# CARBON CAPITALISM AND THE PROBLEM OF ENERGY*

**John Urry**

*This paper examines how contemporary mobile societies are built upon the energy resource of oil. This dependence sets up many difficulties and conflicts. And it is especially highlighted in the new century as oil supplies would appear to be getting more uncertain and expensive. Capitalist societies face many problems because of their dependence upon a single and limited energy resource.*

***Keywords:*** *oil energy, cars, infrastructure, systems taxation.*

Places of high carbon excess have mushroomed in the past 30 or so neo-liberal years. The speculative development of places like Dubai was made possible by large infrastructural projects involving celebrity architects. The associated new transport systems are typically paid for out of public money. Building such places often involves the profligate consumption of water, power and building materials in order to build on reclaimed land (Macao, Dubai) or in deserts (Las Vegas, Abu Dhabi). Such sites are highly commercialized with many simulated environments, more 'real' than the original from which they are copied. Gates, often digitized, prevent the entry and exit of local people and those visitors who do not have signs of good credit. Norms of behavior are unregulated by family/neighborhood. They are beyond neighborhood with liminal modes of consumption and only pleasure and no guilt unless insufficient consumption occurs.

Moreover, many such places lie on or near beaches (and/or deserts). In Dubai massive construction projects have enlarged the 'beach' through many 'artificial' islands. On occasions whole islands provide secure sites for such excess consumption. Indeed, entire Caribbean islands are being developed into exclusive resorts for the super-rich, and removed from the control and governance of local communities and their governments (Sheller 2008c). Sheller says we can talk of 'the neoliberal respatialization of the Caribbean for the benefit of the super-rich, yacht owning, aeromobile global elite' (*Idem* 2008b: 1396).

Davis and Monk state that the scale of global offshore tax havens is ten times greater than the UK's GDP (Davis and Monk 2007; see also Palan 2003). More generally, such 'treasure islands' often form a part of the unregulated tax-free offshore economy, the 'offshore world' constituted through assembling physical space with cyberspace beyond the control and access of states (for more details and analysis see Shaxson 2011). Such offshore worlds are paradigmatic of neo-liberalism, of gated resort development, select tourism for the super-rich, the splintering of public infrastructures and the enabling of often dubious wealth to go offshore and hence out of sight of tax-collecting authorities. In the neo-liberal period systems of excess production, ultra high carbon consumption and privatization have become dominant.

However, it might be argued that these high carbon mobile lives pertain only to the super-rich. But this is not the case since all in the rich North are implicated in high carbon excess. First, these places establish exemplars of development which the developers elsewhere then seek to emulate and to produce mass market versions of such places of excess, including themed restaurants, downmarket resorts and suburban shopping malls (Sheller 2008a). Second, many of these places attract the super-rich 'offshore' and this reduces the tax-take of states and lowers the level and scale of public provision especially of low carbon initiatives. Third, these places of consumption are part of a 'splintering urbanism', excluding many people and hence reducing the availability of public space more generally around the world (Graham and Marvin 2001). Fourth, the development of these places for visiting has the effect of further extending the mobility field and producing further inequalities between the economic and network capital rich and the economic and network capital poor. Fifth, these dreamworlds for the super-rich provide models of lives that through global media and travel generate desires within much of the world's population for similar kinds of experience. As Davis and Monk argue, these 'dreamworlds enflame desires – for infinite consumption, total social exclusion and physical security, and architectural monumentality', and we might add – for high carbon lives lived and experienced in places of energy excess at-a-distance (Davis and Monk 2007: xv).

But most significantly here, these places all depend upon oil and it is oil that makes the world go round. Today's global economy is deeply dependent upon, and embedded into, supplies of abundant cheap oil. Most industrial, agricultural, commercial, domestic, and consumer systems are built around the plentiful supply of oil or 'black gold'. I now discuss oil's centrality of contemporary capitalism.

The increasingly mobile twentieth century was the path dependent upon cheap and plentiful 'mobile' oil. Most of the 'social practices' of modern life came to involve regular and predictable long distance movement of people (commuters, holidaymakers, families and friendship groups) and objects (including water and food). These patterns became habitual. They started in the USA and then moved out: '[O]il powers virtually all movement of people, materials, foodstuffs, and manufactured goods – inside our countries and around the world' (Homer-Dixon 2006: 81). Oil is remarkably versatile, convenient and was (during the twentieth century until the early 1970s) cheap. It became vital to virtually everything that *moves* on the planet including many foodstuffs and, in the form of plastic, to most manufactured goods (Maass 2009: 194; Heinberg 2005: ch. 2).

The worldwide transport sector has a dependency upon oil of at least 95 per cent, accounting for about half of all oil consumption and about one-fifth of all energy consumption. Almost 95 per cent of all goods for sale in shops involve oil. There has been an annual average growth rate of oil production of more than 2 per cent (Pinchon 2006; Leggett 2005: 21).

But in the *twenty first* century oil is a huge problem. First, its widespread use generates greenhouse gas emissions and hence significantly contributes to climate change. DeCicco and Fung simply note that: 'America's cars are one of the world's largest sources of global warming pollution' partly because each generates more emissions per vehicle since such 'gas-guzzlers' were developed during the century of 'easy oil' (DeCicco and Fung 2006: 1). Second, the supply of oil is finite and many argue that we

have reached or are about to reach a peak in the global supply of oil, and hence of petrol and kerosene. Third, in the case of machine-based movement there is so far no alternative source of energy to oil, there is no plan B that could begin to replace it on the scale required.[**]

The 'petroleum interval' in human history could thus turn out to be a brief (twentieth) century or so of Easy Oil. Energy will be increasingly expensive and there will be frequent shortages, especially with the world's population continuing to soar. There is rapidly increasing demand from developing economies, especially China and India. From 1999 to 2004, China's oil imports doubled. It is now the second largest user of oil. If China reaches the US's per capita level of car ownership 'it would have some 970 million cars, 50 % more than the entire worldwide car fleet in 2003' (Girardet 2004: 136). The IMF estimates that the number of cars in China will increase from 21 million in 2005 to a staggering 573 million in 2050 and this is part of an almost six-fold projected global increase over this period (Chamon, Mauro and Okawa 2008). Kunstler estimates that at the current rate of growth in demand China will in ten years consume 100 per cent of the available world exports of oil. And this assumes no growth in demand elsewhere in the world and no fall in global production (Kunstler 2006: 84).

It is thought that most of the 85 per cent of the world's population not owning a car now would own one if they could in order to develop those social practices that presuppose private vehicles. If many of those in developing countries do acquire 'western' levels of private car ownership, then this will transform domestic transport infrastructures, road safety, global world fuel resources, global environment and especially ensure that climate change is unstoppable (Sperling and Gordon 2009: 4).

Oil supplies are increasingly concentrated amongst relatively few countries and this adds to the uneven character of supplies. Some commentators emphasize less the technological peaking of oil but more its political peaking. This political peaking will occur sooner than the technological peaking due to 'terrorism, wars, supplier countries underinvesting, holding back, and even collapsing' (Sperling and Gordon 2009: 120–121). Such political and security instabilities result in the fact that most oil-producing states generate through authoritarian policies and corruption much internal terrorism, while oil pipelines and refineries are such that terrorist attacks can relatively easily result in catastrophic breakdowns in supply. Oil is also a key commodity speculated upon in financial markets; according to the recent major Report from Lloyd's, such speculation destabilizes oil supply and price and reduces energy security (Froggatt and Lahn 2010: 13–15; see also Lovins *et al.* 2004: 8–12, on how 'oil supplies are becoming more concentrated and less secure').

When oil production goes the past peak, the size and general effectiveness of the world economy and society will also peak. There will be likely large reductions in all oil-dependent industries which in fact are almost all of manufacturing, services and transportation (Strahan 2007: 123; Homer-Dixon 2009: 13).

Furthermore, despite their multiple oil interests, both corporations and states consistently exaggerate the size of their reserves, upon which the official global estimates depend. In particular, in 2004, Shell was found out for over-estimating its reserves by 24 per cent (Maass 2009: 19). Carbon interests maintain that the peaking of oil globally is way off in time, they lobby against regulation and intervention in energy markets and energy prospecting and they fund various foundations and think-tanks that engender climate change skepticism (Bower 2009; Heinberg 2005: 118–133). One interesting

counter-analysis from an NGO contesting this is the Transition Towns movement. It organizes so as to end the era of cheap and plentiful oil. It seeks to move transition towns away from 'oil dependency to local resilience' (Hopkins 2008). The Rocky Mountain Institute somewhat similarly has developed and costed a strategy for how the USA can be redeveloped so that it can 'win the oil endgame' (Lovins *et al.* 2004).

But overall in a world of globally contested and diminishing oil and energy reserves, a rush for remaining oil is still the most likely future. The main industrial states and corporations will try to secure available supplies and distribution channels using legal and often illegal means. Intermittently insufficient oil to sustain global economic growth and consumption will generate economic downturns, more resource wars and lower population levels.

The very likely future sudden increases in oil prices will almost certainly generate much bloody resistance, intense competition and wars to secure supplies. This seems especially true in the contemporary world with the two largest national economies, the USA and China, engaged in a desperate search to secure oil at almost any cost. Ruppert (2004) shows how such a search has corrupted U.S. domestic and foreign policy for decades. He specifically connects the ending of cheap oil with the more general decline of the American Empire. The USA engaged in various regime destabilizations in order to provide the pretext for invading Iraq which possesses 11 per cent of known oil reserves, and possibly in the future in Saudi Arabia with over one-fifth. The USA's effort to increase its access to oil sources from outside because of its decline in oil production since the 1970s, led to its subjugation of Middle Eastern oil interests in the name of the 'freedom' of U.S. citizens to drive, to live in energy expensive suburbs and to fly. Engdahl concluded that 'US foreign and military policy was about controlling every major existing and potential oil source and transport route on earth... Washington appeared to be waging ... resource wars' (Engdahl 2004: 263–264).

Oil producers are sites of untold wealth, huge inequalities, autocratic government, militarization, corruption and much potential protest and resistance (apart from Norway?). As Lovins *et al.* argue: 'Countries often become unstable once they discover oil' (Lovins *et al.* 2004: 19). It seems the higher the price of oil (and gas) the *more* likely a society is to be autocratically governed and for local populations to suffer many deprivations including ironically a lack of access to oil itself. There is a 'global curse' of oil, as in the prophetic words of the movie 'There will be blood'.

And these conditions in turn generate terrorism, revolutions and demoralized labor and in such risky environments accidents are rather probable. The post-peak oil context would itself involve huge reductions in the size of the global economy and society, many threats to 'democracy', little chance of world peace and many threats to the mobile lives that the rich North and its mobility pioneers have got used to. Ending the dependence upon oil is probably the priority for the quality of human life on the planet Earth.

## NOTES

[*] This paper is drawn from Urry (2011).

[**] The article does not deal with issues of increasing shale oil and gas production. The author studies them in his new book *Societies beyond Oil: Oil Dregs and Social Futures* (Zed Books, 2013, see at http://zedbooks.co.uk/paperback/societies-beyond-oil). According to the author, these processes will not solve the problem of energy deficit.

## REFERENCES

Bower, T.
2009. *The Squeeze. Oil, Money and Greed in the Twenty First Century*. London: Harper Press.

Chamon, M., Mauro, P., and Okawa, Y.
2008. Mass Car Ownership in the Emerging Market Giants. *Economic Policy* 23(54): 243–296.

Davis, M., and Monk, D. B.
2007. Introduction. In Davis, M., and Monk, D. B. (eds.), *Evil Paradises: Dreamworlds of Neoliberalism* (pp. ix–xvi). New York: The New Press.

DeCicco, J., and Fung, F.
2006. *Global Warming on the Road*. Washington, D.C.: Environmental Defense.

Engdahl, W.
2004. *A Century of War. Anglo-American Oil Politics and the New World Order*. London: Pluto.

Froggatt, A., and Lahn, G.
2010. *Sustainable Energy Security. Strategic Risks and Opportunities for Business*. London: Lloyd's and Chatham House.

Girardet, H.
2004. *Cities, People, Planet*. Chichester: Wiley-Academy.

Graham, S., and Marvin, S.
2001. *Splintering Urbanism*. London: Routledge.

Heinberg, R.
2005. *The Party's Over: Oil, War and the Fate of Industrial Society*. New York: Clearview Books.

Homer-Dixon, T.
2006. *The Upside of Down. Catastrophe, Creativity, and the Renewal of Civilization*. London: Souvenir.
2009 (ed.). *Carbon Shift*. Canada: Random House.

Hopkins, R.
2008. *The Transition Handbook*. Totnes: Green Books.

Kunstler, J.
2006. *The Long Emergency: Surviving the Converging Catastrophes of the 21st Century*. London: Atlantic Books.

Leggett, J.
2005. *Half Gone. Oil, Gas, Hot Air and Global Energy Crisis*. London: Portobello Books.

Lovins, A. B., Datta, E. K., Bustnes, O. E., Koomey, J. G., and Glasgow, N. J.
2004. *Winning the Oil Endgame*. London: Earthscan.

Maass, P.
2009. *Crude World. The Violent Twilight of Oil*. London: Allen Lane.

Pinchon, P.
2006. *Future Energy Sources for Transport: Background*. Brussels: Future Energy Sources for Transport.

Ruppert, M. C.
2004. *Crossing the Rubicon. The Decline of the American Empire at the End of the Age of Oil.* Gabriola Island: New Society Publishers.

Shaxson, N.
2011. *Treasure Islands*. London: Random.

Sheller, M.
2008a. Always Turned On. In Cronin, A., and Hetherington, K. (eds.), *Consuming the Entrepreneurial City*. London: Routledge.
2008b. Infrastructures of the Imagined Island: Software, Mobilities, and the New Architecture of Cyberspatial Paradise. *Environment and Planning A* 41: 1386–1403.
2008c. The New Caribbean Complexity: Mobility Systems and the Re-Scaling of Development. *Singapore Journal of Tropical Geography.* 14: 373–384.

Sperling, D., and Gordon, D.
2009. *Two Billion Cars. Driving toward Sustainability*. Oxford: Oxford University Press.

Strahan, D.
2007. *The Last Oil Shock.* London: John Murray.

Urry, J.
2011. *Climate Change and Society*. Cambridge: Polity.