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Salford University's Cultural Economy Students
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Abstract

The current lifestyle of UK residents who rely on large amounts of imported vegetables and fruit is argued to be unsustainable. 'Food Miles' is a term often used to demonstrate the distance food has travelled from farm to fork: raising awareness regarding the sheer distance produce travels to the average consumer. Concepts have formed, such as 'Urban Agriculture', to tackle this overreliance on importing goods: this idea revolves around the growing of food in the city, thus making the supply chain much shorter, whilst educating residents and encouraging them to grow their own food.

The contents of this paper have been formed through student research projects at the University of Salford and work conducted at Birmingham City University. It provides a commentary of existing rhetoric surrounding this term and possible concepts which could help to reduce food miles. Similarly, the paper touches on successful projects which have pioneered alternative forms of food systems, aimed at changing the way we currently rely on imported produce. Finally the paper provides some concluding thoughts on the future of the food system.

Key words: Food Miles; Food Security; Urban Agriculture

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Introducing the commentary: a mechanism for engagement?

This paper provides an overview of issues regarding the current food system and the push for more local sites of production within the urban. Unlike other commentary papers, this has been developed through a variety of sources, including presentations from third-year geography students at the University of Salford acting as research assistants gathering data on the food movement and local projects of interest. These students were an integral part of this paper, contributing their thoughts and acting as peer-reviewers before publication. They discussed theoretical approaches to urban food at length whilst also providing an analysis of local food projects through the UK. This commentary demonstrates how the most ordinary formative in-class exercises can be transformed to be more innovative and engaging: in this example, students have achieved a publication through their work on investigating food systems.

Introducing urban agriculture

Whilst the practise of gardening in the urban has been around for centuries (Schofield, 1999), the idea of farming within a city is a relatively new concept, at least in the Western hemisphere (Nasr *et al.*, in press; Mougeot, 1999a; Viljoen, 2005). However, Ayalon *et al.* (2009, p.11) claim that UA "in the 1990s [had] more than 800 million people around the world [producing] 15-20 per cent of the food eaten by the world population". However, contrary to this Bryant (2012) argues that the concept has only come to fruition in more recent years. He states that, whilst UA has been evident in the North American context, only a small number of academics and practitioners were involved; UA has since moved across the globe and is now being slowly embedded in international, national and local policies (Bryant, 2012).

Fundamentally, UA involves the notion of bringing food production into the city context (Caputo, 2012; Mougeot, 1999b): this can include anything from community garden and allotments to radical vertical cultivating systems and rooftop farms (Gorgolewski *et al.*, 2011). The core argument for UA is often based on the need for greater food security: with populations rising and cities growing, the ways in which we cultivate crops and the spatial dimension of cultivation need to be reconsidered (Angotti, 2013; Steel, 2009). Before this paper further explores the concept of UA, it investigates food security and the current strategies employed to resolve this particular issue.

The Food Security Issue

“Food security is fundamentally about achieving reliable access to adequate, affordable and nutritious food supplies sufficient to avoid chronic hunger, crisis hunger and stunted development” (R. Johnson, 2009, p. 4).

The notion of food security has been discussed for over 40 years, originally addressing people's risk of not having access to food which would enable them to lead a healthy lifestyle (Von Brauen *et al.*, 1992). The concept of food security has encountered several significant paradigm shifts; perhaps the most important of these was awareness of the need to plan for the long term, instead of looking primarily for short-term answers (Anderson and Cook, 1999). The idea focuses on more than just producing crops: it addresses population change, mobility problems, international trade concerns, climate change and many more complicated issues (Phillips, 2009). However, the main issue remains as to whether food production can keep pace with population growth (Ehrlich *et al.*, 1993), especially since this is predicted to increase rapidly, especially in urban centres, throughout the early twenty-first century (Wiskerke and Viljoen, 2012).

An estimated 9.1 billion people will inhabit this planet by 2050 (mainly in developing countries); food output will need to increase by 70 per cent to support such a dramatic rise (FAO, 2009). Whilst output must rise, the existing system needs to be overhauled in order to provide more food to disadvantaged populations (Hanson *et al.*, 2012; L. Johnson, 2011). For instance, enough food is already produced to feed over and above the world's current population, but this is not distributed effectively (Nally, 2011; OECD, 2009). In the UK context, Hardman (2012) demonstrates how current academic discussions relating to the origin of food refer to the current situation as dire, with large amounts of UK food being imported at the turn of the century; and this figure would only increase over time if current circumstances continue (DEFRA, 2002). International organisations, national governments and local councils are responding to this by drawing up strategies to secure food sources for the future.

It becomes apparent that there are numerous, potentially conflicting strategies which tackle the issue of food security. At the international level the United Nations Food and Agricultural Organisation (FAO) is planning for 2050, whilst at the national level the UK's strategy plans for 2030, then at the local level London's strategy, for example, focuses on 2016 (DEFRA, 2010; FAO, 2009; London Food, 2006). The significant differences in these plans soon become apparent once their individual aims are compared. For example, the London 2016 plan contains eight stages which focus on small, locally-achievable objectives which can be completed by 2016 (London Food, 2006). In contrast, the national strategy aims for something similar, but by the later date of 2030 (DEFRA, 2010; Marsden, 2010). Nevertheless, the national strategy aims to bring all of the local plans together, aiming for “better integration of food policy across Government” (DEFRA, 2010, p. 4).

Marsden welcomes the publication of this *Food 2030* strategy, which addresses the food concerns that have been “so much on the political agenda” (Marsden, 2010, p. 443). However, he is critical of the strategy's vagueness and failure to fully explore the short- and long-term food security issues in the UK. The strategy “is at best chaotic and at worst idealistic about eliding the different strategic United Kingdom versus global strategic foci” (Marsden, 2010, p. 444). In a similar manner, Nally (2011) challenges the value of these strategies, explaining that the future of food security will depend on private companies and not central or local government. In essence, Nally disputes the power that governments have over the food system, and believes that most of the power lies with corporate entities. He feels that the “legal, institutional and biotechnical mechanisms” (Nally, 2011, p. 49) need to be addressed in order for the poor to survive. Although Nally (2011) is critical of the current food system and its future, his particularly bleak outlook does not pay sufficient

attention to charitable campaigns or other organisations that aim to bring food to places of 'underproduction'.

Various not-for-profit organisations appear to have taken on the burden of tackling these unproductive spaces: ranging from the Community Land Advisory Service to the Federation of City Farms and Community Gardens (FCFCG). Their core objective is to bring food production to the heart of cities, specifically to areas defined as 'food deserts', in essence spaces which severely lack food infrastructure and supply (Community Land Advisory Service, 2012; FCFCG, 2009; Viljoen, 2005). Local schemes are also in operation, for example the Grow It, Eat It, Move It, Live It (GEML) project in central Birmingham, which focussed on the creation of UA sites in deprived communities, bringing fresh food and educating the local populace on how to cultivate their own crops (Hardman and Jones, 2010). Nevertheless, Vejre (2012) argues that more is required on the part of strategies, such as the Common Agricultural Policy (CAP), to further embrace the idea of UA which, he argues, is still treated as somewhat alien and new in many cities across Europe.

Everyday grow spaces: attempts at improving food security

Whilst growing food on domestic properties has occurred for centuries even in urban contexts (Bhatti and Church, 2001), modern domestic food production in the Western hemisphere has predominantly been for leisure rather than for survival (Mougeot, 1999a). Nevertheless, historically this was not always the case: urban gardening was 'virtually impossible' during the early industrial revolution period, partially due to extensive soil contamination, but enthusiastic horticulturalists continued with their attempts to cultivate land (Hoyles, 1991). During the industrial revolution, when most men were at work, women played a vital role in supplementing the family income with garden produce (Hudson, 1996). In terms of survival, domestic food production was vital during the World Wars (Reynolds, 2008). Food shortages and rationing, especially in Britain, resulted in 'victory gardens': these plots ranged from municipally-owned land to private plots, all in aid of producing food for the war effort (L. Johnson, 2011).

Victory gardens appeared in many countries, all created to provide more food for friends, family and neighbours (Adams and Allen, 2003). Victory gardens located abroad proved just as effective, for instance during the Second World War in the USA, victory gardens accounted for 40 per cent of all the vegetables grown (The National WWII Museum USA, 2006). In Vancouver, wartime government campaigns urged citizens to plant gardens, but values soon changed and, only a few years after the war, Vancouver residents were forced to get rid of poultry and even give up some plots (Hough, 1989). The scheme in Britain involved districts being given targets and a strict management scheme was set up, with explanations expected if, for example, food quotas set by the government were not achieved (DeSilvey, 2003).

More recently, many households use their private gardens to cultivate crops (Viljoen *et al.*, 2005): a popular option usually involves a small space in one's private garden, set aside as a mini allotment (Wiskerke and Viljoen, 2012). This is a low-cost alternative, saving the gardener money whilst simultaneously providing the household with fresh food (Mobbs, 2003). There has been a recent surge in gardeners growing vegetables at home; The National Trust (2009) explains that 21 per cent of the population now grow some of their own food and 80 per cent of parents surveyed agree that food growing should be taught in schools, meaning that the next generation of gardeners would be educated about the benefits of growing food at home. Perhaps this shift signifies, as Hoyles (1991) earlier claimed, the changing ideals of the gardening populace, with this push for 'growing your own' and the rise of organic produce.

Growing at home is not just an activity that can be tackled alone; several community groups have emerged over the years that come together to produce food for everyone who takes part. There are many forms of communal gardening, from allotments, to community gardens and other associated agricultural projects (Milbourne, 2010; Welsh Assembly Government, 2010); all constitute forms of UA (Caputo, 2012; Gorgolewski *et al.*, 2011). These communal forms of gardening contain aspects of food security whilst simultaneously providing the population with a sense of local control (Feagan, 2007). Radical reformers often promote community action, declaring that communal ownership or control of land may help in becoming self-reliant (Mougeot, 1999a; Tudge, 2009). Increasingly, this form of governance is preferred by local authorities, both in the urban and rural environments in which these projects may be found (Born and Purcell, 2009; Stanley *et al.*, 2005).

However, these strategies that give this local control and promote community food production have been criticised for being too fragmented, decentralised and chaotic (Wekerle, 2004). Buttel (1997, p. 260) argues that, although these types of environmental communities are encouraged to 'think globally, act locally', they should in fact pay greater attention to the wider picture: linking with the central state whilst keeping an eye on the changing policies and regulations (Wekerle, 2004).

Nonetheless, the community garden offers an everyday space for individuals to socialise, exchange knowledge and, to an extent, build a community around nature (Gorgolewski *et al.*, 2011; Milbourne, 2010, 2011). Milbourne's (2010) study of a city-based community garden in Greater Manchester highlights these benefits in the context of a disadvantaged community. His interactions with community members reveal that community gardens can create spaces in which "nature, sociality and culture collide" whilst, at the same time, providing nearby residents with access to fresh vegetables and fruit (Milbourne, 2010, p. 257). Whilst urban community gardens have become more popular, Milbourne (2011) claims that the activity is only just gaining momentum in the UK. This suggestion is reinforced by Nasr *et al.* (in press), who note that while these forms of gardening have been present in North America for some time, cities in the UK are relatively new at embracing the concept. This is demonstrated in the gradual rise of projects which emulate those in the American context, such as the well-known community gardens of New York (Nasr and Komisar, in press). The ethos of urban community gardening has roots in a variety of North American communities: from student-centred areas to impoverished neighbourhoods, a range of actors practice the activity (Komisar *et al.*, 2009).

Milbourne (2011) argues that, at least in the UK, there are insufficient studies focusing on this particular form of UA. Despite this lack of hard evidence, he claims that "there is little doubt that [community gardening] has become much more significant in urban places during the last few years" (Milbourne, 2011, p. 5). However, Gibson *et al.* (2012, p. 295) still label this form of UA as creative, unusual and fairly amateurish, seeing this activity as "something out of the ordinary". These thoughts perhaps highlight the disconnection between UA practise in the North American situation, and that which is forming elsewhere: whilst in the former this is a fairly familiar urban activity (at least in some places), in others, such as the UK, this use of land is still in its early stages (Holland, 2004). Nevertheless some schemes, such as Birmingham's GEML, have been created to rejuvenate areas of the city otherwise in decline (cf. Hall and Hubbard, forthcoming; Hardman and Jones, 2010). This particular scheme was initiated by Birmingham City Council to encourage residents living in disadvantaged neighbourhoods to eat more fresh vegetables and fruit, to exercise more and live a healthier lifestyle: the scheme involved creating community gardens in disadvantaged neighbourhoods and it proved fairly successful, creating 16 sites (Hardman and Jones, 2010) until the recession eventually closed its operations in 2011.

There are many other initiatives which have formed to bring food closer to urban dwellers; these can be found in the most unlikely of places, from alleyways to parks and private

gardens (Hardman, 2012; Nasr *et al.*, in press). In Manchester, for example, there are several initiatives, ranging from food projects in Hulme, to gardens in Wythenshawe aimed at increasing the community's access to fresh produce. Several of these have grown substantially over the years in which they have operated and are now economically sustainable: relying less on government grants and more on income generated through their gardening activities.

Perhaps the most comprehensive analysis of allotments, community gardens and similar community agricultural projects in the UK is the Welsh Rural Observatory's (WRO's) report on the extent of this activity in Wales. Although this report does not specifically focus on UA schemes, its survey of "196 community growing projects" presents an insight into the activities of such projects and the barriers they face (WRO, 2012, p. 2). This is perhaps the largest such study conducted in the UK context and, covering topics ranging from their impact on residents to an analysis of the various project sizes, it raises some key issues and ideas surrounding the use of community grow projects. The report also contains information on the demographic, crops grown and funding, amongst other portions of statistical data: providing an overview of grass-roots agricultural activity in Wales.

A cultivating revolution: UA and the food miles argument

Many city dwellings have little available space, yet food can still be grown on a balcony, rooftop or spare window sill (Hanson *et al.*, 2012; Ruppenthal, 2008). Flores (2006) explains that some city households – many in suburban locations – have lawn space and challenges these residents to transform their lawns into food growing space: "the average urban lawn could produce several hundred pounds of food each year" (Flores, 2006, p. 2). This cry is echoed by many environmentalists and promoters of UA, for example Roberts (2001), who explains that the average molecule of food any of us eat on any day has travelled 1,500 miles. This distance issue, or 'food miles' as it is often termed, is one of the major arguments put forward for the wider adoption of UA (Gorgolewski *et al.*, 2011; McClintock, 2010; Wiskerke and Viljoen, 2012). McClintock (2010) further explains that the ability to reduce transport costs could have an impact on the wider global warming crisis.

'Food miles' is a term coined by Professor Tim Lang (see *The Guardian*, 2005) and, in its basic form, concerns the distance travelled by produce from farm or area of production to consumer (Born and Purcell, 2009; Feagan, 2007; Marin, 2003). Lang's distance idea plays a major role in showing the origins of a product, with long trade routes often being identified via the use of food miles (Lang, 1999). Paxton (2005) suggests that food miles can be considered at two scales: transportation within a country and transportation between countries. On a national level, the transportation of food accounts for 25 per cent of the UK's HGV emissions, with 10 million tonnes of CO₂ produced from road journeys alone, this equates roughly to 1.8 per cent of total CO₂ emissions nationally (Smith *et al.*, 2005). Internationally, the systems appear just as unsustainable as the UK alone currently needs to import 95 per cent of its fruit and 50 per cent of vegetables (Countryside Alliance, 2010).

Sceptics of the 'food miles' ideology claim that this approach is insufficiently robust to question whether the content of one's food basket is environmentally friendly or not (Chi *et al.*, c. 2009). An earlier report, published by DEFRA and authored by Smith *et al.*, reinforces Chi *et al.*'s reservations: summarised in the report Smith *et al.* explain that using a single indicator for the food miles argument fails to capture the complexities of transportation (Smith *et al.*, 2005). For example, Hogan and Thorpe (2009) claim that during certain times of the year, imported produce may have a lower overall environmental impact than food grown in the UK. The food mile concept is increasingly being exposed as unduly simplistic (Saunders *et al.*, 2006), since it does not explore how the food was produced, processed or consumed (Food Ethics Council Business Forum, 2007).

Often exports do travel huge distances to reach consumers (Campbell, 2004), and Lang's 'food miles' concept, even if over-simplistic, does highlight the realities, and occasional flaws, of the modern food system. Regardless of the limitations of the food miles argument, consumers are increasingly becoming interested in "food with a story" (Parrott *et al.*, 2002, p. 254). Although clearly a very basic concept, Lang's distance-led argument is a helpful tool to raise customer awareness of how far their produce has travelled. It is also used to promote UA. In some cities, UA is seen as the answer to solving problems associated with the current food system (Lee and Tan, 2011). Contradicting this point to some extent, Mougeot (1999b) suggests that UA complements the existing rural and foreign food supplies, as opposed to replacing entire systems. He continues by explaining that UA specifically targets the poorer community, addressing food insecurity and allowing these particular citizens access to organic produce (Mougeot, 1999b). Whilst the successes of these official schemes are relatively easy to monitor, data on informal growing of food in Western household gardens are scarce (Kortright and Wakefield, 2011). Little is understood about this everyday version of UA; whether residents are cultivating their own food, to what scale and its value in the urban context (Wiskereke and Viljoen, 2012).

Summary: can UA solve the 'crisis'?

This paper has identified some of the issues with the current food system and explored the idea of UA: a move away from current farming practices towards a system which is situated closer to, even within, cities themselves. Whilst UA is viewed as a niche activity within the UK (Caputo, 2012), there is some evidence to suggest that the concept is on the increase: local food is now playing a part in government strategies and policies (Marsden, 2010), whilst sites are on the increase within cities (Hardman, 2012). This is reinforced with policy shifts designed to accommodate UA (see for instance, Wiskereke and Viljoen, 2012) and the increase of food charters which are designed to enable more city-based cultivation.

There are still questions concerning the impact that UA can have on eating habits; evidently, more research is required into this area to review the extent and means by which UA can be facilitated within the UK, and the implications of creating more sites for local food production. The increase of UA will, no doubt, raise tensions between the traditional agricultural industry and this alternative method of food production. For UA to be successful and implemented on a wider scale, education is crucial; liaising with the public and teaching them about the benefits of this niche approach to producing food in the city context.

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