Futures 62 (2014) 151–154

Contents lists available at ScienceDirect

Futures

journal homepage: www.elsevier.com/locate/futures

Urban food futures: ICTs and opportunities

ARTICLE INFO

Keywords:
Food
Futures
ICT
Urban informatics, Networks, Transparency, Sociality

ABSTRACT

Today, practices of food production, consumption, and distribution have the potential to go through immensely transformative shifts as information and communication technologies (ICTs) become increasingly embedded in every domain of contemporary life. This paper addresses key challenges and opportunities at the intersection of food and ICTs. The paper argues for the need for interdisciplinary research to examine the key roles that network technologies play in re-shaping social and economic networks of food, focusing on three main research areas: food data, transparency and changing practices; new forms of sociality around food supported by technologies, and; re-routings of mobility and distribution networks made possible by ICTs.

1. The networking of food

Food is a vital foundation of all human life. It is essential to a myriad of political, socio-cultural, economic and environmental practices throughout history. As Kaplan (2012) contends, "the scholarship on food has real pedigree." Today, practices of food production, consumption and distribution have the potential to go through immensely transformative shifts as network technologies become increasingly embedded in every domain of contemporary life. This presents unique opportunities for further scholarly exploration on this topic, which this special issue intends to address.

Information and communication technologies (ICTs) are one of the pillars of contemporary global functionality and sustenance and undoubtedly will continue to present new challenges and opportunities for the future. As such, this special issue of Futures has been brought together to address challenges and opportunities at the intersection of food and ICTs. In particular, the edition asks, *what are the key roles that network technologies play in re-shaping social and economic networks of food?*

Possible responses to the above question would necessarily be wide-ranging and even conflicting. We introduce a special issue here that addresses the question from multiple perspectives. This special issue was born out of a collection of papers that were presented at the *Urban Food Futures symposium* held in late 2011 at the University of Oxford's Oxford Internet Institute. The speakers came from a variety of fields, including information technology, geography, business studies, development, and futures studies. Before introducing the papers that make up this issue and the debates and issues that they speak to, we find it useful to reflect on the importance of the coming-togethers of food and ICTs for futures studies. We do that in three ways.

First, we focus on the increasing data trails left behind by food as it is moved across the world, and highlight the significant impacts that these food-related data might have on both production and purchasing practices. Second, because our interactions with food are always inherently social, we focus on both the ways that ICTs are able to amplify certain socialites around food, and the broader implications of those amplifications. Finally, we focus on the re-routings of mobility and distribution networks made possible by ICTs and their potential effects on not just food production and consumption, but also the urban and rural infrastructures and spaces that mediate those activities.

http://dx.doi.org/10.1016/j.futures.2014.04.009
0016-3287/

2. Food data, transparency and changing practices

The last decade has seen an unprecedented growth in the digital data trails left behind by human behaviour. Governments, corporations, and academics are all rushing to harness the unimaginable amount of 'big data' produced about everyday life. Deepening data shadows have also emerged with a concomitant and broad-ranging movement to promote openness and transparency of data sources. Though not without criticism (Morozov, 2013; Yu & Robinson, 2012), 'open data', 'open government', 'open society', and 'open development' are just a few of the umbrella-terms that have been marshalled to deploy significant resources and massive amounts of human labour to remove barriers and intermediaries in flows of information between producers and users. In relation to food, this desire for transparency has been particularly pronounced at economic and environmental intersections. Data about the environmental consequences of economic processes and products is collected, collated, and calculated by firms, certifying organisations, and consumers. In other words, myriad groups focused on ethical consumption (e.g. SourceMap,[2] the Rainforest Alliance,[3] Followthethings,[4] and a myriad of food miles calculators) are employing the powerful discourse of transparency in order to make available a range of new data sources that attempt to allow people to see the environmental, and the economic implications and embeddedness of engagement with contemporary food chains (Graham & Haarstad, 2011).

3. ICTs and the sociality of food

From production to consumption, sociality around food continues to shape the meanings, processes, and physical traits of food. Food has played a central role in shaping a range of individual and societal changes and transformations through history (cf. Gopnik, 2010; Scott, 2012; Steel, 2008). For example, as Sennett remarks, our fundamental social skills to connect with others can be traced back to food consumption in early stages of our lives: "[b]uried in all of us is the infantile experience of relating and connecting" (Sennett, 2012) for survival, a basic craft of cooperation learnt and rehearsed through experiences such as breastfeeding. On a broader level, the innate centrality of food in society is clearly demonstrated in tight state control (in most countries) over food. From religious food regimes commonly observed during the Middle Ages to contemporary scientific forestry and industrialisation-scale food production (Bynum, 1987; Scott, 1998) – food, and social, economic, and political practices and forms of governance related to food, have significantly environments, social orders, cultural values, and many other facets of everyday life.

With rising environmental problems, diet-related health issues, and widening economic inequality in recent years, ensuring food security has become a major political, social, economic, and scholarly agenda. Recent interest by a broad swath of society about food has been demonstrated by the proliferation of food-related media across platforms as well as an extensive growth in farmers' markets around the world: 60 per cent increase in farmers' markets in US between 2010 and 2013 (USDA, 2010); UK has experienced a similarly exponential growth in this area with approximately 800 Farmers' Markets currently in operation, since it was first introduced in 1997 (Gleeson, 2010). Added to this is the rapid development of ICTs, which has been conducive to a myriad of technical endeavours designed to address these issues and topics. Choi (2014), for instance, attributes the recent surge of interest to people's need to engage in new "tactics of wellbeing" and argues that most of these technical endeavours could benefit from further critical considerations of some of the key sociocultural and phenomenological aspects of food.

New forms of sociality have been emerging in various parts of the food chain from consumption to preparation and production, afforded by everyday experiences increasingly and inextricably interwoven with network technologies. Some of the most prolific developments have been observed in the *consumption* domain. For example, sharing information through online review systems – such as Urbanspoon,[5] a restaurant review system; Buycott,[6] an App that lets the user scan bar codes of products and trace their corporate parent companies; and Fooducate,[7] which helps the user find detailed information about ingredients of a particular product and suggests other products that are deemed healthier alternatives – has had significant implications for contemporary consumer decision making processes. New ways of communicating and evaluating product information, as seen in qkies,[8] edible QR codes, and MealSnap, which analyses photographs of food taken with the user's mobile phone to algorithmically identify the food and its calories,[9] have provided novel and richer ways for consumers to understand food. Some modes of *preparing food* have become more accessible with the advancement of DIY science and knowledge sharing through online communities – for example, molecular gastronomy – and some have been newly explored and engendered, such as food fabrication (Jun & Cheok, 2012; Periard, Schaal, Schaal, Malone, & Lipson, 2007). Uses of network technologies for knowledge development have already become a significant part of small-to-large scale food *production* as evidenced in growing body of literature in, notably, ICT4D (ICT for Development) (cf. Ethiopia, 2012;

[2] sourcemap.com.
[3] rainforest-alliance.org.
[4] followthethings.com.
[5] urbanspoon.com.
[6] buycott.com.
[7] fooducate.com.
[8] qkies.de.
[9] mealsnap.com.