

PEAK OIL AND APOCALYPSE THEN¹

Melinda Burns[©]

Oil is the backbone resource of industrial society, but the Oil Age will come to an end, someday. The pessimists say the world reached maximum oil production in 2008. Middle-of-the-road optimists say peak oil won't occur until 2030. Either way, production is already past its peak and on a terminal decline in 54 of the 65 largest oil-producing countries in the world, including Mexico, Norway, Indonesia and Australia. It's been declining in the lower 48 states of the United States since 1970. What will happen when cheap oil is no longer available and supplies start running short? In an interview with Miller-McCune.com, Jörg Friedrichs, a lecturer in politics at the University of Oxford, examines how different parts of the world would likely react to a peak oil scenario. Despite its timeliness, Friedrichs' examination of the global energy crunch was rejected a dozen times before it found a home in the August issue of *Energy Policy*.²

Miller-McCune.com: In your study, you ask the question, "What is likely to happen if peak oil occurs?" When do you think that will be?

Jörg Friedrichs: As a social scientist, I don't ask when peak oil will occur. This is a question for geologists, engineers and possibly economists. Some of them believe that the world has reached the peak of the Oil Age, or is about to reach it in this decade. Instead of joining their debate, my question is, "What if?" This I see as a social scientific research challenge.

M-M: Why do you think the U.S. would cynically choose "predatory militarism" in the face of future resource shortages, as fuel-starved Japan did before World War II?

JF: Predatory militarism is the result of desperation and temptation. In the Japanese case, the element of desperation prevailed. As a consequence of their own ill-conceived policies, they saw no other choice in 1941 than to loot oil from the East Indies, even at the cost of starting a suicidal war with the United States. In the case of the U.S., the element of temptation may be stronger. Why compete for a scarce but vital resource in markets when you have a military option? Why negotiate with people like Hugo Chávez if you have a military stick? We have sometimes seen this pattern in the past, and we are likely to see it more often after peak oil. However, there is also likely to be a great deal of desperation. One should not underestimate the likely consternation of many American citizens when their fossil-fuelled and consumerist lifestyle is in serious jeopardy.

M-M: What about China, another country that is heavily dependent on oil imports?

JF: On the one hand, the situation of China would be more desperate than the U.S. because their access to foreign oil is militarily less secure. But on the other hand, they would be less tempted because their navy and air force is no match for that of the US. The Chinese military could hardly control the shipping lanes from Angola to China, or even in the Straits of Malacca. But they may perhaps be tempted to launch predatory military operations in Central Asia.

¹ Miller-McCune newsletter, Environment, May 29, 2010

² Friedrichs, J., Global energy crunch: How different parts of the world would react to a peak oil scenario. *Energy Policy* (2010), doi:10.1016/j.enpol.2010.04.011

M-M: In your view, what would other entrenched dictatorships likely do if their imports of oil were severely reduced?

JF: It's awful to imagine, but they may follow the example of North Korea. On its own cynical terms, the North Korean regime has successfully dealt with a severe oil supply disruption that began in the early 1990s. When the Soviets stopped delivering subsidized oil to foreign "comrades," the North Korean elite basically screwed its own population. Elite privileges were preserved, while hundreds of thousands of ordinary people starved.

M-M: Wouldn't there likely be popular movements to overthrow those dictatorships?

JF: This is indeed likely to happen in many places. Where authoritarian regimes try a North Korean strategy but fail, a failed state is the most likely outcome.

M-M: You offer a third, less shocking scenario, one in which "local solidarity" and urban "self-help" agriculture gets people through a period of severe fuel shortages, as in Cuba after the collapse of the Soviet Union. What countries do you think might take this route?

JF: The Cuban experience offers an interesting contrast to what happened in North Korea. Despite a similar crisis, there was a period of considerable hardship, but no mass starvation. This was possible because, unlike North Korea, Cuban society preserves a lot of social glue and traditional knowledge. Developing countries are more likely to be in this category than developed countries. Unfortunately, many developing countries are hopelessly overpopulated. But where there is social glue and where sustainable lifestyles can be recovered, people may find a way to muddle through at the local level.

M-M: Why don't you think the West would be a good candidate for "local solidarity"?

JF: Strictly speaking, it's not so much a problem of the West but of a particular lifestyle. When social glue and traditional lifestyles have eroded, they are not easily recovered. After several generations of individualism and affluence, Westerners will have a hard time accepting that they need to rely on communities and must revert to a sustainable lifestyle. After 65 years of mass consumerism, Japanese society is likely to face similar problems.

M-M: What about Europe?

JF: Western Europe falls under the category of places where social glue and sustainable lifestyles are almost passé. Unlike the US, Europe is not a particularly promising contender in case of a military scramble for resources. And unlike North Koreans, Europeans are not likely to accept a totalitarian "solution" to the problem of how to slice up a shrinking pie. After peak oil, probably the best hope for Europe is populist regimes that might mobilize residual national solidarity to weather the crisis. I'm not a fan of populist regimes, but they typically emerge when democratic societies enter a deep crisis.

Fortunately, there are a few rays of hope. Western Europe has invested more in energy conservation and sustainable energy than any other part of the world; and railways offer a fallback position for transportation that is not available in most other places. There is a chance that Europe may possess large reserves of shale gas. In any case, Russia and the Near East can supply Europe with oil and gas. Unfortunately, however, such deals are highly unstable and subject to constant renegotiation. In the long run, Europeans could hardly avoid a return to a

more subsistence-based lifestyle, but given their long exposure to mass consumerism, they will have a very hard time in the process.

M-M: Explain how Dixieland fits into your views of peak oil and its aftermath.

JF: Dixieland is a cautionary tale for those who believe that social and technological innovation will take care of all problems. After Southern elites lost slavery as the backbone of their way of life [during the U.S. Civil War], it took them at least a century to adjust to the new reality. Why did they not simply embrace industrial capitalism and liberal democracy? Well, I guess it is not so easy to give up one's lifestyle. Now, imagine that people were to face an energetic downgrade, rather than the upgrade available to Dixieland after the Civil War. While the "challenge" for Dixieland was lifting its socioeconomic fabric to industrial capitalism and liberal democracy, after peak oil the opposite would be the case. Do you really think people would have an easier time adjusting to peak oil? The world would sorely miss cheap and abundant energy, and liberal democracy would become more and more difficult to sustain. The example of Dixieland shows that it takes a lot of time for the "new consciousness" to emerge that is necessary for radical social change.

M-M: But isn't that comparing apples and oranges? The Civil War was about much more than technology.

JF: I am really not interested in the Civil War and its root causes. What I am interested in is rather the reaction of Southern society to the defeat. How do people react when they are deprived of their socioeconomic backbone resource — slaves for Dixie, oil for us? What happens when people are forced to radically adjust their way of life? This hasn't happened very often in history, but we can look at the South of the United States from the end of the Civil War in 1865 to the Civil Rights Act of 1964 to get some clues.

M-M: Why do you dismiss the possibility of a smooth transition from oil to other sources, such as solar and wind power or a new, improved generation of nuclear reactors?

JF: I do not dismiss this possibility. The ideal solution would be to electrify everything from road traffic to heating systems, and then produce electricity with whatever energy source is available. But let us not forget that such a technological fix would take a lot of time and investment. Unless the energy descent after peak oil is very smooth indeed, there may simply not be enough time. Alas, technological crash programs are much more difficult under crisis conditions. This is not to deny that solar and wind, as well as nuclear energy, can be helpful in the transition. But the transition is unlikely to be smooth.

M-M: You say that coal would become a more important energy source for at least a couple of decades, with dire consequences for the climate. What about clean coal and other technological innovation?

JF: Most clean coal technologies, as well as many other innovations, are currently at the experimental stage. As mentioned, their implementation requires a lot of time and investment that may not be available under crisis conditions. Another serious problem is the fact that clean coal technologies, such as carbon capture and storage, require energy and thereby reduce efficiency. You basically siphon off energy from productive purposes to reduce carbon emissions. If we assume that sufficient energy supply will become a serious challenge after peak oil, this may hardly be acceptable to some people.

M-M: After peak oil, how does the world realign itself, in your view? Which countries come out on top?

JF: This depends on your criteria. If the criterion is the ability to gain military access to energy resources, then I'd say the US. If it is the capacity for peaceful adaptation, then I'd look at developing countries that are not too much overpopulated. If the criterion is political stability, then countries with a recoverable authoritarian tradition are likely to work better than liberal democracies. This sounds like a dismal criterion, but stability will be highly valued in times of crisis when entire countries fall apart. It doesn't have to be as bad as North Korea: just think of "authoritarian democracies" such as Putin's Russia. Oil exporting countries such as Brazil or Iran are also possible winners. However, they may just as well fall victim to military predation and/or the notorious "resource curse."³

M-M: What happens to global oil corporations such as Exxon and Shell?

JF: In the transition, they are likely to lose further ground to the state-controlled companies of oil exporting countries such as Saudi Aramco or the Nigerian National Petroleum Corporation. As a consequence, even oil-importing countries would increasingly rely on state-controlled companies. This is already happening, for example, in the case of the China National Petroleum Corporation.

M-M: Instead of collapse, you forecast a "slow and painful" adjustment to peak oil, lasting a century or more. Is there anything people can do right now to prevent that from happening? Or is it inevitable, as you suggest it is, that "industrial society will start crumbling and free trade will begin to disintegrate?"

JF: I believe it's inevitable. But this doesn't mean that action cannot make a difference. There is a difference between slamming into a brick wall and crashing into a haystack. Peak oil is not likely to be a haystack, but it doesn't have to be a brick wall — if, that is, people take appropriate measures to prepare themselves and smoothen the descent.

M-M: You say your research was "trashed 12 times" before it was accepted for *Energy Policy*. Why?

JF: My colleagues in the social sciences are just not (yet) ready to face this topic. Most of them prefer to stage disciplinary sham fights rather than looking at pressing issues. Perhaps it's going to be like the end of the Cold War or the current financial crisis, where clever analyses by social scientists have appeared only after the fact.

But, of course, I cannot entirely exclude the possibility that peak oil is still 20 years down the line. Nor can I exclude the chance that some technological breakthrough such as fusion technology is around the corner. If that happens, I will be glad if my research turns out to be inapplicable. As mentioned in my introductory statement, I am only exploring a (highly plausible) hypothesis.

³ In developing countries, natural resources endowment often leads to a country's impoverishment. Natural resource earnings that should be earmarked for productive investments are siphoned off wholesale by those in power, who then need repressive capabilities to remain there.