

## THE PRODUCTIVE PERIPHERY: FOODSPACE AND URBANISM ON THE EDGE

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*Abstract: The paper focuses on the way that food interacts at two nested design and urbanism scales – the edge and the conurbation – with rapidly expanding urban settlements and the development of megalopoli. It asks if these urban forms are instrumental in undercutting productive urban food regions and sustainable food-sheds, can they conversely be designed and planned in ways that contribute to more sustainable food-centred urbanism? The paper draws on research in Food and Urbanism (Parham, Bloomsbury: 2015), to reflect on contemporary developments in relation to food on the urban edge and in burgeoning conurbations. It argues that there is significant scope to support 'gastronomic landscapes' (Hardy, 1993) in the face of a post-productivist agricultural model and the presumption of primacy for urban development, with a range of design-based tools including food-centred sprawl repair and retrofitting techniques now available for remaking edge and conurbation space. It concludes that there are increasing possibilities to integrate design for food as part of a more conscious approach to sustainable urbanism at a range of scales from the very local to the megalopolis. Recognising the role of spatial design to support productive peripheries, more food-centred conurbations and localised rural regions is one key to this transformation.*

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### 1. Introduction

The following paper is largely based on *Food and Urbanism* (Bloomsbury, 2015), which explores the interplay of food and city design and urbanism from the scale of the table to the agricultural region. Just as in last year's Aesop conference paper I explored the notion of convivial green space in cities (Parham, 2014), this year the particular focus is on the interplay between food and space on the edge which for purposes of analysis I divide into two nested spatial scales: the productive periphery and the megalopolitan food realm. Space did not permit writing here about more traditional forms of suburbanization that preceded the conurbation nor the wider food region within which these scales sit, but both these scales (suburb and region) should be kept in mind as relevant to any interrogation of food at the contemporary urban edge. I suggest that urban peripheries, and the wider regions influenced by, or becoming urban settlements, are the loci for a series of food-related, spatialized issues. Among others these include problems of urban sprawl, the presumption of primacy for urban development in the context of the changing nature of farming on urban edges with the advent of a post-productivist agricultural model, the argued need to protect and localise food-sheds, and the transforming practices of peripheral, conurbation and rural food consumption and gastronomic tourism.

Conceptually, scale is important to this investigation. Not only is human scale central to thinking about food and cities in urbanist terms (Talen, Bohl and Hardy, 2008) but scale has been widely recognized as a central concept for understanding space in a number of disciplines and thematic areas with a bearing on food. Considerations of scale's implications are found within the design literature (Cullen, 1961: 144; Jabareen, 2006), in the geography of food (Valentine, 1998; Mandelblatt, 2012), and in synthesizing ideas about city design, planning and sustainability (Jenks

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and Dempsey, 2005). Responding to food and place issues means working at and across scales: 'each scale depends on the others and...only a whole systems approach, with each scale nesting into the other, can deliver the kind of transformation we now need to confront climate change' (Calthorpe, 2011: 3). I suggest that for the purposes of this paper's explorations, scale acts as a useful construct for framing the analysis of food's interplay with urbanism, as it allows not only detailed examination of food's spatial elements, but for themes that link different scales, or cut across them, to be teased out.

The paper asks if urban forms and practices evolving at these two spatial scales are instrumental in undercutting productive urban food regions and sustainable food-sheds, with negative implications for sustainability and conviviality, can they conversely be designed and planned in ways that contribute to more sustainable food-centred urbanism in future? Metropolitan or peri-urban planning and design arrangements for food have not necessarily kept up with rapid urbanism transformations in developing conurbations. While it is acknowledged that there have been useful developments in understanding and responding methodologically to the complex interplays between food and space at these scales, including the development of a number of technical tools for analysing aspects of change in food terms, these insights are not sufficient. Transformations in urban (and rural) space and in food systems themselves have profound implications for the design of what can be broadly delineated as 'peripheral' foodspace and these need to be properly understood.

To respond to these analytic challenges the paper is structured around two scalar contexts I refer to here – peripheral and megalopolitan. It looks first at the way in which some cities and towns have maintained and strengthened the gastronomic landscape of their urban peripheries, and in so doing contemplates the complex, interrelated elements that support positive peri-urban food design and planning. It contrasts success with other less desirable experience of edge food space, investigating whether an aspect of declining conviviality and sustainability is an urban failure to achieve a close knit physical, social and economic relationship to the surrounding productive land (Hough, 1984, 1990). Next, the paper explores food related urbanism implications of the so-called 'megalopolitan' scale (Psomopoulos, 1987: 41) of urban expansion; considering some of their food related socio-spatial effects of new urban forms developing through megalopolis, including obesity, food deserts and obesogenic environments. Examples of land uses and practices related to food are drawn from a variety of locations, from apparently welcoming dystopia to an emphasis on more place-specific, vernacular and traditional design solutions. Insights into transforming food space include those from urban design and urbanism which focus on retrofitting sprawl.

In its concluding section, the paper briefly draws together the urbanist threads from these scales and suggests some potential ways forward to integrate food-centred spatial and design and planning into broader food space strategies for more convivial and sustainable places. It argues that there is significant scope to support 'gastronomic landscapes' (Hardy, 1993, 1994) in the face of a post-productivist agricultural model and the presumption of primacy for urban development, with a range of design-based tools including food-centred sprawl repair and retrofitting techniques and other urbanism techniques now available for remaking edge and conurbation space. It demonstrates how these approaches are starting to be reflected in spatial planning and design practices, policies, services and research, and concludes that there are increasing possibilities to integrate design for food as part of a more conscious approach to sustainable urbanism at a range of scales from the very local to the regional. Recognizing the role of spatial design to support productive peripheries, more food-centred conurbations and localized bioregions is one key to this transformation.

## 2. Urbanism on the edge

The interaction between urban development and food on the periphery of cities is important because the nature of agricultural production, food distribution, retailing, consumption and waste arrangements on the edge of urban space over the long term represent critical gastronomic resources for cities and citizens (Parham, 1992, 1993). Yet transformations of peri-urban space do not reflect a straightforward causative relationship between urban expansion and the decline of food space. Urban edge food resilience is the result of a complex interplay between critical shifts in the nature of urban expansion and also of changes that are internal to the evolution of productive landscapes. Much peri-urban food practice can clearly be seen to operate within the modern food system whereby spatially expressed relationships are highly unequal (Freidberg, 2004) and predicated on a conventional, industrialised 'agro-food complex' (Maye et al, 2007: 1). Yet there are urban edge food policy makers and producers, retailers, restaurateurs and consumers who are attempting to maintain more place-based food strategies and practices, and some of the design and urbanism issues this struggle raises are touched on in this section.

The city and its surrounding productive countryside have historically enjoyed a symbiotic relationship, which has been critical in shaping urban growth and development. Driven by poverty, the rural poor came to cities or towns, while urban wealth creation allowed town dwellers to buy country houses and land. Conversely, rural wealth has provided the basis for acquiring and expressing urban power. The spatial relationships created by this interplay have given rise to an extraordinarily diverse range of landscape circumstances at the urban edge, but a near constant has been the presence of food growing and other food-related land uses. In fact, 'city' and 'wall' are interchangeable terms in some languages, with the circumspection of the urban edge and food spaces just beyond the walls offering principal characteristics of city form (Kostof, 1992: 11). The critical role of the urban edge for food production has given rise to sometimes unique land forms like Amiens' *hortinollages*. Such edge spaces have also been places of pleasure, as in the historic form of the *guinguette* in France (Brennan, 1984) or England's more upmarket pleasure gardens which spawned 'les Wauxhalls' in Europe (Conlin, 2008: 25).

There have been notable attempts to bring cities and surrounding agricultural fringes into a kind of symbiosis, including Ebenezer Howard's food related proposals for garden cities (1902; 9). Certain edge-of-town food growing forms have remained robust despite urban change round them (Marsh, 1998: 9; Laquian, 2005: 317) such as the green zones around French towns, which can be situated spatially and culturally somewhere between the big city allotment and the rural family's home garden (Jones, 1997: 65). In contemporary practice, however, evidence from a very wide variety of regions and city fringes demonstrates that a process of alienation from food productivity (and other kinds of traditional food space along the food chain) is a dominant spatial condition: small market gardens, orchards and viticultural areas are being destroyed or fragmented as peri-urban land becomes more desirable for both formal and informal settlements of housing, large-scale retailing, distribution and customer fulfillment centres, than for food and wine production, processing, food distribution, shops and markets (Parham, 1990, 1991, 1993b, Deelstra and Girardet, 2000; Aguilar, Adrián, Ward and Smith, 2003; Couch et al, 2007; Leontidou et al, 2007; Huang, Wang and Budd, 2009).

Today, the urban edge remains a critical food space, but is hard to capture theoretically given the complex interweaving of town and country as a distinctive, contested space (Hidding et al, 2003; Boume, Bunce, Taylor, Luka and Maurer, 2003; Simon, McGregor and Thompson, 2006; Qviström,

2007). Both the scale and changing spatial, social and economic nature of city edge urbanisation since the second half of the 20<sup>th</sup> century in particular has required new ways to conceptualise this space, some of which directly reference its heterogeneous food nature as a dynamic spatial 'jumble' of different kinds of land uses blurred into an unstable relation with one another (Audirac, 1999: 13; Lapping and Furuseth, 1999). Given the huge scale of such burgeoning zones globally; such as around megacities like Beijing, this has significant food implications (Zhao, 2010).

The notion of the foodshed seems conceptually helpful in tracing food transformations in productive space wrought by suburbanisation in this fringe zone (Getz, 1991). Peters et al (2009: 2) define the foodshed as 'the geographic area from which a population derives its food supply' and can act as both a conceptual and methodological unit of analysis for understanding not only the way that food growing around an urban area is spatially organised but how it can be better aligned to needs for food resilience and conviviality (as per Kloppenburg et al, 1996: 33; Peters et al, 2005). Similarly, the framing design principles of the Transect allow peri-urban areas to be conceptualized as part of a complex spatial design configuration of conditions that range from city to country, urban and semi-urban, through semi-rural to rural, and suggest particular forms of urbanity with intensity generally decreasing with distance from the city centre (Duany, 2002; Talen, 2002; Dunham-Jones, 2009: 37).

Edge-of-town locations around western cities have often comprised a predominantly food-focused landscape in the twentieth century, as part of modernism's spatial project. Some urban hinterlands have acquired complex land use combinations in which food is just one of many elements, as for instance, in the peri-urban mix of urban, industrial and rural landscapes around Tuscan cities and towns (as reported in Parham, 1996). Peri-urban areas around cities in developing countries are often suffering strains induced by massive urbanisation, while retaining a critical role in food security, as found around Hubli-Dharwad in southwest India (Brook and Dávila, 2000). Evidence from Central and sub-Saharan city edges (for example), shows the critical importance of urban agriculture as a survival strategy (Cofie et al, 2003; Trefon, 2009). Food growing has not disappeared from the peri-urban zone even around western cities either, although rurality is being reconfigured and reconstituted (Murdoch and Marsden, 1994). Around many cities a substantial grey area of land uses has grown up of semi-urban—semi-rural development, including small-scale hobby farms run by those deriving income from primarily urban sources. In this peri-urban patchwork a range of competing interests are at work, leaving food space vulnerable and environmental quality undermined. Hough (1990: 126), has referred to a 'perverse energy system' in which (to paraphrase) resources are taken from the country, through agriculture occurring at huge environmental cost, exploited for city needs and then expelled as waste into a hinterland constituting a polluted sink for urban excess. Notions such as the ecological footprint, ecosystem services and the urban metabolism have been developed to help conceptualise, and offer applied tools to better understand and measure, how far into its own region (and beyond) a city absorbs food and other resources and creates carbon and other negative outputs (Rees, 1992; Wackernagel and Rees, 1996; Giradet, 1999; Roberts et al, 2009: 122).

Concern for the health of the city's countryside has been sharpened by urbanisation often of a sprawling complexion, and sometimes massive in scale as in China and elsewhere (Bryant and Johnston, 1992; Chen, 2007). The so-called 'presumption of primacy' for urban development results in an 'impermanence syndrome' whereby farmland is viewed as 'suburbs in waiting' by farmers believing they have development rights to sell farm land for urban development prices (Bunker and Holloway, 2001: 13; Cook and Harder, 2013). In relation to farming itself, these changes are

connected to the move to a post-productivist mode in which constant modernisation and industrialisation is undertaken, there are reduced farm outputs and greater integration with non-farm activities, in line with wider economic and environmental objectives (Ilbery and Bowler, 1998).

From a variety of perspectives; environmental, social justice, gastronomic and economic, it seems clear that approaches to peri-urban food planning, design and management need reconfiguration. Yet the question remains whether there is a right balance to be achieved? Is it possible to ensure a productive diversity of land uses, encompassing farms, houses, business, shops and services as a sound basis for gastronomic and broader health? Research reported on from Italy and Australia offers examples of regionally-based, locationally-specific and urban design-conscious food strategies to protect and enhance such peri-urban foodspace but clearly these are not yet mainstream approaches (Parham, 2015). In spatial terms, of course there are techniques to call on including the use of urban growth boundaries (green belts have been employed over the long term in this way), while fully-costed development charges reflecting the real costs of growth can also be employed. The gastronomic costs and benefits, measured in implications for conviviality and sustainability of urban settlement growth, need to be more adequately factored into discussion of peripheral food production and other foodscapes.

The urban edge is also a gastronomic tourism landscape that can be situated as a growing subset of cultural tourism, with visitors primarily interested in a peri-urban region for its diversity of good quality local food and wine products and the landscapes that support them (Parham, 1995, 1996; Bessière, 1998; Richards, 2002; Hjalager, 2002; Hjalager and Richards, 2004; Kivela and Crotts; 2006). This is reflected in increasing numbers of visitors who are primarily motivated by the opportunities to experience peri-urban landscapes, enjoy locally focused restaurants, taste regional wines, and purchase products from wineries, mills, farm shops, nurseries, apiaries and markets, among others. Such tourism is often associated with high food quality (overlapping with artisan and organic approaches) that is produced through alternatives to dominant production modes. This is in turn connected to embeddedness in particular locations through alternative food networks and producer groupings (Ilbery and Kneafsey, 2000). Such networks cover newly emerging combinations of producers, consumers, and other actors who embody alternatives to the more standardised industrial mode of food supply (Murdoch et al, 2000, in Renting et al: 394). Similarly, the rise of the slow food and slow cities movement has been critical in foregrounding the peri-urban as a critical food region given that these are intended to counter 'the loss of local distinctiveness as it relates to food, conviviality, sense of place, and hospitality' (Mayer and Knox, 2006: 322; Pink, 2008; Parasecoli et al, 2012).

Of course it may well be the case that at least some peri-urban representations of wonderful foodspaces remain in the realm of aspirational food fantasy, depicted in apparently pristine circumstances, with any uncomfortable or unsightly features, context and details erased. Actual threats to fragile gastronomic resources at real urban edges may be underplayed or ignored. However, despite such readings, as Boniface (2003) notes, such tourism can act in synchronicity with edge space agriculture and other food related land uses that challenge industrialised food approaches. The growth of alternative food networks and spaces such as producer markets at edge space locations may be an indicator of an economically subversive gastronomic approach insofar as these bypass the vertically integrative economic arrangements of conglomerate food suppliers, wholesalers and retailers. Food purchased here is also likely to be fresher, may be cheaper and will almost always be economically more supportive of small-scale growers. Peri-urban foodspace

research conducted by the author around Florence certainly found evidence of such positive interplay between visitors and gastronomic resources and landscapes, and more recent study around Pisa seems to have similar findings (Parham, 1995; Orsini, 2013).

Foodspace design has important but I argue under-explored implications for both conviviality and sustainability on the urban edge as it deals with an essential design paradox: how to give people the access they desire to both a wild and productive countryside without continuously sprawling into that space, and thereby destroying valuable food landscapes and built forms. It is worth remembering that historically there have been attempts to plan settlements with such ideas in mind. The Garden City, for instance, was designed to positively connect city and countryside through a productive edge of allotments, orchards and dairy farms. More recently designers informed by landscape ecology have been alert to the importance of design's role in connecting and shaping the urban edge in biodiversity terms, with green belts, green fingers, wedges and corridors. This supports the 'biophilic city' configured for biodiversity while in certain places supporting 'food webs' and reducing ecological footprints (Beatley, 2010; Ignatieva et al, 2011: 17). Cities including Helsinki and Copenhagen have instigated substantial, long term, formal 'green fingers' plans which create a green backbone to structure urban form.

### **3. Exploring the megalopolitan food realm**

Cities' outward growth used to be conceived broadly as taking the form of suburban expansion giving way to the peripheries that were discussed in the previous section. However these spatial assumptions no longer hold. The rise of vast settled regions around cities has provoked a great deal of theoretical attention in geography and related disciplines, but research into such spaces' food implications has been somewhat circumscribed. Although Pillsbury (1998: 209) has identified 'cuisine regions' based on particular megalopolitan conditions across the United States, there is an understandable emphasis on food poverty and obesity in the interrogation of post-urban and post-suburban sprawl. Some of the food implications of the larger 'megalopolitan' scale (Psomopoulos, 1987: 41) are sketched here. The new urban forms developing through megalopolis are having food related socio-spatial effects including creating the conditions for obesity, food deserts and obesogenic environments. It is argued that urban design focused on retrofitting sprawl is among the most helpful urbanism techniques for helping respond to and ameliorate these conditions.

To be better understood, food space transformations wrought by massive urbanisation, need to be situated in relation to large (and arguably unsustainable) levels of population growth forecast within the next fifty to one hundred years. These in turn are expected to result in the development of vast urbanised regions stretching across much of the globe (Laquian, 2005). There are currently twenty-three megacities with over ten million inhabitants. While 3.3 billion people lived in urban areas in 2009, an estimated growth in numbers will increase that to five billion by 2030 (Roberts et al, 2009: 69). By 2025, we can expect to see around one hundred and thirty-five giant urbanised regions along coastal edges and inland plains across the world. Of particular note is that in the post Second World War era huge metropolitan regions have grown outside traditional urban centres and the twenty-first century will see a continuation of this trend worldwide (Perlman, 2005: 169). A huge range of neologisms has been coined to describe these 'uncentred' places and the boundedness of Ebenezer Howard's Garden City again has a particular resonance. As Fishman (2002: 59) points out, 'Now our challenge is to escape from the low density 'anti-city' (to use Mumford's term) that has sprawled out

over whole regions and has de-concentrated the central cities far more radically than the garden city activists ever envisioned'.

As suburbs are replaced by a post-urban world that provides jobs, housing and food services to its residents, but without the presence of traditional urban forms, everyday life in relation to food has also changed. In the edge cities that were identified in the late 1980s, the more recent 'privetopia' of gated communities, and other versions of sprawl, social life, including in relation to food takes place in privately owned spaces including indoor malls, business and office park atriums, gyms and airports (Garreau, 1991; McKenzie, 1994). Not just an American phenomenon, we now see such spatiality around a number of cities globally, including in Europe in a process dubbed 'euro-sprawl' (Hardy, 2004: npr; Pumain, 2004; Bontje and Burdack, 2005). This fast growing post-urban context offers an array of foodspaces that reflect settlement forms revolving around (and as far as food is concerned often experienced in) gated communities, distribution and customer fulfilment centres including 'dark stores', business and office parks, big box food stores, hypermarkets, fast food outlets and chain restaurants, petrol station forecourt 'road pantries' and the food courts of outlet and megamalls (Parham, 2005; Basker et al, 2012; Benedictus, 2014; Butler, 2014). Food spaces associated with gated communities are thinly represented in the research literature but include onsite 'gourmet restaurants' and other restaurants and supermarkets. As Pow Choon-Piew, (2009) notes, Bourdieu's notion of the habitus appears well suited to describing lifestyles which model distinction through luxurious food consumption within such developments, often in the context of great inequality in the surrounding society.

Meanwhile, other food spaces, with their seeds in suburban landscapes, have come to be seen as representative of the post-urban. Emerging most strongly from the 1980s, very large supermarkets, superstores and hypermarkets became central features in the post-urban retailing environment in Europe and elsewhere. Large-scale superstores have shown a great deal of resilience and their market penetration has continued apace, despite intriguing examples of local rejection of the model's crude spatiality in places including Korea (Halepete et al, 2008). Similarly, 'superregional malls at freeway interchanges...became catalysts for new suburban mini cities, attracting a constellation of typically urban functions' (Crawford, 1992: 24-26). As earlier regional malls lost their appeal, a variety of niche malls developed, some of which 'eliminate social and public functions to allow more efficient shopping' (ibid) while others have attempted to build in more food consumption elements to increase dwell times and spend. Two food-related consumption spaces of increasing importance have been implicated in the decline of regional malls: these are the hybrid mall and the big box retail store. Sometimes understood as predominantly a western phenomenon, the trend has also been noted in places including India, where malls have become ubiquitous as middle class customers move from traditional 'kirana' stores to mall-based food consumption (Goswami and Mishra, 2009).

It is possible to argue that in megalopolis, an urban form has been created that starves its inhabitants of opportunities for sociability and conviviality in relation to food while given its vast spatial extent, rendering more of them subject to this narrowing down effect. One way that this has been conceptualised is as a broad process of McDonaldisation in which 'the principles of the fast food restaurant are coming to dominate more and more sectors of American society as well as the rest of the world' (Ritzer, 1995: 1; 2008). This closely connects to the ubiquity of the car which has played a critical role in supporting post-urban development and shaping its relationship to food in the context of a posited 'hyperautomobility' (Frumkin, 2002; Freund and Martin, 2007). One of megalopolis's

salient characteristics is that foodscapes and practices are often disconnected from the public realm or civic engagement; in part because the spaces for that engagement have been excised. This situation is associated with a rejection of design principles that govern traditional cities. With the rise of privately owned 'public' spaces, what really constitutes public space in relation to food is often blurred or elided. Yet, from an architectural perspective, Gastil and Ryan (2004: 9) advise that we cannot 'ignore the inevitable' but need to accept that these are 'the real conditions of public space' today: spaces that may cost to enter, or only be open for part of the day.

The developing landscapes of megalopolitan space have created both winners and losers in food terms. Of course gastronomic marginalisation does not only arise in peripheral areas, yet the shaping of food access in megalopolitan regions has identified rising levels of obesity which have been correlated with changing foodscapes including an increase in out-of-home food outlets (Burgoine et al, 2009). Poverty, food insecurity, food deserts (or swamps) and obesity, are all evident in post-urban space and it has an argued role in causing or supporting obesity through the creation of obesogenic environments (Lake and Townshend, 2006). In spatial terms, while food deserts were originally conceptualised as occurring in urban neighbourhoods that had been left behind by transforming urbanised space, they have also been found in suburban areas, rural locations and megalopolitan regions (Clarke et al, 2002). Links to city design that undercuts opportunities for active travel on foot or by bicycle, and the increasing prevalence of fast food, have also been recognised as implicated in obesity production (Frumkin et al, 2010). As Guthman (2011: 77) notes of her fieldwork sites in megalopolitan California, the nature of the place is implicated in the levels of obesity experienced by her participants.

Various health theorists and designers have proposed techniques to remodel the sprawl conditions of conurbations to help retrofit places that are more civilised and convivial; essentially referencing principles of urbanism that governed earlier placemaking processes in traditional cities. Dunham-Jones and Williamson (2009), for example, offer specific proposals for redesigning a range of post-urban spaces to improve individual outcomes including achieving obesity reduction, but also to institute sustainable and convivial urbanism with other food benefits including creating the conditions for food markets and small food shops. Their design approaches include for regional mall re-use to create public space focused downtowns; edge city infill to repair fragmentation and improve walkability and interconnectivity; and office and industrial park retrofits to mend car dependent, land wasting spatiality (ibid). Duany's (2011) proposals for urban agriculturally focused retrofits too offer valuable ways to reintegrate food into dysfunctional post-urban spaces, using transect based principles to remake more convivial food-centred urbanism.

#### **4. Conclusions**

At the scale of the peri-urban edge, the city and its hinterlands have always been strongly interconnected in food terms, both for production and pleasure. In certain places traditional food production has continued or been revived to considerable gastronomic and landscape benefit; however the dominant trend has been towards foodspace decline on the edge. While capturing theoretically exactly what constitutes the productive periphery has proved difficult – spatially, economically and culturally – it does seem clear that the alienation of peri-urban foodspace as a gastronomic landscape became a marker of twentieth century attitudes and practices with largely negative food effects. With a presumption of primacy for urban development, foodspace on the urban fringe suffered in many places; paradoxically at the same time as its crucial role in urban food



resilience became increasingly evident. Contemporary peri-urban farming and tourism practice centred on food can help maintain or reshape peripheral locations as gastronomic landscapes, increasing both their conviviality and sustainability. With sensitive planning, management and design all critical to this process, designers have conceived a variety of schema for supporting food-centred urbanism, with the most promising emerging from transect inspired sprawl repair and agricultural urbanism perspectives.

Similarly, the development of enormous sprawling regions around cities both challenges our notion of what constitutes urban space and present some difficult food issues in design terms. Driven by a variety of demographic, economic and cultural changes, megalopolitan settlement patterns are the setting for many peoples' interaction with food, yet the dispersed, fragmented and splintered foodspaces of the post-urban region are often problematic in terms of both conviviality and sustainability. Loss of connection to location may be offset by new ways of expressing belonging in food terms. Yet the so-called McDonaldization of foodspace evidenced through megamall food courts, gated communities, business parks, and distribution centres, among other foodscapes of megalopolis, has created sites for interaction that have turned their back on the public realm. These may also be predicated on most unequal economic relationships and judged as uncivil and unsustainable in relation to food as a result. Although not traditionally researched as locations for food poverty, food deserts and obesogenic environments, megalopolitan spatial design is implicated in their development, and thus substantially contributes to the pandemic of 'globesity', which is set to cause massive social and economic disruption and is already blighting many individual lives.

An overarching conclusion from this discussion is that various peripheral urban forms are instrumental in undercutting productive urban food regions and convivial, healthy and sustainable food relations and practices in a range of ways foregrounded here. More attention is required to identify what is shaping foodspace in design and urbanism terms at these scales and how this plays out in specific peripheral contexts. That would act as a platform for better supporting food-centred urbanism through a range of methods and structures, including urban food policy and strategy, land use and transport planning, urban design and architecture, and fiscal and economic instruments, among others. The paper concludes that such burgeoning urban scales can be designed and planned in ways that contribute to more sustainable food-centred urbanism - and processes of retrofitting foodspace along convivial and sustainable urbanist lines seem particularly important. Design proposals that remake space towards more gastronomic ends are to be welcomed as a positive response to food problems generated at peripheral post-urban scales.

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