knox and Walford, 2016; Woolgar and Lezaun, 2013; Woolgar and Lezaun, 2015). For instance, Woolgar and Neyland (2013) emphasise the role of classification schemes that order the ontology of people and things. Building on their research of waste management/recycling, traffic control and management of passenger movement through airports, they advocate for studying on-going acts of ontological constitution with a focus on how accountability relations are re-distributed, leading to (new) forms of governance (Woolgar and Neyland, 2013: 56). The authors draw on the example of the McDonald's hot coffee case – a US product liability lawsuit in which a customer sued McDonalds for serving hot coffee that led to third degree burns after the customer accidentally spilled the coffee. They suggest that the legal respecification of coffee in terms of appropriate temperature resulted in coffee's newly accomplished ontological status as safe or unsafe to drink. Ultimately, the authors argue that 'to recognize that coffee can be subject to such ontological segmentation is to recognize that constituting the nature of coffee constitutes its accountable character (that is, that it can take part in the distribution of relations of accountability)' (Woolgar and Neyland, 2013: 55). The potential for ontological respecification poses important questions about how digital platforms used in food activism re-classify and co-constitute food, and the extent to which digital platforms define the actions to be taken within activist networks (see Caldwell; Lyon; Lupton and Turner; and Eli et al., this volume).

In another example of ontological respecification, Hawkins, Potter and Race (2015) examine the ontological constitution of bottled water and how drinking bottled water enacts new relations and meanings that may interfere with other kinds of drinking practices (2015: 84). Building on recent publications about ‘material politics’ (Barry, 2013; Braun and Whatmore, 2012; Marres, 2012), their chapter on anti-bottled water activism<sup>7</sup> is especially valuable for understanding how this form of activism, which has been developing over the past decade, renders bottled water and the practice of drinking bottled water contentious. Activists’ challenges of bottled water coalesce around the notion of water being a universal human right. Hawkins et al. emphasise, however, that the deliberations around bottled water ‘are very situated’ (2015: 145). They identify anti-bottled water activism as located in countries where water provision is the provenance of the state, and describe how citizens in countries with no reliable or safe water supply welcome bottled drinking water. In other words, Hawkins et al.’s chapter on anti-bottled water activism illustrates how bottled water becomes a ‘matter of concern’ (Latour, 2005) in some places but not in others and the different ‘ways in which the same object can prompt heterogeneous concerns and attract multiple publics according to its different ontological realities as commodity, waste, or something else’ (Hawkins et al., 2015: 147). For Hawkins et al. this is not simply a process of moralising bottled water. Studying how bottled water becomes an issue in some places (but not in others) shows how activism – with its strategic intent to disrupt dominant market framings – shifts relations between objects and subjects and contributes to the emergence of a changed reality for bottled water (Hawkins et al., 2015: 147-149).

Closer to this volume's focus on the roles of digital technologies in food activism, Knox and Walford (2016) pose the question of whether there is an ontology to the digital. Given our focus on digital food platforms and infrastructures, we are particularly interested in the authors' definition of the term ontology as the 'specific role that material arrangements play in bringing forth social realities' (Knox and Walford, 2016: 2nd paragraph). They argue that studying the ontological dimensions of digital technologies enables researchers 'to pay attention to the unexpected or unforeseen effects of digital technologies and their capacity to disrupt, destabilize, rechannel, unsettle, all the while calling forth different ways of relating' (Knox and Walford, 2016: 2nd paragraph).

What new insights do we gain from considering digital food platforms as infrastructures involved in relating and redefining human and non-human actors? Drawing on the analytical power of exploring infrastructures as ontological experiments, in the following section we return to the fieldnote on *Buycott* shared earlier in this chapter. Through this fieldnote we explore who and what meets, engages and produces which kinds of realities, with and through the digital platform at the core of *Buycott*.

#### *Buycott as infrastructure/platform for ontological experimentation*

The simple act of scanning a water bottle using the *Buycott* app revealed information hitherto unknown to Tanja. Whereas the water bottle she scanned was Swiss 'local water' for her, the bottle she held in her hands after the scan was geographically local water owned by the multinational company Coca Cola, headquartered in the United States. As discussed earlier, corporate ownership of products is *Buycott*'s key variable

of transparency, as well as the referent of information and comparison. Thus, kinship charts that classify food products in terms of companies and parent companies re-configure corporate ownership as ‘the’ issue at stake.

With Woolgar and Neyland (2013) we see how this particular format of classifying products orders the ontology of the food product and its producers and consumers (see also Bowker and Star, 1999; Mol, 2013). In the process of uploading information, creating campaigns and/or interacting with *Boycott*’s digital platform via its mobile app, a digital respecification of what food is occurs: *What food is* is mediated by information on corporate ownership, which is enabled by a productive assemblage of food product, barcode, programmers, digital devices, users, digital platform, food manufacturers and others. Similar to labelling a food product as organic, fair trade or healthy, food products become digitally ‘informed materials’ (Barry, 2005; cf. Lezaun and Schneider, 2012). In other words, through the *Boycott* app, food is re-classified and respecified through relations with complex informational and material environments.

However, it is not only food that is respecified. ‘Digital devices’, as Ruppert, Law and Savage argue, ‘are simultaneously shaped by social worlds, and can in turn become agents that shape those worlds’ (2013: 22). As the explorative episode of interaction with *Boycott* shows, producers and consumers of food can be affected by digital engagement, transitioning to an ‘activist’ status and habitus. For instance, Tanja’s particular food values (to support locally produced and preferably locally owned products), led her to re-consider her choice of bottled water (switching to another brand of bottled water) and, in fact, the consumption of ‘bottled’ water in general.

Additionally, through consumer and producer actions, the digital platform itself and its developers, in turn, also become respecified. For instance, consumers can set up campaigns such as the ‘Demand GMO Labeling’ or ‘Long live Palestine boycott Israel’ campaigns, which may or may not reflect the developers’ food values. However, as the platform becomes known for hosting such a campaign, its developers will also become associated with the campaign<sup>8</sup> and its entailed values, a process described in (Eli et al., 2016). Ultimately, accountability relations are redistributed in the process of making food digitally transparent: in the realm of digital food activism, food is governed by (frequently corporate) platforms that respecify foods through reclassification. Consumers who use these platforms and engage in the actions envisioned assume the roles of activists.

### **Food transparency by digital means, reconsidered**

As Barry (2016) observes,

*‘[t]he ongoing existence of infrastructure depends on the cultivation of consumers and businesses that have an interest, and generate interest through its future existence; transparency appears to offer governments and corporations a way of managing the relation between infrastructures and their publics, which needs to be sustained over time’.*

Previous research has attended to how ‘online platforms’ define new ‘issue publics’, through offering a means of association and action to individuals who would not have connected otherwise (Langlois et al., 2009). This research, however, has also emphasised that digitally-enabled activism may lead to volatile and ephemeral action across geographic and political boundaries (Kang, 2012). Digital activism may thus

result in ‘unlocated citizenship’ (van Zoonen et al., 2010), that is, citizenship that is not linked to recognised political institutions. Bennett and Segerberg (2012) have described this latter scenario as structured by a logic of ‘connective action’ (as opposed to the collective action prevalent in social movement organisations) which recognises ‘digital media as organising agents’ (Bennett and Segerberg, 2012: 752) for ‘[...] self-motivated (though not necessarily self-centered) sharing of already internalized or personalized ideas, plans, images, and resources with networks of others’ (Bennett and Segerberg, 2012: 753). As an organisationally enabled network, *Buycott* is structured around a logic of connective action rather than collective action. This logic, however, entangles activism and business through the platform’s crowd sourced product information database (Lupton, forthcoming; see also Srnicek, 2017 on platform capitalism), which entwines datafication processes and potential commercial interests. This echoes Langley and Leyshon’s conceptualisation of the power of platform-based businesses: power that rests on practices of intermediation and processes of capitalisation (2016: 3). Thus, we suggest that an analysis of digital food activism requires careful investigation of what we would describe as ‘infrastructures and platforms in the making’, which considers how entrepreneurs, digital platforms, consumer-citizens and food are entangled in particular ways, and the economic, political and social implication of this entanglement.

Where does this leave us with respect to digital food activism? We suggest that, to understand digitally produced food transparency, the following questions should be asked: (1) how are activism, expertise and agency defined on each of the platforms?; (2) how do user actions facilitated on each platform enact activist values and identities?; (3) how does platform infrastructure create new spatialities and

materialities of political action? The contributors to this volume have taken up these (and additional) questions, applying them to diverse field sites and objects of inquiry. In the next section, we offer a short overview of each of the chapters that comprise this volume.

### **Overview of chapters**

In *chapter two*, Melissa Caldwell introduces the practices of a newly emerging cluster of food activists that seek to change the nature of food and thereby challenge understandings of food. Through their engagement with a range of different tools and technologies, including digital technologies, these self-identified hackers, inventors, entrepreneurs and citizen-scientists set out to disrupt and redefine ‘the structures, limits, and possibilities of foods and food experiences.’ (page number in final manuscript)

Based on her ethnographic observations in the United States, Eastern Europe and Russia, Caldwell describes the hackers’ modes of inquiry into food and, by extension, into producing and consuming food as playful and experimental. However, the playfulness and experimentation are underpinned by activists’ social justice concerns about equity, safety and access to knowledge in the predominant industrial food system. The extension of non-digital food activist concerns to the digital realm is particularly insightful as these practices offer new spaces and materialities for political action, have the potential to invert expert-lay relations and centre on ideas of shared knowledge (rather than patentability). By inviting others to join and identify themselves as makers rather than consumers, these diverse groups develop participatory communities that ‘allow individuals to reclaim their own autonomy,

pleasure and sense of personal responsibility’ (page number in final manuscript). It is to these unexpected effects of digital technologies and their potential to disrupt, challenge and redefine that Caldwell draws attention, while raising broader questions on how these technologies provide alternative ways of relating to food, the environment and people.

*Chapter three*, by Amy McLennan, Stanley Ulijaszek and Mariano Beguerisse-Diaz, explores the use of Twitter in linking food, eating and diabetes, and considers the ways in which Twitter is used as a platform for food activism. Activism and protest are but two uses among many for Twitter, but along with Facebook, Twitter dominates global digital activism. Although diabetes is fundamentally related to food consumption, diabetes activism on Twitter rarely mentions food. So, rather than dealing with food activism directly, this chapter examines what ‘counts’ as activism on social media, and highlights different forms that user-generated digital food activism might take.

Through a network analysis of over 2.5 million English-language tweets that contain the term ‘diabetes’, the authors find that diabetes tweets are posted by users with very different claims to expertise. Users include individuals experiencing diabetes directly; personal trainers advertising their services; companies selling lifestyle products or services; marketing agencies; and hospitals and health agencies attempting to communicate specific health messages. The most common content falls into four thematic categories – health information, news, social interaction and commercial interests. In the social interaction category sits humour, and the authors go on to interrogate the use of jokes in this context.

The biggest diabetes related jokes on Twitter bring down the mighty health authorities, admit powerlessness in the face of omnipresent big-brand food products, and remind users that the world of food and health is much bigger than their narrow interpretations of it. Governments and researchers are easy targets for humour, as they position themselves as expert authorities, often downplaying or ignoring the effect of corporate lobbies. Diabetes on Twitter generally highlights the uneven balance of power between citizens, governments and organisations that advocate for healthy diets. This humour does not seek to bring about social or political change, but rather demonstrates a resigned and docile acceptance of the status quo. The authors conclude that diabetes tweets form spaces for social interaction and support, and for coordination of collective action and advocacy. This dynamic organisation around a particular idea – such as using humour to highlight consumers’ sense of powerlessness – brings to light shared values but does not necessarily connect to action in the non-virtual world.

Sarah Lyon’s ethnographic case study, in *chapter four*, shifts our attention from how consumers engage in digitally enabled political consumption to the less recognised, yet increasingly significant role digital technologies play for producers in agro-food networks. Her case study focuses on how fair trade/organic coffee growers in southern Mexico are engaging with digital technologies to gain the visibility and international connections needed to boost their competitiveness in the crowded consumer market of specialty coffee. Their strategies range from adopting online record keeping to enable field-to-cup traceability, to using the internet to identify new buyers and service providers, and most notably, to employing social media to share

the experience of coffee growing with diverse constituencies, including consumers, buyers, and funders.

As Lyon notes, at one level the adoption of these digital technologies represents producers' efforts to redress the material inequities that have long characterized the coffee commodity chain, allowing them to capture a higher percentage of coffee profits at origin. At another level, it reflects the way that growers are upending the 'political ecological imaginary' (Goodman, 2004: 896) of coffee production that Fairtrade deploys to forge an attachment between morally reflexive northern consumers and southern producers. In a process of reterritorialisation, growers are adopting the digital to reassert ownership over their self-image and place-based identities, and to connect to a locally resonant vision of food sovereignty and social justice. In so doing, the adoption of digital strategies by coffee producers opens up new possibilities for southern producers to assert political agency and reframe the broader contours of food politics in the coffee commodity chain.

Whereas Lyon expands the discussion of digital food activism from consumers to producers, in *chapter five*, Katharina Witterhold questions the consumer-activist category itself, arguing for a nuanced typology that accounts for differences between forms of consumer-side activism. Drawing on a study that examines digital consumer citizenship in Germany, Witterhold presents an in-depth comparison of two types of consumer-activists, which she terms 'Green Buycott' and 'Expressive Lifestyle'. Through the case studies of two young women who participated in the study, Witterhold frames the main distinction between the two types as one of consuming information versus producing and sharing it.

While ‘Green Buycott’ consumers draw on expert information, in both digital and offline spaces, to optimize their own conscious food consumption, ‘Expressive Lifestyle’ consumers also produce and share information digitally as part of cultivating a political consumer habitus – a mission in which educating others is entangled with one’s own development as a conscious consumer. Witterhold, then, suggests that some conscious consumers embody an individualistic orientation to food consumption, whereas others embody a communal orientation; thus, while the two types of conscious consumers may draw on similar sources and make similar food choices, their motivations differ, as does their potential to scale up individual practice into political organization and action.

Just as Witterhold’s chapter challenges the category of ‘consumer-activist’, in *chapter six*, Ryan Foley questions what forms of engagement constitute digital food activism. Based on her ethnographic work with Luminare, an Italian social co-op, Foley explores the co-op’s use of Facebook, showing how social cause and product promotion continuously interweave. Her analysis problematizes the boundaries between activism and marketing, and points to the tensions that characterize the retail side of conscious consumption. Luminare’s Facebook posts, Foley writes, may seem to be at odds with its mission: whereas Luminare emphasizes the values of sustainability, community, and social justice, its Facebook posts emphasize products and prices. Moreover, while Luminare operates as a cooperative, its Facebook posts are constructed as ‘top-down’ marketing messages, with no aim of fostering dialogue with and between citizen-consumers.

Yet, Foley argues, viewed against the backdrop of Luminare's offline activities, the co-op's Facebook posts transcend a simple contrast between activism and marketing. Foley suggests that, through using marketing templates in its Facebook posts, Luminare ultimately 'takes advantage of these existing paradigms to maintain their own alternative distribution model, and consequently to support alternative producers' (page number in final manuscript). As such, Foley's analysis shows how, in the context of multi-faceted activist organizing, the employment of commercial social media for marketing-oriented messaging highlights the sometimes-uncomfortable entanglements of activism and consumerism in the realm of food.

The critical re-positioning of the use of commercial social media in activist contexts is at the heart of Eva Giraud's analysis of anti-capitalist food activism in *chapter seven*. Giraud's analysis is grounded in participatory action research with *Veggies*, a Nottingham-based grassroots initiative which has both catered activist events and produced food activist media, and in a documentary analysis of the *McInformation* campaign, with which *Veggies* was affiliated, and which grew as a solidarity response to a libel suit filed by McDonald's against two Greenpeace activists.

Tracing the development of activist-generated *McInformation* and *Veggies* media in the digital realm over two decades (1996-2016), Giraud highlights the 'frictions' that inhere in the production of activist media. Centrally, these 'frictions' implicate power structures; for example, while anti-capitalist activists aim to generate information free of hierarchies, when this information is disseminated, it implicates an often-elitist expert voice. Such 'frictions', Giraud suggests, have gained an additional dimension with the advent of Web 2.0 and the resulting replacement of activist-produced

alternative media with commercial social media platforms, like Twitter, whose commodification of information contrasts with the anti-capitalist ideals around which these activist communities have formed. Yet, Giraud challenges an easy condemnation of the use of commercial social media in food activism, arguing instead for an analysis that highlights ‘media ecologies’ rather than particular platforms, and thereby explores how activists employ multiple technologies in relation to one another.

Through examining *Veggies* and *McInformation*, Giraud shows how an emphasis on ‘frictions’ can reveal the agentic and creative ways in which activists negotiate the digital realm in order to engage different constituencies, define their identities, and organize effectively within existing structures. In a central example, Giraud highlights how the *Veggies* website presents the *Veggies* Twitter feed alongside links to archived *McInformation* work, inextricably connecting past and present, commercial and alternative media. Such direct juxtaposition, Giraud argues, provides a lens onto the ways in which activists ‘tinker’ with the affordances of digital media to negotiate and arrange enduring activist spaces within ‘a shifting media environment’ (page number in final manuscript).

In *chapter eight*, Deborah Lupton and Bethaney Turner consider foods fabricated using 3D printing technologies. Producers of 3D printers for human food production frequently describe their products as one potential solution for challenges such as food sustainability, food waste, ethical consumption, environmental degradation and world hunger issues. These challenges have begun to capture the public imagination through, for instance, increasing media reportage on food security and critical food

documentaries, with 3D printing technologies depicted through techno-utopian marketing claims made by scientists, entrepreneurs or hybrid scientist-entrepreneurs.

In their chapter, Lupton and Turner pose a crucial question for the 3D printing industry and its supporters: do these technologies and their resulting food products convince potential eaters? The authors report on an online discussion forum with 30 Australian participants that considered the potential consumption of 3D printed food. Their responses, as the authors describe, vacillated from fascination to disgust. In particular, the discussions centred on the perceived unnaturalness of 3D printed food. Lupton and Turner suggest that ‘those who promote the concept of fabricating food with 3D printers, including activists for sustainability and ethical consumption, need to come to terms with these cultural meanings and dilemmas’ (page number in final manuscript).

Beyond this advice to activists, scientists and entrepreneurs, Lupton and Turner’s chapter reveals how food activists’ values have entered research laboratories and start-ups, resulting in a blurring of boundaries between the activist and scientific spheres. We take this as an indication that new spatialities and materialities of political action are taking shape through emerging forms of digital food activism. The most compelling issue that Lupton and Turner introduce is how different actors, including, but not limited to, technology companies, activists and consumers/eaters, redefine what food ‘is’.

In *chapter nine*, Alana Mann examines the role that digital media, and in particular Twitter, play in propelling activist action around the issue of food insecurity in

Australia. Focusing on the Right to Food Coalition, an Australian food security workforce of policy makers, academics, community development and health professionals, she suggests that platforms such as Twitter enable activists to bypass journalistic intermediaries and facilitate community organising.

Employing the Twitter Capture and Analysis Tool Set (TCAT), Mann conducts a frame analysis of Twitter coverage of a Right to Food Coalition campaign in Australia leading up to the federal election in 2016. She shows how Twitter elements such as hashtags, handles and mentions can serve as issue-framing devices and mediators within food advocacy networks. Mann's study reveals the importance of Twitter 'for facilitating a cross-flow of information between ideologically aligned advocacy organisations, both domestically and internationally'. (page number in final manuscript). She discusses how digital media platforms and applications contribute to the constitution of issues and related issue publics – in this case, mostly non-governmental organisations (NGO). This is an important point that echoes McLennan et al.'s observation (see chapter two) that prominent voices on Twitter are rarely individuals expressing their views, but rather bots or organizations that professionally manage their Twitter accounts.

More generally, this begs the question of whether digital media contribute to a democratisation of public debate or rather to a fragmentation into issue publics assembled around specific, pre-defined issues (by NGOs and other organisations) on a voluntary basis. Although Twitter creates new digital spatialities of political action, the platform and the digital spaces enabled by it are algorithmically structured to foreground those individuals and organisations with many followers, retweets, and

strategic and consistent use of hashtags. Mann's chapter, then, suggests that the implicit hierarchy of those with carefully curated twitter accounts creates a bias toward certain activist values and identities compared to others with fewer resources, such as time, access, and digital knowledge.

Tania Lewis explores food politics in a digital era in *chapter ten*. Lewis offers an overview of the key challenges food producers, consumers and activists face. She discusses the growth of lifestyle and consumer-related forms of participatory politics online, the affordances of online platforms for enabling connected forms of personal consumption, and the role of platforms in bringing together food communities. Drawing on her participatory ethnographic research among urban food production activists in Melbourne, Australia, Lewis discusses a Permablitz group whose members redesign suburban gardens based on permaculture principles. She suggests that Permablitz Melbourne is 'not so much a community in the conventional sense as a fluid network of people, connected primarily via a website' (page number in final manuscript).

Lewis argues that in the case of Permablitz Melbourne we can see how the internet is central for co-producing local food activism. By documenting their efforts online, this group of activists enables others to learn more about Permablitz initiatives and to follow their example by developing their own groups in other places. Lewis also examines the limitations of connectivity and the hegemony of corporate food politics in social media spaces, and considers the limits of digital food activism in an era of big data. She highlights that digital food activists dedicated to sustainable food production, distribution and consumption should take into account the potential

environmental and social impact of digital infrastructure and energy-reliant communicative systems.

In the *final chapter*, we return to our own research on digital food activism. Focusing on three case studies – a mobile app, a wiki platform, and an online-centric activist organization – we examine how interactions between activists and platforms generate new knowledges and practices in relation to consumer-based food activism. Specifically, we critically analyse how consumer activists and social entrepreneurs use ICTs to facilitate new or alternative forms of engagement with food, and how platforms, in turn, shape possibilities for action.

Our aim in this chapter is ‘to capture diverse forms and potentials of digital food activism, and develop an analytic framework that can be applied to other cases in the field’ (page number in final manuscript). We propose that digital food activism goes beyond food activism that occurs on digital media. Instead, we argue, digital food activism comprises forms of food activism that are ‘enabled and shaped by and through digital media platforms’ (page number in final manuscript). Digital platforms thus have the potential not only to supplement but also to reimagine AFN activism, creating new messages and activist publics – ideally in interaction with users. However, we acknowledge that many platforms used for digital food activism pre-structure how issues and actions are framed or classified. In addition, we point to the ‘free labour’ that users provide when they contribute crowd-sourced data on food, and the commercial value such data may have for the owners of digital platforms.

In his *Afterword*, Javier Lezaun reflects on digital food activism, proprietary versus open source platforms, and public participation. Lezaun engages with and accentuates key issues identified by the volume's contributors, and points to the potential of open source digital platforms to create new forms of community that offer space and materials to fashion new publics – publics centred in an activist identity rather than in a consumer identity. Drawing on Kelty's (2008) notion of 'recursive public', Lezaun suggests that 'digital food activism raises the possibility of a *doubly-recursive* public, a public that attends both to the conditions under which the food it consumes are produced, and to the systems that generate and disseminate the information that underpins its food choices' (page number in final manuscript). These infrastructural arrangements and their ensuing ontological experimentation are at the heart of this volume's approach to current debates in food studies and beyond.

### **What this volume adds**

The chapters that comprise this volume call for careful consideration of the ways in which digital media and technologies offer new spatialities and materialities of political, economic, and social action concerning food. The experimental nature of some of the activist undertakings the chapters describe is underpinned by an ambition to challenge existing forms of food production, distribution and consumption. The chapters, we suggest, show how digital food activism develops, extends and re-imagines food activism, foregrounding 'connective action' rather than 'collective action' (Bennett and Segerberg, 2012). What digital food activism is, however, remains contested. This volume demonstrates that food, and the ways in which it is produced, distributed and consumed, becomes an issue in some places, for some individuals and for groups, but not in/for others. The ontological reality of food as

political, then, is situated. Producers, consumers and the digital platforms and technologies they draw on enact different food futures, including divergent ‘ideal’ behaviours and rules to live by, and implicating a diverse ‘ontological politics’ (Mol, 1999; see also, Mol, 2013) of food and the digital.

So, how successful is digital food activism so far? And how successful might it be in the future? Will it pose a major challenge to the industrialised agri-food system and its key players: Large multi-national food and agricultural corporations? Will digital food activists foster widespread food transparency? We end on a cautionary yet optimistic note. Despite the potential we see for activists to employ digital media and technologies to re-imagine food futures, these efforts are likely to be increasingly monitored, at times by the industry and policy actors targeted. As digital food activism also entails potentially mine-able data about activist groups and consumers, this points to the centrality of infrastructures and platforms in designing effective, and safe, consumer action.

If activists want to avoid ‘platformed food sociality’, they might need to develop communication infrastructures that act as alternatives to commercial services (see also Giraud this volume). Alternatively, activists relying on proprietary platform and communication infrastructures might achieve visibility through commercial platforms, thereby mainstreaming digital food activism. Another possibility would be for activists to develop spaces, such as the food hacking spaces described in Caldwell’s chapter (this volume), that foster playful and open-ended experimentation with foods. The important thing, we suggest, is that any form and format of collective experimentation entails a broad range of constituencies that come together in ‘hybrid

forums’ (Callon et al., 2011). These public spaces, accessible to diverse groups, including ‘experts, politicians, technicians, and laypersons’ (Callon et al., 2011: 18), hold potential for new, multi-vocal provocations and responses that may challenge, and ultimately change, the production, distribution and consumption of food.

On an optimistic note, we suggest that the digital realm could function as a heterotopia (Foucault, 1984/1986) in which digital technologies would contribute to enacting different food-related realities. Viewing digital food platforms as infrastructures involved in relating and redefining human and non-human actors, these ontological experiments have the potential to reclassify food, shift accountability relations and disrupt prevailing market framings.

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## Endnotes

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<sup>1</sup> <https://oxfordfoodgovernancegroup.wordpress.com> (accessed 7.7.17).

<sup>2</sup> Affordance/s is an important analytical concept in several academic fields including STS, media studies and communication studies. Our use of the term draws on Davis and Chouinard's (2017) review of these literatures and the authors' suggestion to attend to the mechanisms and conditions of affordances to consider '*how artifacts afford, for whom and under what circumstances*'.

<sup>3</sup> This chapter is based on research funded by the Oxford Martin Programme on the Future of Food, and we are thankful for the Oxford Martin School's generous support.

<sup>4</sup> Joyce explains that '[c]yber-activism refers to the Internet; social media for social change refers to social software applications; e-activism refers to electronic devices' and '[t]he scope of practices encompassed by info-activism is broader than those encompassed by digital activism, so the term is exhaustive but not exclusive' (2010: ix).

<sup>5</sup> For more information, see <http://digital-activism.org> (accessed on 10 January 2017).

<sup>6</sup> The Global Digital Activism Data Sets (GDADS 1.0 and 2.0), are available at the project website ([www.digital-activism.org](http://www.digital-activism.org)) and through the Interuniversity Consortium for Political and Social Research (ICPSR) that can be accessed through this website <http://www.icpsr.umich.edu/icpsrweb/> (accessed on 23 March 2017).

<sup>7</sup> According to Hawkins et al. anti-bottled water activism encompasses a diverse set of 'online campaigns, NGO reports, newspaper articles, YouTube videos, public art events, memes and more' (2015: 145).

<sup>8</sup> We also discuss Buycott's efforts to be a 'neutral platform', which is visible in the organization's online Terms and Conditions section that reads: 'Buycott and the Services are about giving Consumers, Campaign Creators and other relevant third parties a voice in relation to socially conscious purchasing. We provide the Services, but the Services are about sharing your voices, not ours. We don't endorse any Campaigns or the Causes to which they are directed. Nor do we have any obligation to screen or vet Campaigns or Causes' (see <https://www.buycott.com/terms>, accessed 25.7.17).

## References

Barry, A (2005) Pharmaceutical matters: The invention of informed materials. *Theory, Culture & Society*, 22(1): 51-69.

Barry, A (2013) *Material Politics: Disputes along the Pipeline*. London: Wiley-Blackwell.

- 
- Barry, A (2016) Infrastructure made public. *Limn*, 7 <http://limn.it/infrastructure-made-public/>.
- Bennett, WL and Segerberg, A (2012) The logic of connective action: Digital media and the personalization of contentious politics. *Information, Communication & Society*, 15(5): 739-768.
- Bos, E and Owen, L (2016) Virtual reconnection: The online spaces of alternative food networks in England. *Journal of Rural Studies*, 45: 1-14.
- Bowker, GC and Star, SL (1999) *Sorting Things Out: Classification and Its Consequences*. Cambridge: MIT Press.
- Braun, B and Whatmore, S (eds) (2012) *Political Matter: Technoscience, Democracy and Public Life*. Minneapolis: University of Minnesota Press.
- Callon, M, Lascoumes, P and Barthe, Y (2011) *Acting in an Uncertain World: An Essay on Technical Democracy*. Cambridge, MA: MIT Press.
- Counihan, C and Siniscalchi, V (eds) (2014) *Food Activism: Agency, Democracy and Economy*. London: Bloomsbury.
- Cui, Y (2014) Examining farmers markets' usage of social media: An investigation of a farmers market Facebook page. *Journal of Agriculture, Food Systems, and Community Development*, 5(1): 87-103.
- Davis, JL and Chouinard, JB (2017) Theorizing affordances: From request to refuse. *Bulletin of Science, Technology & Society*, First Published June 16, 2017.
- De Solier, I (2013) *Food and the Self: Consumption, Production and Material Culture*. London: Bloomsbury.
- Edwards, F, Howard, PN and Joyce, M. 2013. Digital Activism and Non-Violent Conflict. Seattle: University of Washington. Available: <http://digital-activism.org/2013/11/report-on-digital-activism-and-non-violent-conflict/-sthash.PodOSCHx.dpuf>.
- Eli, K, Dolan, C, Schneider, T and Ulijaszek, S (2016) Mobile activism, material imaginings, and the ethics of the edible: Framing political engagement through the Buycott app. *Geoforum*, 74: 63-73.
- Fonte, M (2013) Food consumption as social practice: Solidarity purchasing groups in Rome, Italy. *Journal of Rural Studies*, 32: 230-239.
- Foucault, M (1984/1986) Of Other Spaces, transl. J. Miskowiec. *Diacritics*, 16(1): 22-27.
- Gad, C, Jensen, CB and Winthereik, BR (2015) Practical ontology: worlds in STS and anthropology. *NatureCultures*, 3: 67-86.

- 
- Gil de Zúñiga, H, Copeland, L and Bimber, B (2014) Political consumerism: civic engagement and the social media connection. *New Media & Society*, 16(3): 488-506.
- Goodman, D, DuPuis, ME and Goodman, MK (eds) (2014) *Alternative Food Networks: Knowledge, Practice, and Politics*. London: Routledge.
- Goodman, MK (2004) Reading fair trade: political ecological imaginary and the moral economy of fair trade foods. *Political Geography*, 23(7): 891-915.
- Grasseni, C (2013) *Beyond Alternative Food Networks: Italy's Solidarity Purchase Groups*. London: Bloomsbury.
- Hawkins, G, Potter, E and Race, K (2015) *Plastic Water: The Social and Material Life of Bottled Water*. Cambridge, MA: MIT Press.
- Holloway, L (2002) Virtual vegetables and adopted sheep: ethical relation, authenticity and internet-mediated food production technologies. *Area*, 34: 70-81.
- Howard, PN and Hussain, MM (2013) *Democracy's Fourth Wave? Digital Media and the Arab Spring*. Oxford: Oxford University Press.
- Humphery, K and Jordan, T (in press) Mobile moralities: ethical consumption in the digital realm. *Journal of Consumer Culture*.
- Jackson, P (2015) *Anxious Appetites: Food and Consumer Culture*. London: Bloomsbury.
- Jensen, CB and Morita, A (2015) Infrastructures as ontological experiments. *Engaging Science, Technology and Society*, 1: 81-87.
- Joyce, M (ed) (2010) *Digital Activism Decoded: The New Mechanics of Change*. New York: International Debate Education Association.
- Kang, J (2012) A volatile public: The 2009 Whole Foods boycott on Facebook. *Journal of Broadcasting & Electronic Media*, 56(4): 562-577.
- Kelty (2008) *Two bits: The cultural significance of free software*. Durham, NC: Duke University Press.
- Kneafsey, M, Cox, R, Holloway, L, Dowler, E, Venn, L and Tuomainen, H (2008) *Reconnecting Consumers, Producers and Food: Exploring Alternatives*. London: Bloomsbury.
- Knox, H and Walford, A. 2016. Is There an Ontology to the Digital. Series: Theorizing the Contemporary. *Cultural Anthropology* [Online]. Available: <https://culanth.org/fieldsights/818-is-there-an-ontology-to-the-digital>.

- 
- Langley, P and Leyshon, A (2016) Platform capitalism: The intermediation and capitalisation of digital economic circulation. *Finance & Society: Early View*, 1-21.
- Langlois, G, Elmer, G, McKelvey, F and Devereaux, Z (2009) Networked publics: The double articulation of code and politics on Facebook. *Canadian Journal of Communication*, 34(3): 415-434.
- Latour, B (2005) From Realpolitik to Dingpolitik or how to make things public. In: Latour, B and Weibel, P (eds) *Making Things Public: Atmospheres of Democracy*. Cambridge, Mass.: MIT Press, p.14-41.
- Leer, J and Povlsen, KK (eds) (2016) *Food and Media: Practices, Distinctions and Heterotopias*. London: Routledge.
- Lezaun, J and Schneider, T (2012) Endless qualifications, restless consumption: The governance of novel foods in Europe. *Science as Culture*, 21(3): 365-391.
- Lien, M and Nerlich, B (eds) (2004) *The Politics of Food*. London: Berg.
- Lupton, D (forthcoming) Cooking, Eating, Uploading: Digital Food Cultures. In: LeBesco, K and Naccarato, P (eds) *The Handbook of Food and Popular Culture*. London: Bloomsbury.
- Mann, A (2014) *Global Activism in Food Politics: Power Shift*. New York: Palgrave Macmillan.
- Marres, N (2012) *Material Participation: Technology, the Environment and Everyday Publics*. Basingstoke: Palgrave Macmillan.
- Mol, A (1999) Ontological politics. A word and some questions. In: Law, J and Hassard, J (eds) *Actor Network Theory and After*. Oxford: Blackwell Publishers, p.74-89.
- Mol, A (2002) *The Body Multiple: Ontology in Medical Practice*. Durham: Duke University Press.
- Mol, A (2013) Mind your plate! The ontonorms of Dutch dieting. *Social Studies of Science*, 43(3): 379-396.
- Mossberger, K, Tolbert, CJ and McNeal, RS (2008) *Digital Citizenship: The Internet, Society and Participation*. Cambridge, Mass.: MIT Press.
- Niewöhner, J (2015) Anthropology of Infrastructures of Society. In: Wright, JD (ed) *International Encyclopedia of the Social & Behavioral Sciences*. 2nd ed. Oxford: Elsevier, p.119-125.
- Plantin, J-C, Lagoze, C, Edwards, PN and Sandvig, C (2016) Infrastructure studies meet platform studies in the age of Google and Facebook. *New Media & Society*.

- 
- Reed, M and Keech, D (2017) Gardening cyberspace - social media and hybrid spaces in the creation of food citizenship in the Bristol city-region, UK. *Landscape Research*.
- Rousseau, S (2013) *Food and Social Media: You Are What You Tweet*. Plymouth: AltaMira Press.
- Ruppert, E, Law, J and Savage, M (2013) Reassembling social science methods: The challenge of digital devices. *Theory, Culture & Society*, 30(4): 22-46.
- Sandovici, ME and Davis, T (2010) Activism gone shopping: An empirical exploration of individual-level determinants of political consumerism and donating. *Comparative Sociology*, 9(3): 328-356.
- Schneider, T. 2013. Learning how to boycott? Political consumerism and new media. *Oxford Food Governance Group blog (OFG)* [Online]. Available from: <https://oxfordfoodgovernancegroup.wordpress.com/2013/08/20/learning-how-to-boycott-political-consumerism-and-new-media/> [Accessed 30 May 2017].
- Schneider, T, Eli, K, McLennan, AK, Dolan, C, Lezaun, J and Ulijaszek, S (forthcoming) Governance by campaign: The co-constitution of food issues, publics and expertise through new information and communication technologies. *Information, Communication and Society*.
- Siniscalchi, V and Counihan, C (2014) Ethnography of food activism. In: Counihan, C and Siniscalchi, V (eds) *Food Activism: Agency, Democracy and Economy*. London: Bloomsbury, p.3-12.
- Srnicek, N (2017) *Platform Capitalism*. Cambridge: Polity Press.
- Star, SL (1999) The ethnography of infrastructure. *American Behavioral Scientist*, 43(3): 377-391.
- Stolle, D and Micheletti, M (2015) *Political Consumerism: Global Responsibility in Action*. Cambridge: Cambridge University Press.
- Tufekci, Z and Wilson, C (2012) Social media and the decision to participate in political protest: Observations from Tahrir Square. *Journal of Communication*, 62(2): 363-379.
- van Dijck, J (2013) *The Culture of Connectivity: A Critical History of Social Media*. Oxford: Oxford University Press.
- van Zoonen, L, Visa, F and Mihelja, S (2010) Performing citizenship on YouTube: Activism, satire and online debate around the anti-Islam video Fitna. *Critical Discourse Studies*, 7(4): 249-262.
- Vegh, S (2003) Classifying forms of online activism. In: McCaughey, M and Ayers, aMD (eds) *Cyberactivism: Online activism in theory and practice*. London: Routledge, p.71-95.

---

Woolgar, S and Lezaun, J (2013) The wrong bin bag: a turn to ontology in science and technology studies? *Social Studies of Science*, 43(3): 321-340.

Woolgar, S and Lezaun, J (2015) Missing the (question) mark: what is the turn to ontology? *Social Studies of Science*, 45(3): 462-467.

Woolgar, S and Neyland, D (2013) *Mundane Governance: Ontology and Accountability*. Oxford: Oxford University Press.