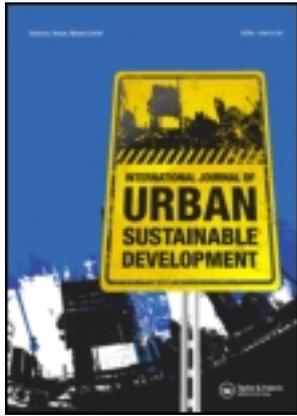


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Urban social reconstruction after oil

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Urban social reconstruction after oil

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Over the past decades there has been a struggle to create decent living conditions for poor urban majorities in conditions of rampant urbanisation and in the face of neo-liberal development rules. ‘Peak oil’ is, however, upon us, which we may expect will fundamentally change the context of urban development. Whilst conceding that there are a range of scenarios as to how policymakers will address the problem of declining energy resources and hence what the net results will be, the view taken in this article based on substantial research over recent years is that ‘economic growth’ and development that has been built upon the growing consumption of fossil fuels will go radically into decline. This article looks at different dimensions of what this might mean for cities everywhere, with a focus particularly on cities in the South. It concludes with proposed measures that need to be taken, starting today and growing out of emerging initiatives – such as the ‘transition towns’ movement, to start the process of rebuilding viable urban life post fossil fuel.

Keywords: fossil fuel; neo-liberalism; alternatives; urban and peri-urban agriculture (UPA); local economic development (LED); transition towns; World Social Forum; intentional community; megacities; empire

Introduction

For several decades now the issue of ‘sustainable development’ has been taken up by urban researchers, planners, activists and municipal leaders to give us a substantial literature under the title of ‘sustainable cities’.¹ In general this literature accepted the need to address deteriorating urban – and to a degree global – environmental conditions, and the need to use energy more frugally and where possible to substitute renewable sources for fossil fuels. Recently this literature has grown more urgent in terms of what needs to be done, particularly through the efforts of the ‘post-carbon’ and ‘transition towns’ initiatives.² There is still a wide range of assumptions on how the decline in energy will affect urban life, mainly premised on how effective measures implemented in good time will forestall problems. Although there is generally

an assumption that globalisation will not survive and that localist solutions will necessarily prevail, in some literature there is also a presumption that large-scale cities can be adapted to a ‘post-carbon’ world.

This literature – and a proliferating number of planning documents by particular city administrations and local groups – is entirely local in its focus and so far exclusively Anglo Saxon although the transition towns movement is spreading rapidly to cities throughout Europe. The wider context of what will be happening generally around the world as a consequence of diminishing energy resources, particularly with respect to the burgeoning cities of the South, does not come into focus and although there is literature concerned with the broader impacts of declining energy resources – again almost exclusively from and focused on the

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United States – this has little to say about what the rest of the world might expect. This article focuses more on the cities of the South and what might be expected and eventually done to ameliorate the problems ahead resulting from energy depletion.

In contrast to the sustainable cities, literature, we still read throughout the much more substantial ‘conventional’ urban literature that urbanisation and the growth of cities are set to continue into the coming decades along the lines we have seen over the past decades. In the spirit of the most recent literature on sustainable cities, we here express an extreme scepticism of ‘conventional’ opinion regarding the future of cities and go on not just to conjecture consequences but also to suggest how today’s urbanists might bring certain current trends and ‘best practices’ in urban projects into the foreground as a means of ameliorating the dire consequences of radical economic decline that the decline in energy can be expected to bring and to start the process of reconstructing urban worlds – albeit on a more modest scale than the way in which urbanisation took place in the now-passing era of ‘modernity’.

Cities the world over have grown rapidly over the past century and especially fast in the South over the past several decades. On the environmental side this urbanisation has brought in its wake massive problems in water supply and sanitation, resource flows – especially solid waste management also with serious sanitation consequences – and the management of movement, with chronic congestion and air pollution.

On the social side, the implementation of neo-liberal economic ‘development’ rules and the consequent changes in the global economy, together with the seduction of whole populations into an uncritical and consumerist mentality, have led to the massive migration of rural poor into degraded urban living conditions and general poverty. This is characterised by the lack of employment and the continued growth of the ‘informal economy’ as the mechanism to redistribute sufficient income to provide at the very least survival conditions and, for most, a modest level of modern consumption for urban majorities.

‘Alternatives’ that would raise the conditions of the poor have been discussed and numberless small-scale or other ameliorative initiatives have been undertaken by citizens themselves, often with Non-Government Organisation (NGO) and even ‘donor’ and World Bank assistance. But effective deep criticism and political action against the ground rules of this development model have – with the exceptions noted above – been pitifully inadequate and whilst in many poor urban quarters some amelioration is evident in terms of improvements in the quality of dwellings and infrastructure, the spread of poverty and degraded living conditions continues.

Now, it is contended here that the whole sorry game is coming to a conclusion. There has been much talk of ‘global warming’ and how this will be affecting cities and hence urban populations with sea levels rising and climates changing with resulting environmental refugees. These are genuine problems and although little concrete action has yet to be taken to ‘adapt’ to or ‘mitigate’ climate change, the supposed problems are nevertheless beginning to impact on policy thinking of governments and agencies. However, little has been discussed concerning the consequences for urban life in the near future of a far more proximate challenge of the coming decline in energy resources.

‘Peak oil’ is upon us, where the price of oil and other energy sources rising. So far this has fuelled, and been accompanied by, ‘economic recession’ and rising food prices that are affecting increasing numbers of people: today over a billion people in the world are undernourished and the numbers are rising fast, with the urban poor most affected.

But, if, as widely expected, the decline in energy resources – and petrochemical feedstock used for agrichemicals and a vast range of today’s manufactured products – should accelerate over the coming decades then we might speculate that we have seen nothing yet: in the coming decades, these impacts will increase rapidly with the incipient collapse of one dimension after another of both local economies and global economy. Contrary to conventional opinion, we conjecture that, in the extreme, within four or five decades our overgrown

cities will have emptied out as global production and distribution systems fail. We might expect both agricultural and manufacturing production to return to the proximity of where people are living. This will lead to towns and smaller cities with access to agricultural land and manufacturing based largely on local resources producing for local use. Agriculture will again become the main occupation of populations everywhere and manufacturing will have simplified down with the elimination of the vast majority of the ‘stuff’ that beguiles us in modern life.³

This article starts with an exposé of what is being done currently to alleviate urban problems under present circumstances, focusing predominantly on the South. It then goes on to expand a little on the nature of the challenges ahead before exploring ‘solutions’ that are appropriate to the real future that we can expect, post oil. The analysis here follows on from earlier expositions and speculations that I conducted from 2006 to 2008, published in a series of papers under the general title of *Cities after oil* (Atkinson 2007b, 2007c, 2008). This article takes some of the key arguments of my previous analysis a step further.

Some of this research has tried to explore the immediate, what might be called ‘technical’, issues, particularly the incipient return to agriculture under the general title of urban and peri-urban agriculture (UPA) (Atkinson Forthcoming 2012). In this article I explore the more social side, looking at how communities might face a radically altered urban future and reconstruct a life that is not only an issue of survival but one where people care for one another and learn again how to live enjoyable lives in circumstances where the accoutrements of modernity in terms of travel, communication, energy-assisted production and consumerism have been left behind us.

Current ‘conventional’ approaches to addressing urban ‘problems’ in the South

We might recall in just a few sentences the history of modern urbanisation. We wish to emphasise just how brief the period of mass urbanisation has

been (and will have been upon what is being conjectured here as its demise) and how what we see today is a transition back to largely pre-urban conditions. Amelioration of what is perceived of as a serious problem is generally seen in the context of an upward trajectory out of contingency and misadventure – as opposed to planning – but somehow the future will sort things out such that (and this is universally asserted) by mid-century two-thirds of the world’s population will live in cities (hopefully, in the words of the Cities Alliance (2006), ‘Cities without slums’).

Modern cities emerged in the early nineteenth century in the United Kingdom and spread to other parts of Europe and the Americas later in the century. A few large cities had existed at least 1500 years earlier but these came and went: ancient Rome and Baghdad, once great cities, faded away to villages as did a few Chinese cities. Although solid enough in construction, the nineteenth-century Occidental cities, chaotically constructed and with much of the population living in poverty, weighed down with long hours of work and little time or resources for recreation and in squalid conditions (Karl Marx’s colleague Engels’ description of Manchester in 1848 being the classic critique), initiated the trajectory towards what, in the twentieth century, became world-wide mass urbanisation.

Modern elites and ‘middle classes’ like to believe that improvement in the condition of Occidental cities came about through benevolence and reason along a trajectory of ‘progress’ and ‘development’ that would see everyone eventually living an affluent urbane life. A more realistic perspective sees social movements and the substitution of fossil energy for human and animal power as the two main motivating forces in facilitating urban expansion and improvement in conditions and lifestyles. Bad smells and fear of disease lay behind improvements in water supply and sanitation; trams, railways and buses – and eventually private cars – facilitated urban expansion and suburbanisation, meaning more living space; fear amongst elites of revolution led to improved housing conditions; and mechanisation and more

lately IT facilitated ‘the end of the working class’ and the growth in affluence and high-consumption lifestyles for the vast majority, at least in the North.

For 30 years following the end of the Second World War, an ethos prevailed that presumed ‘governments’ had a major role to play in appeasing the less advantaged and at the same time providing the basic resources for continued ‘economic development’ and with this urbanisation. Even with the decline in this ethos – starting abruptly with the neo-liberal counterrevolution of 1980, deepening and spreading over the following decades – concern for possible revolt continued to motivate the financing of programmes aimed at reducing ‘social exclusion’.

This ensured that the young unemployed as well as any broader population had less reason to rebel or even to think coherently about the inequities and, in the end, the absurdities – the unsustainability – of the society and circumstances in which they were living. Meanwhile, with the ‘consumer society’ providing ever more by way of ‘stuff’ and vicarious means of entertainment, mutual dependence and with it the traditional sense of community solidarity ebbed away.⁴

By the early years of the twenty-first century there was a widespread satisfaction amongst the population with the circumstances in which they were living⁵ and whilst there were voices – particularly the ‘greens’ who could see that some time in the near future this whole edifice was likely to collapse, and certain academics who could see certain minorities who understood their exclusion broadly from ‘the Right to the City’ – overt criticism and with it manifestations of revolt had almost vanished.

At the time of writing, it seems, however, as if revolt is again in the air in French cities, Athens, London and even Tel Aviv. The immediate analyses of these in the media, however, did not indicate any profound sense of injustice and still less a sense of foreboding with respect to the future. On the contrary, whilst the overall feeling that seemed to trigger these manifestations had a different inflection in each city, it was possible to see exclusion in general as the motivation albeit at a rather shallow

level. In some circumstances it was clear that the revolt was against racism. However, the predominant motivation was growing economic difference: not any sense of absolute poverty but a sense that the world owes those participating in the manifestations at least what they already have in a situation of incipient decline and, above all, amongst the less privileged, that they deserve a more equal share.⁶

Cities beyond the Occident, perhaps as many as half of which were founded by European colonialism, most still living in the shadows of this history, pulled and seduced into the modern world, face a different, and in many ways more problematic, set of challenges. In practice there are wide differences between cities in different countries and we should start by excluding the Far East, not only Japan, Taiwan, Singapore, South Korea and Hong Kong who have climbed in recent years into the mould of Occidental lifestyles and expectations. The Chinese population, comprising a quarter of humanity, for all the modest (and in some areas impoverished) lifestyle of the traditional rural population, is rapidly urbanising with all that goes with this in terms of increased consumption.

Elsewhere, in other parts of Asia, in Africa and even in Latin America, we see processes that are referred to as ‘informal’ because they do not fit into the frameworks of organisation and regulation expected of ‘modern’ society and because the vast majority of those living in this condition are by the standards of the Occident impoverished. As the process of formation of ‘urban informal settlements’ got under way in the 1950s and 1960s, urban authorities in many southern cities feared that these might breed revolution. But as evidence mounted that overwhelmingly the inhabitants were supplicant to the modern world of the formal city and its new elites and middle classes, these became the subject of benign neglect (Hardoy and Satterthwaite 1989). The existence of large bodies of informal workers was convenient insofar as it provided cheap labour in support of enterprise and households in the ‘formal sector’.

In the context of the ideology of development, the informal living conditions of growing urban majorities were seen as somehow

inadequate – even if local elites were not particularly interested in assisting the poor majority to achieve their affluent lifestyle. Hence ‘development programmes’ of UN and other development agencies and banks focused attention on ‘slum upgrading’ that could be justified as addressing the issue of the spread of disease (the case in Indonesia’s Kampung Improvement Program) or a reaction to fear of rebellion (as at the start of the programme in the Philippines). Meanwhile, many ‘slum dwellers’ made their own improvements over time, and some local authorities invested in infrastructure post hoc, particularly in the Middle East and some Latin American cities. Elsewhere in a few cases ‘NGOs’ assisted communities to organise improvements in their living conditions.⁷

What, by the first decade of the twenty-first century, was in overwhelming evidence was that for all the economically and often also physically precarious conditions prevailing throughout these settlements, there was little or no sense of injustice⁸ or fear of the precariousness which they faced (Atkinson 2007a). In consequence, there is clearly inadequate attention paid to improving the circumstances of those living and working ‘informally’ from any perspective concerned with social justice. Poverty is assumed in a liberal – and neo-liberal – world to be something inevitable in a situation where competition for wealth and status is, if not the only game in town, then at least the only one that really matters. Although amongst the poorest there was in some places a sense of solidarity growing of the necessity for mutual help,⁹ these settlements have increasingly mirrored on a reduced scale the consumerist individualism that had come to prevail in northern cities.

The notion that things could be different

Occidental culture has distinguished itself from almost any other in its orientation towards self-criticism. The origin of this lies clearly in the notion of progress. That is to say that once it is accepted that things will change then the door is opened to the possibility of different futures that may be contested. The ancient Greek

philosopher Plato, in his *Republic*, spent time evaluating the different ways of governing societies that he could see amongst the Greek states, proceeded to propose an ideal form of governance and, in his own small way, attempted an experiment intended to show how it might work. But it is particularly in the Christian context of ‘millenarianism’ – progress towards the second coming of Christ and the Judgement – that ideas about different ways of organising life, as moral speculation and cause, have been generated (Heinberg 1995).

Few people today are aware of just how prolific both the literature and the experimentation in ‘alternatives’ to the arrangements of governance prevailing at the time in the Occident have been (Manuel FE and Manuel FP 1979). Everyone is, however, aware that throughout most of the twentieth century there was a struggle between two clear alternatives, namely ‘capitalism’ and ‘communism’. With the victory of capitalism – and its return to a fundamentalist version of that particular ideology under the title of ‘neo-liberalism’, the world was made to believe that, in the famous words of Margaret Thatcher, ‘there is no alternative’.

However, whilst the neo-liberal ideology and the related mechanisms of governance have come to dominate almost every society today, under the heading of ‘globalisation’, the fact is that debates and experiments continue, attempting to suggest change and, in a few cases, to actually live life in a different way. Most obvious amongst these is the debate that takes place in the context of the annual *World Social Forum* (WSF) and its regional and local progeny. As the global media, dominated today to an extreme degree by corporate interests with their mission to sell stuff and make profits, ignore these events and the discussions and messages which they generate, few people are aware of these manifestations.

For the record, each year since 2000, bar 2008, fora have been organised in various countries, starting in Brazil and maintaining strong links in that country, in which organisations and individuals have assembled to present alternative

ideas and their projects for discussion in efforts to move the world away from the neo-liberal (we might say suicidal) path along which it has been taken in recent years. Whilst there is no very concrete organisation or party behind the events, nevertheless, a manifesto has been generated and it is useful to quote the definition on the web site that speaks of

. . . an opened space – plural, diverse, non-governmental and non-partisan – that stimulates the decentralized debate, reflection, proposals building, experiences exchange and alliances among movements and organizations engaged in concrete actions towards a more solidarity, democratic and fair world . . . a permanent space and process to build alternatives to neo-liberalism.

It is not possible here to go in any detail into the richness of the offering of critical debates or very far into the proposals for local and global change. Suffice it to say that the ‘main events’ attract tens of thousands – in 2005 as many as 155,000 registered participants – and since the early years have inspired regional, national and local events expressly intended to generate locally relevant solutions to today’s challenges.

As can be seen, the forum explicitly encourages diversity, in stark contrast to the way in which Communism, as the culmination of a diversity of alternative social movements in the nineteenth century, emphasised the notion of a single path. Nevertheless, it is possible to discern broad alternatives and a useful analysis was carried out at the time of the first forum, attempting to discern these (Starr 2000).

This saw three distinct alternatives: those who believe that the world can be reformed by changes in the way existing institutions work¹⁰; those – and this is arguably the dominant tendency at the WSF – who believe that a completely different form of global governance is possible, under the title of ‘alter-globalization’; and those who believe that the world has to return to much more localised and locally appropriate and responsive forms of governance. We will see later in this article that in the face of the collapse of our civilisation – which is not a theme on which the forum alternatives have

had much to say – only the last of these alternatives will be viable in the not too distant future as the sinews of global communication fall apart for lack of fuel.

A second direction taken by ‘alternatives to the present’ is in the form of what are known as ‘intentional communities’. These comprise groups of people who come together to live an alternative lifestyle. At one end are ‘eco-villages’ that are little more than a group of households (even urban apartment blocks) where notions of a more environmentally and resource-sensible lifestyle are lived out whilst nevertheless living within the existing matrix and paradigm of work and consumption. At the other end are communities – generally in the countryside – who grow their own food along what are considered to be ecologically sound lines (organic and many applying permaculture), may produce much of their own products and – this being most important – have a coherent ideology or set of ideas or even religious principles upon which they organise their life together.

In fact intentional communities, as lived utopias, have existed in Europe and the United States for a very long time.¹¹ The modern manifestation of these movements can be said, however, to have started in the 1970s (Ross Kanter 1972; Rigby 1974) and whilst the failure rate of communities was initially high, gradually these have stabilised with, by now, some that have lasted several decades. The communities network strongly with country networks especially in the United States (Fellowship of Intentional Communities 2010) and more recently European networks have increasingly extended right across the continent (Eurotopia 2005). A few such communities are to be found also in India – notably Auroville – as a consequence of interest of Europeans in Indian philosophies, in Latin America and in Japan (Metcalf 1996).

Interesting though all this might be, we must be clear that, perhaps as a consequence of the total lack of information on any of this in the public, corporate-dominated media and, even where people might have heard of something, a concerted lack of interest in the context of more or less

total engagement in the ‘mainstream’, for the vast majority of humanity all this is totally invisible, that is to say engagement in consumption of materials and goods offered through advertising and in the markets that people frequent and engagement in the flow of ‘infotainment’ presented by television and other media. Life is not a serious matter and where it is, as a consequence of ‘social exclusion’, the concern, as noted earlier in this article, is predominantly one of envy or feelings of inadequacy, not of any articulated need to change things.

But more important for us in this article is: Do these movements have anything to say to us about ameliorating the problems ahead and rebuilding our (urban) societies post collapse? If they have been so marginal in recent years, why might one expect them to become more important in the future? One answer is relatively easy: the WSF in all its manifestations has involved a significant number of people from all around the world and exposed them to ideas about a future that could be, that is sustainable and that is socially equitable. Whether they are practical or not remains to be seen from whether the opportunity and the will arise to try to implement these ideas; certainly not all of the thousands of small projects and proposals that have been presented in workshops and presentations at these events are useful, but at least the slogan and the spirit which goes with it may inspire confidence to go forward: *Another World Is Possible*.

As for the intentional communities, most of which are now well aware of the need in future to nurture the ecological basis of our existence and so practising ‘permaculture’, these may well be ‘demonstration projects’ for a future that works – particularly as models to be emulated by the transition towns, seeking a sense of direction. The problem here is the tiny scale and extent of these relative to the enormity of the challenges that lie ahead, of reorienting and restructuring life for massive populations. And the fact of their being virtually all located in the Occident must surely have something to say about their cultural specificity: they probably have nothing to contribute to

those parts of the world that have been colonised by Occidental modernity and overwhelmed by the neo-liberal world, where the future is likely to mean recovering at least some of their shattered identity rather than learning yet another set of lessons from the Occident.

The collapse of ‘modern civilisation’

In 2012 we live in strange times: where a vast population encompassing the majority of Occidental societies and taking in some Far Eastern societies are living a bizarre life of affluence to which an even larger population in other countries around the world aspires, demonstrated at first hand in southern countries by rather smaller local elites and ‘middle classes’ attempting to live the same lifestyle. There is, nevertheless, in the air a sense that this cannot last, but with very few people wanting to look deeply into what is most likely to happen.

There is a feeling, expressed generally in passing conversation, that ‘the economy’, already failing significant numbers incipiently and a few more radically (losing jobs and houses being repossessed), is not going to recover. Why this might be, or what it might bring for the coming years, is simply screened out of consciousness. Global warming – that in a while actually may bring serious existential problems through global climate change – is allowed more space for discussion, as the effects are distant enough in space and time not to threaten our way of life in the immediate months and years. What seem like extreme weather events – at least as they are presented by the media – are creating a frisson that these are the first signs of retribution for our lifestyle, but in reality there is little proof that any of this is, in fact, due to global warming and life goes on regardless for the vast majority.

But that which will be the predominant drive behind the ‘downward passage’ of our civilisation is, quite simply, the dwindling availability of fossil fuels. We are either totally ignorant of, or at best do not allow ourselves to admit, the extreme degree to which ‘modern civilisation’ and ‘economic growth’ are founded upon and driven by

fossil fuels. *Prima facie* it is clear that one day, mineral resources of all kinds that come out of the earth are finite and cannot be extracted forever: they are non-renewable. From time to time since the mid-nineteenth century, when William Stanley Jevons published a book analysing the eventual end to coal in Britain and what that could mean for the British economy, worries have arisen that fossil energy resources might be depleted within the foreseeable future.

Since the 1940s, what has been clarified is that supply does not stop suddenly overnight but, in a situation where demand and production are constantly on the increase, the day comes, only halfway through the theoretical possibilities of exploitation, when production starts to decline and then accelerates towards the end in what is known as a bell-shaped curve. With respect to the production of petroleum, the point of maximum production of which is being referred to as 'peak oil', there is overwhelming evidence that global petroleum production has reached, or is about to reach, this point and that from here on, regardless of demand, production will be declining.

Most people who allow themselves to think about this make assumptions from superficial things they have heard or read in the press that after oil there are other resources, particularly 'renewable' energy sources and nuclear power. I am not going to argue this in any detail but simply assert from detailed research (Atkinson 2007b) that there really are no substantial alternatives to fossil fuels to supply us with the kinds of energy we have become accustomed to. Fossil fuel currently satisfies well over three-quarters of global energy demand, with oil providing over 90% of the fuel to run the world's transport system. If readers want to continue to believe there are solutions to the coming decline and its impacts, I recommend reading more widely to understand the issues more clearly.¹²

The main question amongst energy strategists is not whether the decline will happen but the profile of the descent and how fast it will be. The International Energy Agency has, in the past few years, made statements that are not always

consistent but in 2008 noted that by 2030 the equivalent of six new Saudi Arabias will have to come on stream to satisfy projected oil demand. Some of this resource is already known and in process of being opened up, but there is still a huge gap in a situation where there is little of the world's geology that is not already known and where only modest resources are to be found.

Many would like to believe that renewable energy sources can be rapidly opened up to replace declining fossil fuel; nuclear electricity is another candidate. However, in both cases, the energy that is used to open these options up at the rate necessary to replace dwindling fossil fuel resources can be expected to accelerate the decline in fossil fuels even faster. Furthermore, it is clearly unrealistic to imagine poor countries making any kind of hi-tech conversion required to replace the fossil fuel – in most cases even quite modest – demands of these countries.

The issue with which we are concerned here is that the energy debate almost entirely fails to look 'over the fence' at the consequences for the wider economy and indeed present-day globalisation and how this will fare under conditions of declining energy and especially the problems which the world's transport system will be facing given that there really is little by way of alternatives to 'conventional' petroleum.¹³ Economists like to think abstractly about rising prices triggering alternatives but the reality will be that high prices will derive from the unavailability of energy resources meaning that less will be available and thus dwindling amounts used. Continuing along this line of thought we quickly come to the question of where fossil fuels are used and hence what we might expect to be rising in price and declining in availability as a consequence.

The most obvious problem lies in the systems of global and local transport. Already with the 'spike' in oil prices in 2008, car drivers in the United States drove billions of kilometres less than the year before. Also in 2008, the airline industry ran into crisis (which has since apparently been overcome – but clearly only temporarily) and the global shipping industry ran into crisis as

the quantities of materials being shipped took a precipitate (again temporary) fall. All of this can be expected to return and become a steady and permanent reduction in all movements requiring fuel.

Already we are witness to the rise in global food prices that over the past 10 years has been systematic when smoothing out the fluctuations and differences by region and country. In the North, 'energy subsidies', almost all from fossil fuel, amount to almost 90% of the 'embodied energy' in the food that arrives at our tables,¹⁴ although this is less in southern countries where a greater proportion of the food is more locally grown. But the rising cost of these energy subsidies is clearly one of the ingredients of rising food prices and the shortages – the malnutrition – affecting increasing populations.

What we almost entirely fail to see, however, is the way in which there has not only been a huge growth in 'stuff' that we can buy in shops and market stalls and wherever, but that a large proportion of this is made entirely or in part of oil or natural gas derivatives. Furthermore, traditional goods from clothing to furniture and all manner of household goods once made from metal, wood and other 'natural' products are now made from oil and gas derivatives.¹⁵ So as the price of oil rises and oil becomes increasingly unavailable, the flow of goods we have become used to will also decline unless new sources of raw material are found. And finally, the processing of materials and goods, not themselves fossil fuel derivatives, including particularly metals and cement, also requires significant inputs of fossil fuel. So we can expect virtually all manufactured goods to rise steeply in price and, in many cases, to disappear altogether.

Although almost nobody wants to think about the consequences of the global decline in energy resources because these are so devastating, and, as a consequence, governments actively collude in avoiding any meaningful discussion of the issue (Atkinson 2010), here we wish to acknowledge the problems head on. The rest of this article thus looks at the consequences of the decline in global energy resources with particular reference to what

we might expect in cities in the South and what academics and development workers might start to think about by way of ameliorating the problems and conceptualising urban worlds post fossil fuel that they might like to help forge.

Short-term impacts of energy decline on southern cities

In recent years there has been shock and some speculation that one might presage the challenges ahead and suggest indications of how people and communities, if not governments, might react to the economic decline ahead.

The financial 'meltdown' of 2008 and the economic problems that followed showed at least in the United States a certain capacity to absorb recession and retreat from the heights of modern affluence without yet causing significant disruption. People drove less. Thousands were evicted from their homes (in the worst hit areas almost 10% of households) with no perceptible political reaction. The assumption remained that the situation was temporary. But it is in the United States that at least some realistic discussion has been developing on the consequences of the coming decline in oil (Heinberg 2004; Kunstler 2005; Greer 2008).

A 90-minute video film produced by a group concerned with the issues was released already in 2003 under the title *The End of Suburbia* indicating how the 'American way of life' will not survive far into the 'end of oil'. By extension, we can surmise that the great growth in suburban living everywhere (far faster in European cities than in the United States over the past decade) will come to a halt in the relatively near future, throwing open the question in a very concrete way as to what will be sustainable forms of urban community in the future.¹⁶

The demise of the Soviet Union in the early 1990s and the implementation of the so-called 'shock therapy', unleashing capitalism in the wake of the collapse of Soviet planning, resulted in a large part of the population becoming unemployed and resources no longer reaching many of the cities. People were forced to invent ways

to survive and it was the rapid growth in local auto-production of food that was the most marked immediate effect. Already in the 1970s and 1980s, many Russian families had acquired 'dachas' – holiday homes in the countryside beyond the city limits – which they used for recreation purposes. In the emergency, large numbers of these were quickly converted to small farms where the unemployed workforce could retreat in the short summer months to grow provisions – though they continued to be officially resident and to spend the winter months in their urban apartments. Although the Russian economy made something of a recovery and supermarket food-purchasing culture is spreading, self-provisioning has continued and today provides a significant amount of the food eaten by Russians.¹⁷

Cuba also suffered from the end of the Soviet Union with its source of fossil fuel and with this agrichemicals and food imports terminated. The country was on the verge of starvation and, as in Russia, many urban households took to growing their own food. In fact the agriculture ministry had already experimented with methods of intensive horticulture and so went out to assist households and local communities to organise their own food production in ways that would not require chemical inputs (i.e. organically). Within 2 years, in the capital Havana, the system had become efficient enough to supply most of the fruit and vegetables needed by the population – and eventually more healthily than under the old system (Murphy 1999). It should be noted, however, that self-provisioning of carbohydrate that, in the final analysis, is the main source of human energy is considerably lower and imports of grain remain high.

One must, indeed, be cautious concerning the notion that any city or country can change quickly to self-provisioning of food on the basis of UPA alone. Imports continue – and have even revived – in the ex-Soviet countries and in Cuba and fuel imports continue at world prices such that local self-provisioning, whilst being a useful new dimension of the local economy, is still far from providing for all needs. The future decline in energy

resources (that may affect Russia later than most other countries should there be a policy of retaining Russian oil and gas reserves for Russian use) will eventually force greater local self-reliance upon cities and the issue already may be: how can this be achieved.

The alternative is for populations to decamp to the countryside as a growing movement of urban–rural migration. Such – relatively brief – movements of de-urbanisation occurred during the twentieth century. Japan and Germany both experienced this following the destruction of their cities in the final years of the Second World War. Siberia has been experiencing a steady de-urbanisation since the end of the Soviet era which is, however, a migration back to European Russia rather than an urban–rural migration. Recent economic disruptions have caused urban–rural migration in Indonesia in 1997 and in China in 2008 – in the latter case it was reported that 20 million urban workers had gone back to their rural homes from the urban industrial centres as a consequence of the global recession.

In both the latter cases, the recession was relatively brief but it was immediately evident, certainly in the Indonesian case, that recent growth in urban *and* rural population has precipitated a situation of overcrowding where there is no longer room, in the sense of work or land to till, for the erstwhile rural population that might want to return home. Although since the turn of the century Chinese rural population has been in decline as a function of very rapid urbanisation, there is nevertheless little room for any mass return to rural areas especially if efficiency in agricultural production were to decline as a consequence of any decline in availability of agrochemicals.

In short, food production as a consequence of malnutrition and in the medium term the tightening of global food trade – caused by both diminishing production consequent on unavailability (or increasing price) of agrochemicals and increased costs of transport – will spread as an early driver of urban futures. How can UPA be organised in urban regions to address local needs? In Latin America and parts of Africa, urban–rural migration could

be a solution in the sense of potentially productive land being available but throughout Latin America the main constraint will be the legacy of large land holdings and the exclusion of would-be migrants from the land.

This brings one to the issue of conflict and the extent to which this may arise as a consequence of economic downturn turning to more serious depression and severe and continuous shortages of food, eventually spreading to other commodities. This will not be unrest in the way it has been manifesting itself in the affluent North in recent months, but rather more likely to be food riots of the kind that have been occurring with increasing frequency in increasing numbers of countries since 2007. Insofar as the circumstances triggering food riots increase, will this lead to incipient return to authoritarianism or total breakdown in government as has been the situation now for two decades in Somalia? Might conflicts become more organised with urban groups moving into the countryside to squat land to produce food? Might the end of fossil fuel trigger a descent right back to the era, pre-civilisation, where humans return to hunting and gathering as some extreme American commentators envisage?¹⁸ Or will governments, central and local, emerge that, as in Cuba, are capable of taking action to restructure economies to transcend the emergent 'long crisis'?

One is loath to think that in many cities there will be no solutions even with the best of wills and that the precariousness of so many informal settlements will turn from venues of incipient malnutrition to sites of mass starvation. It seems unacceptable to write in these terms and one can only hope that initiatives in the past where communities have organised themselves or been assisted by NGOs will learn rapidly, through necessity, to rebuild or invent forms of solidarity to work cooperatively to produce food and thence to rebuild local economies. As we can see from the above examples of what has actually been happening, it is not possible to propose one solution for all countries or cities. Local solutions will be of the essence, depending on local resources and making the transition as well as communities can, to

sustainable local economies, interacting over relatively small territories – urban subregions – in ways that were familiar to the vast majority of the world's population back into deep history and up to just 50 years ago.

Local economic development post globalisation

It is nevertheless possible and perhaps useful to sketch some general rules that may be applicable in many urban subregions as approaches to reconstructing local economies and societies. The general moral stand that is widely accepted out of Occidental – we might be specific and say Christian – culture asserts the principle of equality and via this the right of all persons to participate equally in deciding what should be done and how, and thence to benefit equally from the results.

This is a strong statement of what lies behind the notion of 'participatory planning' that has been widely disseminated in recent years in projects to ameliorate conditions in informal settlements or community efforts at local economic development (LED) (Rahman 1993; International Labour Organization 2002; Vilorio-Williams 2006). We simply overlook here the fact that other cultures – Indian caste, Confucian or Islamic authoritarianism or whatever – are not easily open to suggestions of a thoroughly participatory approach to local redevelopment.

It is difficult to imagine that large cities – 'megacities' – will survive for long the decline in fossil fuels (Atkinson 1993). Insofar as they do, then confederation of relatively small local groups where face-to-face decision-making can work will be the only way to ensure that local communities are heard in a broader context of managing resources of the urban subregion to produce enough in quantity and variety of materials and goods to satisfy all needs. It seems to me that megacities are a direct function of a globalised economy and that with the demise of the global, we will also see the break-up of megacities. Thus, a mix of villages, smaller and larger towns and the occasional small city, perhaps similar to the kind of urban–rural networks analysed in south Germany as recently as the 1920s¹⁹, will again prove to

be the most effective and efficient way of working with nature, thus producing from the resources available. Most of these resources are things that the regional population needs for a reasonable life: houses, furniture, clothing, basic utensils.

Sketched briefly, LED, post fossil fuel, will be concerned to optimise the use of subregional resources in a sustainable manner to satisfy the modest needs of urban and rural populations in the subregion – and this will mean sustainably – that is within the limits of the carrying capacity of the subregion and tight limits on either reliance on imports or promotion of exports. In the jargon of the notion of the ‘ecological footprint’, this corresponds to the notion of the bioregion: regional self-reliance (Atkinson 1992). It also means developing a new sense of care for the conservation of the ecological resources of urban subregions, abandoning the environmentally destructive approach that seemed to be inherent in modern development.

The planning methodology would be one that has become widely accepted, at least in principle, in development circles.²⁰ Via this methodology, a wide public is made aware that a planning process is to be undertaken and that they are invited to participate and, if they choose not to, that they are kept continuously informed of progress and at regular points invited to participate in particular events or activities. Fora of those who are prepared to take the initiative and have, or are, prepared to develop new (in many cases old and forgotten) skills can be expected to steer the planning process.

These planning methods generally start by defining an overall strategy and thence explorations are made of the potential human and physical resources available, ranging from agricultural land and produce, potential energy and water resources, institutional framework including private and cooperative initiatives and available skills and so on. If these processes become well established, then ‘government’ in the modern sense may well become shadow organisations in the sense that ‘political power’ being totally devolved to participatory processes and confederation becomes the

means of interaction of communities over greater distances.

Consumption needs of the citizenry and the availability and shortfall of materials and goods need to be analysed – with particular focus on people and voices otherwise obscured (there is generally concern for the inclusion of women and youth): the process, it is asserted, should at all times strive for equality not just of opportunity but also of voice in the planning process and in what is received at the end of the process. Always an ideal end state – of an integrated and sustainable local economy producing for need, not profit – is posited as the ultimate goal (Albert 2003).

Activities are assumed to be incremental and sectoral – which could in the context of economic decline mean allocating agricultural lots for particular production and building irrigation systems; building and installing forges to make use of the scrap metal and glass furnaces to recycle the remains of modern cars and buildings left behind by the demise of modern civilisation; planning a mix of sources of renewable energy and the machinery to harvest this; bakers, butchers and candlestick makers . . . And thence groups of citizens who should take responsibility for each of the initiatives . . .

One might conjecture that in principle, and barring debilitating conflicts, there will be enough time in which to initiate, adjust and consolidate such initiatives: the energy downward passage can be expected to take many decades, probably proceeding with times of plateaux and others of steeper descent (Greer 2008). But we can be confident that it will require a local – or subregional – politics of consensus and a rapid learning process regarding how to work together effectively as well as a deep sense of conscientiousness regarding responsibilities allocated by the fora. The notion of the ‘cooperative commonwealth’ pioneered by the Spanish city of Mondragon, before it grew too large and began to enjoy its power too much (Whyte WF and Whyte KK 1988), may indicate the general direction. We are talking here of an ethos that has put liberal individualism and competition far, far into the distance – that would seem to be the

necessity of the new circumstances of increasing frugality rather than continuous growth of modernity that rewarded individuals for their foibles, their egos and their selfish desire – in however small a way – for power over others.

Fora of this kind may proliferate. Whilst LED can be expected to be at the centre in the first instance, the production, allocation and management of the built environment and the provision of infrastructure could use the same general format as could even the governing of the city and subregion as a whole. It is the participatory format that matters and, within this, relearning solidarity (patience and humility) but also relearning simpler skills and being able to create life in situ where the vast majority of the world's working population today – North and South – knows almost nothing of a practical nature except how to negotiate the hypermarket shelves or, in the case of the world of the informal economies of the South, to sell things in the street. Thence, life today becomes a space for manipulating infotainment on electronic machines about which few know anything of how they are made and which, with the decreasing availability of electricity and, indeed, the supply of the machines themselves, will vanish from our lives.

The longer-term perspective

The main vision presented above is one where local residents and communities come together to try to solve their existential problems in situ. With the decline in energy, this will from the outset pose problems of lack of all resources and the need to be inventive first with UPA and thence with other aspects of LED. But larger cities can be expected to increasingly fail and so populations that can do so would migrate out. Historical and archaeological research, particularly over just the last decade, has revealed that populations have configured themselves in very different ways across the continents in the past relative to today, and we can also expect, besides a probable severe reduction in global population over a relatively short period, radical shifts in the locations of populations.

On the one hand this can be expected to result in mass migrations – as is incipient in Russia today: the United States could see the emptying out of the 'sun belt' for lack of air conditioning and more seriously lack of water, with a return to mixed agriculture in areas that can support population but where in recent years monocultures have come to prevail (true of many parts of the world). The case of South America is dramatic in that it is now revealed as having possessed a large pre-Colombian population that died mainly of disease before the European invasion had progressed very far and which, geographically, was distributed very differently from the present day geographic distribution of the continent's population (Mann 2005). The future is likely to see a further radical redistribution of surviving populations.

Some megacity regions in areas with good soils (many megacities have spread over some of the best agricultural lands) may simply thin out until the relationship between population and proximate productive land is re-established that might still be relatively urbanised areas but morphologically bearing no relation to the present city, where much of the infrastructure would be abandoned and plundered for their resources. As noted above, it could well be that the distribution of population in productive areas will end up, as in the past in many parts of the world with a matrix of villages, small towns, larger towns and small cities, spread as a carpet across the land: variations on the Christaller model. But many cities are highly likely to disappear altogether as happened many times in eras prior to the modern era.

We turn finally to the administration of settlements in terms of production and lifestyles of the resulting population distribution. We might expect that the shape of world politics and the politics of each nation will change very rapidly in the coming decades where the hegemony of 'Empire', in Hardt and Negri's (2000) sense, fades away.²¹ The intense surface treatment of events in the media that reaches into almost every home today, purveying a uniform global (Occidental) culture of 'democracy' and 'consumption', is unlikely to last for long once energy disruptions

and their economic impacts become more intense.

Some kinds of cultural reassertion might be expected to emerge beyond the borders of Occidental culture, though there clearly can be no return to local cultures *ex ante* Occidental hegemony for all but a few small enclaves – such as Bhutan – that managed to escape the ravages of ‘modern civilisation’. Whilst it is clearly impossible to predict what might happen in non-Occidental worlds – and because changes in direction away from ‘modernisation’ can be expected to be so fundamental that it would be pointless to try to make any planning recommendations – all one might speculate on is the degree and direction that certain nations might take.

There is no space here to conjecture even a few of the manifold different paths that are likely to be taken by different nations and fragments of nations. But, notwithstanding probable debilitating impacts of climate change, urban life will almost certainly continue and be rebuilt in new ways in many places where there has been a precolonial urban culture. And where there was none – we can think particularly of India, where today’s great cities are but a British (in a few cases Moghul) overlay of what was and may again become a culture that only ever weakly supported the establishment of cities – even huge megacities can be expected to fade away as did Rome at the end of the Roman Empire. And, whilst Latin America will have a wieriary path to supercede internal colonialism, most of Africa might be expected to sigh with relief at the retreat of the white man and his frenetic, bizarre culture.

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Notes

1. A short list of important contributions should include the following: Stren et al. (1992), Houghton and Hunter (1994), Pugh (1996), Satterthwaite (1999), Newman and Kenworthy (1999), Leitmann (1999), Williams *et al.* (2000), Lawrence (2000), Allan and You (2002), Hallsmith (2003) and Jenks and Dempsey (2005). See also the journal *Environment and Urbanization*.
2. Important references here include Portney (2003), Lerch (2007), Hopkins (2008) and Newman *et al.* (2009).
3. For an entertaining look at the world of ‘stuff’, see www.storyofstuff.com.
4. Whilst there is a large literature addressing this issue, a series of books by Zygmunt Bauman make the point most clear (Bauman 2000, 2002, 2004).
5. Albeit surveys investigating levels of happiness in the United States were indicating a decline (Heinberg 2007).
6. Perhaps the protest movements of late 2011, starting with Occupy Wall Street, can be seen as the first steps in a reaction against the rampant wealth of the few against the majority though these have yet to show a capacity for deeper analysis of the source of the malaise and invent effective political solutions!
7. This ranged from the famous Orangi Pilot Project in Karachi and similar community-organised sanitation projects in Latin America to the proliferation of community-based microfinance initiatives starting with the famous Grameen Bank in Bangladesh.
8. The critical view of many northerners – perhaps motivated by a vague sense of their own purloining of the earth’s resources at the expense of others, stretching to the posture of moral outrage famously articulated by Mike Davis (2006) – is not to be found amongst the populations themselves living in the urban slums of southern cities.
9. See Douglass and Zoghlin (1994) for a good example. See also papers from the N-AERUS conference of 2007 entitled *Grassroots-Led Urban Development: Achievements, Potentials, Limitations*.
10. Arguably best represented by the *International Forum on Globalization* with a membership of some 50 ‘radical thinkers’ and a well worked out, comprehensive alternative global system (Cavanagh and Mander 2004).
11. Whilst nineteenth-century France (Manuel 1962) and the early years of the United States with such communities as the Mormons, Amish and Hutterites are best known, the United Kingdom also has a rich history of such communities. Dennis Hardy (1979) researched many nineteenth-century communities in England and analysed in detail their ideological origins and intentions.
12. For an easy entry to the subject, see Heinberg (2003). For a more technical exposition by

- ex-employees of the US Department of Energy, see Hirsch *et al.* (2010).
13. Brazil is almost alone in potentially being able to run its entire transport system on ethanol derived from sugar cane. This is but a very small percentage of the world's transport fleet and could never increase to a very significant extent.
 14. Energy is received by food crops from the sun. Added to this, before it arrives on the table, is fuel for tractors and other agricultural machinery, agrochemicals, harvesting and transport, refrigeration, preparation for marketing, the family trips to the supermarket and thence home preparation.
 15. See Bloomington Peak Oil Task Force (2009) for a short list. The report also notes Gary Stringer of Northeast Louisiana University as having compiled a list of 500,000 products using oil or oil-based products as ingredients.
 16. A rich academic debate that has had very little impact on planning realities has been conducted in recent years concerning 'sustainable cities' and particularly 'compact cities'. See Jenks *et al.* (1996) and Jenks and Dempsey (2005). For a series of papers on compact cities for the South, see Jenks and Burgess (2001).
 17. Dmitry Orlov (2008), a Russian who had become an American citizen but often returned to Russia in the early years following the demise of the Soviet Union, writes in an entertaining fashion of the problems that arose in Russia at that time and how the United States may fare in the coming years with the decline in energy resources.
 18. Perhaps due to the fact that US culture is entirely a European derivative, envisioning the end of this culture whilst continuing to live on territory taken from a native population of a different order of civilisation triggers notions of 'returning' to such a condition of life or going back even further to prehistoric social conditions. See Diamond (2007) and Zerzan (2008).
 19. Walter Christaller's 'discovery' of central place theory as a practical manifestation of territorial economies is still used by the German planning system to determine the distribution of functions between towns and thence villages of different sizes.
 20. One such methodology is explained in brief as a kind of checklist in the paper entitled *Local and Regional Economic Reconstruction in an Age of Global Economic Crisis* developed in the context of a project in Colombia managed by New Synergies in Development, the NGO chaired by the author, to be found on the web site of the organisation in documents – www.newsnergies.ch.
 21. For readers unfamiliar with the debate: 'Empire' in this sense is the global capitalist system with the United States at its centre but encompassing also capitalist structures in Europe, Japan and elsewhere, the point being the dominance of corporate interests in running the modern world politically as well as economically.

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