The peaking of liberal democracy: energy scarcity, food security, and insurgent governance.

WAYNE FOORD

This article argues that the peak in global oil production is bringing about the emergence of a post-liberal order. Given continuing fossil fuel and resource depletion, as well as climate change impacts, the new order will be unsustainable, thus providing opportunities for the deepening of democracy through new forms of local participatory governance. Local food-system planning is one example. The Cuban experience of energy scarcity during the 1990’s ‘Special Period’ also points to the possibility of adaptive policy responses, leading to more resilient, decentralised governance, and highlights the role of assertive grass-roots initiatives in setting precedents for policy innovation.

Introduction

‘Peak oil’ refers to the point at which maximum global production is reached, and thereafter enters permanent decline. There is evidence that ‘conventional’ oil has already peaked, and ‘all liquids’ production has reached a plateau (Birol 2010; Miller and Sorrell 2013; Murray and King 2012). This article argues that the peak in oil production is associated with the emergence of a post-liberal order, as anticipated by the more pessimistic contributions to the ‘politics of scarcity’ debate, initiated in the 1970s. Trends towards a post-liberal order can also be seen within the global food-system in the form of land-grabbing, and the widespread imposition of genetically modified (GM) based industrial agriculture. Given continuing fossil fuel depletion, this new order will be unsustainable, and opportunities may arise for new forms of local participatory governance to evolve.

Alternative proposals from the transition movement for food-system resilience are examined, and lessons from Cuba’s experience of energy scarcity during the 1990s ‘Special Period’ are examined.

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1 Wayne is a PhD candidate in the School of Politics, International Studies and Philosophy at Queen’s University Belfast.
2 ‘Conventional’ oil and gas refers to easy-to-access, land-based and shallow water fields; ‘non-conventional’ oil and gas includes deep water oil, tar sands, shale gas and oil.
3 ‘All liquids’ combines both conventional and non-conventional sources of oil and gas.
identified. In particular, the process of forced decentralisation during the Special Period, and the contribution of community-led insurgent planning. It is argued that the concept of insurgent planning could be extended to more strategic infrastructure and governance, including alternative food initiatives.

The Limits to Growth Report and Politics of Scarcity
The first *Limits to Growth* report (Meadows et al. 1972) presented a ground-breaking systems-dynamics model that simulated interactions between population growth, food production, industrialisation, pollution, and resource depletion. The business-as-usual scenario indicated a collapse of industrial output and food production beginning in the second decade of this century, with a subsequent collapse of global population starting around 2050. The report was subjected to derision and misrepresentation (Bardi 2008, 2011), but later reappraisals found its projections to be remarkably on track with the actual trajectory of global trends since its publication (Simmons 2000; Turner 2008; Hall and Day 2009; Bardi 2011).

*Limits to Growth* informed a related debate addressing the politics of scarcity that anticipated resource conflicts and the rise of green authoritarianism in response to ecological crises (Connelly and Perlman 1975; Gurr 1985; North 1977; Orr 1977, 1976; Pirages 1977). Some argued that ecological scarcity and human survival will necessitate the end of democratic and liberal values (Ophuls 1977; Heilbroner 1974), while others made the case for a deepening of democratic participation (Barnet 1980; Botwinick and Bachrach 1983; Jennings 1983). Concerns about climate change and resource constraints in the 21st century have renewed this debate (Ahmed 2010; Friedrichs 2010; Lovelock 2010; Mulligan 2010a, 2010b; Shearman and Smith 2007). This article reframes the debate by considering, not what might or should happen in the future, but what is emerging now, and how best to respond, in order to promote human flourishing and resilience.

Peak Oil, Plateau Oil and Future Scenarios
If climate change is among the most serious threats to all life on the planet, peak oil is the more immediate threat to human industrial civilisation. No other energy source combines the energy density, transportability, and low cost of oil. Oil represents 34% of global energy supply, and contributes over 90% of transportation fuel (Sorrell et al. 2010). It underpins every sector of the economy, and provides the feedstock for plastics, pharmaceuticals and chemicals, including agricultural pesticides and fertilisers. The global food-system’s reliance on oil also extends to
fuel needed for agricultural machinery and irrigation systems, to transportation, refrigeration, processing, packaging, and distribution.

Given this pervasive dependency, the risks of oil depletion for industrial civilization are potentially catastrophic. A consistent correlation exists between historic oil price spikes and economic recessions, including the recent global recession (Hamilton 2009, 2011). If no substitute is found to match the energy density and versatility of oil – and none is available at present - the peaking of global oil production signals the end of economic growth and globalisation. Peak oil will likely precipitate economic contraction, mass unemployment and the collapse of government services and social welfare programmes as the tax base shrinks. Opportunities for investing in alternative energy infrastructure will diminish; and, actual or anticipated social unrest may lead to more autocratic government.

According to the International Energy Agency conventional oil peaked in 2005-06 (Birol 2010). To meet the continuing growth in global demand the shortfall is being met with non-conventional oil and gas which are more expensive, harder-to-access, and more environmentally polluting. All liquids production has reached a plateau and no longer responds to rising demand and higher prices (Murray and King 2012). The post plateau decline is likely to be earlier and steeper than mainstream forecasts have predicted. Depleting conventional fields require more energy-intensive extractive technology, and non-conventional sources also have very low energy return on investment ratios (EROI) (Murphy and Hall 2010). Low EROI means less energy is available for social and industrial use. Maintaining economic growth through the transition to alternative energy is implausible given the unique energy density, transportability and versatility of oil, and the economic and political constraints on investment in new energy infrastructure in a period of increasing austerity and capital scarcity. The most likely post-plateau energy scenarios for industrial societies now lie on a continuum between forced, gradual energy descent and rapid collapse.

**Peak Oil Policy Response and the Emerging Post-Liberal Order**

In the UK, public debate about peak oil is rare. However, since the oil price spikes of 2007-08, UK energy and national security strategy documents have sounded a more alarmist note. Their titles are simultaneously reassuring and disquieting: *Energy Security: A national challenge in a changing world* (Wicks 2009); *A Strong Britain in an Age of Uncertainty* (Cabinet Office 2010); *Rebuilding Security: Conservative Energy Policy for an Uncertain World* (Conservative
Peak oil is not denied, but alluded to, as one might handle a difficult subject like cancer or death. We are warned obliquely that “the era of cheap oil is behind us” (Conservative Party 2010: 22). Alongside more traditional security threats, such as, terrorist attack, WMD, state-led threats, and regional conflict, the following have been added: “competition for energy” (Cabinet Office 2008: 2), “resource scarcity” (Cabinet Office 2010: 16), “disruption to oil or gas supplies” and “disruption to international supplies of resources (e.g. food, minerals)” (Cabinet Office 2010: 27). This represents a broadening of the security agenda, but these additional threats are still framed within a traditional national security perspective that remains disposed towards military solutions, and peak oil is not explicitly acknowledged.

Various factors may explain this lack of candour, including: the reluctance of elected politicians to present bad news and potentially unpopular policies; fear of panicking financial markets; and an endemic culture of secrecy. A further explanation may be that a strategy for addressing peak oil exists, but its legitimacy would be challenged if exposed to public debate. The UK, for example, as an ally of the US in the so-called 'War on Terror', has arguably already embarked on an imperialist energy security policy. Alan Greenspan, former chairman of the US Federal Reserve, commented in his memoir,

> What do governments whose economies and citizens have become heavily dependent on imports of oil do when the flow becomes unreliable? The intense attention of the developed world to Middle Eastern political affairs has always been critically tied to oil security...I am saddened that it is politically inconvenient to acknowledge what everyone knows: the Iraq war is largely about oil (Greenspan 2007: 463).

The events of 9/11 provided the pretext for the invasion of Iraq. According to General Wesley Clark, there were further plans to invade Libya, Syria, Lebanon, Sudan, Somalia, and Iran (Global Research 2007). All of these countries, along with Iraq and Afghanistan, either have oil and gas reserves, or are important geopolitically, as transit countries for pipelines. Ukraine, as an important energy corridor for oil and gas from the Caspian Sea region, is the latest pawn in a ‘New Great Game’ (Klare 2012, 2008) between the major powers to secure control of remaining oil and gas reserves, and pipeline routes (Ahmed 2014).
The ‘War on Terror’ also provided grounds for introducing domestic anti-terrorism legislation in both the US and UK, with the resulting loss of civil liberties, increased surveillance, and appropriation of increasingly repressive powers by the state (Ahmed 2013; American Civil Liberties Union 2011; Hedges 2011; Wolin 2008). Concerns expressed in military and national security documents, regarding the risks of social unrest arising from energy scarcity, may also be a significant driver of this legislation (Department of Energy and Climate Change 2009; Ministry of Defence 2013; US Joint Forces Command 2010). For example, the UK Ministry of Defence (2013) warns of “increased incidents of internal unrest” and that “the western way of life with cheap access to a wide variety of consumer choice and cheap energy will be increasingly challenged as lifestyles follow GDP levels” (Ministry of Defence 2013: 16). Since 9/11, the indications are that Western nations, led by the US, are heading towards a post-liberal order that is, effectively, authoritarian, and far from green. The key features of this emerging order are: extreme energy solutions that exacerbate climate chaos and environmental damage; predatory militarism masked as the ‘War on Terror’ to secure control of oil and gas reserves (Friedrichs 2010); the creation of a homeland security state (Chossudovsky 2005); and, managed democracy where policy-making is captured by corporate agendas (Wolin 2008).

GM and the Global Land-Grab – An Emerging Post-Neoliberal Food Regime?

How might this emerging order be reflected in the global food-system? Striking trends since the 2007-08 oil and food price spikes indicate that the current global, neoliberalist food regime is transforming. These trends include a surge in land-grabbing (Anseeuw et al 2012; Borras, Franco and Wang 2013; Borras and Franco 2010; GRAIN 2008; McMichael 2013, 2012), combined with aggressive promotion of a ‘New Green Revolution’, based on GM technology (Daño 2007; Holt-Giménez and Altieri 2013; Mittal and Moore 2009; Morvaridi 2012). A developmentalist and global food security narrative is deployed to justify both land-grabbing and the New Green Revolution.

Foreign investors in farmland that is typically, but not exclusively, located in the global South include wealthy import-dependent countries concerned about food and energy security, as well as financial investors seeking to exploit rising land values, higher food prices, and demand for biofuels and livestock feed. The latter reflects the growing demand for meat and dairy products

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Footnotes:

4 Food regime analysis is associated with the work of Friedmann and McMichael. A food regime is defined as “an historically specific geopolitical-economic organisation of international agricultural and food relations” (McMichael 2005: 57), or alternatively, a “rule-governed structure of production and consumption of food on a world scale” (Friedmann 1993: 30).
in emerging economies. The New Green Revolution enables market penetration by agribusinesses, the destruction of indigenous smallholder farming, and the imposition of large-scale, export-oriented, industrial farming. It requires commoditized land markets to facilitate foreign investment or land-grabbing. Insofar as land-grabbing involves wealthy states concerned about food and energy security and seeking to bypass global markets, it represents a shift towards security mercantilism (McMichael 2013) and the emergence of a post-neoliberal, imperialist food regime. Given the dependence of industrialised agriculture on fossil energy, this new regime will become increasingly unsustainable as we enter the post-plateau decline.

**The Transition Movement and Food-System Resilience**

The transition movement broadly includes those who subscribe to peak oil theory and advocate energy descent transition strategies. Their proposals for a more resilient food-system include: a shift from industrial, chemical-intensive farming to organic agriculture; downscaling from large, capital-intensive to smaller labour-intensive farms; a return to mixed farming and a diverse farm sector to recreate self-reliance in sourcing fuel, fertilizer, and feed; and on-farm generation of renewable energy (Heinberg and Bomford 2009; Pfeiffer 2006; Pinkerton and Hopkins 2009).

The Transition Towns network in the UK is actively promoting re-localisation of food production, processing and consumption. The most promising initiative, in terms of strategic potential and ‘deepening’ democracy, is the creation of Food Policy Councils (FPCs) in Bristol and Cardiff. Modelled on similar organisations which grew out of the local food-systems planning movement in North America, FPCs promote re-localised, sustainable food-systems that re-establish links between city and countryside. They integrate food policy with other policy issues, such as, energy, waste, economic development, health, and anti-poverty programmes. They also foster ‘food democracy’, a deliberative form of local food-system governance.

The least promising proposals are those calling for strong government intervention and those planning to maximise national self-reliance, promote local food production, encourage re-ruralisation (Heinberg 2007), refocus the education sector on the food and farming transition (Heinberg and Bomberg 2009), and coordinate a ‘war-time mobilisation’ (Brown 2008). The

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5 For further information: http://sustainablefoodcities.org/findacity/cityinformation/userid/42 and http://bristolfoodpolicycouncil.org/ (Both accessed 28 March 2014)
call for centralised planning flies in the face of entrenched neoliberal orthodoxy favouring a minimal state, and ignores the degree to which policy-making has been captured by corporate interests. A ‘war-time mobilisation’ led by the current UK power elite would probably unleash accelerated oil and gas fracking, GM crop production, and offshore land-grabbing. Therefore, proposals for national government transition planning may be unrealistic at this present time.

**Lessons from the Cuban Special Period**

Cuban experience suggests that opportunities for change may open up when the energy crisis deepens, and that assertive community-led initiatives can set precedents for policy innovation. The Special Period, precipitated by the collapse of the Soviet Union in 1989 and a tightened US trade embargo, entailed dramatic falls in imports of oil, food, and agricultural inputs. It provides important insights into the likely impacts of future energy scarcity on food and farming systems, resilience factors, and possible coping responses.

Due to ongoing US hostility, Cuba had maintained strategic reserves of fuel, food, fertilisers, and seed. This meant that the full impact of the crisis was not felt until 1993-94 (Wright 2009), providing a ‘breathing space’ to develop adaptive responses. The loss of oil and agricultural inputs led to the collapse of large-scale, high-input industrial farming. However, low-input, small-scale family and cooperative farming, using traditional organic and agro-ecological methods, proved to be resilient. The state responded by breaking up the large industrial farms into smaller worker cooperatives, and promoting widespread adoption of organic and agro-ecological approaches (Alvarez and Messina 1996; Enriquez 2000; Rosset 2000; Rosset et al 2011; Sinclair and Thompson2001; Warwick1999; Wright 2009). Energy and fuel shortages also had incapacitating impacts on centralised government departments based in the capital of Havana. The regime’s response was to decentralise key public services, including education, health and support for food production. Department of Agriculture functions that were previously separated and centralised became integrated at regional and municipal levels (Piercy, Granger and Goodier 2010; Wright 2009).

The commitment to social justice was maintained. The government introduced rationing, and targeted food programmes for vulnerable groups. A national nutrition monitoring system was set up to monitor health impacts, and has become an international model of best practice (Mesa-Lago 1998; Sinclair and Thompson 2001; Wright 2009). There were no food riots in Cuba during the Special Period. Spontaneous, and largely illegal, community initiatives led to the
spread of urban agriculture. The regime responded creatively by legalising occupations of unused land, urban food markets, and private food businesses, and by establishing a Department of Urban Agriculture (Gonzalez 2003; Wright 2009). The Cuban government response to the crisis was generally pragmatic and reactive, in a context where centralised state agencies were relatively incapacitated. Nonetheless, these responses were informed by socialist and humanitarian values.

**Insurgent Planning and Adaptive Governance**

A key lesson from the Cuban experience is that a period of crisis and adversity may present opportunities for profound change, and for assertive, grass-roots movements to set precedents for, and effect, policy innovation. The land occupations and urban food initiatives in Cuba constituted a form of ‘insurgent planning’, a term originally used to refer to informal, organic urban development (Sandercock 1999; Holsten 2008), or oppositional activities of communities, in the global South, confronting neoliberalism (Miraftab 2009). Insurgent planning is transgressive and challenges established norms. It can be oppositional, and/or creative and precedent-setting. In the context of energy, food, resource and climate crises, it brings an important contribution to adaptive governance.

Adaptive governance is a term used in resilience thinking in relation to socio-ecological systems, and describes approaches that are needed to address complex interaction and manage uncertainty and periods of change. It is characterised by collaborative, flexible and learning-based management across different scales (Folke *et al* 2005; Olssen *et al* 2006; Ostrom, Walker and Gardner 1992). Governance, generally, is associated with ‘legitimate’ authorities and stakeholders, not oppositional movements, or ‘extra-legal’ strategies. However, insurgent planning could extend to more strategic infrastructure and governance, such as local food planning and alternative food networks. The concepts of parallel public infrastructure and shadow networks would support this.

Parallel public infrastructure (Darley, Room and Rich 2006) refers to the creation of communities, or outposts, that build increasing self-reliance with regard to energy, food-systems, transportation, means of exchange, and governance. These proposals have much in common with some forms of anarchism, the anti-globalisation movement and the food sovereignty movement in Latin America. They have less in common with the current apolitical and non-threatening style of the Transition Towns network.
The term shadow networks is derived from literature on resilient socio-economic systems and adaptive governance (Anderies, Walker and Kinzig 2006; Gunderson 1999; Olsson et al 2006), and refers to the emergence of informal networks in response to social and ecological crises. These networks link key individuals in different sectors and levels of governance. They engage outside the constraints of their separate organisations, and are able to generate a diversity of innovative ideas and solutions. Case studies of shadow networks demonstrate their capacity to exploit windows of opportunity, having developed “a portfolio of possible projects that could be launched whenever there was an opening and the time was right” (Olsson et al 2006).

Conclusion
Peak oil, combined with other resource and environmental crises, is bringing about a sea-change in Western liberal-democracies. The trappings of representative democracy remain, but the substance is becoming post-liberal, authoritarian, and largely controlled by corporate agendas. This is reflected in the emergence of a post-neoliberal and imperialist global food regime. Given continuing decline of energy availability, resource depletion, and increasing severity of climate change impacts, this emerging order will not be sustainable. As large-scale political and economic systems become increasingly incapacitated, it may present opportunities for radical policy innovation and for new forms of democratic governance to evolve. Local food-system planning is one such innovation. The concepts of insurgent planning and adaptive governance together suggest many creative and transgressive ways to bring these changes to fruition.
Bibliography


