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INSIGHT & BOOKS

OPINIONS D6-7 SUNDAY, APRIL 10, 2011 ■ SECTION D

U.S. GOVERNMENT ■ BUDGET

Carolyn Kaster ASSOCIATED PRESS

House Budget Committe Chairman Paul Ryan, center, with House Majority Leader Eric Cantor, unveiled the Republican Party's deficit management plan, dubbed the 'Path to Prosperity,' on Tuesday.

Ryan takes lead for GOP on deficit, but early reviews mixed

'You may like or not like the specifics of what (Rep. Paul) Ryan is proposing, ... but hey, something dramatic has to be done, because this is not sustainable.'

DALLAS SALISBURY
President of the nonpartisan Employee Benefit Research Institute

By Kevin G. Hall
McCLATCHY NEWSPAPERS

WASHINGTON — Budget experts gave high marks for courage and low marks for the details in a bold Republican plan offered last week to slash government spending by about $6 trillion over 10 years while overhauling costly medical programs for the elderly and poor.

The proposals from Rep. Paul Ryan, R-Wis., chairman of the House Budget Committee, would reverse retirement policies that became staples of American life with President Lyndon B. Johnson's Great Society programs of the 1960s. They come against a backdrop of two decades of widening income inequality, in which America's top earners have won an ever-increasing share of society's wealth.

Ryan's is the opening move in a political chess match that's likely to unfold over several years. His plan effectively would end Medicare for seniors, revamp Medicaid for the poor, scrap the 2010 health care law, roll back nonmilitary federal spending overall and lower individual and corporate tax rates.

Ryan's "Path to Prosperity" plan has virtually no chance of enactment in the next two years, with Democrats in charge of the Senate and the White House, because it relies almost exclusively on cutting spending in programs that Democrats support. However, the plan does frame a Republican vision for 21st-century government, one that's likely to help American voters choose the future they want in 2012.

Independent analysts praised Ryan for getting ahead of President Barack Obama by daring to propose bold changes to costly programs that, unless overhauled, will send the national debt soaring as baby boomers — 75 million Americans born from 1946 to 1964 — reach retirement age soon.

"I give him credit for putting out a proposal. He's ahead of the president on this, because the president says he cares about debt reduc-

See **BUDGET**, back page

ENVIRONMENT ■ SCIENCE

THE BLIND SPOT

BP oil spill a year ago this month revealed how little we know about Gulf ecosystem and its vulnerability to pollutants

Douglas N. Rader, who holds a doctorate in biology, is chief oceans scientist for the Environmental Defense Fund. Among other efforts, he works to strengthen fisheries management policies and programs that align conservation with the business of fishing, to improve coastal habitat protection programs, and to build science-based networks of marine protected areas.

By Douglas N. Rader
SPECIAL TO THE AMERICAN-STATESMAN

When the well at the Macondo Prospect exploded April 20, the sad fact is that no one was adequately prepared to respond to a disaster of unprecedented magnitude and impact. While oil and gas industry specialists and oversight agency officials labored to shut down the spewing well, agency and academic scientists struggled to comprehend the main risks, in order to be able to guide key management decisions. Remarkably, the damage to Gulf of Mexico ecosystems and human communities expected from a "worst-case" event had never been fully assessed, and the investments needed to establish baselines against which those impacts could be measured were never made.

A full year after the blowout, we are still struggling, as a society, to assess the ecological and human costs from our nation's worst oil disaster, to understand how to heal — or offset — the worst damage, and to limit future risks associated with America's offshore energy industries. While a damage assessment being conducted by various federal agencies is moving forward, it is not clear that a full accounting is possible, given the current state of science.

See **GULF**, back page

Deep drilling reflects era's decline, Texas expert says

Tad Patzek is chairman of the Petroleum and Geosystems Engineering Department at the University of Texas; his research involves mathematical modeling of earth systems with emphasis on multiphase fluid flow physics and rock mechanics. Patzek testified in Congress last summer about the Gulf of Mexico oil spill.

By Tad Patzek
SPECIAL TO THE AMERICAN-STATESMAN

A year ago, the world woke up to the terrifying news of a huge explosion and fire on the Deepwater Horizon rig drilling an exploratory well for BP in the deep Gulf of Mexico, some 130 miles southeast of New Orleans and 420 miles east of Houston. Eleven people perished, and the giant rig sank in two days.

For another 90 days, I stayed glued to the live video feeds and news reports from the epic oil and gas spill that ensued, and tried to figure out the technical and organizational reasons for the well failure. In January the definitive government report on the spill was issued, and in March the results of a thorough forensic investigation of the blowout preventer stack were published.

I am now putting final touches on a book on the Macondo well disaster. The book was co-written with Joseph Tainter, the author of "The Collapse of Complex Societies." It focuses not only on the important direct

See **DRILL**, back page

Top: Oil flows at the site of the Deepwater Horizon oil spill in the Gulf of Mexico last summer.

Middle: A bird is coated in oil on the beach at East Grand Terre Island along the Louisiana coast.

Bottom: Fishermen and other affected members of the community listen to Kenneth Feinberg, administrator of the BP claims fund, talk at a public meeting last month in Mathews, La.

Large photo: A member of Louisiana Gov. Bobby Jindal's staff reaches into the Gulf and pulls out thick oil in Barataria Bay in Plaquemines Parish in June.

ASSOCIATED PRESS PHOTOS

BOOKS ■ HISTORY

Stories of North and South converge on the Civil War's sesquicentennial

Chris Sullivan ASSOCIATED PRESS

The sun sets over cannons arrayed on the Civil War battlefield at Manassas, Va. The first Battle of Manassas occurred in July 1861.

By Roger Gathman
SPECIAL TO THE AMERICAN-STATESMAN

In a recent New York Times article about Southern museums celebrating the sesquicentennial of the Civil War, Edward Rothstein — evidently a Northerner — marveled at the difference between the Northern and Southern versions of the war: "As seen from a perch up North," he writes, "the war's purpose is morally and politically clear. Slavery's abolition, like Lincoln's powerful redefinition of the nation's principles, set the United States on a path toward equality that it might have never found through antebellum thickets. The Civil War created contemporary America." The Southern version, however, is still in those thickets.

Two new books conveniently represent those two views. "The Civil War: The First Year Told by Those Who Lived It," a collection of speeches, memoirs, poems and newspaper clippings from 1860-61, is a dutiful homage to our distant ancestors who brought forth a new nation. The current Southern version is aptly expressed in David Goldfield's "America Aflame," a personal, opinionated, sometimes brilliant account that weaves together a version of the war that is, on the one hand, visibly touched by Southern opinions about who was at fault (for Goldfield,

See **HISTORY**, D4

America Aflame
How the Civil War Created a Nation
David Goldfield
Bloomsbury; $35

The Civil War
The First Year Told by Those Who Lived It
Edited by Brooks D. Simpson, et al.
Library of America; $37.50

■ Four more reviews of new Civil War books that might be of interest to you, **D5**

BUDGET: GOP's 'Path to Prosperity' leans heavily on spending cuts

Continued from D1

tion but hasn't proposed anything specific," said Leonard Burman, a tax and budget expert at Syracuse University.

"I think Chairman Ryan should be commended for his leadership and courage to lay out a specific framework that would achieve spending cuts even greater" than earlier commissions proposed, said David Walker, a former U.S. comptroller general who's crusaded for years on the need to tackle the federal debt.

The most controversial part of Ryan's plan is its eventual elimination of Medicare, the federal health plan for seniors, and its significant changes to Medicaid, the joint state and federal program that provides health care to the poor.

Ryan would give states block grants for Medicaid and end federal rules specifying who gets what benefits, leaving those determinations to state governments.

Seventeen Democratic governors wrote congressional leaders to protest Ryan's Medicaid plan, which they said "would shift costs and risk to states. Such a cost shift would severely undercut our ability to provide health care to our residents and adequately pay providers."

Under Medicare today, the federal government covers about half the health expenses of Americans 65 and older. Ryan's plan would end this program for anyone who retires after 2021 and replace it with a "premium support" program. Older Americans would choose among several private insurance plans that would operate on a federally regulated exchange. The federal government would subsidize their plans.

The government would save trillions, but costs would shift to retirees. While the government would adjust payments to the broad inflation rate, medical inflation — the rise in health care costs — has outpaced the overall rise in prices across the economy for the past 15 years.

A senior today, on average, costs the Medicare system about $185,000, half of which the senior pays, said Dallas Salisbury, president of the nonpartisan Employee Benefit Research Institute, which studies health and retirement issues. If Medicare ends, affected seniors would have to save at minimum another $90,000 to make up for lost Medicare contributions.

While Ryan's Medicare proposals might be faulted, experts said they confronted a grim reality: The payroll tax would have to triple to cover the cost of promised future benefits, or Medicare spending must be slashed in half to balance the budget. Neither option is politically feasible; hence the need for tough tradeoffs.

"You may like or not like the specifics of what Ryan is proposing, … but hey, something dramatic has to be done, because this is not sustainable," Salisbury said.

On another controversial front, Ryan's plan assumes that tax cuts for the wealthiest Americans would remain in place over the next decade.

"While the problem is primarily a spending problem, it is going to take some additional revenues in order to achieve agreement," Walker said, underscoring that Democrats won't go along with budgets that simply cut spending while leaving tax cuts for the top earners in place.

Fiscal watchdogs such as the Concord Coalition say the extension of Bush-era tax cuts for the other 98 percent of earners is equally unaffordable and also should be on the negotiating table for fixing the federal budget.

Ryan proposes bringing individual and corporate taxes down to a top rate of 25 percent but gives only vague details on how to pay for it, saying unspecified loopholes will have to be closed. In reality, this would involve curtailing popular tax breaks such as the mortgage interest deduction for individuals and a wide variety of them for corporations.

The U.S. Chamber of Commerce praised Ryan's plan as "an important first step" but was silent on its vague promise to close corporate tax loopholes.

Lowering tax rates was the easiest part of Ryan's plan, Burman said, but it can't be viewed in isolation.

"Cutting the corporate tax rate is a good idea if you could do it in a fiscally responsible way, which he doesn't do," Burman said. "The whole thing sort of locks in place grossly inadequate levels of revenues, and virtually all the deficit reduction is done on the spending side."

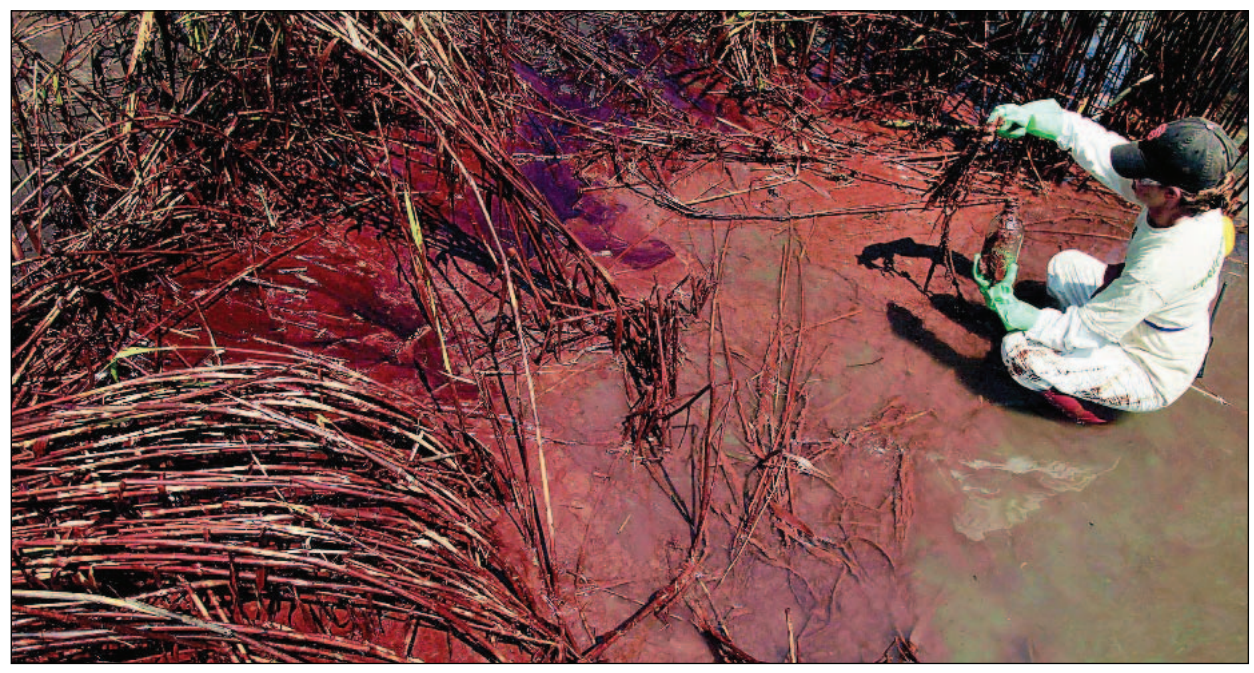
Americans, he said, "want a bigger government than he's laying out here, and we ought to figure out a way to pay for it."

On balance, budget experts don't expect changes on the scale of Ryan's plan to become law anytime soon.

"My view is that it's not likely that you are going to see significant actual reforms before the 2012 election," Walker said.

GULF: Damage extends beyond grimy shores and oil floating on surface

Continued from D1



2010 ASSOCIATED PRESS

Greenpeace worker Lindsey Allen collects samples of oil that washed up along the mouth of the Mississippi River near Venice, La., in May after oil from the Deepwater Horizon oil rig explosion began to drift ashore along the coast.

Though the press was full of images of oil-soaked pelicans and dead turtles stranded on Gulf beaches, the hidden threats were never fully appreciated. Many of the most vulnerable elements of Gulf marine ecosystems are out of sight, and monitoring programs for most are inadequate or nonexistent.

One challenge — and common misconception — is that the risks of environmental damage were from "oil," and that once the "oil" was gone, no threats remained. In fact, from the very beginning, the hundreds of specific chemicals from the quarter-billion gallons of light sweet crude oil were physically, chemically and biologically sorted, processed and transported during the long journey from a mile down on the seafloor up through complex layers in the sea, to the surface, and then either into and through the air or back into the depths. The pathways taken by the various materials — and their footprints in time and space — were altered by the use of chemical dispersants and by other management measures in ways that have not yet been fully analyzed.

Nonetheless, it is possible to use ecological first principles to trace the interactions of pollution from the BP oil disaster with living ecosystems of the Gulf of Mexico and to approximate the effects. The Gulf is characterized by a wealth of extraordinary and complex life cycles, with many species using a wide array of habitats at different life history stages, many of which were affected by oil-based pollution.

Impacts at the population or species levels can only be appreciated by assessing and adding up those independent effects. Ecological cascades — where losses of one life stage of a creature, or one habitat, induce alterations in others, and then in turn in others — are more complex still, requiring mathematical models that also do not exist.

Two elements magnify the impact of the disaster on marine and coastal ecosystems of the northern Gulf: the depth of the broken wellhead and its location.

Oil rising through more than 5,000 feet of water exposed the entire water column as it ascended, topped out, was dispersed and weathered, and then drifted back toward the bottom. Oil on the surface threatened not just the widely photographed big animals, but also floating seaweed mats — key habitats for sea turtles and many sport and commercial fishes — plus billions of smaller unseen plants and animals that form the base of ocean food webs, including larvae and other young being transported by ocean currents from spawning and hatching grounds to adult habitats. Oil in the middle depths threatened the profuse life of the "deep scattering layer" — so dense it appears on ships' sonar, and key prey for diving whales, dolphins, tunas, sharks and billfish. Oil pollution near the bottom, or raining back down underneath the plume, polluted ancient deepwater coral reefs and other bottom habitats.

The proximity of the well both to world-class coastal wetlands and beaches and to various offshore current systems that are part of the now-famous Gulf Loop Current created a situation where none of the key elements of marine ecosystems was immune from damage, and where distant critical habitats became vulnerable. Coastal habitats in the Gulf region provide key nursery and feeding grounds for many of the best-known seafood species and their prey, and play a keystone role in supporting coastal communities.

Offshore, the Loop Current acts as a superhighway in the sea for baby animals, larvae of lobsters, snappers and groupers and other reef fishes spawned far upcurrent in the western Caribbean, drifting through the Gulf on their way toward settlement habitats on reefs and seagrass beds of Florida and the U.S. Southeast. The northern Gulf is the major spawning ground for large-bodied fishes like bluefin tuna, whose larvae take advantage of the current to disperse broadly back into North Atlantic waters. Because pollution occurred during the time when pollution-intolerant larvae were moving through the system, impacts were likely severe on many species, putting at risk entire "year classes" in at least some portions of the Gulf. Determining the impacts of bad year classes on ocean fish populations will be very difficult, especially for species that have still never received a formal stock assessment — most of the important Gulf seafood species.

Only the vagaries of nature prevented the disaster from fulfilling the worst-case expectations of scientists: down-current delivery of large amounts of oil-based pollution to distant but world-class and pollution-intolerant coral reefs, seagrass beds, mangrove swamps and beaches of Cuba's north coast, the Florida Keys and beyond. The happenstance development of a cutoff eddy in the northern part of the Gulf Loop Current on June 1 redirected much of the oil into a swirling "black hole" in the deepest part of the Gulf — just as long-distance transport was beginning, and just as the fishing closures reached all the way to the Dry Tortugas. The eddy then uncoupled from the main current, allowing larvae riding the current to bypass the main "kill zone" in the northern Gulf.

No precedent exists for understanding the large-scale toxicant transport and potential threats this ecosystem faced and faces. Persistent and extremely toxic polyaromatic hydrocarbons received the bulk of press attention, but other challenges lurk.

Nearly 50 million gallons of very toxic organic chemicals like benzene, toluene and xylene — that would typically be evaporated from a surface spill — entered the waters of the Gulf, and must be accounted for. Much of that seems to have been processed, but even so, there is no free lunch — biological degradation comes at an ecosystem cost. As organics are decomposed by microbial action, oxygen is sucked out of the water, potentially exacerbating the well-known "dead zone" in the northern Gulf, and creating new ones. In addition, there is considerable evidence that evaporated chemicals not only exposed relief workers, but also continued to affect people and ecosystems through transport and redeposition.

A significant risk remains for potential accumulation and delivery of toxicants into human food chains. The threat will persist as toxic substances enter food webs — for example, when bottom-dwelling organisms process sediment and are then eaten by foraging predators — or are re-released from sediments with disturbances such as storms.

Putting these pieces together to find the bottom line from the BP oil disaster could take years.

With politicians and industry pushing for renewed deepwater drilling, and permits beginning to be issued, the public deserves an objective bottom line on the BP oil disaster, with a complete and even-handed after-action on what worked and what did not work.

The implications of decisions about the use of dispersants and other management measures must be fully elaborated, not to second-guess decision-makers operating in real time without adequate information or response planning, but rather to fully inform future challenges.

In the meantime, three things are certain. First, ensuring the safety and sustainability of seafood from the Gulf will require serious additional investments in science and monitoring. Fishermen have taken the lead with a new program called "Gulf Wild," which verifies the source of fresh seafood from the Gulf, with elevated seafood safety testing, with labels that allow seafood to be tracked into the supply chain. America must support its "fish basket" in the Gulf with better investments in stock assessment and sustainable fisheries programs like catch shares.

Second, it is time to recognize that a successful oil and gas industry can be compatible with a vibrant Gulf. However, the additive effect of decades of mismanagement of lower Mississippi wetlands threatens this vision, and the economy of the coast. As a nation it is time to commit to comprehensive restoration, both to offset the worst of the spill's damage, and to sustain the unique natural resources of the Gulf, and the human communities that rely upon them.

Finally, the state of investment in basic science on the Gulf of Mexico must be improved. The Gulf is a world-class ecosystem. Let's treat it that way.

DRILL: High-producing reservoirs used up before they can be replaced, author says

Continued from D1

reasons for the accident, but also on the broader societal and technological contexts of offshore drilling and other quests for new, massive sources of cheap, concentrated energy. The supply of easily recoverable petroleum is running out, and leaders of the U.S. and other industrialized nations have yet to face that fact.

In the meantime, other events across the world have overshadowed the complex and important Macondo well accident. The ambitious plans of the Obama administration to develop a trillion-dollar trading of carbon pollution credits and reintroduce the U.S. to a significant expansion of nuclear power stations were scuttled by the global depression, political gains of Republicans and the disaster that took down four of the Fukushima Daiichi nuclear reactors with catastrophic and still unknown environmental consequences. The Fukushima Daiichi tragedy may yet be the most serious industrial accident of the 21st century and is likely to slow any shift toward nuclear energy.

The long overdue and welcome quest for social justice in the Middle East may have significant and unpleasant consequences for the rate of oil production in the region. History, so thoroughly ignored by Americans, is a good guide. The Middle East delivers more than one-quarter of the global oil supply. It took 15 years after the Iranian revolution in 1979 to rebuild oil production in Iran to the current level of 3.5 million barrels of crude oil per day. The starting point was 6 million barrels per day, and the low point 1.5 million. Iraq produced 3.5 million barrels a day before its war with Iran broke out in 1980; eight years after the 2003 U.S.-led invasion, it produces 2.5 million barrels per day. Libya has lost most of its production of 1.5 million barrels per day, and it will not return to the 2010 level for five to 10 years. Similarly discouraging examples come from the collapsed Soviet Union and the mismanaged Venezuela; both have never recovered to pre-crisis levels of oil production.

Now, let's enter the arena of exuberant optimism about energy supply. A perfect example comes from the unflappable IHS CERA (the former Cambridge Energy Research Associates). Most recently, Pete Stark, vice president of IHS CERA, declared in The New York Times that 1.5 million barrels per day might soon be produced from the oil shale deposits in North America. Today, the Bakken shale, a huge but incredibly impermeable and low-productivity hydrocarbon deposit in North Dakota and Montana, produces 350,000 barrels per day from hundreds of very expensive, low-rate wells. So, if we increase oil production in the Bakken and elsewhere fourfold with many thousands of new wells, we will replace 60 percent of the oil production rate in Alaska 20 years ago, mostly from Prudhoe Bay, where output is in a long decline.

Therein lies humanity's predicament: We lose rate of oil production from the existing high-productivity reservoirs worldwide faster than we can replace it with the generally low-productivity new reservoirs. The only significant exception is production from the new, ultradeep, difficult and dangerous offshore reservoirs. This is why we have drilled offshore, and this is why we will continue to do so worldwide. For example, if the Macondo well were to produce only 30,000 barrels of oil per day (and lots more gas), 10 Macondo wells would produce as much oil as the entire state of North Dakota with almost 5,500 wells. If the Macondo well were to cost $200 million, an average well in North Dakota would have to cost $360,000 to compete barrel for barrel. Current cost of a hydrofractured horizontal well in the Bakken is 16 times higher.

We can think of petroleum resources as a huge global banking account. Up until recently, our petroleum ATMs — i.e., oil and gas wells — operated with few if any restrictions. A good well in Saudi Arabia might produce 10,000 barrels of oil per day. Similarly, a good well in the Gulf of Mexico can deliver 5,000 to 10,000. But with time, nature imposes the ever more stringent daily withdrawal limits on our ATM cards. Old and easy oil reservoirs are depleted, the new ones are less productive, and we need more wells to produce less oil per day at a higher monetary and energy cost.

The International Energy Agency, or IEA, is an intergovernmental organization that acts as energy policy advisor to 28 member countries. As with every political body, IEA has been in denial about the peak rate of oil (and coal and gas) production for many years. To IEA's credit, in 2008, it showed a plot of the global oil production rate in which production from the existing reservoirs started to decline in 2004. To be consistent with its previous oil consumption estimates, IEA created a magical wedge of oil that has yet to be found or produced. According to IEA, this wedge would deliver about 50 million barrels per day 20 years from now (current world production is more than 80 million barrels per day). In 2009, enhanced oil recovery was about 2.5 million barrels per day from hundreds of projects worldwide, half of which are found in the United States. It is impossible for enhanced recovery to deliver an oil production rate five to 10 times higher than the current rate. A separate wedge for tar sands might provide another 7 million to 10 million barrels per day for the next 20 years, according to the IEA. This would be several times more than the current 1.5 million barrels of synthetic crude oil and bitumen produced in Athabasca, Alberta — and this, too, is impossible.

The only truly growing oil and gas production has been coming from offshore projects. Some of these, like those in the deep Gulf of Mexico, can deliver very high rates of oil production and quench our insatiable thirst for petroleum for another decade or so. This fact has been at the core of permitting the deep offshore projects as quickly as possible. The U.S. government and public need both the oil production rate and the revenue from the deepwater offshore projects.

Because the real production rate of liquid petroleum is peaking and the imaginary additions are unlikely to make up for the rate deficit, the world, but especially the developed countries, and above all the U.S., will face the inevitable shortages of liquid transportation fuels. For the completely unprepared U.S., such shortages may be economically devastating. The U.S. is running out of time to move much of its transportation off the cars and trucks and onto rails that will guide electric trains of different kinds, not just the sexy and prohibitively costly "bullet trains."

So what are the two main lessons from the Macondo well tragedy? One is that we need to be a lot more careful in how we drill and produce oil and gas reservoirs in the most difficult and inhospitable environment on Earth — the deep ocean. The second lesson is that we have to snap out of our stupor and realize that the time of cheap gasoline and sprawling suburbs accessible only by car is coming to an inevitable end, no matter what anyone says. This second lesson has not been learned yet.