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CRITICAL ENVIRONMENTAL SECURITY: RETHINKING THE LINKS BETWEEN NATURAL RESOURCES AND POLITICAL VIOLENCE

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CHAPTER 8
"THE ELEPHANT IN THE ROOM?" PEAK OIL ON THE SECURITY AGENDA

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> Can I tell you the truth? I mean this isn't like TV news, is it? Here's what I think the truth is: We are all addicts of fossil fuels in a state of denial, about to face cold turkey.[1]

Introduction

Peak oil is an awkward topic to broach. While there is strong evidence that world oil production levels are near their maximum, and while a growing chorus warns of the challenges and threats this poses to economic growth and political stability, there is virtually no public policy discourse directed to the issue, and only a handful of academics seem prepared to investigate the phenomenon and its implications for economies, societies and state (as well as human) security. It is as if there is a tacit agreement to avoid the topic, an agreement in which we are all, to some extent, participating, through our avoidance of this 'elephant in the room.' The evidence for peak oil is often received with reticence, or even hostility toward the speaker. Indeed, breaching the silence of an open secret – "something of which everyone is aware yet no one is willing to publicly acknowledge" – is akin to "breach[ing] some implicit social contract, and groups indeed treat those who violate their norms of attention and discourse just as they do any other social deviants who defy their authority and disregard their rules."[2] This paper aims to go further, however, to talk about the very fact that we don't want to discuss it, even though "the very act of avoiding the elephant is itself an elephant!"[3] The latter, too, is something we don't generally talk about.

Why are governments, and most of the rest of us, ignoring (or at least avoiding discussion of) peak oil? This paper examines a range of answers to that question, with a focus on the lack of policy discourse on the issue. It then looks at a number of contemporary issues in international politics – the geopolitics of oil and gas, responses to the global financial meltdown, and global 'climate' policies – to see if peak oil adds to or illuminates the rationale behind the actions of states and other actors. It concludes with some reflections on secrecy and security in an age of ecological decline.

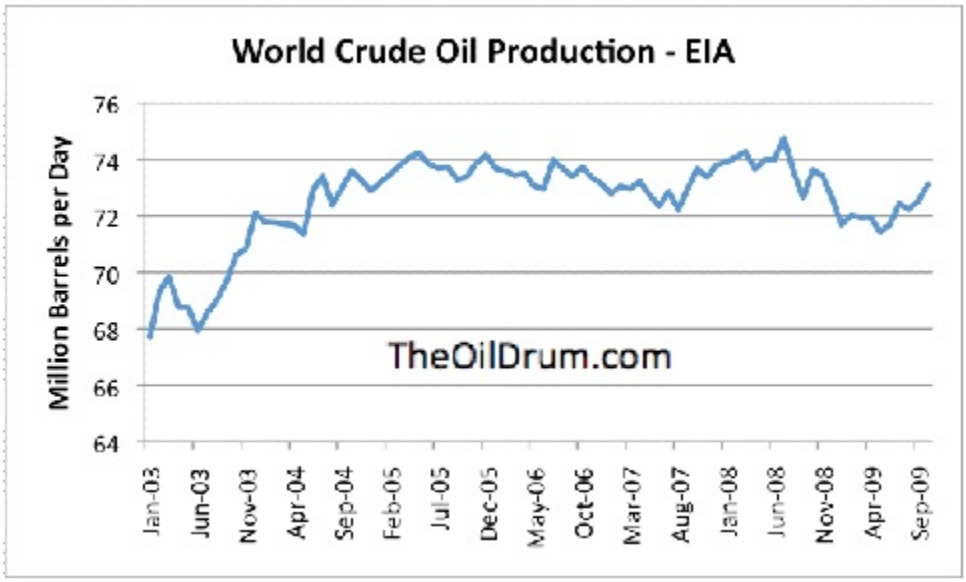
Peak Oil: An Emerging Consensus?

The discourse of energy security has long centred on questions of supply and price, but has also generally attributed energy security conditions to human agency: threats to importing states' energy supplies and prices may arise from hostile state actions, terrorist attacks on infrastructure, inadequate investment (and unfriendly investment environments), price gouging companies and market speculators. Thus the price spike of 2007-08 was widely blamed on 'speculators,' while most analysts ignore that global production was flat from late 2004 to mid-2008 – even while rising prices spurred significant investments in oil sands, biofuels and deep water production. Others argued that supply constraints were primarily due to inadequate investment and other 'above-ground factors,' including violence and vandalism/terrorism in Nigeria, Iraq and elsewhere. Yet a growing chorus argued that supply constraints and price volatility were the foreseeable consequence of the approaching peak in oil production.

The expectation of peak oil is based on two simple facts: one, oil must be discovered before it can be 'produced'; and two, production in *any* field tends to rise to a maximum and thereafter decline. Global discoveries in fact peaked in 1965,[4] and since the early 1980s global consumption has consistently exceeded discoveries, and by a growing margin. In the first decade of this century, the ratio of discoveries to consumption may have been as high as 1:5 – that is, for every barrel found, five barrels were burned.[5] M. King Hubbert developed the peak oil model in the 1950s, and he used it to predict – correctly, as it turned out – that lower-48 US production would peak around 1970. He also predicted that world production would peak around the year 2000. Many analysts believe that the oil crises of the 1970s delayed the global peak, but that it looms large, and may already be behind us.

While there remains a debate over peak oil, it is not really a debate over whether a peak will occur, but when it will occur, what it will look like and how serious a problem it will be. As former US Energy Secretary James Schlesinger said to the Association for the Study of Peak Oil and Gas (ASPO) in 2007, "we are all peakists now. Conceptually the battle is over, the peakists have won."[6] Nevertheless, expectations of the peak date vary from 2005 to 2030, and optimists (popularly known as 'cornucopians') argue that technology and new supplies are likely to produce an "undulating plateau," rather than a peak, which some say we could remain on for decades before production falls.[7] Many peak oilers, however, see the production curve from 2004-2008 as just such a plateau. Figure 1 shows global crude oil production for the last decade: the image of an undulating plateau is clear, though a peak is not.[8] As Matt Simmons often points out, however, "we will probably only be able to see peak oil in the rear view mirror."[9] If the production level achieved in July 2008 is indeed the highest we will ever see, it may be years before it is recognized that that *was* the peak. Indeed, if this economic downturn continues, along with falling *demand*, peak oil may not be recognized for decades among the events that surround it.

Figure 1. World Crude Oil Production January 2003-September 2009



Source: EIA

An imminent peak would seem to pose a serious threat to military, economic and even social stability, yet peak oil is surprisingly absent from current policy debates, and it seems that to date not a single national government has openly addressed the prospect. Yet a number of important reports have shown that the concern is very real. The "Hirsch Report," commissioned by the US Department of Energy in 2005, pointed out that, while the date of the peak was uncertain, "without timely mitigation" (by which the authors meant *decades* in advance), "the economic, social and political costs will be unprecedented."[10] The Energy Watch Group, initiated by a German Member of Parliament, concluded that oil likely peaked in 2006, and that by 2030 production will be "dramatically lower." According to the Energy Watch Group, "[t]he world is at the beginning of a structural change of its economic system. This change will be triggered by declining fossil fuel supplies and will influence almost all aspects of our daily life."[11] A 2007 report by the US Government Accountability Office (GAO) admitted its concern that "there is no co-ordinated federal strategy for reducing uncertainty about the peak's timing or mitigating its consequences."[12] In the United States a 'peak oil caucus' has been running for a number of years, while the UK's All-Party Parliamentary Group on Peak Oil includes 32 elected officials, and ASPO Switzerland currently counts 23 parliamentarians among its members.[13]

Despite this, there is little public discourse on the threat posed by peak oil, and no educational campaigns, policy initiatives, or even parliamentary debates seem to have arisen at the level of nation states, let alone at the global level. The relative obscurity of the voices on peak oil, the general lack of media attention, and the range of uncertainties associated with it, leave "more room than is healthy for politicians to dodge, procrastinate or back-pedal on the policies needed" to deal with peak oil.[14] On the one hand, this is hardly surprising: democratic politics thrives on the rhetoric of

hope, of "energy independence" and the aspirations of the next "energy superpower."[15] Voters don't tend to support the bearers of bad news, as the career of former US President Jimmy Carter, who consistently drew attention to the energy crisis, attests. On the other hand, the silence is rather shocking, given the centrality of energy in economic and industrial health, as well as the growing discussion of peak 'theory.' According to "The Global Oil Depletion Report, "[t]he growing popular debate on 'peak oil' has had relatively little influence on conventional policy discourse. For example, the UK government rarely mentions the issue in official publications and ... 'does not feel the need to hold contingency plans specifically for the eventuality of crude oil supplies peaking between now and 2020.'"[16] The UK is far from alone in "failing to give serious consideration to this risk."[17] Indeed, Canada does not appear to even *have* an official position on peak oil. Natural Resources Canada – the lead agency responsible for energy supply questions – looks to the reserves in the Alberta tar sands and argues that Canada has enough oil for the next 200 years.[18] Canada is also a member of the International Energy Agency (IEA), and is thus bound to production-sharing agreements in the event of an energy shortage; however, as a net energy exporter, Canada has not deemed it necessary to hold strategic reserves, despite that eastern Canada is largely dependent upon imported oil products and is thus highly vulnerable to shortages on the global market.[19]

The possible reasons for government silence on peak oil range from ignorance (we don't know) to disbelief (we don't buy it), to helplessness (yes, but what can we do?), to conspiratorial silence (we're working on it).[20] The most sympathetic perspective would accept that governments – that is, the people who perform the various offices, from resource bureaucrats to elected heads – generally don't know about peak oil, or don't understand its implications. One editor of The Oil Drum recently suggested that even "the [US] Secretary [of Energy] seems woefully unaware of the underlying fragility of the energy supply situation."[21] However, such a claim seems dubious, and UK MP Michael Meacher laughs at the suggestion. As he says: "it's not as though the leaders are not briefed [about peak oil] – *of course* they are."[22] Indeed, it seems highly improbable that the Energy Secretary of the world's largest energy consuming state would not be all too familiar with peak oil – especially given that the US peak is a frequently-cited proof of the concept. More likely, politicians and bureaucrats (among others) may be committed to a way of thinking that assures them that peak oil is not a problem. The principal grounds for complacency seem to lie in faith that the market mechanism is effectively infallible: the price mechanism, alongside technological advances, will provide the best way through. The market perspective is of course widely shared among the citizens of Western states, but it has also become deeply entrenched in policy circles, and no doubt many enjoy an infallible optimism about the market's ability to deliver.

As David Hughes notes, "[o]ne of the reasons politicians, television news anchors and newspaper columnists are so reassuring about our energy future is that the people they get their information from are just as bullish.... [The Energy Information Administration (EIA) and IEA] invariably paint a view of the future that is barely distinguishable from the past," and a resumption of growth is believed to be merely a matter of time.[23] The IEA's flagship publication, the *World Energy Outlook* (*WEO*), has consistently claimed that, given sufficient investment, a peak in production is unlikely prior to 2030. However, the *WEO* is also a source of some alarming statistics. The *WEO* 2008 noted, for instance, that in order to meet demand projections (in the face of declines from existing fields), "some 64mb/d of additional gross capacity – the equivalent of almost six times that

of Saudi Arabia today – needs to be brought on stream between 2007 and 2030."[24] The *WEO* 2009 also noted that the investment required to meet projected energy demand is daunting: some $26 trillion between now and 2030. However, the high oil prices needed to attract sufficient investments may actually constrain economic activity and the availability of the capital. Indeed, the IEA estimates that investment in energy production had declined from 2008 to 2009 by some 20% in certain sectors. According the *WEO* 2009, "[e]nergy companies are drilling fewer oil and gas wells, and cutting back on refineries, pipelines and power stations.... The financial crisis has cast a shadow over whether all the energy investment needed to meet growing energy needs can be mobilized."[25] The IEA, then, is not all optimism, and in fact seems to suggest that production constraints are likely.

If we presume that government agencies actually pay attention to the fine print in the IEA's publications, and that they have noted the inevitability of a peak in conventional oil production, we have to approach the view of policy-makers as fully aware of peak oil, and simply not willing (or able) to discuss the issue. Returning to US Energy Secretary Steven Chu, one former colleague has been quoted as saying the Secretary "knows all about peak oil, but he can't talk about it. If the government announced that peak oil was threatening our economy, Wall Street would crash. He just can't say anything about it."[26] That a public acknowledgement, let alone an information campaign, could negatively affect markets, certainly suggests one reason for avoiding the issue. Voters are unlikely to respond well to falling markets, especially if these can be traced to politicians' ill-considered announcements regarding declining energy. Again, President Carter's fate is well recalled.

Yet the notion that governments are aware of a threat to societal well-being and political stability, and are not discussing it openly in order to protect themselves, is hardly comforting. Indeed, even when some have tried to discuss the issue, governments have resisted it. Jeremy Leggett, who edited the 2008 UK Industry Taskforce Report, says the Taskforce had initially invited the Department of Trade and Industry (DTI) to conduct a joint industry-government study. The DTI replied, "and this is the exact words used: 'it would be too risky to do that.' Their argument was ... basically, there isn't any risk, so why do a risk assessment, because if you do that you might scare the horses unnecessarily."[27] On the other hand, the UK government has widely embraced the Wicks review,[28] which Leggett notes "dismisses peak oil out of hand." Though the taskforce had met with the authors of the review, including Malcolm Wicks himself, neither the taskforce nor its principal arguments are discussed in the report. Says Leggett, "[t]his is gross irresponsibility, and a form of betrayal of national interests, and I think the people involved in this will really live to regret it."[29]

Leggett's appeal to national interests, however, may be missing the point. The official silence may well be a policy choice informed, in some manner, by national interests. Peak oil is hardly a secret, but if governments are aware – as seems likely – and are taking steps to address it – as seems prudent – then the awareness and these steps are, in some sense, state secrets. We might look at this in terms of an 'open secret,' an issue over which a silence is tacitly understood as appropriate or necessary to maintain social and group cohesion. Open secrets – or 'elephants in the room' – are characterized by an understanding that such silences are "far less threatening than the efforts to end them."[30] Yet whatever actions are being taken to deal with peak oil are doubly guarded. To the extent they are motivated by peak oil concerns, not only is this motivation disguised (in favour of more palatable motives), but the very existence of a threat that might motivate such actions is not admitted (and is thus 'inadmissible' as evidence, even in scholarly work). Hence, it may well be as

Mike Ruppert suggests:

> Most people have ... a serious misconception: ... that there is an urgent need to somehow make key decision makers and leaders of American and global life aware of the immediate problems of Peak Oil and Natural Gas. Nothing could be more off base. The world's key decision makers have been aware of and planning for this crisis for years.[31]

But in the absence of a discourse that reveals such awareness, or that discusses policy efforts to address it, how are researchers to approach this hypothesis? Clearly, we need to look not at what actors say about peak oil – because they do not say much – but at what they do. In this spirit, this paper turns to interpret a number of current issues in international politics in light of an impending peak in oil global production.

Actions Speak Louder than Words

Blood for Oil?

> [T]he notion that the war with Iraq had nothing to do with oil is simply preposterous. The US attacked Iraq (which appears to have had no weapons of mass destruction and was not threatening other nations), rather than North Korea (which is actively developing a nuclear weapons programme and boasting of its intentions to blow everyone else to kingdom come) because Iraq had something it wanted. In one respect alone, Bush and Blair have been making plans for the day when oil production peaks, by seeking to secure the reserves of other nations.[32]

> I'm glad you asked. It has nothing to do with oil, literally nothing to do with oil.[33]

Surely the first area to look for policies and practices informed by peak oil is in terms of resource wars. Assumptions of self-interested states motivated by relative power differentials suggest that increasing scarcity of essential resources is likely to lead to inter-state conflict. While it is widely recognized that the First Gulf War was driven by concerns about oil supplies, there was serious opposition to tying the 2003 invasion to oil. Donald Rumsfeld denied it, perhaps too loudly, but at least he then had the decency to retire. Tony Blair made the same assertion in *Foreign Affairs*,[34] and then (briefly) considered seeking the EU Presidency. Alan Greenspan raised the ire of many in suggesting "that it is politically inconvenient to acknowledge what everyone knows: the Iraq war was largely about oil."[35]

As David Strahan writes, "Iraq was indeed all about oil, but in a sense that transcends the interests of individual corporations, however large. The elephant in the drawing room was the fact that global oil production is likely to peak within about a decade."[36] The view that the war on terrorism is effectively a pretext for actions motivated by other reasons, oil high among them, is widespread not only in the peak oil community, but also among academic scholars.[37] Even some who do not see peak oil recognize that the war "provided a cover that has enabled the Bush administration to do what it wanted to do anyway."[38]

Not surprisingly, the United States has been flagged for 'covert awareness' of peak oil. In 1999, former Vice-President Dick Cheney told an audience that by 2020 the world would need the equivalent of five Saudi Arabias to meet projected demand, and that the likely source, and thus "the prize," was the Middle East oilfields.[39] In 2008, President George W. Bush himself noted that the Saudis could not very well be asked to pump more oil if they didn't have the capacity, suggesting that he might have actually been listening to his energy advisor Matt Simmons.[40] The representation of resource wars as a 'response to terrorists,' or as part of a noble project of 'spreading democracy/ freedom,' offers seemingly useful justifications for these interventions. Seen through the lens of peak oil, however, they emerge as a strong statement of global power politics in its most crude form.

'Climate' Policy

Energy security and climate change are closely tied in both political rhetoric, and in the policy response, especially in terms of renewable energy supplies. The IEA's *WEO* 2009 outlines a "450 scenario" for future energy production shaped by the aim of maintaining carbon dioxide concentrations below 450 ppm. Many of its policy recommendations to address emissions also promote the goals of energy security, and the IEA's Chief Economist, Fatih Birol, told the US Council on Foreign Relations (in response to a question) that even if global warming were not at issue, he would advocate "ninety percent" of the 450 scenario policies for energy security reasons. He also told the group of his certainty that developing states are interested in climate negotiations – and in reducing emissions – far more for energy security reasons than for climate ones.[41] Diplomatically, he did not point out that major industrial states might be acting for much the same reasons.

To be sure, developments in renewable energy are welcome in terms of both climate concerns and energy security, and the global push toward renewable energy sources is promising. It seems the threat of global warming is being taken seriously; the economic implications, and the potential for widespread scarcities (of food and water) and conflict within and among states are significant. Yet there remains some tension between most energy/emissions projections and the demands of climate change mitigation. For instance, the IEA reference scenario has, for many years running, projected fossil fuels will continue to make up about 80% of growing consumption in coming decades – a scenario that is almost sure to bring about catastrophic climate change. However, many believe that climate change is already proceeding rapidly toward 'tipping points,' after which anthropogenic emissions will have a negligible effect. In that case – one that is looking increasingly likely – the push for renewable sources will mean little for climate or its security implications. On the other hand, the observation that carbon supplies may be insufficient to fulfill the worst-case emissions scenarios – and thus that peak fossil fuels may be "good news for climate change" – suggests a considerable challenge for the maintenance of electricity generation and manufacturing capacity.[42] In either case, the future is not particularly bright.

The policies that would address energy security and climate change are largely complementary, in particular the diversification of energy supplies and the development of renewable sources of electricity. Yet the global warming agenda is a voluntary one, and this allows politicians and others to maintain that we have a choice in switching our power sources. Thus as fossil fuel scarcity begins to bite, declining supply (*bad*) can be made to look like reduced emissions (*good*?). Whether due to peak oil or climate change concerns, our reliance upon fossil fuels seems sure to decline in the

future, and even the semblance of normalcy will depend on a massive effort to develop alternative energy and fuel supplies. Solar, wind and geothermal energy hold a lot of promise, and may stem electricity supply concerns (thus enabling natural gas to be directed to other uses), and many states are developing enhanced grids for low-carbon electricity. In the absence of a technological breakthrough with second generation biofuels, however, we appear to have few options to assist with liquid fuel supplies.[43]

Responding to the Economic Crisis

A third policy area that might be examined in light of peak oil is the handling of the global economic crisis that, despite talk of 'green shoots,' remains precarious in terms of employment figures, production and especially sovereign debt. While many deny that the recession/collapse was in part instigated by peak oil and high prices, there is a strong historical correlation between oil price shocks and subsequent recessions, and the spike of 2007-08 was "one of the biggest shocks to oil prices on record."[44] Those who have been watching peak oil coming have long warned of the economic consequences. Kenneth Deffeyes, in *The End of Suburbia*, suggested the peak would result in "ten trillion dollars wiped from the stock market; two million jobs gone; state and municipal budget surpluses GONE."[45] Leggett subtitled his 2005 book with a prediction of *The Coming Global Financial Catastrophe*, painting a picture not unlike what we have seen in the past two years, with declining real estate values and credit availability, along with rising unemployment.[46] Lester Brown projected that "when [oil] production turns downward, it will be a seismic economic event, creating a world unlike any we have known during our lifetimes.."[47] If these trends represent the beginnings of a global energy descent, "historians writing about this period may routinely distinguish between before peak oil (BPO) and after peak oil (APO)."[48]

That peak analysts foresaw an economic downturn is interesting, but hardly serves as proof that the current downturn is the result of peak oil. Nevertheless, many would argue that, for a number of reasons, peak oil marks something like the end of economic growth as we know it.[49] A principal reason is the historical link between energy (and oil) consumption and GDP growth. Despite efficiency gains, there is still very near a 1:1 correlation between declining oil supply and declining GDP, and as production stalled from late 2004, a halt to GDP growth could not be far behind.[50] In consumption-based economies (like that of the United States), oil prices inevitably have an impact on disposable incomes and take away from consumptive opportunities. That this could drive heavily indebted consumers into insolvency, leading to a housing market crash, was noted by the IEA itself as prices climbed through 2004.[51] While it is easy in hindsight to recognize the bubble of real estate and financial innovation was destined to pop, it may be unfair to suggest that the expectation of a crash was widely shared. Some analysts clearly saw it coming, but there was also a good deal of genuine 'irrational exuberance' over the economy among consumers, investors and in policy circles.

Yet to the extent governments have been aware of peak oil, they have no doubt also been aware of the threat it poses to economic growth and the possibility, if not the certainty, of a financial meltdown. Was such foreknowledge part of the reasoning behind the infamous repeal of the *Glass-Steagal Act* (which enabled commercial banks to act as investment banks and vice versa)? Did oil awareness help drive authorities to maintain low interest rates and 'growth' grounded in accumulating debt? The ongoing borrowing binge that has followed the onset of the crisis, while dressed

up as Keynesianism, seems to many an utterly unsustainable shift of future wealth to the corporate sector. As Orin S. Kramer wrote, "[e]veryone seems to know the current path of federal fiscal policy is a deathtrap over the long term.... [Yet] precisely because the size of the problem precludes easy answers, it lies beneath the surface of the public dialogue."[52] In Europe, the noise about Greece's debt problems has evolved into a contest over who holds the distinction of being Europe's worst basket case, and whether they might go down together.[53]

The current crisis may well represent a rule-changing event, especially if peak oil affects opportunities for growth as severely as many expect. But how widespread is such an expectation? Is it possible that governments (along with many banks, traders and analysts) realize that the old game of capitalism cannot be sustained under conditions of declining energy? If so, has the future health of capitalism become irrelevant? Indeed, in that case it may be that the rational thing to do is seek to gain whatever can be withdrawn from the system prior to the major rule changes that will be necessary to adapt to a declining energy order (even while the state upholds a requisite public discourse of recovery). Whether the advantages gained will still hold under whatever new rules emerge remains an open question.

Of Elephants and Silence

Three major crises are facing international order: the initiation of (energy) resource wars; a near certainty of continued climate change; and an economic crisis that has no evident solution. I have presented these problems as 'elephants,' issues of which we are well aware but the discussion of which is socially unwelcome, even subject to a tacit agreement of silence, obfuscation and the wide use of euphemism. Although only a few scholars and critical journalists – in the mainstream at least – give voice to the belief, is it not widely known that Iraq and Afghanistan are conflicts oriented toward the capture or control of energy resources? Have we not all pretty much accepted that there is little the world's governments can do to alleviate climate change (and an even lower likelihood that they *will* do anything)? Similarly, is it not evident that the global economy has entered a crisis phase of debt accumulation that will radically change the rules that govern that economy?

Of course, it is not by any means clear that the answer to all these questions is yes. Over the last two centuries of fairly continuous growth, we have earned a reputation for, and perhaps a right to, a degree of optimism, about human nature and liberal politics. Thus there are competing arguments for the Western occupations of Afghanistan and Iraq which are still widely accepted, and which some surely hold as genuine justifications for their own participation in these actions. The powerful images associated with climate change have generated a great deal of popular will to try to stop the damage caused by human activities, and no doubt some decision-makers share these sentiments and have internalized them. And of course economic downturns are not unusual, (even if the current one is), and thus the expectation of recovery is justified by historical experience. That there is in fact widespread disagreement and arguments over all of these issues points to two central flaws with the claim that they represent 'elephants' – a common realization which we all agree to not discuss. First is that there seems to be a great deal of uncertainty and disagreement over the conclusions presented, which is to say we do not all know or realize the elephant is present, and second, the degree of

dissenting discourse suggests that we have not all agreed to keep silent about it (them).

The question, then, might be a matter of the genuineness or sincerity of the reasons given by governments for their decisions. It *may* be that, while many are aware of peak oil, the policies outlined above are duly sought as remedies for *other* genuine problems, which happen to be (in some ways) resoluble through peak-friendly policies. Maybe, as some argue, leaders are avoiding the issue because they sincerely believe people will be better off – economically and psychologically – if they are not presented with the case for peak oil. When dealing with elephants, we tend to see "silence as far less threatening than the efforts to end [it]."[54] Thus Sadad al-Husseini, former Vice-President of Saudi Aramco, suggests that those

> who are not expressing a concern [publicly] ... are doing that with a good intention: they feel like somehow this is a reality that the public at large can't handle ... [that] being in ignorance of these realities is better than knowing them ... and that somehow they will be solved. But in reality, if you don't have a public understanding of the issues you will never have the public support for the solutions.... So it's important to actually talk about the facts.[55]

However, if 'solutions' can be represented as answers to other problems – terrorists, climate change, unemployment – public support may be easier to gain than under an honest presentation of the situation. It is difficult to gauge the degree to which peak oil is seen as a threat (i.e., as a genuine energy security issue), but the issues discussed above are all themselves generally presented in terms of security: terrorism, climate security, economic security. Alternative explanations, based on linking these issues to peak oil, suggest that the latter 'elephant' has given birth, in a sense, to these others. Ultimately, however, the crises discussed above can all be linked more broadly to a limits to growth argument, the implications of which are, at the very least, frightening. As Donella H. Meadows et al. argued in 1972, business as usual would seem to be bringing humanity toward a collapse scenario, entailing "a sudden and uncontrollable decline in both population and industrial capacity" within a century.[56] The ecological limits of the human project is surely the mother of all elephants: we cannot hide the possibility that we have reached these limits, but nor can we discuss it seriously (or not much). Our need to focus on hopeful outcomes makes talk of limits, let alone decline, collapse, or 'die-off,' an unwelcome topic in political conversation.

Conclusions: Energy, Ecology and Security in the 21st Century

If the future, starting now, is to reveal these limits to us in increasingly discomfiting forms, the challenges facing us and our children are nevertheless in many ways unimaginable. Is it best to leave them unspeakable, as well? Is there anything to be gained by a more open public discussion of peak oil as a turning point in our history? Does holding off public acknowledgement hinder our chances of preparing for a future, or is it likely that such preparations will be disastrous in themselves? According to Eviatar Zerubavel, "[c]alculating what we ultimately gain and lose by opting to see, hear, and speak no evil is largely a matter of weighing short-term against long-term benefits.... [M]uch of what seems to benefit us in the short run often comes to haunt us in the long run."[57] Yet

the image of ecological/energy collapse does not suggest much we could do to prepare, even if we were discussing it. Ecology shows patterns to which humans too are subject: maybe we can't be helped; maybe we are simply doing what dumb organisms do.[58]

The arguments presented here suggest that there is a general silence on peak oil not because governments and others are unaware of it, but because that silence is itself a protective measure, indeed a security imperative. Among the systems upheld by surplus energy is a system of faith in those systems, a faith that then helps support those same systems. Such faith is not readily abandoned. For the state to be perceived to be doing something, *even if the illusion is obvious*, is still better than admitting the state's impotence in upholding human security in the face of ecological limits. As Zerubavel says, "[a] kingdom, after all, needs a king, even a naked one."[59] However, the critical analysis of domestic and international politics would surely profit from such a discussion. Political correctness, analytical euphemisms and a heads-in-the-sand approach are encumbrances to analytical rigour, and promise failure for any efforts to secure our collective future.

Notes

1. Kurt Vonnegut, "Addicted to Oil and Violence," *In These Times*, 13 May 2004, available at www.countercurrents.org/us-kurtvonnegurt130504.htm.
2. Eviatar Zerubavel, *The Elephant in the Room: Secrecy and Denial in Everyday Life* (Oxford University Press, 2006), pp. 77-78.
3. *Ibid*., p. 53.
4. Colin J. Campbell and Jean H. Laherrère, "The End of Cheap Oil," *Scientific American*, March 1998, pp. 78-83.
5. As calculated by Darwinian, based on data from Goldman Sachs, 15 January 2010, available at www.theoildrum/node/6133#comment-580120.
6. Quoted by Rob Hopkins, "ASPO 6. In Praise of ... #2. 'We Are All Peakists Now,'" *Transition Culture*, 24 September 2007 available at http://transitionculture.org/2007/09/24/aspo-6-in-praise-of-2-we-are-all-peakists-now.
7. The notion of an undulating plateau may be attributed to Daniel Yergin, of Cambridge Energy Research Associates (CERA). CERA is somewhat notorious among peak oilers for its 'cornucopian' views.
8. Figure 1, based on Energy Information Administration (EIA) data to October 2009, is from Heading Out, "Oil Demand Seems to be Moving Up: Are Higher Prices Around the Corner?" 13 January 2010, available at http://www.theoildrum.com/node/6122. World liquids production (which includes natural gas liquids, ethanol, syncrude and other substitutes) shows a similar plateau.
9. Matt Simmons quoted in Ugo Bardi, "Peak Oil: The Four Stages of a New Idea," *Energy*, Vol. 34, (2009), pp. 323-326.
10. Robert L. Hirsch, Roger H. Bezdek and Robert M. Wendling, *Peaking of World Oil Production: Impacts, Mitigation and Risk Management* (US Department of Energy, February 2005) (known as the 'Hirsch Report'), p. 4.
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