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John E. Carroll

University of New Hampshire, John.Carroll@unh.edu

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Peak Oil, Geopolitics, and the Need for Relocalization: Will Our Magnificent Obsession Become Our Obsolete Obsession?

BY JOHN E. CARROLL

NATURAL RESOURCES

COLLEGE OF LIFE SCIENCES AND AGRICULTURE

Those who lived through the energy crisis of the 1970s, both here in Durham and across the nation, recall the intense discussion and debate on energy issues, with the oil embargoes, gasoline shortages, and skyrocketing prices that characterized that period. The past year has felt like *déjà vu*, as we return to this subject in the new context of the 21st century.

Serious awareness of energy conservation and alternative energy forms have been missing from the American and UNH psyche, and from public discourse, since the early 1980s. Both appear to be returning, with the added debate over “peak oil,” i.e., what happens after global oil production peaks, and a much-broadened understanding of oil geopolitics around the world. War in and over the future of Iraq, the world’s second most important oil nation and neighbor to the single most important oil producer, Saudi Arabia, is a centerpiece in the geopolitical scene. But so are Russian control of vast natural gas reserves and willingness to use those reserves for political ends.

Chinese trade arrangements with Iran and other fossil fuel-bearing nations, and political uncertainty in Nigeria, Bolivia, Venezuela, Angola, Sudan, and numerous other source nations for oil and/or natural gas, also figure in oil geopolitics. Closer to home, the oil refinery shortage, unwillingness by the oil industry to invest in increased refinery capacity (perhaps sensing the futility of such investment), and hurricane threats in the Gulf of Mexico lead to ask an important question.

What is going on?

Following his meetings with President Bush at the White House, President Hu of China went to Morocco, an important supplier of natural gas to Europe and the United States. And from there? From there, he visited Nigeria, Kenya, Saudi Arabia—all part of the Kingdom of Oil. Who’s likely to get that oil, China or the United States? We may suspect that China will get it, along with Iranian, Indonesian, and South American oil. And with

U.S. dollars that we provide to China in return for a host of cheap consumer product.

China’s demand for both oil and natural gas at this time is virtually boundless, evoking visions of George Clooney’s movie *Syriana*, another chapter in the geopolitics of oil and gas. I knew from Clooney’s fictitious character that the Chinese had mastered Arabic and were negotiating in the Arabic language out of deference to their Middle Eastern hosts. This contrasted with the American negotiation that takes place mostly in English. The Chinese, working from a position of respect and humility, may enjoy greater success with their “carrot” approach than the American “big stick” approach grounded in arrogance and the implied threat of military superiority. Our arrogance and our unilateralism, our refusal to understand other cultures, may cost us dearly, as most certainly will our refusal to seek energy independence.

Last May 21 a *Boston Sunday Globe* editorial described a group of which few Americans are aware: the Shanghai Cooperation Organization. Membership includes China, Iran, Russia, and several Central Asian republics. All except China are energy exporters. Now organizing to contain the United States, these nations control much of the world’s remaining oil and natural gas reserves and access to these strategic resources. India, Pakistan, and Mongolia expect to join the group. Together with China-Iran bilateral oil agreements, China-Africa oil deals, and China-South America trade deals, we see more and more major oil and gas exporters reaching agreement with energy-consuming major trading partners.

The United States is the odd nation out, and will be squeezed dry if it doesn’t learn to seriously curb its appetite for oil.

In spite of it all, we remain determined to feed our prodigious energy appetite, even to the point of laying plans to explore and drill in the Arctic Ocean (with

the Arctic sea ice opening up due to climate warming), thereby accelerating the process of climate change that our dependence on fossil fuels produced in the first place.

Neither the threat of global warming, the reality of war, or the diplomatic cost in our relations with other nations have shaken our oil habit or determination to protect the status quo at all costs. Our magnificent obsession (with oil and cheap energy) has become obsolete, but we are not yet awakening to the reality.

There are two important ideas about energy and its use in our society with which the reader needs to be familiar:

1. Oil packs an energy punch like no other. The amount of easily usable energy available in any unit of oil, whether a gallon of gas or a barrel of oil, is exceptional—some would say almost miraculous. There is no readily available equivalent amount of energy available to us in other forms. Oil's liquid form makes it both uniquely accessible and available to us for many energy uses. (This is in addition to oil's value for non-energy uses, as a lubricant, medicinal, or product component such as plastic.) No other form of energy is truly equivalent, in a practical sense; other energy alternatives (coal, nuclear, hydro, solar, wind, etc.) are not easily substituted for oil. This means that, in practice, we face an energy gap that can only be made up by a change in society's values, habits, and basic way of life. Long gone are the days of less than \$10 per barrel oil.
2. Our physical infrastructure, i.e., roads, automobile-dependent transportation system, diffuse retail business districts, suburban housing, pervasive "sprawl," aviation, national and international system of food supply, and agricultural practices since World War II, depended upon much cheaper oil prices than we now have. Forecasts call for higher prices, so our problem is not that we are running out of oil, but that we are running out of cheap oil. The distinction is important.

When we think of the rising price of oil, what generally enters our mind is the price of gasoline at the pump. Secondly, we think of the cost of home heating. We may or may not think of the oil (or natural gas) component in electricity. How few of us realize that it is our agriculture, our food supply, that is the first victim of oil price rises. Our American food is 98 percent "com-

posed" of oil and natural gas, and only two percent of every other form of energy combined. This includes everything from preparing soil, to planting, nurturing and harvesting crops, raising animals, and delivering a processed food product to our dinner plate.

Every molecule of food we consume travels an average of 1,700 miles from its point of origin to our dinner table. Nearly 80 percent of this transport is by truck, nearly 20 percent by rail, and a small percentage by sea and air. All depend fully on cheap oil for transport. And agricultural fertilizer is fully dependent on natural gas for its manufacture. Thus, the future of food is tied directly to the future of oil and natural gas.

One might ask, "When does the rising price of oil and natural gas lead to higher food costs?" It already has, in the form of reduction in quantity for the same price. And, as stocks of older food produced at yesterday's oil prices are used up, the market becomes more dominated by food at today's higher oil prices.

It is said that suburbia, called the greatest misallocation of resources in the history of humanity, has no future. The same is said of supermarkets, which are dependent on long distance transport of most of their product. Some argue that the only possible future in a world devoid of cheap energy is localization—or "relocalization," a compact state and way of life our forebears knew well.

Geopolitics, uncertainty of supply and price of both oil and natural gas, and climate change from fossil fuel burning, all speak to the need for serious energy conservation. Technological fixes are not enough. A much more politically challenging change in lifestyle, housing patterns, transportation, agriculture, and national lifestyle is required. Our values will, of necessity, change, no matter how difficult that may be, or we will not survive. Living within these new realities will make for the greatest challenge we Americans have faced in our 230-year history. We'll soon know if we're up to that challenge.

Will the nation's (and your parents') "magnificent obsession" with cheap oil become your "obsolete obsession"?