

Ambulances and helicopter "life flights" depend on gasoline, as do personnel who travel to and from medical workplaces in motor vehicles. Supplies and equipment are shipped in petroleum-powered carriers. In addition, there are the subtle consequences of fossil fuel reliance. A recently retired doctor informs me, "In orthopedics we used to set fractures mostly by feel and knowing the mechanics of how the fractures were created. I doubt that many of the present orthopedists could do a good job if you took away their [energy-powered] fluoroscope or X-ray."

Recently, oil tycoon T. Boone Pickens was asked when we will hit peak oil. "We have already peaked," he said, adding, "Everyone is going to have to come to grips with this in the next two or three years." Simply put, oil is the linchpin resource of modern economies, reaching far beyond gasoline prices... When production begins to decline, expect the following chain of economic consequences: price increases affecting a variety of products and goods, especially food and medical costs; reduced consumption, with lower income people facing "heat or eat" decisions; the economy slows or goes into recession, which leads to unemployment and less tax revenues for government... The health of the nation will be at risk as demand for health care from people unable to pay increases. The potential for a vicious circle ensues.

Medicine must overcome its conservatism, bureaucracy, and ethos of uniqueness to recognize and then respond to the challenge of peak oil. To illustrate this, a brilliant medical executive told me, "If things get tough, we can requisition oil and other resources because we're in the business of saving lives. Right along with the military, police, and fire we've got priority."... This is unrealistic. The current system of health care, which commands 16 percent of GDP and 70 percent of the public finds unsatisfactory, will not continue as is in the midst of economic distress. For example, the Environmental Protection Agency estimates that hospitals use twice as much energy per square foot as office buildings. Hospitals are Cathedrals of Consumption. Who is going to pay for -- and morally justify -- them as presently operated in an energy-constrained world? Something will have to give. I wish I had been quick-witted enough to tell this executive that the military, police, and fire are public goods run by government... Some medical institutions are nibbling at the margins of the energy issue with "environmentally sustainable" market-based solutions. The market will resolve oil scarcity, of that there is no doubt. It is the manner in which this will occur that is at issue.

With rare exceptions, health-care professionals consider only two of the market's three solutions. For oil, these are one, discovery, and two, developing alternatives. The third solution, the one society faces at this late date, is demand destruction -- price rises pushing buyers out of the market... Health-care leaders are surprised when I inform them that in testimony to the Senate in 2006 Alan Greenspan said we should not explore for more oil, a view consistent with peak oil. When I go on to note he suggested developing substitutes, they smile in contented relief. Mr. Greenspan, rarely a bearer of bad news, was silent on the possibility of demand destruction... Nonetheless his advice to forgo exploration in lieu of substitutes is sound economics. Unfortunately, by "doing the math" we find that present substitutes are of little avail. Tar sands, ethanol, and biofuels, among others, are not providing adequate liquid fuels for economic growth. In addition, each is fraught with environmental, economic, and health concerns.

The stark truth is that medicine -- along with government and society -- has no Plan B for peak oil. It looks as though socioeconomic and related hardships -- caused by demand destruction -- will force a transition to, one hopes, environmentally sustainable energy sources... Despite this gloom, there are options open to Pittsburgh's health-care leaders. For example, medical administrators admit to substantial "fat" in the system. Massive conservation and efficiency could lower consumption, especially in hospitals. This is an orderly option that can save jobs -- and lives... Further, medical leaders should highlight the connection between fossil fuels and climate change, and also speak authoritatively about the health consequences of various alternative fuels. They could point out that tar sands, biofuels, and ethanol are dead ends and also use their enormous lobbying powers to pressure government to get serious about alternatives and public transportation. A health care perspective on conservation and sustainable energy is, paradoxically, ripe for job growth... Currently, Pittsburgh health-care executives have extensive infrastructure, human capital, and fiscal resources at their disposal. They face a choice: draw down these advantages to prop up a status quo that cannot hold or innovate to deal with peak oil.

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Electric cars could act as batteries for the energy grid, By Tom Simonite, December 4, 2007 –
NewScientist.com news service [<http://technology.newscientist.com/article/dn13000-electric-cars-could-act-as-batteries-for-the-energy-grid-.html>]

This electric car uses its battery to supply or store grid electricity when in the garage and smooth out peaks in demand -- just 100 of the vehicles could provide 1 megawatt of storage... Electric and hybrid cars could act as energy stores for the power grid while not being driven, say US researchers... Scientists from the University of Delaware are using a new prototype made by US company AC Propulsion to store or supply grid electricity when required... On its own, one such battery might make little difference to the energy supply system, but, if hundreds or thousands more car owners adopted the system, it could significantly improve the efficiency of power distribution, the scientists say.

The average US car is only driven for one hour out of every 24, says Willet Kempton, who led the research... Combustion-powered cars are useless while off the road, but all-electric and plug-in hybrid vehicles could act as backups to the grid while idle, using a system developed by Kempton and colleagues called V2G (vehicle-to-grid).

"Storage is golden for power companies because it is hard to do," Kempton told New Scientist, which notes that the cost of storing excess electricity means that there is only capacity for around 1% of yield in the US and UK... As energy companies try to match demand with supply, extra storage facilities can help ensure capacity is not wasted. Storage is particularly important for renewable energy because power supplied by the sun, the oceans, or the wind is often irregular... Energy is usually stored by pumping water uphill and using its downhill flow to drive turbines later on... The V2G system developed by Kempton and colleagues could be a great help in the early morning, he says. Between 4:00 a.m. and 7:00 a.m. demand spikes as people, factories, and businesses start drawing power from the grid. Normally, power plants have to up their output to cope... When plugged in at Kempton's house, an onboard computer uses "broadband-over-power lines," a system for sending computer data down pre-existing power cables to make a secure connection with a computer owned by grid operator PJM.

Megawatt back-up: PJM's computer asks the car to charge up and store excess power when demand is low; for example, at night. Then, when demand suddenly spikes, the car can supply extra electricity to help smooth supply, providing it is still connected to the grid... "One car cannot make the overall needle move," says Kempton, but 100 vehicles available for a third of the time could provide a megawatt of storage power. To ensure no one is stranded as a result of taking part, users would need to specify how much charge they would need at any particular time... The researchers estimate each car can provide \$4,000 (2,000) worth of storage to an energy company per year. It would cost roughly \$600 (300) to install the high-power connection system required. To encourage drivers to help out, power companies would need to pass on some of their savings, says Kempton.

Over the next 18 months the researchers plan to build up four more cars and to fine-tune the software that controls the recharging... Cars and Motoring -- Learn more about the latest technologies in our comprehensive special report... Energy and Fuels -- Learn more about the looming energy crisis in our comprehensive special report.



The Shortage Myth -- The Lies at the End of the American Dream, by Paul Craig Roberts – Nov. 4, 2007
December 4, 2007

Last June a revealing marketing video from the law firm Cohen & Grigsby appeared on the Internet. The video demonstrated the law firm's techniques for getting around U.S. law governing work visas in order to enable corporate clients to replace their American employees with foreigners who work for less. The law firm's marketing manager, Lawrence Lebowitz, is upfront with interested clients: "our goal is clearly not to find a qualified and interested US worker." ... If an American somehow survives the weeding out process, "have the manager of that specific position step in and go through the whole process to find a legal basis to disqualify them for this position -- in most cases there doesn't seem to be a problem... No problem for the employer, he

means -- only for the expensively educated American university graduate who is displaced by a foreigner imported on a work visa justified by a nonexistent shortage of trained and qualified Americans.

University of California computer science professor Norm Matloff, who watches this issue closely, said that Cohen & Grigsby's practices are the standard ones used by hordes of attorneys, who are cleaning up by putting Americans out of work... The Cohen & Grigsby video was a short-term sensation, as it undermined the business propaganda that no American employee was being displaced by foreigners on H-1b or L-1 work visas. Soon, however, business organizations and their skills were back in gear lying to Congress and the public about the amazing shortage of qualified Americans for literally every technical and professional occupation, especially IT and software engineering... Everywhere we hear the same droning lie from business interests that there are not enough American engineers and scientists. For mysterious reasons, Americans prefer to be waitresses and bartenders, hospital orderlies, and retail clerks.

As one of the few who writes about this short-sighted policy of American managers endeavoring to maximize their "performance bonuses," I receive much feedback from affected Americans. Many responses come from recent university graduates, such as the one who "graduated nearly at the top of my class in 2002" with degrees in both electrical and computer engineering and who "hasn't been able to find a job"... A college roommate of a family member graduated from a good engineering school last year with a degree in software engineering. He had one job interview. Jobless, he is back at home living with his parents and burdened with student loans that bought an education that offshoring and work visas have made useless to Americans.

The hundreds of individual cases that have been brought to my attention are dismissed as "anecdotal" by my fellow economists. So little do they know...! I also receive numerous responses from American engineers and IT workers who have managed to hold on to jobs or to find new ones after long intervals when they have been displaced by foreign hires. Their descriptions of their work environments are fascinating... For example, Dayton, Ohio, was once home to numerous American engineers. Today, writes one surviving American, "I feel like an alien in my own country -- as if Dayton had been colonized by India. NCR and other local employers have either offshored most of their IT work or rely heavily on Indian guest workers. The IT department of National City Bank across the street from LexisNexis is entirely Indian. The nearby apartment complexes house large numbers of Indian guest workers filling the engineering needs of many area businesses"... I have learned that Reed Elsevier, which owns LexisNexis, has hired a new Indian vice president for offshoring and that now the jobs of the Indian guest workers may be on the verge of being offshored to another country. The relentless drive for cheap labor now threatens the foreign guest workers who displaced America's own engineers.

One software engineer wrote to me protesting the ignorance of Thomas Friedman for creating a false picture of American engineers being outdated and for "denouncing American engineers and other workers as 'xenophobes' for opposing their displacement by foreign guest workers." The engineer also took exception to the "willful ignorance or cynicism of Bruce Bartlett and George Will" who he described as "bootlicks for pro-outsourcing lobbies."

On November 6, 2006, Michael S. Teitelbaum, vice president of the Alfred P. Sloan Foundation, explained to a subcommittee of the House Committee on Science and Technology the difference between the conventional or false portrait that there is a shortage of US scientists and engineers and the reality on the ground, which is that offshoring, foreign guest workers, and educational subsidies have produced a surplus of US engineers and scientists that leaves many facing unstable and failed careers.

As two examples of the false portrait, Teitelbaum cited the 2005 report, *Tapping America's Potential*, led by the Business Roundtable and signed onto by 14 other business associations, and the 2006 National Academies report, *Rising Above the Gathering Storm*, which was the basis for substantial parts of what eventually evolved into the American COMPETES Act."

Teitelbaum posed the question to the US Representatives: "Why do you continue to hear energetic re-assertions of the Conventional Portrait of 'shortages,' shortfalls, failures of K-12 science and math teaching, declining interest among US students, and the necessity of importing more foreign scientists and

more than one.

Although The Technical Alliance has just been formed, Mr. Scott has been working at the project for several years. Not trying to get the engineers together – that is not an engineer's method of forming an organization. He has been gathering data and making charts showing just how industry has been carried on today; and so far as he could, he has been calculating the percentage of waste.

"The whole problem may be stated," he said, "as the problem of elimination of waste, but waste to an engineer has a different meaning than it does to the general public. People generally think of waste only in terms of potato peelings or of spending money for what they hanker for, instead of for what they think they ought to buy. If the elimination of that kind of waste could solve the problem, China should be the richest country on earth today; but the engineer recognizes exhaustion of any natural resource is a waste."

"If we could eliminate idleness and duplication of effort," he said, "we may have immediate prosperity – such prosperity as the world has never known. If we could find a way then to husband our natural resources, we may make that prosperity permanent."

"Can the engineers and technical men do this?" I asked.

"If they can't," he answered, "nobody can. Inasmuch, however, as that is only one thing they are trained to do, the problem doesn't seem difficult. The simple fact is that they have not tackled the problem up-to-date. They have been trying, with gratifying success, to eliminate idleness and

duplication of effort within the various industries in which they have been employed, but so far they have not thought of American industry, which means, practically, that they haven't thought as engineers."

"The time has come, however, when the engineer must do exactly that. We are reaching a crisis, and the technicians are the only people who can find out what to do. They must survey the country, tabulate its resources, discover its possibilities in natural and human power, uncover the present wastes and leakages, and work out a tentative design of coordinated production and distribution."

"And suppose you draw up a seemingly workable plan," I asked. "What are you going to do with public opinion?"

"It is all a technical matter," he said. "It makes not the slightest difference whether the public knows about it or not. The steam engine didn't need a press agent. The Einstein Theory doesn't require any special legislative enactment. If the only people who can bring order to our present industrial chaos find out exactly how to do the job, we needn't worry about the next step."

"Won't you run against some political difficulties?" I asked.

"Yes," he said, "in the same way the well-known tide ran against political difficulties in the person of His Majesty King Canute. Politics is our natural approach to matters that we don't understand. When we know exactly what we want, and exactly how to get it, we get it. If we don't know what we want, we vote for it with a superstitious hope that a change – any sort of change – will bring it out of its hiding place. Mr. Harding (29th President of the U.S.) was elected by an overwhelming majority because we wanted something badly, and we thought that 'normalcy' might be it. Had we been in a little more pain, we should have probably elected Debs, (Eugene Debs, candidate for president) hoping that a change in ownership would somehow work a miracle."

"Isn't the question of ownership a vital one?" I asked.

"No," he answered. "It makes no difference who owns the sun. What concerns us vitally is whether we use it properly or not. No lovers ever quarreled about who owns the moon. Neither does it make any difference who owns the earth if we can only discover how to use it. Ownership is a myth. If we once get to using our coal and iron and our industrial and transportation systems to their full capacity, nobody will be fool enough to care if they are owned or not."

"The engineer especially is not concerned with ownership. Technicians, as such, cannot function in politics. Their training has placed them in a position where decisions are the results of intrinsic fact and not of personal opinion, whether autocratic or democratic. They cannot function in finance because their science is one of production and utilization, not one of title or credit. They cannot function in labor unions as presently organized because these unions are mere political groups in which the individual member functions not as an individual responsible for a certain detail of the industrial process, but as a voter expressing some – usually borrowed – opinion."

"The Technical Alliance is simply an attempt to organize the technical workers on their jobs instead of organizing them as an academic group outside. In one sense of the word, this may be called the first genuine labor organization in America, for every technician is engaged in strategically important labor and is concerned primarily with the organization, that is, the coordination of industry."

"Technical men must necessarily look on industry as industry. The central purpose of industry – and the only purpose which the engineer, as such, can pay attention to – is to serve humanity. Mr. Gantt, (Henry L. Gantt – engineer and social scientist) in his very conservative estimates, proved that our present industrial machine is not giving more than 20 percent of the service it is capable of giving, primarily because the machine is controlled by business groups for business ends rather than industrialists for industrial ends. His figures were actually far too high, because with the elimination of the business motive would come the elimination of thousands of industries now engaged in making things which only business organizations need; and because with the machine once operating at its full capacity, there would be such an abundance produced for everybody that we would not need to protect private property as it is protected today."

Mr. Scott is anything but an enthusiast, yet I have never heard an irresponsible soapboxer make more staggering statements. To multiply the nation's wealth by ten – without waiting for new inventions and without considering a political move – seemed to him a simple problem for the engineers when they organize as engineers.

For lack of anything better to say, I asked him a question which every advocate of a new order will recognize as an old acquaintance: "Won't you have to change human nature first?" Mr. Scott smiled dryly.

"Did you have to change human nature," he asked, "in order to keep passengers from standing on car platforms?"

"Go on," I said, "I'm listening."

"They put up signs first," he continued, "prohibiting the dangerous practice, but the passengers still crowded the platform. Then they got ordinances passed, and the platform remained as crowded as before. Policemen, legislators, public service commissions all took a hand but to no effect; then the problem was put up to an engineer."

"The engineers solved it easily. They built cars that didn't have platforms."

According to Mr. Scott, the same course will have to be followed in the matter of a still more familiar prohibition. THOU SHALL NOT STEAL. Church and state, he says, have united unanimously throughout all history behind this law, but it has never been enforced. Technical administration alone, he maintains, can enforce it. How? Let him answer in his own words.

"By coordinating the industrial process; by operating all industries as one agency for one definite purpose; producing and distributing the things that people want so that an abundance of everything shall be accessible to all."

"Private property," he said, "is generally recognized as a burden even today, and few people would want to carry it if they could be rich without having to do so. For the first time in history, though, humanity has a machine at hand which is productive enough to make everybody rich, and it has the technical knowledge at its disposal to run such a machine."

"But do you expect the engineers to agree upon a program?" I asked. "They have prejudices and differences, don't they, just like the rest of us?"

"They disagree as politicians," he said, "but not as engineers. We are not trying to organize them, however, into a society to debate something, but into an alliance which will discover the facts. Engineers do not disagree on facts. They all know what direction a stone will drop. They all know that a straight line is the shortest distance between two points. If there is anything else they want to know as engineers, they find out; and when they find out, there isn't the slightest disagreement. Engineers are not radical or conservative. As engineers, they are no more radical than a yardstick and no more conservative than so many degrees Fahrenheit."



Report Says that the Rich are Getting Richer Faster, Much Faster, by David Cay Johnson, from a new Congressional Budget Office report

The increase in incomes of the top 2003 to 2005 exceeded the total income of the poorest 20 percent of Americans, data in a new report by the Congressional Budget Office shows... The poorest fifth of households had total income of \$383.4 billion in 2005, while just the increase in income for the top 1 percent came to \$524.8 billion, a figure 37 percent higher.

The total income of the top 1.1 million households was \$1.8 trillion, or 18.1 percent of the total income of all Americans, up from 14.3 percent of all income in 2003. The total 2005 income of the three million individual Americans at the top was roughly equal to that of the bottom 166 million Americans, analysis of the report showed.

The report is the latest to document the growing concentration of income at the top, a trend that President Bush said last January had been underway for more than 25 years... Earlier reports, based on tax returns, showed that in 2005 the top 10 percent, top 1 percent, and fractions of the top 1 percent enjoyed their greatest share of income since 1928 and 1929... Much of the increase at the top reflected the rebound of the stock market after its sharp drop in 2000, economists from across the political spectrum said. About half of the income going to the top 1 percent comes from investments and business... In addition, Congress in 2003 cut taxes on long-term capital gains and most dividends, which advocates said would encourage people to turn untaxed wealth into taxable income. Some economists have said that the increase in incomes at the top is illusory and is in good part simply converting untaxed assets into taxed income to take advantage of reduced tax rates.

Asked how much of the increase at the top was from the tax cuts rather than market gains, Peter R. Orszag, the budget office director, said, "I can't give you an answer to that because we just don't know." Jared Bernstein, an economist at the Economic Policy Institute in Washington who characterizes the Bush administration's policies as YOYO economics, based on You (Are) On Your Own, said the differences in incomer growth explained why so many Americans have told pollsters that they are feeling squeezed.

At every income level Americans had more income, after adjusting for inflation in 2005 than in 2003, but the increases ranged from almost imperceptible for the poor to modest for the middle class and largest for those at the top... On average, incomes for the top 1 percent of households rose by \$465,700 each, or 42.6 percent after adjusting for inflation. The incomes of the poorest fifth rose by \$200, or 1.2 percent, and the middle fifth increased by \$2,400, or 4.3 percent.

