**Beyond entrepreneurial cities: towards a progressive grassroots urban politics of climate change and resource constraint.**

**Introduction – the entrepreneurial city.**

This paper examines what recent concerns with climate change and with looming ecological overshoot mean for urban political economy, and the effectiveness of grassroots urbanism as a response to it. The paper argues that given the pervasiveness of the ‘entrepreneurial thesis’ of urban management, alternatives to ‘growth’ as the objective of local economic development policy are unlikely to be persuasive in the eyes of urban managers, but catalytic of grassroots approaches that are developing new, if currently unpersuasive, conceptions of the sustainable city. Drawing on conceptionalisations within economic geography of ‘diverse economies’ developed by JK Gibson-Graham (2006a,b) and others, the paper argues that it *is* possible to engage in a local politics of economic development that critiques unsustainable forms of ‘growth’ and rethinks what ‘prosperity’ means in low carbon ways ([Jackson, 2009](#_ENREF_82)). We argue that this opens up a space for a progressive urban politics of resource crises and climate change that characterisations either of ecological modernisation (Mol, Sonnenfeld et al. 2009) or of capitalism as inherently ecocidal ([Foster, 2002](#_ENREF_47); [Kovel, 2007](#_ENREF_86)) would occlude.

The paper works from the perspective that conceptions of ‘urban entrepreneurialism’ ([Hubbard and Hall, 1998](#_ENREF_76); [Oatley, 1998](#_ENREF_119)) that emerged through the urban crises of governmentality and stagflation after the 1973 oil shock as the post-war Keynesian settlement began to unravel and be challenged by a new right committed to the ‘rolling back’ of the state ([Peck and Tickell, 2002](#_ENREF_128)) are hegemonic, but need to be and are being challenged from the grassroots. The entrepreneurial cities thesis suggests that cities must now compete for mobile capital in an environment where cheap communications technologies and fuel meant that capital could increasingly seek a ‘spatial fix’ to problems of profitability by moving to places where labour costs are cheaper and levels of labour and environmental regulation lower ([Harvey, 1992](#_ENREF_63)). Often the perception that capital can move if its needs are not met is enough - no threats need to be made, no often expensive and locally integrated plant dependent on local supply lines actually uprooted and moved. Politicians, local and national, have internalised this discourse of powerlessness, arguing that they can’t stop firms moving. All they can do, they argue, is make the transition from industrial to post-industrial economy as smooth as possible and make sure their residents benefit from what they regard as the only feasible source of new jobs and opportunities.

According to this discourse cities must make themselves as attractive to footloose international finance as possible, forgoing any ‘costly’ social programmes likely to be seen as a burden on business ([Peterson, 1981](#_ENREF_130)). They have to follow the logic of urban competition by making their labour costs as competitive and regulations as light as possible, providing infrastructure, and making administration business friendly. Business competitiveness, rather than social justice and citizenship, is the logic of entrepreneurial urbanism. Inward investment is privileged above endogenous growth from existing businesses. The image of the city is changed to make it as attractive as possible for business ([Roberts and Schein, 1993](#_ENREF_137); [Short et al., 1993](#_ENREF_141)), or, more recently, for the new ‘creative class’ who, through cultural innovation, are seen as the drivers of postmodern, information based capitalism ([Bianchini and Parkinson, 1993](#_ENREF_15); [Florida, 2004](#_ENREF_46); [Peck, 2005](#_ENREF_125)). Cities have to be change agents, not just social structures ([Cox and Mair, 1991](#_ENREF_40)).

Consequently, a major role in urban governance, in the US especially, is given variously to land-based ‘growth machines’ focussing on the realisation of the maximum return from downtown urban real estate ([Cox and Mair, 1989](#_ENREF_39); [Harding, 1991](#_ENREF_62); [Jonas and Wilson, 2000](#_ENREF_83); [Lloyd and Newlands, 1988](#_ENREF_92); [Logan and Molotch, 1987](#_ENREF_93)) or to more diffuse urban ‘regimes ([Dowding, 2002](#_ENREF_43); [Lauria, 1997](#_ENREF_90); [Stone, 1989](#_ENREF_145), [2001](#_ENREF_146); [Ward, 1997](#_ENREF_152)) which are able to develop a consistent urban narrative of place and a governing coalition enabling it to be successfully delivered. In the UK, cities have seen a greater involvement of business ‘movers and shakers’ in urban governance ([Bennett, 1998](#_ENREF_13); [North et al., 2001](#_ENREF_118); [Peck, 1995](#_ENREF_124); [Peck and Tickell, 1995](#_ENREF_127); [Valler et al., 2000](#_ENREF_149); [Wood et al., 1998](#_ENREF_155)). A number of initiatives from Urban Development Corporations ([Imrie and Thomas, 1999](#_ENREF_80)), companies and partnerships all aimed to inject private sector influence in urban policy making ([Hastings, 1996](#_ENREF_67); [Mackintosh, 1992](#_ENREF_98)). Urban entrepreneurialism is now ubiquitous ([Bassett, 1996](#_ENREF_11); [Cochrane et al., 1996](#_ENREF_32); [Hubbard, 1996](#_ENREF_75); [Kenny, 1995](#_ENREF_85); [Quilley, 1999](#_ENREF_133), [2000](#_ENREF_134); [Ward, 2003](#_ENREF_153)). Even late starters like the city in which we live and work, Liverpool, a city whose Militant-led council that in the 1980s symbolised the antithesis to the entrepreneurial thesis ([Frost and North, 2013](#_ENREF_50); [Parkinson, 1985](#_ENREF_122); [Taafe and Mulhearn, 1988](#_ENREF_147)), have now engaged with the new de rigour through its status as ‘capital of culture’ ([Jones and Wilks-Heeg, 2004](#_ENREF_84)).

While ubiquitous, the paradigm is not without its critics. It has been objected that multinational business is more locally embedded and less mobile than it says it is ([Cox, 1997](#_ENREF_37), [1998](#_ENREF_38)). Better welfare outcomes might be generated by concentrating on developing endogenous business than providing corporate welfare to multinationals who provide relatively few jobs ([Scott Cato, 2004](#_ENREF_138)). What happened to cities that tried to compete and failed? Sheffield, for example, found that winning the World Student Games in 1991 was a mixed blessing, while its museum of pop music failed. Failed companies, perhaps, can disappear, but cities cannot ([Bernt et al., 2014](#_ENREF_14); [Rink et al., 2012](#_ENREF_135)) and it is simplistic to assume that a city can be conceptualised as ‘competitive’ or not in the same way. Urban strategies, focussing on welfare, social inclusion or the environment, are side-lined by an unelected urban elite. Real problems, poverty, job creation, would be displaced in the public imagination ([Mooney, 2004](#_ENREF_107)). ‘Difficult’ conceptualisations of urban identity, for instance (in our case), that of the unruly, probably criminal scouser, would be occluded ([Boland, 2008](#_ENREF_19)). Rather, John Lovering ([1995](#_ENREF_95)) famously argued that all entrepreneurialism generated was vacuous mission statements about place that could not be differentiated from each other ([Griffiths, 1998](#_ENREF_59)). Jamie Peck and Adam Tickell (1998) pointed out that the real generators of urban strategies remained local authorities, with local business elites being deployed strategically to provide an illusion of partnership and consensus around local strategies

But in its own terms, the entrepreneurial thesis did seem to revitalise the city centres of cities in which it was deployed, if by revitalisation we mean providing jobs in the tourism, finance and knowledge economies inaccessible to those who had lost them in manufacturing ([Harvey, 2001b](#_ENREF_66)) or by increasing visitor numbers and the perception of cities as having ‘turned a corner’. Outside the city centre, often little changed. Part-time minimum wage casual jobs replaced full-time unionised jobs. Many poorer parts of the city were passed-by through these processes of uneven development ([Beazley et al., 1997](#_ENREF_12); [Boyle and Hughes, 1994](#_ENREF_20); [MacLeod, 2002](#_ENREF_100); [Mooney, 1999](#_ENREF_106); [Smith, 1996](#_ENREF_143)), or worse, saw social investment in their services decline to pay for new conference centres and capitals of culture (Boland, 2010; Jones and Wilks-Heeg, 2004). Places bypassed by revitalisation would be subjected to social control to civilise or weed out those who do not fit the new expectations ([Coleman and Sim, 2000](#_ENREF_34); [Ward, 2003](#_ENREF_153)). Some communities did challenge the new urban logic, organising to defend their community services ([Ferman, 1996](#_ENREF_45); [Mooney, 2004](#_ENREF_107); [Mooney and Poole, 2005](#_ENREF_108)), but credible alternatives seemed to lack the same plausibility in the eyes of urban leaders, if they were held in higher esteem in the academy ([DeFilippis, 2004](#_ENREF_42); [Imbroscio, 1997](#_ENREF_79); [Peterman, 2000](#_ENREF_129)). The local socialist and progressive urban strategies of the 1980s ([Alcock et al., 1989](#_ENREF_4); [Boddy and Fudge, 1984](#_ENREF_18); [Clavel, 1986](#_ENREF_30); [Mackintosh and Wainwright, 1987](#_ENREF_99)) were eclipsed and neoliberal urbanism seemed dominant. The advent of the credit crunch of mid-2007 and the following recession if anything made the re-ignition of urban growth a priority.

**Cities, climate change and the ecological crisis**

If the crises of stagflation and urban governmentality did seem to some extent seem to have been overcome by the entrepreneurial conceptionalisation, two new urban crises have more recently emerged – climate change and ecological overshoot – which challenge the perception that ‘growth’ should uncritically be the object of urban strategies if it leads to unsustainable levels of greenhouse gas emissions or is dependent on resources that are being unsustainably depleted (Gibbs, 2002). While a poor environment and dealing with wastes has been a problem since the dawn of urbanisation, anthropogenic climate change emerged more centrally as an issue through the 1990s as global long-series temperature readings and observable extreme weather events all suggested that the planet is warming (IPCC, 2013), perhaps dangerously ([Anderson and Bows, 2011](#_ENREF_7); [Lovelock, 2006](#_ENREF_94)). The International Panel on Climate Change ([IPCC, 2013](#_ENREF_81)) suggested that there is a consensus about the dangers of dangerous climate change, and that emissions of greenhouse gasses need to be cut by at least 80% by mid-century. What would be the implications of this for cornucopian conceptions of urbanism that stressed unlimited global urban competition based on externalised fossil fuel used and greenhouse gas emissions? This is a problem at a higher level than protecting or enhancing urban environments and handling the disposal of wastes: it goes to the heart of the long-term viability of human civilisation. It needs a new economic ethics for the anthropocene ([Gibson-Graham and Roelvink, 2010](#_ENREF_57)).

If there was a consensus on the danger of runaway climate change, another set of problems began to emerge about which there was more contestation. Ecologists had long argued that there were ‘limits to growth’ in a closed ecological system like the planet Earth ([Meadows, 1974](#_ENREF_103)), while more optimistic critics argued that technological progress would enable growth to continue in sustainable ways ([Cole et al., 1973](#_ENREF_33)). By the turn of the twenty-first century, ‘limits’ theorists argued that the planet was finally coming up against some of these long predicted limits ([Meadows et al., 2005](#_ENREF_104)), while theorists of ecological footprints argued that the ecosystem was unable to provide resources for, and absorb the wastes from, a lifestyle as resource intensive as that in the global North if it was adopted by everyone on the planet ([Wackernagel and Rees, 1996](#_ENREF_151)). ‘Peak’ theorists ([Heinberg, 2004](#_ENREF_68), [2007](#_ENREF_69); [Kunstler, 2006](#_ENREF_88); [Roberts, 2004](#_ENREF_136)) argued that the planet did not have the resources necessary to power carbon-based growth indefinitely, and that we were close to the peak of production for oil in particular. Peak theorists did not argue that key resources would soon be completely unavailable, but that they would soon be scarce and that their price would therefore rise. For a time in 2007, with oil hitting $147 a barrel, ‘peak oil’ was highly relevant, although the subsequent crash of the oil price to below $40 a barrel as a result of a number of factors (geopolitical, increased refining capacity, the global recession cutting demand) took peak oil out of the headlines. Despite this, peak theorists continue to argue that the underlying conditions are unchanged, and that price volatility is to be expected ([Heinberg, 2008](#_ENREF_70)). Some peak theorists expect that resource constraints mean that complex carbon-based resource intensive forms of society do not have a future: they will inevitably unravel ([Greer, 2008](#_ENREF_58); [Homer-Dixon, 2006](#_ENREF_73)). We have, they argue, two options as a society: to prepare for life post-oil which could be more enjoyable, ecologically sustainable and inclusive than growth-based urbanism ([Astyk, 2008](#_ENREF_8); [Hopkins, 2008](#_ENREF_74); [Murphy, 2008](#_ENREF_109)); or enter a new age of conflict over resources and of increasing global inequality. These perspectives change inspired new social movements such as direct action against those responsible for dangerous climate change, and the transition towns movement which looked to develop sustainable post carbon livelihoods ([Bailey et al., 2010](#_ENREF_10); [North, 2011b](#_ENREF_116)).

Resource constraints and climate change are fundamental challenges to cornucopian conceptions of entrepreneurial urbanism based on never-ending growth underpinned by externalised greenhouse gas emissions, and cheap fuel and communications technologies. Sustainability in terms of ecological limits was not a concern, as long as growth was sustainable in terms of being maintained over time. Entrepreneurial urbanism assumed that manufacturing would be outsourced to places in the global South with lower environmental standards, and the carbon embodied in goods produced elsewhere would not be considered. Emissions as a result of transporting goods to the North were ignored, as were those of businesspeople and citybreakers flying to cities to partake of the cultural festivals generated by the new urbanism. Airports would be expanded, travel made easier. The fundamental tension between urban strategies built on carbon intensive travel and consumption, with emissions externalised and fuel cheap, and ecological limits was not recognised at all. Few cities have engaged with the implications of climate change for local economic development sustainability in a meaningful way, although some are a little more progressive than others ([While et al., 2004](#_ENREF_154)). Even fewer have engaged seriously with the implications of peak oil ([Lerch, 2007](#_ENREF_91)). It is not serious politics to imagine a city might positively embrace degrowth and shrink ([Bernt et al., 2014](#_ENREF_14)): even Detroit hangs on past disinvestment, bankruptcy and the reintroduction of urban agriculture next to the former city centre.

There are a number of conceptualisations of how cities should adapt to the climate and ecological crises. Conventional discourses of sustainable development growing out of the Brundtland report look to balance economic growth with social inclusion and environmental protection ([Gibbs, 2002](#_ENREF_52)), although there are questions as to how this ‘balancing’ is used a means to justify economic responses ([Krueger and Gibbs, 2008](#_ENREF_87); [Owens and Cowell, 2002](#_ENREF_121)). More thorough transformation is envisaged through ecological modernisation, where the economy is *switched* from an industrial to an ecological mode which pays attention to its resource base through the diffusion of clean technologies ([Gibbs, 2000](#_ENREF_51)). The third wave conceptualisation of ‘smart growth’ looks to identify ways to grow economies that are emissions light ([Krueger and Gibbs, 2008](#_ENREF_87)). Critics debate the extent that capitalism can be greened: for some it includes the seeds of its own destruction in its capacity to destroy the environment on which it depends ([Foster, 2002](#_ENREF_47)), while others have more faith in what even Marx celebrated as the creativity of capitalism. For them, solving problems associated with climate change and resource crises will become a new accumulation strategy underpinning continued capitalist development ([Buck, 2006](#_ENREF_22)). However, while many cities have embraced a local politics of climate action in more or less strategic ways ([Bulkeley, 2010](#_ENREF_24); [Bulkeley and Castán Broto, 2013](#_ENREF_26); [Castán Broto and Bulkeley, 2013](#_ENREF_29))relatively little attention has been paid to what climate change and resource crises means for local economic development strategies. Apart from David Harvey’s (1996:401) engagement with ecological modernisation and environmental justice little thought has been given to how climate change and peak oil might be integrated into progressive local economic strategies in ways similar to those in which social justice was at the core of progressive local strategies adopted by some local authorities in the 1980s. This paper aims to fill out what a grassroots inspired progressive urban strategy might look like that combines the creation of resilient, resourceful and vibrant urban livelihoods with what we need to do to avoid dangerous climate change.

**The nature of the problem.**

It is necessary to understand the interconnectedness of the climate change and resource constraint issues: they are normally examined separately. Peak theorists and social movements argue that many technologically-advanced solutions to climate change may come up against resource limits: for example, supplies of lithium for electric car batteries, uranium for nuclear power stations. They argue that an economy collapsed as a result of having run up against fundamental resource constraints, rather than a lack of credit, might not be the best form of economic organisation to facilitate the generation of solutions to climate change. On the other hand, peak oil can be assuaged by accessing unconventional hydrocarbons or through biofuels, but the result is higher carbon emissions. The two problems need to be seen as intertwined: resource constraints suggest that the ecosystem is reaching limits to the quantity of inputs it delivers to our economies, while climate change is the result of the planet being unable to absorb the waste products of complex urban society. Resource constraint means we may not have the hydrocarbons we need to power our cities as they are currently organised, while climate change means we can’t continue to emit as many greenhouse gasses as we do. Any urban progressive urban strategy advocated by the social movements would understand this.

The second problem is one of scale. Which initiatives at an urban scale can be taken will make a difference to what is a planetary problem, and which are likely to prove to be irrelevant or merely cosmetic if they do not connect to the global processes whereby resources are transformed into commodities that are circulated around the globe, consumed, and eventually discarded ([MacKinnon and Derickson, 2013](#_ENREF_97))? On one hand, all greenhouse gasses are emitted somewhere, so it obviously makes sense to limit them at source – locally ([Agyeman and Evans, 2004](#_ENREF_2)). Cities are sources both of emissions *and* innovation, as the status of many cities as beacons for environmental innovation attest. Cities can inherently be very sustainable, cutting transport as a result of proximity, and able to provide high quality public services that enable quality lifestyles to be enjoyed without the need for individual consumption. On the other, local action suffers from the free rider problem and from the tragedy of the commons. Olson’s free rider problem of collective action ([Olson, 1965](#_ENREF_120)) suggests that the costs of successful collective action – here limiting consumption, perhaps generating fewer jobs or limiting growth - are paid only by those who engage in collective action. The benefits of successful direct action – here a sustainable economy with dangerous climate change avoided – will be shared by all, irrespective of whether they paid the costs of participating in collective action or not. So it is in my interest not to limit my own personal consumption, as the strategy will not succeed unless enough people do participate. If enough people do participate, I can free ride. If not enough people participate, and the movement does not succeed, then I will have paid the costs and get none of the benefits. I will have forgone consumption, but dangerous climate change is not avoided. Secondly, the well-known tragedy of the commons also applies. I get all the benefits from consumption, while the disadvantages are shared by all, until the whole system collapses. If I refuse to fly, I pay the costs and seem to get few benefits. At the level of the urban system, an urban leader who thinks that by forgoing consumption he is likely to pay the costs of collective action while perceiving no benefits, and will have to defend not creating jobs, will find the prospect unattractive.

Local action needs to be collective, not individual, and alongside action at other scales. Climate action is a multi-scale phenomenon ([Bulkeley, 2005](#_ENREF_23); [Bulkeley and Betsill, 2013](#_ENREF_25)): radically cutting or avoiding consumption very locally with no attention to unsustainable practices at other scales and in other places seems at best misplaced, at worst can seem like the problem is being addressed locally while local effects are wiped out elsewhere – the local trap ([Brown and Purcell, 2005](#_ENREF_21)). Climate and resource politics needs to engage with local urban politics and global negotiations, with inequalities between places and with the right to development in a resource constrained world ([Baer et al., 2007](#_ENREF_9)). It needs to understand the relation between places and economies, and responsibilities between local places for global problems ([Massey, 2004](#_ENREF_102)). For example, action to mitigate oil shortages in the global North through the development of biofuels and ethanol had catastrophic repercussions for global food prices. Cool northern latitudes might be short term winners from global warming, while some for some vulnerable communities in the global South climate change is not a problem for the future, but a survival problem for today. Local action therefore needs to be balanced with a geography of responsibility, an understanding of the effect it has on people far away and in the future.

The third problem for developing a progressive urban politics of climate change and resource constraint is one of measurement and temporality. How much climate change is mildly beneficial in some places, catastrophic in others? What do we have to stop doing to avoid the catastrophic everywhere, and is catastrophic heating of above 2oc or CO2 levels of more than 350, or 450 ppm ([Hansen et al., 2013](#_ENREF_61))? How difficult are things likely to get ([Hansen, 2009](#_ENREF_60))? Climate science suggests that there are ‘tipping points’ when climate processes change radically, literally in months, from one state to another ([Lynas, 2007](#_ENREF_96); [Pearce, 2007](#_ENREF_123)): how do we know if we have avoided tipping points? Given that we know that considerable warming is inevitable as it is still in the system but has yet to be experienced, how much of a change should we make and when – and how will be known, locally, if what we are doing is enough? Measuring the unmeasurable and unpacking local from global effects is difficult and problematises the development of urban strategies which we can be sure are making a real difference, as opposed to feel good gesture politics which covers up the fundamental unsustainability of contemporary urbanism ([Blühdorn, 2007](#_ENREF_17)). While we can count emissions and allocate carbon budgets, it is difficult for any one actor to know if they are doing enough, in relation to what everyone else is doing. Without equality of effort and sacrifice, just sustainability, there will continue to be a perception that those in the global South who have little historical responsibility for in-the-system warming and who are sometimes suffering from the effects of climate change now are expected to forego development. Any progressive strategy must ensure equality of contribution to maintaining the global environmental commons (Agyeman and Evans 2004:160-161).

**Adapting to the inevitable or mitigating the worst excesses?**

Any progressive strategy for dealing with climate change must include both adaptation (adapting to changes that are inevitable given warming that is already in the system) and mitigation (minimising the amount of warming in the future) ([Adger et al., 2005](#_ENREF_1); [Bicknell et al., 2009](#_ENREF_16)). Adaptation can be addressed in a number of ways, from technical adaptation of the existing urban form handle higher expected summer temperatures, storms and floods through risk and disaster management to psychological adaptation to what an uncertain future might hold for residents. Is their home likely to flood or be storm damaged? If so, can they get insurance, or will they have to abandon it eventually? What might the implications of continuing high oil high prices and scarcity be for their jobs? Consequently, Hodson and Marvin ([2009](#_ENREF_72)) argue that ‘ecological security’ will become the touchstone for urbanism in an era of climate change and resource constraint.

So what should be a progressive conceptualisation of adaptation and security? Perhaps the paradigm of the *un*secure city would be New Orleans. The state did not maintain the levees. When Katrina hit, citizens were left to fend for themselves. Those with private transport survived, those without were left to their fate, perhaps later to be shot as looters – especially of they were black ([Comfort, 2006](#_ENREF_35)). Then the disaster was used to clear out the undesirables and rebuild the city for the wealthy with privatised urban services ([Peck, 2006](#_ENREF_126)). A progressive strategy, working from an environmental justice perspective, would recognise that the most vulnerable citizens socially are often the most vulnerable environmentally, and specifically ensure that class and race is not a predictor of who is likely to survive disasters ([MacKinnon and Derickson, 2013](#_ENREF_97)). People should not be left to adapt their homes and communities for new climatic and resource conditions, make their own preparations for disaster, and repair the damage within their own limited private resources. Adaptation should be social and collective, not individual. It should be comprehensive, planned and state-led through active urban management, not privatised, piecemeal and dependent on ability to pay and individual decisions about how to respond to risks.

Secondly, a progressive conceptualisation of adaptation should balance the need for a city to pay attention to its own resilience with international responsibilities. Some more wealthy cities in ecologically favourable locations might well be able to handle their adaptation needs quite easily, whereas a city with a poorer social and economic inheritance in a more vulnerable location should not be left to cope alone – redistribution from favoured to less favoured places would be necessary. This is an issue both within geographically uneven nations, and internationally. Further, a progressive strategy of adaptation would discourage cities from thinking of themselves as lifeboats, meeting their own needs (food, power, water) as locally as possible with no concern for how less well endowed cities might cope. Climate change will lead to population movements: better endowed cities will need to absorb environmental refugees, not secure their own future and leave the less fortunate to get by as best they can (Hodson and Marvin 2009:18). This obviously has implications for urban politics and for social cohesion, with the far right likely to feed off of fears associated with migration. It might also mean that limits can be put on the right to travel and migrate, and justified ecologically. This, coupled with surveillance over and regulation of individual consumption habits could be a recipe for an authoritarian ecological urbanism.

The third issue for a progressive urban politics of climate change and resource constraint would be the trade off between adaptation and mitigation. The concern is that focusing on adaptation to the exclusion of mitigation can lead to a politics of quietism, fatalism and passivity. Focussing on adaptation alone assumes that present day consumption patterns are likely to be maintained, and that there is no appetite for large scale cuts in consumption or changes in urban socio-economic systems. Growth-based capitalism has no real alternatives, urban citizens will continue to consume, to drive private cars and fly, and that any urban politics that does not provide for economic growth or which restricts consumption will be electorally unpopular. The hard issues must be avoided, and all we can do is prepare for the inevitable. A progressive politics must argue for more open and progressive conceptualisations of urban futures, and challenge systems of domination that prop up unsustainable practices, including conceptualisations of urban entrepreneurialism based on unsustainable levels of travel and consumption by elites serviced by armies of poorly-paid casual service economy workers.

Mitigation must therefore be a key element in any progressive response to climate change. Economic development must be decarbonised. From an ecological modernisation perspective, the Stern Review ([2007](#_ENREF_144)) famously argued that there is no trade off between growth and dealing with climate change. New businesses and jobs can be developed to solve climate change problems through new technologies and through adapting our urban fabric. Dongtan and other eco-cities provide visions of the high technology green city. For our purposes though, the problem is that there is no change from urban entrepreneurialism: cities will specialise in the development of the new technologies and green collar jobs, with urban leadership acting to facilitate private sector- led development through ecological modernisation and smart growth. The regime of accumulation will continue to be based on inter-urban competition, with ecological technologies (rather than the creative sector) providing the focus for urban strategies and sustainability as the accumulation strategy. Winning cities and regions will almost certainly be those which currently have strong high technology sectors, and the entrepreneurialism that delivered current technologies can be channelled into ‘fixing the climate’ ([Friedman, 2008](#_ENREF_49)). From a progressive standpoint, it can be objected that not every city is able to specialise in quite a limited set of technologies and that some will be better placed to do this than others. The number and range of quality jobs that could be generated through environmental technologies is likely to be as limited as were generated by the creative industries, although the number of jobs in the engineering and construction sectors to adapt our urban fabric to climate change is likely to be large, and they are likely to accessible to those with industrial and manual skills.

**Grassroots alternatives?**

A radical conceptualisation would be of a more thoroughgoing restructuring of the urban economy to avoid dangerous climate change through a local Green New Deal ([NEF, 2008](#_ENREF_111)) or Apollo project ([Nordhaus and Shellenberger, 2007](#_ENREF_112)). This would ensure that the local economy is transformed onto a post-carbon basis with emissions levels progressively falling in the global North (it cannot be assumed the private sector will do this autonomously) and that the fruits of progressive ecological modernisation widely shared within an overall conceptualisation of environmental Justice (Harvey 1996:401). Peter Victor ([2008](#_ENREF_150)) examined a range of macroeconomic and policy approaches to the management of market economies without growth that could inform local strategies. Building on Amartya Sen’s ([1999](#_ENREF_140)) ‘capabilities’ approach, Tim Jackson (2009:35-48) argued that prosperity could be reconceptualised away from a growth in consumption and resource throughput towards socially inclusive human flourishing with reduced environmental impact, involving a greater emphasis on feelings of subjective wellbeing and happiness and a reduced emphasis on the steady throughput of an abundance of material commodities. Sen sees prosperity as an ability to choose whether or not to take part in the normal life of the community, enjoying its freedoms and opportunities, adequately nourished and free from avoidable morbidity. Jackson argues for a conceptualisation of human wellbeing not as ‘opulence’, as the throughput of material goods, but the capability to live as you wish to, to exercise your freedom to live in the way you wish to within finite resource and ecological limits, given global population levels and technological capabilities (2009:45). In similar ways, Mackinnon and Derickson (2013) argue for ‘resourcefulness.

Local strategies for environmentally just urban ecological modernisation and smart growth might look quite like the strategies for ‘local socialism’ or ‘restructuring for labour’ ([Mackintosh and Wainwright, 1987](#_ENREF_99)) developed by the progressive urban local authorities in the UK and (to a lesser extent) in the US ([Clavel, 1986](#_ENREF_30)) in the 1980s. Not only would the focus be on developing new technologies within the logic of a capitalist urbanism, but attention would be paid to the sorts of livelihoods generated, supporting democratic and inclusive economic forms like co-ops and worker-controlled businesses, developing alternative plans for currently unsustainable or questionable forms or business (car companies make buses, arms companies make windmills etc) and developing public and community-controlled sustainable urban services. The climate and resource crises might be seen as a way to harness new environmental technologies for the construction of a more convivial, democratic and inclusive post-capitalist economy ([Murphy, 2008](#_ENREF_109); [Neale, 2008](#_ENREF_110)). Rather than lecturing citizens about their individual responsibility to cut consumption while providing flights at a fraction of the costs of train travel or poor levels of public transport such that people need a private car, the city would be organised so that a low carbon lifestyle was obvious, easy to achieve, and enjoyable. Opportunities for participation and engagement with the process would be maximised. Taking a leaf out of the entrepreneurial cities cookbook, a progressive local state might wish to advertise it credentials by engaging with one of the many local networks of cities looking to develop sustainably, such as ICLEI or the networks of mayors.

A progressive urban politics of climate change and resource constraint might well include more local production of things that can be produced locally (food, goods to meet basic needs, power) in order to reduce emissions from transport. It would support local businesses and co-operatives, local banks and credit unions, and other community-based financial institutions ([DeFilippis, 2004](#_ENREF_42)). Things would be produced where it makes most sense from a perspective of economic efficiency *and* social and economic justice, not just where they can be produced the most cheaply, subsidised by cheap fuel and externalised emissions . Localisation would mean that avoidable emissions through transporting goods that could just as easily be produced closer to where they are consumed would be saved, and must be part of any progressive strategy ([Shuman, 2001](#_ENREF_142)). Cities and regions would become more integrated economic spaces minimizing wastes and transport costs, developing interdependent networks of enterprises that collaborate, exchange resources, recycle, and use each other’s waste as inputs ([Hudson, 2007](#_ENREF_77)). Local economic welfare would focus more on quality of life, good, wholesome food, time for family and friends, and providing low-carbon homes, very much the perspective of the degrowth and ‘slow city’ movements of continental Europe ([Fournier, 2007](#_ENREF_48); [Pink, 2008](#_ENREF_131)). However, attention would need to be paid to questions of justice and redistribution between places with different economic and ecological endowments in order to avoid the problems associated with uneven development. It would be important from a progressive standpoint to maintain the benefits of fair trade and of international connection, if transport could be justified with ecological limits – this again is a technological issue. It would also be necessary to recognise that some places might be better placed to produce certain goods and export them, that there are limits to what can be produced very locally (for example, windmills, photovoltaics, electric cars, tidal barrage power stations) and that consumers do appreciate a diversity of consumption choices. As long as the costs of transport are bearable within carbon budgets or ecological limits, localisation need not mean autarky ([Hines, 2000](#_ENREF_71); [Lang and Hines, 1993](#_ENREF_89); [Woodin and Lucas, 2004](#_ENREF_156)).

How do we start? Perhaps by seeing our local economy in different ways ([Gibson-Graham, 2006b](#_ENREF_54); [2008](#_ENREF_55); [Gibson-Graham et al., 2013](#_ENREF_56)). What sort of economic activity do we want to see in our city – chains that don’t pay their taxes and repatriate profits to their local head office, or local shops that care about their community ([Mitchell, 2006](#_ENREF_105))? Can we take back production? What can we produce locally? What will always have to produced elsewhere given their complexity and questions of local climate and resource endowments ([Scott Cato, 2006](#_ENREF_139))? Perhaps we should start with what we need in our everyday life: housing, heat, clothes, furniture, food. How much of that can we produce locally? Then look at our resources. For example, we might be living in a wooded area, but produce no wooden furniture – an obvious thing to start to produce. Or we have sheep, but make no woollen clothes. Might there be opportunities for developing local production of everyday goods and services, or of goods that at have high and avoidable transport costs and which can be produced using local materials and using local labour, within local resource and climatic constraints? What could a local urban community produce locally that they don’t currently, to meet local needs? What ‘factors of production’ – people, resources, machines, power sources – are available locally? Could the wood needed to set up local furniture production be sourced locally, perhaps paying for it with local money ([North, 2010](#_ENREF_114))? We can expect these new opportunities to emerge as fuel prices and emissions associated with long term transport become more significant, and living standards in the global South rise to a level where local markets become more significant ([North, 2009](#_ENREF_113)). What are the climatic resources we have? Can you grow grapes? Is there enough rain? A local low carbon grassroots strategy means different things in different places

Could a local urban community generate power from a local renewable source? This would be very dependent the availability and locations of renewable energy resources: how much wind, hydro or solar power can be accessed, how much space is available for what size wind turbine, hydro system or array, what income could be generated from it? The extent that micro-energy could generate useful amounts of both power and income would need to be ascertained. Community-owned local renewable energy could provide an income for local residents, and provide for local resilience in the face of uncertain energy futures, as has been demonstrated in Denmark and Germany ([Cumbers, 2012](#_ENREF_41)).

How much food can be grown locally: both in the city (through urban agriculture) and in the hinterland (perhaps through community-supported agriculture) ([Pinkerton and Hopkins, 2009](#_ENREF_132)). It is clear that more and more consumers want to have access to locally produced, high quality and perhaps unusual food and drink. How much land can be turned over for food production without replacing parks with industrial agriculture? What attractive edible plants could we replace our current ornamental plants with?

We also need to generate a low carbon cultural offering and opportunities for leisure that does not generate unsustainable emissions or consume scarce resources. George Marshall ([2007](#_ENREF_101)) suggests using local labour to do provide low carbon treats – cooking meals, sorting out gardens, advising on how to grow food, fixing things – as alternatives to high carbon treats like fast cars, low cost flights, or international citybreaks. In a low carbon economy visitor economy, visitors would want to have fun that emitted less carbon and involved less long distance travel. They would travel less far, but stay longer, and consume less carbon while doing it.

A diverse economies perspective would see local residents’ skills, needs, visions and aspirations as generators of self-employment and of new small and social enterprises that will create the jobs and opportunities of the future. Residents here are a source of local entrepreneurialism and mutual aid, a supply of labour, and a source of demand; solutions, not problems ([Cahn, 2000](#_ENREF_27)). These might be insecure, micro businesses at the beginning, but a diverse economies approach would focus on seeing their future potential as generators of diverse livelihood opportunities, not as inadequate ‘get by’ solutions. We need to explore these issues with a clear head. Some places seem to be more endowed with a deep range of grassroots alternative from which to build real grassroots economy, ([Amin, 2009](#_ENREF_5); [Amin et al., 2002](#_ENREF_6); [Clavel, 1986](#_ENREF_30)) while others need to start with seeing what looks like a desperate situation in more optimistic ways ([Cameron and Gibson, 2005](#_ENREF_28)). Given deep public spending cuts there is considerable, probably justified scepticism about the ability of grassroots approaches to address deeply entrenched problems. Building a resilient, resourceful and convivial local economy is a difficult job given the depth of inteconectedness of a globalised economy, and will not be easy ([North, 2013](#_ENREF_117)). The UK Coalition Government’s ‘Big Society’, which looked to mobilise the resources of community organisations and social enterprises, has been widely dismissed as a cover for public spending cuts, offloading problems onto the poorest ([North, 2011a](#_ENREF_115)). However, a diverse economies reading recognises that community-based mutual aid is as much the strategy of the libertarian left as it is of the neoliberal right ([Corkey and Craig, 1978](#_ENREF_36)). Further, the psychic benefits that accrue to those who believe they are standing up and taking action or making a difference in a time of economic dislocation of growing feelings of hopelessness should also not be underestimated ([Clavel and Kraushaar, 1998](#_ENREF_31); [Hudson, 2009](#_ENREF_78)).

**Conclusion**

This paper has examined the extent that climate change and resource constraints represents a fundamental challenge to the entrepreneurial urbanism. Founded on cheap fuel and externalised carbon emissions, entrepreneurialism based on inter-urban competition for footloose capital, with the prizes going to those cities able to present themselves as the most competitive, seems not to have a future as currently conceptualised. Resource constraints and the need to cut emissions to avoid dangerous climate change mean that we cannot focus uncritically on instantaneous and cheap transport and communication, and need to rethink ‘growth’ in ways that reduce carbon emissions and the consumption of limited resources. Of course, it could be that given capitalist cornucopianism new urban regimes of accumulation based on new environmental technologies could emerge. The city could be ecologically modernised much like it was industrially modernised in the 19th century as drains, gas, electric and mass transport were introduced. Local economic development agencies could promote low carbon economies by minimising wastes, cutting use of hydrocarbons out of industrial processes, and shortening supply lines: but the progressive nature of such a settlement can be challenged. A progressive urbanism of climate change and resource constraint would ensure that low carbon futures are democratic and inclusive, keeping communication and openness where possible, but having an understanding of the need to live within ecological limits, seen as technologically mediated.

The climate change focused social movements are arguing for new forms of economy based on more localised, more convivial, resourceful, resilient, economies, but there are fundamental academic concerns about the ability of citizen based action to challenge the power relations that underpin modern capitalist local economies ([Albo, 2007](#_ENREF_3); [Trapese, 2008](#_ENREF_148)). Citizens do not control the productive forces in local economies – they are in private hands. It would be romantic to assume that this process would be unchallenged, given that local authorities, as well as citizens, do not control the local means of production, as the radical authorities of the 1980s came to realise ([Eisenschitz and Gough, 1993](#_ENREF_44)). This process would need to be in tandem with social movement mobilisation to challenge local power relations opposed to such a transformation, but in this case it would not be possible for one locality to go it alone. To avoid romanticism here, local strategies would need to be generalised into a much wider movement seeking fundamental change (Neale 2008), assuming, that is, that those transitioners who foresee the unravelling of complex industrial society in the face of climate change and resource constraints are wrong.

What could be the role for an urban leadership growing from or sympathetic to their aims, that wanted to develop an alternative to unsustainable urban entrepreneurialisms? As discussed above, d a whole range of livelihood alternatives would be supported, as would developing local resilience in food and power. The problem here is that since the heyday of the urban socialisms, and in many ways because of them, the space for an independent local politics of economic development has been severely restricted in the UK, if there is more space in the US. Its role has been reduced to facilitating the private sector and spatial planning. Any progressive local economic strategy will need to see a reskilled urban leadership able to link climate change and resource depletion to a progressive politics of local economic development. In this case, sustainability would need to move from its subaltern position in relation to ‘hard’ economic development, generating growth and thus jobs and businesses. A progressive local economic development would look to develop more than jobs, businesses and growth, but sustainable and convivial *livelihoods* in a resilient low carbon economy.

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