

THE URBAN REVOLUTION THAT ISN'T: THE POLITICAL ECOLOGY OF THE NEW 'URBANOLOGY'

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The Industrial Revolution, including the ascendance of computer technology, has remade essential elements of human culture and relocated human life. In 1800, when James Watt's patent for his steam engine was only 25 years old, only 3% of the human population lived in urban areas. By the end of World War II this had risen to 30%. At the end of the first decade of the 21st century, for the first time as many humans were living in urban areas as in rural communities.

There is, of course, a perfectly good reason for this population shift. Agglomerations of humans are dynamic. So much human interaction inspires new ideas and a greater acceptance of them; it spurs intellectual growth and a tolerance for novelty and change. There is a critical human mass, able to support a wide range of arts and sporting activities. Cities generate both numerous and various jobs. And, because of the advantages of scale and proximity, there are efficiencies of cost in the delivery of services, such as education and healthcare, which are expensive to deliver in more sparsely populated rural areas. Cities, in short, are a useful, indeed powerful, form of human organisation. They have proved rewarding in many ways to our species.

Cities symbolize human achievement, therefore, but also the human predicament. Their growth parallels the growth of technologies, of the human population and the blossoming of a culture that is now fraught with as much danger as promise. There are now over 400 cities worldwide with a population greater than one million. Over 19 are already dubbed 'megacities', with populations up to 23 million. Below their dazzling beauty – and many cities are places of tremendous history, charm and style – there is a fetid underbelly of waste, pollution, physical deterioration, crime, inequity and social injustice (Hamilton 2010: 1;

Swyngedouw 2009: 603; Lowe 2009: 49; Swyngedouw and Heynen 2003: 900).

The increasingly manifest failure of urban planning to address the mounting ecological and social crises confronting human urbanisation suggests a need to rethink conventional approaches, institutional systems and the level of resources dedicated to human development (Harvey 2012: 78). The size and number of large cities alone is now drawing the attention of academics and the general public to urban planning. Threats to the city from climate change and the threat from such large conglomerations of the human organism to the environment inspire critical thinking about human prospects at the beginning of the second decade of the 21st century.

One response to the rapid urbanization has been the arrival of the new urban literature which we and others (e.g. Bush 2011) term 'urbanology'. Its most discussed example is Glaeser's (2010) bestselling *Triumph of the City* (also Brugmann 2009). The term invokes a longer, largely North American tradition of popular urban commentary that has eclectically mixed expertise with opinion in what are often provocative statements about the human urban experience. Its latest manifestation choruses the dawn of a human 'urban age'. Recognising the indisputable ecological stresses generated by urbanization, these new urbanologists advocate sustainability as critical to urban planning. However, from a critical social science perspective, as recently articulated by Sayer (2009), it is apparent that the new urbanology, while avowing sustainability, is freighted with the assumptions and norms of neoliberalism which progressive thought holds destructive to urban progress and well-being (Hodson and Marvin 2010: 9; Harvey 2010: 77, and 2012: 3).

Neoliberalism is a concept and a political project that has been influential, not to say ascendant, in recent decades, certainly in the Anglophone world since the late 1970s (Harvey 2010: 16). There is, arguably, much that needs to be done in terms of explaining its workings and legacy in the fields of urban planning and urban political ecology, itself a fairly new academic discipline. Typically, neoliberals seek to deregulate markets, advance free trade, and promote capital mobility unobstructed by regulation. They advocate the privatisation of commonly held assets, and seek to reduce public expenditure. Competitiveness, individualism and self-sufficiency are promoted as incontestable virtues, which means that all forms of social protection are anathema, as are taxes

to pay for welfare programs. Business regulation is regarded as an unnecessary imposition; unions and collective bargaining are despised as damaging to a 'flexible' labour market.

As Harvey (2005) explains, these ostensibly economic positions have profoundly influenced social forms at the national and global scales, especially by reframing the 'mindset' of politics, institutional endeavor and even the popular consciousness. Over several decades they have encouraged a way of thinking that has privileged the 'economy' above all other aspects of our lives. One of the results of the domination of this way of thinking has been a general neglect of the importance of social and environmental features in human life. This has resulted in a lack of critical inquiry into environmentalism as it relates to the built environment; and hinders progressive debate, insight and action (Bickerstaff *et al.* 2009: 591; Schweitzer and Stephenson 2007: 319).

We argue that the urbanologists' themes, concepts and arguments fail to comprehensively engage the mainstreams of critical social science, including debates around social inequity, a failing human ecology and systematic denial of urban citizenship (the 'right to the city' – see Harvey [2012: 3]). This 'social impoverishment' of human discourse has been elsewhere recognised in the field of climate debate by the sociologists Beck (2010) and Shove (2010). The focus in this article is how the new urbanology defines and operationalises the principle of environmental sustainability in the urban setting and to what extent these influential writings reflect the dominant neoliberal meme. The focus on environmental sustainability builds upon Gleeson's (2012: 935) critique of new urbanology which focused primarily on social sustainability. Our enquiry and critique are applied through the lens of urban political ecology (UPE), whose defining premise is the importance of political economic arrangements to the human interpretation and transformation of nature, and the problems that emerge from these arrangements.

Importantly, UPE holds the capitalist economy advocated by neoliberals and encapsulated in many aspects of urbanisation to be deeply problematical. It is seen as an ineluctably crisis bound system, with mounting environmental contradictions representing an increasingly intractable predicament (*e.g.*, see Altvater 1993) for a growing human population.

Our analysis has three parts. Firstly, we briefly articulate our interrogative frame, the political economy of urban sustainability. A

range of ideological perspectives is identified, forming a continuum that considers the popular contemporary discussion of neo-liberal urbanism and alternative new progressive thought situated within UPE. The latter is our entry point into the current investigation and our lens for the analysis.

Secondly, we review the new urbanologists' understanding of environmental sustainability. We draw on the political economy of urban sustainability to identify key themes in the new urban literature that reveal its uncritical and ultimately contradictory deployment of the sustainability construct.

Thirdly, after establishing the new urbanologists' current positions on political economy and environmental sustainability, we criticise their constructs through the lens of UPE. We argue that the new urban revolution as espoused by the new urbanologists is, in fact, not a revolution at all, but an affirmation of the current neoliberal imaginary of a market-based utopia. Its conformism fixes both nature and society firmly within capitalist dynamics of production, circulation and exchange.

Background on Urbanology

Gleeson (2012: 931) has illuminated a new wave of urbanology, preceding that of the 1960s and 1970s, which is becoming increasingly influential and is cheerful about the prospects for the human urban age. The texts of new urbanology include *The Triumph of the City* (Glaeser 2011); *Welcome to the Urban Revolution* (Brugmann 2009); *Arrival City* (Saunders 2010); *The Next Hundred Million: America in 2050* (Kotkin 2010); *The Great Reset* (Florida 2011); and *Aerotropolis: The Way We'll Live Next* (Kasarda and Lindsay 2011).

The authors of the new urbanology are largely from North America, and, in the main, are journalists (see Lindsay and Saunders), consultants (see Brugmann and Kotkin) and media savvy academics in business and management (see Kasarda and Florida) and economic schools (see Glaeser). Urbanologists have, furthermore, made significant inroads into popular Western discourse and Western consciousness, receiving accolades from the likes of Britain's former Prime Minister, Gordon Brown. In Australia, critic Elizabeth Farrelly (2011) exulted that former Prime Minister Paul Keating and Liberal politician Malcolm Turnbull

had each been seen in Sydney admiring a copy of Glaeser's *Triumph of the City*.

The early urbanologists of the 1960s and 1970s were less sanguine about urbanisation. It's political context was entangled with the *Limits to Growth* thesis proffered by the Club of Rome, which encouraged caution among writers about the urban environment when considering economic growth. Urbanology displayed neo-Malthusian tendencies in that urbanisation was a marker of population growth, resource use and environmental harm that was 'out of control'. Many of the early urbanologists were journalists. Key texts include *The Death and Life of Great American Cities* (Jacobs 1961) and *Exploding Cities* (Wilsher and Righter 1975).

What distinguishes the urbanology that emerged at the beginning of the 21st century from the version popular 35 years earlier is that the current urbanologists assume growth is essential to the future of cities, although they acknowledge some challenges. Richard Florida, for example, predicts that *The Great Reset* after the 2008 global financial crisis will provide a new economic landscape to power new kinds of consumption in pursuit of new economic growth. Kotkin (2010: 214) outlines explicitly 'why America cannot easily adopt antigrowth attitudes'. The 'aerotropolis' envisaged by John Kasarda and Greg Lindsay is a vision of city life as an adjunct to an aviation sector.

The new urbanologists argue that their texts offer a revolutionary outlook of the urban situation, but in fact they are very much entrenched within neoliberal urbanism, and their vision is strongly aligned with the entrepreneurial city. Furthermore, they tend to share a determinedly sanguine view about the human urban future. Glaeser trumpets *The Triumph of the City*. Their visions are generally described in Panglossian terms as the door to species improvement by way of higher incomes, depressed fertility and the emergence of greater ingenuity and economic growth.

Observing new urbanology, Gleeson (2012: 931) notes the absence of a theory of social power and the failure to articulate how the dynamic interactions between human agents in a society shape urbanization. He notes inconsistencies and simplifications, and points out that the movement is 'weak on epistemology and strong on conventional wisdom' (Gleeson 2012: 933). Furthermore, the current texts in urbanology display a strong preference for a unifying construct of the

city, and are restricted by a focus on naturalism, particularly determinism. Even when the rhetoric appears to advocate imagination, creativity and flexibility, the memes remain liberal and neoliberal. They are centred on entrepreneurship, self-help, small business, new and innovative technology, and 'smarter' environmentalism.

The authors do, however, express different perspectives on some issues. The visions espoused vary, from the aerotropolis of Kasarda and Lindsay to the revival of suburbia in the form of 'greenurbia' suggested by Kotkin. Variance in the understanding of the importance of density of the built urban environment is also present. Kotkin, for example, favours the revival of suburbs, while Glaeser is exasperated at the extent of public subsidization of an unsuccessful and unsustainable suburban landscape.

Brugmann, Kasarda and Lindsay, and Florida promote high density for driving economic efficiency and increasing the advantages of exchange in pursuit of economic growth and the delivery of environmental sustainability. The political ideals are fluid, as reflected by the mixing of progressive concepts, such as sustainability, with libertarian values. This is well illustrated by Glaeser who has suggested that 'we must stop idolizing homeownership', while conjuring a strongly optimistic view of the elimination of urban poverty (Glaeser 2011: 15).

Kasarda and Lindsay seem to support and extend Friedman's (2007) 'flat earth' thesis of globalization, whereas Brugmann is not in agreement¹. While it is clear there are divergences and disagreements within new urbanology, however, the texts are 'broadly similar: they are optimistic and generally of the view that cities have immanent trends, even laws, which define their possibilities' (Gleeson 2012: 932).

Given the attention that the new urbanology is garnering, it is appropriate that its nostrums and prescriptions are exposed to critical review. However, except for a recent challenge to Brugmann from geographers critical of his lack of a theory of social power to deepen his urban investigations (Nicholls 2011: 266; Purcell 2011: 263), substantial criticism of the new urbanology is yet to occur. Few thinkers have seriously challenged the visions of the urbanologists who write, without

1 Glaeser (2011: 2) makes an idiosyncratic distinction: 'It turns out the world isn't flat: it's paved'. According to Lemann (2011: 76): 'Edward Glaeser considers Richard Florida's celebration of cities sentimental and unrigorous compared with his own celebration of cities'.

exception, of human triumph in the face of imminent economic, social and ecological challenges.

Political Economy of Urban Sustainability

The idea of a 'sustainable urban environment' has assumed increasing significance and currency in urban policy discourse over the last thirty years, particularly since the release of the Brundtland Report in 1987, which included a chapter on 'The Urban Challenge'. It is a phrase that echoes the original discussions of sustainability as a desirable state where human activity, especially economic activity, is in equilibrium with the fundamental ecological systems that support life. The implication is that the urban environment is capable of thriving in a condition where socio-politic and economic systems are in balance with natural systems. The sustainable city requires minimization of its global ecological footprint of urbanization (Rees 1992). McManus (2005: 5) describes cities as 'growth vortexes' – that is places that devour resources with little consideration of renewal or recycling them – and advocates their transformation to places that must contribute to sustainability. For this to occur, cities should be governed in a way that enhances their capacity and are able to adapt to deliver sustainable development (Satterthwaite 1997: 1168). Harvey (2010: 78) also recognizes this imminent natural crisis that will require adaptation at numerous levels, cultural, social as well as technical, to the current framework of endless capital accumulation. The 'urban challenge' is ultimately a political one. The political regulation of our relationships with nature in cities is a question of democracy, governance, and politics of city life (Swyngedouw 2009: 604, 2007: 14; Keil 2003: 729; Keil and Desfor 2003: 29).

In this context, the ubiquitous noun 'sustainability', along with its equally ubiquitous adjective 'sustainable', as well as cognate terms, have been applied to allied concepts, such as 'sustainable cities' and 'sustainable urbanism' (Haughton and Hunter 1994: 1; Haughton 1999: 1891), and to more specific operational ideas such as such 'smart-growth cities', 'compact cities' (Newman and Kenworthy 1989), 'new urbanism' (CNU 1996: CNU 2000), 'urban ecology' (Collins *et al.* 2000: 416) and 'city's nature and nature's city' (Swyngedouw 1996: 80). All imply and assume environmental sustainability, while also imposing ideologically honed interpretations of what it means to be sustainable in an urban

setting. These concepts also assume that 'the urban' is analytically meaningful in terms of human and ecological activity.

The political economy approach to the analysis of urbanology is initially helpful in that it provides a framework to expose key points of ideological (and logical) tension in this 'new urban' concept. Four broad conceptual frameworks make up the continuum of understandings of sustainability: neoliberal, liberal, social democratic and radical (Davidson 2011: 5). Key points of tension and contradiction in liberalised and social democratic perspectives include: the role and understanding of economic growth; the substitutability of capital; socio-political conditions (power relationships); and the role of technology (Davidson 2011: 5). Understanding points of tension and contradiction enables the positioning within the continuum of ideologically honed interpretations of what it means to be sustainable in an urban setting. This continuum frames and positions the different understandings of urban sustainability.

The right of the spectrum is neoliberal urbanism. This integrates the growth imperative and market ingenuity with the urban form. An understanding of cities as the ultimate market phenomenon embeds an implicit assumption that current economic and social structures do not require fundamental transformation.

New urbanism seeks to reorganise the urban form through technical fixes, without disrupting the *status quo* or power relations (Harvey 1997: 68). Urban social and environmental phenomena are thereby reduced to an instrumental focus on physical urban form (Harvey 1997: 68; Owens and Cowell 2002; Gleeson 2012: 936). Neoliberal advocates of the new urbanism tend, therefore, to design and plan in ways that favour efficiency and cost effectiveness in urban dwellings and services. This focus inadequately considers the impact on the natural environment or assessing human behaviour and psychology for other than market purposes. The outcomes in cities are places and communities that then become complicit in unsustainable economic, environmental and social practices. This complicity was noted by Swyngedouw (2009: 604) as the rise of 'the post-political city'.

Furthermore, elite business interests are prioritised with the aim of attracting and mobilising investment. Such a focus has resulted in 'collaborative public-private governing institutions which [have] adopted the culture, calculative practices, and policy priorities of the private sector' (McQuirk 2011: 2). This prioritisation marks the 'transition in

urban government priorities from social policy and service provision to boosterist, competition-oriented policies aimed [at nurturing] economic development' (McQuirk 2011: 2). The neoliberal preoccupation of the private ownership of land has resulted with the removal of 'housing as a right' (Troy 2012: 1), and led to unfairly structuring our cities (Badcock 1984: 1).

In the neoliberal commentary of urban sustainability the relationship between urban political interests and the spaces of sustainability politics is limiting because many of the environmental issues are located in a politics of living spaces, consumption, which are isolated from the politics of production (Jonas *et al.* 2011: 2541; While *et al.* 2004: 554). Positioning the problem within such a theoretical space limits the sustainability outcome, ignores political economy and the crisis of overproduction (Gleeson 2010: 71).

Any inclusion of natural systems is motivated by a focus on efficiency, profit and productivity that has come to characterise national and urban governance almost universally since the 1970s. This dual economic and environmental is seen to improve the city's liveability and attractiveness in terms of economic development and financial viability (Jonas and While 2007: 129). This movement is summed up by David Harvey (1989) as a movement from 'managerialism to entrepreneurialism': the technomanagerial approach to the entrepreneurial city. The natural environment is, in fact, generally absent from this urban built environment, which is conceptualised in terms of the economic development strategies of urban regimes (Jonas *et al.* 2011: 2538).

To the left of the continuum new political possibilities are emerging that are situated within the fragmented ideals of social scientific urbanism such as: the cosmopolitan city (Sandercock 1998); the just city (Fainstein 2011); the green city (Low *et al.* 2005); and the good city (Gleeson 2010). These new possibilities are characteristic of progressive urban thought positioned outside the popular consciousness. The origins of much of this thinking was inspired by the release of David Harvey's book *Social Justice in the City* in 1973. This thesis reorientated urban geographical analysis onto a resolutely critical path (McGuirk 2011: 257).

This progressive thinking about urban form and substance represents heightened concern about the consequences of the uneven distribution of wealth in all its forms inherent in neoliberal urbanism. It is therefore a

catalyst for a more thoughtful understanding of socio-ecological urbanisation. In direct contrast to neoliberal mores, progressive thinkers emphasise environmental and social outcomes rather than economic ones. The stance regards the econocratic idea of sustainable development (i.e., growth) as oxymoronic. Political and life choices are grounded in commitment to an interpretation of the environment and people as more than an economic resource, and to social justice. The nature of the social and environmental is given increased emphasis in the progressive politics of urban development, including concepts such as collective consumption and increased interest in environmental protection and reparation (Jonas *et al.* 2011: 2540).

In Harvey's iconic book *Social Justice and the City* (1973: 22) the opening passage suggests that 'The city is manifestly a complicated thing'. Indeed cities are inherently complex but Harvey also argues that our problems can 'be attributed to our failure to conceptualise the situation correctly' (Harvey 1973: 22). Peet (1977: 6) suggests that 'Radical science strips away diversions, exposes existing explanations to criticism, provides alternative explanations which trace the relationship between 'social problems' at the surface and deep societal causes, and encourages people to engage in their own theory construction' (cited in Swyngedouw and Heynen 2003: 906).

For these reasons, urban political ecology is suggested as a useful approach as it 'seeks to make up for the shortcomings of other urban environmental perspectives, by prioritizing the effects that urban political economy has on urban environments' (Heynen 2006: 501). The aim of UPE is to 'expose the processes' that bring about such highly uneven urban environments (Cook and Swyngedouw 2012: 1974; Swyngedouw and Heynen 2003: 906). Its focus is on an integrated and relational approach to the complex economic, political, social and ecological processes that already form highly uneven urban landscapes (Swyngedouw and Heynen 2003: 914), and will continue to shape them in the future until new philosophical approaches are in place. Moreover, UPE 'is becoming increasingly central to emancipatory urban politics and to the resurgent quest for more just socioecological conditions' (Swyngedouw and Heynen 2003: 903).

Urban political ecology is situated within a historical-geographic materialist/radical tradition in which the emphasis is on analysis of the development of the urban environment in both its physical and socio-

political forms (Swyngedouw and Heynen 2003: 902). Its proponents argue strongly for the development of a new space from which socio-environmental visions can be conceptualised, debated, and constructed (Jonas *et al.* 2011; Heynen 2006; While *et al.* 2004: 554). This would entail a heightened awareness and wider acknowledgement of nature-society metabolisms, environmental justice and ecological politics (Jonas *et al.* 2011: 2540; Heynen 2006: 501; Swyngedouw 1996: 67).

UPE scholars have considered and informed an understanding of the spatial distribution of limited urban environmental resources (Swyngedouw and Heynen 2003: 906). However, no framework exists that systematically considers the issues of uneven urban socio-ecological change that relate solely to the spatial patterns of the distribution of environmental amenities formed within urban capitalism. The development of such a framework would be an important step to 'disentangle the interwoven knots of social process, material metabolism and spatial form that go into the formation of contemporary urban socio-natural landscapes' (Swyngedouw and Heynen 2003: 906). In the absence of such a framework, the focus on UPE 'is to enhance the democratic content of socioenvironmental construction by identifying the strategies through which a more equitable distribution of social power and a more inclusive mode of environmental production can be achieved' (Swyngedouw and Heynen 2003: 914).

UPE is distinctly a political focus. It 'is about formulating political projects that are radically democratic in terms of the organization of the processes through which the environments that we (human and non-humans) inhabit become produced' (Heynen, Kaika and Swyngedouw 2006: 2). Concerns have been raised by scholars (such as Peterson 2000; Simons 2008) that UPE is privileging the social scientific dimensions and the ecological dynamics is often inadequately incorporated into the discussion. Simon (2008: 704) expresses concern that a 'growing emphasis on the social constructions of the environment as 'socio-' or 'social nature' have perhaps gone too far and that some 'renaturalisation' might be appropriate'. UPE scholars have responded to these concerns by suggesting that 'urbanisation is very much a process of socio-metabolic transformations, and insisting that the re-entry of the ecological in urban theory is vital both in terms of understanding the urban and of engaging in a meaningful environmental politics' (Heynen, Kaika and Swyngedouw 2006: 3). Heynen (2003: 981) optimistically suggests that the 'tension within and between cities and ecology is becoming less

problematic due to an increased focus on nature/society dialectics (see Castree 1995; Haraway 1997; Smith 1984, 1996).

To summarise, the political economy of the *status quo* is a neoliberal urbanism that provides a framework to deliver technocratic-entrepreneurial visions of the sustainability city. UPE, by contrast, argue strongly for the development of a new space from which socio-environmental visions can be conceptualised, debated and constructed. UPE insists that urban change, like all human development, must recognise ecological limits rather than privileging a growth economy. The urbanologists' overstated belief in technology and reorganising the urban form through technical fixes, without disrupting the *status quo* or power relations, is considered insufficient to progress urban sustainability.

The three key points of tension and contradiction between liberalised and social democratic perspectives of urban sustainability are therefore:

- the theme of the relentless pursuit of economic growth for the sake of human progress
- the theme of technology and its use in addressing environmental sustainability
- the theme of using the built form to deliver environmental sustainability.

The Relentless Pursuit of Economic Growth

The influential *Limits to Growth* (1972) focused attention on the conflict between economic growth and environmental degradation forty years ago. Unsurprisingly, this thesis does not gain support from urbanologists. Kasarda and Lindsay (2011) argue, with the support of the economist Julian Simon, that:

... we are actually living in a world of increasing abundance, made possible by cornucopia of innovations. Commodity prices have fallen across the board for two hundred years – oil, copper, steel, lead, rice, cotton, you name it – thanks to new technologies, more efficient production, and timely substitutions. Simon believed the population bomb was really a boom (p. 340).

Kasarda and Lindsay (2011) therefore suggest innovation, technology, substitution, efficiency and population growth are the required attributes for a thriving society and its longevity. Population growth is seen positively as a driver of economies by virtue of the demand and creative capacity it inserts into the system. For this reason human ingenuity is considered by Simon to be the ultimate resource (Simon 1998, 1996, 1986).

Kasarda and Lindsay (2011) are strong advocates of the aerotropolis model - seeing 'the city is the airport' (p. 414) and emphasising connectivity as the key to 'global efficiency in the name of growth' (p. 413). The city as airport meme emphasises the mobility of human and other resources, along with the exchange of ideas and movement of goods around the globe. There is a strong belief in human ingenuity to solve problems.

Kotkin (2010) also rejects the *Limits to Growth* thesis, and seems annoyed that it has gained adherents:

Nearly four decades later such prognostications have proved at best premature, yet the notion of an inevitable environmental collapse and of profound shortages in basic commodities has, if anything, gained adherents (p. 10).

He suggests *that the*'greatest danger would be to take the notion of inevitable decline to heart and in the process lose the motivation to meet the coming challenges' (p. 11). Rejection of anti-growth attitudes is explicit: 'Why America cannot easily adopt antigrowth attitudes' (p. 214). Ironically, as world population growth has placed increased pressure on ecosystems, 'profit first' has come to be regarded by neoliberals as more necessary than ever. In order to meet the serious global social and environmental challenges, the belief is that the power of profit will motivate innovators and change behaviour.

Brugmann (2009) is also explicit about his affiliation with neoliberalism, and argues enthusiastically that 'cities are fundamentally a market phenomenon with strong entrepreneurial origins' (p. 324). Their burgeoning growth holds no fears for him because density, scale, association and extension are attributes considered essential to the development of entrepreneurial cities. Density increases efficiency for the pursuit of economic opportunity. (The market is everywhere.) Volume increases the opportunity for economies of scale. (You can

supply the market cheaply with plenty of mass manufactured goods.) Association encourages collaboration and interaction among populations. (Interaction increases competition for goods.) The combination of scale, density, and association results in extension by providing the ‘... cost efficiencies and user communities to extend their organized strategies to other cities through infrastructure investments and technology application’ (pp. 27-28). (You can sell all over the world.)

Brugmann’s utopia is evidently that toward which capitalist globalisation is already leading. Attempts at local urbanism that take less neoliberal forms are considered by Brugmann (p. 325), but bottom-up processes are marginalised due to the dominance of the culture of economic growth, which influences even small local government entities. As he writes:

With the expansion, extension, and global integration of markets within the City, local government has increasingly developed forms of what is called entrepreneurial governance, evolving numerous market-oriented practices to create and shape the development of markets directly (p. 325).

For new urbanologists, this is highly desirable and part of what Florida (2011: 39) describes as a reset, and writes of as a cycle of five distinct phases:

- Initially, institutions fail to some degree and spending is reduced;
- The second stage involves the development of new innovations into the market;
- Thirdly, new technologies emerge and are selected by entrepreneurs to create bigger and better technological systems;
- Fourthly, a new economic landscape is created through the new public and private investments in energy, transportation, and communication infrastructure.
- The last stage is the spatial fix that realigns the new economic landscape with improvements to the productive capacities of the underlying economy.

This new landscape:

... provides nothing less than the physical representation of a new way of life, unleashing powerful new kinds of consumption that can drive economic growth (Florida 2011: 39).

Entrepreneurship is critical in redefining this new reset, an idea that corresponds to Bruggmann's (2009: 39) thoughts on the 'strategic city' in which entrepreneurial interest and talents create shared and stable forms of advantage. The emphasis is on the development of a new economic landscape to define the new reset. Features include the application of new and better technology, connectivity, improved efficiency of productive capacities, and consumption to further power economic growth.

Glaeser (2011) is also a strong believer in the market. Through market mechanisms, he envisages achieving 'smarter environmentalism' (p. 220). Price incentives, for example, offer a chance to use the market to change behaviour. The congestion tax is cited as one example of 'using prices to get people out of their cars' (p. 221); and the subsidization of fuel efficient technologies encourages their adoption worldwide.

Glaeser emphasises the benefits of living in cities for both society and the environment, and sees a carbon tax as the most straightforward way of addressing climate change. He argues that anyone whose lifestyle produces a higher environmental impact should pay a greater impost. Those who choose to live in suburbs, for example, should realise that this choice has an environmental cost and be made to pay for 'the true costs and benefits of suburbanization' (p. 268). He believes that:

If energy users are taxed for the social costs of their actions, then they'll use more fuel-efficient cars and live in more energy-efficient houses. They'll also find energy-conserving big-city life more appealing. By not taxing energy use properly, we are implicitly subsidizing energy-intensive suburban lifestyles and pushing people out of cities (p. 268).

Market mechanisms that create a price incentive to change human behavior are seen as critical to address the issue of climate change.

In summary, Glaeser (2011), Bruggmann (2009), Saunders (2010), Kotkin (2010), Florida (2011) and Kasarda and Lindsay (2011) currently

dominate the literature on urban economic development. They are enthusiastic promoters of the strategic city and the concept of growth as desirable and essential in order to maintain Western lifestyles while lifting the prospects of less advantaged people worldwide. Their advocacy of growth resonates with neoliberal urbanists who view human progress as a function of entrepreneurialism and the growth of cities a natural outcome of human development. They are sanguine about the human capacity to solve problems, and express very limited concern for the natural environment, from which they hold humans apart.

Technology and its use in Addressing Environmental Sustainability

Urbanologists are enamored with technology. It represents human ingenuity and achievement, and offers hope for a global future filled with a projected nine billion people.

Joel Kotkin (2010: 15) predicts that the addition of another 100 million people to the population of the USA over the next forty years will bring enormous benefit to that nation. He does not locate this population in cities, however, but envisions a suburban utopia (Kotkin 2010: 16). Believing that Americans cannot, on the whole, be convinced to forgo their cars or suburban yards and gardens to live in densely packed cities, he has transferred the urbanologists' enthusiasm for technology and growth to the suburbs.

Although Kotkin feels that there will always be highly desirable and functional large cities, he argues that the age of the 'greenurbia' is in the offing, and will be enabled by technology. He envisages suburbs adopting many of the characteristics of cities, becoming the focal point of innovations and development that will facilitate the reorganisation of work. Kotkin (2010) argues that:

... innovative technologies, and new ways of organizing work, may provide the key to achieving both economic growth and environmental sustainability (p. 215).

He imagines telecommunications creating opportunities to economically revitalise

...long distressed communities – in the scenic Appalachian belt, or in attractive older neighbourhoods in former industrial cities – to find new ways to create higher-wage jobs (p. 237).

He argues that market signals will inspire innovations like energy efficiency, changes to the built environment and new waste management tools and processes that will allow suburbs to coexist with the environment. Market mechanisms such as higher energy prices, for example, will discourage the use of private cars or the development of more efficient cars, which will ease the burden on the environment (Kotkin 2010: 234).

Concepts of ecological modernization and smarter environmentalism are mutually supportive of both economic development and adaptation to environmental stresses. Like Kotkin, Glaeser emphasises such approaches and points to examples of fuel-efficient technologies and more energy efficient homes as developments that would maintain the *status quo* in terms of consumption and support further interaction with the world economy and world ecology.

Similarly, Kasarda and Lindsay (2011) tolerate no uncertainty that an aerotropolis represents the way we will live next. Cities built upon the aerotropolis model will be ‘dense, smart, green’ (p. 358); ‘..studded with chips talking to one another, running the place by remote control’ (p. 4). They suggest that the Internet will be the next big utility:

If you hook cities up to the right mix of sensors and software, their thinking goes, who knows what efficiencies might be revealed? When buildings, power lines, gas lines, roadways, cell phones, residential systems, and so on are able to talk to one another, that information can expose hidden patterns of waste and ways to avoid it. Just as wiring made corporations leaner and meaner, wiring cities may be one way to tease efficiency out of dumb networks like the power grid (p. 357).

Aerotropolis designs related to human interaction with the environment, however, reflect an urban governance centred on economic development and an enthusiasm for innovation, technology and growth. Like Kasarda and Lindsay (2011), Glaeser (2011), Florida (2011) and Kotkin (2010) advocate managerial philosophies that are reflective of this focus on

economic development. Proposed solutions emphasise eco-efficiency (smart grids, fuel-efficient technologies and more energy efficient homes), greater technological cooperation (smart cities, innovative technologies to organise new ways of working from home) and the application of market mechanisms (green taxes and incentives).

Technological fixes to the built environment to readdress environment problems are the deeply held beliefs of the urbanologists. The operationalisation of concepts such as ecological modernisation and smarter environmentalism requires only minor adjustments to capitalist structures and processes. 'Smarter environmentalism' does not include acknowledging the intangible worth of the environment or protecting it (Mikler and Harrison 2012: 182; Orsato and Clegg 2005: 253). Eckersley (1995) acknowledges that market based instruments can 'provide a means of overcoming the inefficiencies of traditional environmental administration' (p. 11). However, the urbanologists do not provide an adequate or even appropriate response to critical environmental issues.

Using the Built Form to Deliver Environmental Sustainability

Population density is a key element of new urbanologist thinking. Even Kotkin (2010: 215), who advocates growth in structurally less dense suburbs, believes that population growth is compatible with green cities and environmental sustainability.

Brugmann (2009) argues that the built environment has the capacity to deliver positive environmental and economic outcomes. He outlines solutions for reducing carbon emissions, for example, in the context of more than new technology or new efficiency standards. He suggests that cities will be able to change their basic energy metabolisms by combining

...technology, design, form, planning, business models, infrastructure, partnerships, and behaviour change to advance how the citywide energy system works (p. 196).

Concepts such as the alteration of a city's energy metabolism highlight the fact that, for urbanologist thinkers, large densely constructed cities represent an economic efficient form. This is delivered through the

dynamic synergies between components, such as the inhabitants and their energy sources, that are not possible in less densely populated locations. Glaeser concurs with Bruggmann and emphasises the correlation between density and sustainability:

If the future is going to be greener, then it must be more *urban* [emphasis added]. Dense cities offer a means of living that involves less driving and smaller homes to heat and cool (Glaeser 2011: 222).

The agglomeration of people in the planned, built environment of a strategic city appeals to urbanologists as the most cost efficient way of managing large, resource hungry populations and reducing their burden on the environment. They take issue with environmentalists who seek to preserve open space in cities, arguing that failure to fill the whole of a city's footprint encourages the spillage of humanity into the countryside:

The alleged environmentalists who suffer from the Lorax fallacy and fight high-density development close to urban cores in order to preserve local green spaces are ensuring that development will move to the exurban fringe and that people will drive more (Glaeser 2011: 221).

High population density, as reflected upon by Glaeser (2011), means that cities are easy to manage and to service, while technological innovation enables the integration of a city's resident population and the interconnectivity of one megacity with another. Commerce will, of necessity, be enormous because of the sheer volume and dynamic interaction of so many diverse human needs and wants, due to ongoing innovation and growth.

A lack of natural open space in a city appears to be of little concern to urbanologists, who see concept cities, such as aerotropolises, as 'dense, smart, green' by default (Kasarda and Lindsay 2011:358). Manhattan is provided as the example to illustrate their argument that cities in the future will be more green for the same reason Manhattan is green today - population density.

Florida (2011) concurs, writing that:

... the key to New York's greenness is simple: density, the very same thing that promotes innovation and speed (p. 153).

He suggests that the metabolism of successful cities is measured in terms of trends in innovation, patent activity, wages and GDP, and that the larger and more dense they become, the faster cities will grow. This is because larger, denser cities foster innovation and entrepreneurship that drives economic growth. The result for urbanologists is a virtuous cycle of wealth making accompanied by human and environmental well-being.

Greenness, for Florida (2011), is based on a simple analysis: 'enable people to walk, bicycle, or take public transit to accomplish their day to day routines' (p. 153) and allow larger cities to use existing infrastructure such as buildings, offices, roads, transit lines, and energy lines more efficiently. He draws on an article from his own research institute, The Martin Prosperity Institute at the University of Toronto's Rotman School of Management, and data from the Santa Fe Institute to claim that '...energy metabolism of metropolitan areas slows down as they increase in size: larger regions burn less energy per capita than smaller regions do' (Florida 2011: 154).

Population growth and large cities therefore hold no fear for urbanologists. Florida even goes so far as to celebrate the potential for the growth of mega regions where major cities become combined physically, including their suburbs; for example, the cities and their attendant regions along the American east coast from Boston to Washington DC. At this scale, the demographic diversity, business and creative base, levels of activity and interactivity are envisaged as combining to produce the most efficient and productive built environment and economy.

It is assumed by each of the aforementioned thinkers that nothing in the natural environment threatens human progress. Nor does what they identify as human progress threaten the natural environment. Indeed, in their vision of the future, population growth and the rise of megacities will benefit both mankind and the natural world.

Critique

The ideas of the new urbanologists are in fact neither revolutionary nor new. The belief espoused by urbanologists is situated within the *status quo*, neoliberal urbanism, in that economic growth, preferably efficient and productive, can continue within our cities, fuelled by population and without danger to the environment.

This new popular urban literature dresses the familiar economic, social, technological and environmental discourse of the last thirty years in new urban clothes. However, it does not address the contradictions and limitations embedded in commonplace sustainability and urban development thinking. Critical social scientists have repeatedly refuted the neoliberal vision of utopia, pointing to the inherent inequalities, the lack of awareness of social justice, the commodification of creativity, and the separation of urban dwellers from the natural environment encouraged by the market focus of the urbanologists (Gleeson 2012: 936; Gleeson 2010: 106; Gleeson 2009: 165; Hamilton 2010: 32; Hamilton 2003: xvi; Harvey 2010: 78; Harvey 1997: 68). Overstated technology solutions of the aerotropolis model have also been scrutinized for their limitations in regards to long term sustainability 'viz, energy provisions, the security of critical infrastructure and export pathways' (Charles *et al.* 2007: 1009). The environmental outcomes of telecommuting are not as simplistic as presented by the urbanologist: greater locational flexibility provided through telecommuting in some instances actually increases total transport miles to work (Zhu 2012: 1; Moo and Skaburskis 2007: 1781).

The neoliberal and liberal discourse heightens threats to sustainability, endangers biodiversity and is largely indifferent to ideas of social justice. Critical social scientists contend that the dominant form of the capitalist system is at the root of current problems arising from the depletion of natural resources and the interruption of the earth's ecological balance (Liodakis 2001: 121-122). So, an ideology that legitimises this economic system becomes part of the problem. It accepts, even celebrates, the processes of economic growth that have historically had catastrophic impacts on the environment and caused massive social upheaval after periods of seemingly benign economic and social success (Diamond 2005: 486). There are no simple spatial fixes for evolutionary dilemmas. The underlying causes of environmental threat in market societies and the tendency for uneven social development and overproduction inevitably flow from the 'growth fetish' of contemporary political economy (Gleeson 2010: 71).

Urban political ecologists are increasingly troubled that nature is more and more treated as a commodity, and 'reified as an exchange value, so much that this becomes the prevailing ideology of nature' (Prudham and Heynen 2011: 227). In the urbanologists' new urban literature, nature is not understood outside capitalist dynamics of production, circulation and

exchange. The attempt to reconcile capitalism with environmentalism emphasises market mechanisms, such as the carbon tax, green entrepreneurialism and the 'enterprising up of conservation initiatives as and for profit-making purposes' (Prudham and Heynen 2011: 227). Challenging this market-centred approach, urban political ecologists have argued for a political economy that incorporates a scope of environmental change and environmental politics (Dryzek 1996: 27). Scholars like Smith (1984, 2011) and O'Conner (1994) concur and add that contemporary political economy must deal with the 'misadventures of capitalist nature' (O'Conner 1994) as a constitutive aspect of capitalism in general (Prudham and Nik Heynen 2012: 229).

Moreover, urban political ecologists argue that technological fixes will not deliver sustainable environments since they depend on the continued removal of resources from the environment and conceive of ecological degradation as a situation that can be 'fixed' through market forces (Harvey 1997: 68). A market-based response to sustainability does not, however, ensure a critical level of natural capital. Nor does it encourage less consumption, or address distributional concerns (Gleeson 2012: 936; Gleeson 2010: 106; Hamilton 2010: 32; Hamilton 2003: xvi; Harvey 2010: 78). It would appear that urbanologists are misguided optimists with little appreciation of environmental and economic history or human nature.

The bravura and optimism of the urban commentary cannot hide the sobering realities of the manifest contradictions and crises of the contemporary global economy, and the continuing escalation of the sustainability crisis (Smith 2011: 264). The preferred urban models fail to account for the effects of rising global emissions, water shortages, increasing inequality, and rampant consumption. The picture of a 'boundless vista of unlimited resources for an affluent society' (Gottman 1961: 71) is as unrealistic for the future as it has been for the past. The 'urban age', if anything, signals not a brave new world for humanity but a 'planet of slums' (Davis 2007) for many and a new level and form of species crisis (Zizek 2010).

The new urbanologists do not progress the debate on sustainable cities. Rather, they provide an extension of the current neoliberal and liberal dreams of a market-based utopia. It is, therefore of deep concern that the new urbanology is exercising a great deal of influence. Critical social science scholarship needs to challenge it by deepening and extending

intellectual engagement with the political economy of capitalism in relation to the dynamics of environmental change and uneven spatial development.

Conclusion

We have argued that, despite rhetoric promising an urban revolution, the new urbanology tends to support the political economic *status quo* and thus to mask its contradictions and failings. The posited 'revolution' changes nothing fundamental while augmenting those elements of the neoclassical economic outlook, such as the market, technology and growth that are axiomatic in the neoliberal worldview.

There is not now, and never has been, a boundless stock of resources for an inventive and rapacious species to use for unlimited growth. Nor can technology solve a problem that is caused and maintained by the elemental human forces that both bind and divide us: a desire for security, comfort, entertainment, mobility, communication, shelter, food and water. The attainment of these ends is always a social question.

At first glance the new urbanologists' narrative appears attractive. The writers are forward looking and optimistic; and their brightly articulated visions seem exciting. The belief in technology and in the power of human creativity to solve social, economic and environmental problems encourages feelings of confidence. A strong measure of voluntarism is evident: readers are encouraged to believe that action by 'community leaders' is steadily driving progress towards the ideal of sustainable urban development. The structural circuitry of power is cheerfully ignored.

The ideas and vision are not revolutionary, however. They spring from a blind faith in human ingenuity that locates our species outside the natural environment and which assumes immunity from natural or material limits. Faith in a mechanistically reliable market is deeply held. Ultimately, the urbanology narrative is an old tale written in a new way that disguises the fact that there is no revolution planned or even 'naturally imminent'. It does not question current power structures, dominant attitudes toward economics or population growth, the fundamental rationale of business and industrial organisations, or the manifest fragility of environment. It is, in short, an expression of conventional wisdom, not radical thought.

From this perspective, the urbanology narrative is an attempt to convince consumers of the power of ‘clever’ and urbane capitalism to transform for the better a world endangered by the deep and unyielding contradictions of market relations. The story eschews the ever compelling evidence of these destructive contradictions, especially the manner in which the accumulation process erodes the natural capital upon which it ultimately must depend (Harvey 2012). The urban age may well be a dangerous moment of species evolution, not the revolution in human prospects that some hope for.

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