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High Octane? The Anatomy and Physiology of Energy Crises, 2009

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HIGH OCTANE?

The
Anatomy and Physiology
of
Energy Crises

by
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Introduction—Oil Pressure!

This is a true story (adjusted for inflation). In the late 1970’s, the service station attendant implored me, “Fill it up?” Reluctantly, I replied, “Fill it up.” He opened the cash drawer and said, “Fill it up.” I filled it up, emptying my wallet. Then he filled my gas tank, seeming to double the value of my old, gas guzzling car. Was this an emotional issue? Without question.

However, by the mid 1980’s, the pendulum had swung to the other extreme. I breezed into the service station in my new, fuel efficient model and happily challenged the attendant to “fill it up.” He moaned, "I haven't seen gas prices this low since it was put in the trolling motor of Noah's ark!"

In more recent times, those high gas prices again make us feel as if we are "paying through the hose." Aside from trying to face any energy crisis with a sense of humor, the fact is that motor fuel is at least $2 more per gallon in Canada--$3 to $4 more in parts of Europe.

Examining the situation closer, and if we are open-minded, the news at the pump gets surprisingly better. In real terms, we have the least expensive gas in the industrialized world. In 1930, the average pay for an hour of factory work would purchase about three gallons of gasoline. Today, average factory worker hourly wages buy about five gallons.
What really drives petroleum prices? (1) inventory levels and replacement costs; (2) refinery capacity and conversion schedules; (3) clean air fuel mandates; (4) zone price marketing formulas; (5) exchange rates; (6) global spot market prices; (7) geopolitical fear-risk premiums; (8) real and man-made disasters; (9) buyer-seller psychology; and (10) supply and demand.

How can fuel prices at the pump vary upwards of 10% to 15% at any point in time? Emotions aside, it should not be a mystery. Retailers deal with many parameters: (1) contractual cost structures, (2) marketing demographics, (3) volume strategies, (4) markup ranges in which to operate in competitive urban versus rural areas.

Prices elsewhere tend toward what the market will bear. Price elasticities operate as well. The rare, full-service station, with its loyal patrons, can charge more than the gas-and-go outlets (whom they correctly do not view as competitors). In fact, convenience store customers are probably more price elastic in their demand. As operators know, the tradeoff to higher prices at the pump is potentially declining sales of other items inside the convenience stores.

Ethanol? It is hyped as being right up there with apple pie, motherhood, and solar energy. The jury is still out on whether more petrochemicals are consumed to plant, grow, harvest, process, and distribute corn and its ethanol byproduct, than they save. Ethanol also comes with a protective tariff subsidy of
54 cents a gallon over cheaper foreign ethanol imports derived from sugar cane. Both corn and sugar cane prices have spiked sharply the last two years, very painful to the near 2 billion of the world’s poor who spend at least half their meager incomes on food to survive. Ethanol has also caused a spike in corn prices at cattle feed lots. Being “renewable” isn’t without its tradeoff, is it?
I. Over a Barrel (Again)

Always a balancing act, in a typical year, it is standard operating procedure for American oil refineries to convert from the production of heating oil to the production of gasoline shortly after the New Year starts. Only by doing that conversion on a timely basis can the energy companies try to meet and anticipate the growing demand related to summer travel by Americans.

As with most things in economics, it all does come down to supply and demand. However, few experts before the Gulf Coast Storm disaster were predicting a petrocession, an energy shortage-induced recession, nor even a dramatic shift in consumer spending habits. Only after a sustained period of adverse economic signals, combined with chronic shortages and persistent record high prices, would we expect to see a petrocession.

Not to go unnoticed was the weakening of the dollar by approximately 35% against the euro between 2002 and 2004. Sellers of petroleum in 2005 reacted by raising prices. Lest we think there is wholesale price gouging in the works, American energy companies have not allowed motor fuel prices to rise as fast as crude oil prices have gone up at the wellhead.

Earlier in the decade, when crude oil prices ratcheted up from, say, $20 a barrel to $40 a barrel (for the sake of easy arithmetic), the retail price of gasoline did not soar from $1.50 a gallon to $3.00 a gallon. Prices at the
pump historically rise about 3.5 cents per gallon for each $1 increase in crude oil prices.

What may also happen, it has before, is that there could be sensational headlines, “Oil Company Profits Soar 50 Percent.” All it would take is the reporting that last year’s profits were, say, $.06 on each dollar of sales and this year’s profits were $.09 on each dollar of sales. Such swings, both up or down, occur in most industries.

On the other hand, with the Mideast a fragile powder keg, and recurring natural disasters hammering our coasts, might $2 a gallon come to be referred to as the “good old days?” Absolutely. Will the reader find this writer expending his time and money, his opportunity cost of foregoing the next best use of his time and talents, driving from city to city comparison shopping and lamenting price differentials that obviously the aggregate marketplace willingly bears? Absolutely not.

Just think, if they all charged the same price, the Federal Trade Commission would scream, “collusion!” Most SUV drivers, weighing a number of factors beyond just annual fuel costs, will hang onto their prized chariots. To also gauge what a low price we pay for motor fuel, try pricing a gallon of drinking water. Milk is currently around $3.50 a gallon. Read on.
II. Has America Acted Fuelish?

Have we been “fuelish”? Not really. We have approximately doubled our real Gross Domestic Product (GDP) in the past 30 years; we did it with only about 60% more energy. Some would accuse us of being “energy pigs.” Americans are not “energy pigs” any more than our children whom we push to go on in school are “education pigs.”

Yes, we use about 25% of the world’s oil flow. We also produce (and sell to ourselves and others) nearly 30% of the world’s goods and services. Do we realize how far we’ve come? Our current model cars go twice as far on a gallon of gas compared to thirty years ago (29.3 vs. 14.2). Trucks have shown a 50% improvement in the same time period.

The equipment in our houses, cars, factories, and aircraft is 30% to 60% more efficient than 30 years ago. Total residential fuel bills have held steady for the last decade, despite an increase of 20 million dwellings (a 25% gain in total dwellings). Between 1980 and 2005, relative energy costs of American families fell by one-third. Additionally, low interest rates have helped consumers service other debt and obligations.

These improvements put us ahead of every major Western trading partner, and almost equal with Japan, in terms of energy efficiency gains. Japan has one-fifth the cars and a total land mass that would fit inside the state of Montana. Ours is a tremendous achievement, considering the topographical
size and diversity of our land and population. Oil now powers about 8% of our electrical energy, compared to 17% in 1973. We have come a long, long way in just 30 years.

Americans have been pumping oil domestically for 150 years. As a result, we are down to averaging about 20 barrels a day from our American wells, compared to approximately 260 barrels per wellhead each day in the Persian Gulf. So, where do we go from here? With environmental considerations, we may have to tap into our Western off-shore continental shelf for new, major oil reserves.

Beyond that, the sun is expected to shine for several billion years. Nuclear fusion creates its own fuel. The oil shale of the mountain states, petroleum in the tar sands of Canada, may rival the Mid-East reserves. Recent discoveries in Venezuela and Nigeria have effectively doubled known world reserves.

Further, 100 billion barrels of oil are estimated to be in America’s continental shelves. Oil, natural gas, gasoline and methanol can be synthesized from coal, as was accomplished by Germany during World War II. Additionally, we are literally the Persian Gulf of coal. Coal accounts for 80% of American fossil fuel reserves.

If oil prices stay high, what would be the result domestically? New England will be hurt the most on heating oil costs. Texas, Oklahoma, Louisiana, and Alaska economies
will pick up (Mexico, Nigeria, Canada, Venezuela, too). Price inflation could rise 0.5 to 1.0%, resulting more upward pressure on interest rates. U.S. exports could become less competitive with a stronger dollar, as those exports become more expensive.
III. When Peace Breaks Out

Like it or not, geopolitics weigh heavily on world oil production, delivery and pricing. Two-thirds of the world's oil stock is in the Persian Gulf, as is one-fourth of the world's current flow of crude oil. Our lack of resolve to tap our own recoverable reserves, combined with our willingness to do business with a cartel, the Organization of Petroleum Exporting Countries (OPEC), has contributed to the power and pervasiveness of OPEC for three decades.

Oil reserves in Iraq and Kuwait alone are 200 billion barrels. We use 23 million barrels a day. Additionally, 13 million of the 23 million barrels must be imported. The world burns about 88 million barrels of oil a day. Crude oil consumption is expected to increase 50% by the year 2028. Domestic and foreign demand for petroleum (especially fast-growing China and India) has been surging to new records each of the last 10 years. An exporter of oil just a decade ago, China now imports six million barrels a day (projected to double by 2025).

What about those surging prices at the pump? Price increases for gasoline and heating oil may or may not continue to be as great as feared, or stay as high as those experienced during past oil crunches. Three decades ago, and as OPEC learned to flex its collective muscles, the price of OPEC crude oil surged 400% in 1973-74 and 300% in 1979-80.
A shocking three-fourths of known oil reserves are owned or controlled by their respective governments. Twenty-five percent of the world’s proven crude oil reserves are within the borders of Saudi Arabia. The Saudis are the only OPEC producers who have significant idle capacity.

Some experts believe that the Saudi’s claimed two million barrels a day idle capacity doesn’t really exist. Rather, it may represent approximately how much wiggle room they are currently using to fudge on existing OPEC quotas. How reliable a supplier would Saudi Arabia be if the country was taken over by anti-western factions?

Further, changes in petrochemical strategy take time to work their way through the supply channels. Ten weeks must pass for crude oil to be refined into gasoline (and other petrochemical products) and delivered to the pump: six weeks to ship on super tankers; two weeks to refine; and two more weeks to move to storage depots.

Meanwhile, U.S. inventories of petrochemicals typically levels out at around 200 million barrels. Few new petrochemical refineries have been built since the 1970’s. Post-Gulf Coast disaster pipeline and refinery circumstances are basically and structurally different today (but not necessarily better). Time will tell if we have used these disasters as a stern, effective schoolmaster.
IV. Wartime Petronomics

What would have happened in 1990 if Iraq, after invading Kuwait (and perhaps on its way into Saudi Arabia), had developed a monopoly on Persian Gulf oil? It could have held captive the world's economy and severely affected industrial output. By that time, it could have stifled the coalition's military power and will to resist. Was the 1990-91 war about cheap crude oil? No; more accurately it was about heading off a possible misuse of oil power.

We did not send coalition troops to the Persian Gulf just to hold oil prices at $20 a barrel. The young men and women of western nations went there, in good measure, to keep expansionist Iraq from potentially controlling two-thirds of global oil reserves and from using that control to blackmail the industrial world.

The case for fighting in 1990-91 was, frankly, that Iraq (already possessing the world’s fourth largest military) would be militarily, politically, and geographically harder to fight later. Remember, there was no peace treaty in 1991, only an uneasy armistice for the next dozen years thereafter. During that interim, shadowy terrorists without borders worked to form tenuous alliances with powerful enablers.

What we did in 1990-91 was a pragmatic attempt to maintain access to the oil on which the world depends. It was nothing less than an effort to sustain the well-being of billions of people on several continents. We still import more than half our petroleum, but even achieving self-sufficiency would not fully
protect us from war in the Gulf. Our prosperity is heavily linked to countries that are also heavily dependent on Mid East oil.

When oil prices hover around, say $70 per barrel, probably $15 to $18 of that is due to a "fear factor (about terrorist violence that could disrupt worldwide petroleum deliveries)." It's a war-tax, if you will, against so-called "weapons of mass disruption."

Additionally, when demand grows faster than supply, prices go up as they would in any seller's market. This, by the way, also allows oil and gas companies to increase exploration and production expenditures. If they are smart, they will do so. Remember: oil companies do not set petroleum prices at the wellhead; the pricing action plays out in various countries' mercantile exchanges.

Realistically, if we complain when prices go up, shouldn't we also give thanks when prices go down? If the price were all that mattered, we could rely on the marketplace. Even for producers, excessively high prices don't maximize profits. High prices can also affect buyers and sellers somewhat differently, by promoting conservation and inducing new oil production, respectively.

Nevertheless, our economy cannot fully thrive except under peaceful conditions. The very foundation of our economic lives--our freedom of choice to manage our individual, business, and national affairs--is a direct result of periods of sustained peace in our time.
V. Connecting the Dots

Is it a primary economic goal of the United States to try to guarantee western nations a stable supply of reasonably priced oil? To be sure. Again, two-thirds of the world's oil stock is in the Persian Gulf, as is one-fourth of the world's current flow of crude oil.

Our lack of resolve to tap our own recoverable reserves in Alaska, combined with our willingness to do business with OPEC, has contributed to the power and pervasiveness of OPEC for three decades. Again, we import over half our oil, but even achieving self-sufficiency would not fully protect us from war in the Gulf.

Will we have another spike in energy prices because we still import too much of our oil and are wasteful? No. The planet's chronic energy crisis is that oil provides 40% of the energy and that 65% of verified oil reserves are in the Persian Gulf, known by its shifting sands of strife for millennia.

Not to go unnoticed logistically, during Desert Storm in 1990-91, the only refinery in the entire Persian Gulf region that could produce jet fuel was in Kuwait. That country alone accounts for 10% of the world's oil production. We could not simply withdraw and cross our fingers that there would be no more such crises.

What happened in Kuwait in 1990 was a threat to the entire Arab world. Later, it could have become a threat to the rest of the globe.
A year before the invasion of Kuwait, and at two Arab summits, Iraq's leader is reported to have argued that by combining the OPEC quotas of the two countries, he could force oil prices up to $30 a barrel, double his development budget, and still pay off his war debts in a few years.

Conjecture was that, in the process, Iraq's leader could expand his coastline from 37 miles to 225 miles and wind up with a deepwater port. All he seemingly had to do was take over Kuwait to whom he owed $18 billion in loans from the Iran-Iraq war. His options were clear. Repay the loan, or he would rob the bank.

In 1990, Egypt's President reportedly told a U.S. Senator that Iraq's leader once took him aside and proposed a military coalition of Iraq, Egypt, Syria and Jordan to pool their weapons and carve up Kuwait and Saudi Arabia. On another occasion, Iraq's leader allegedly offered Yemen two of Saudi Arabia's southern provinces. Alas, so much friction over such a slippery substance.
VI. Marketplace Petronoia

Conversely, what was hoped for in the spring of 1999 ended up working all too well. That is, OPEC did cooperate in restricting the supply and flow of crude oil in early 1999, as part of an attempt to salvage sectors of the depressed American oil industry, when prices at the wellhead were then around $10 per barrel.

The fix worked too well. Within one year's time, the marketplace responded with a swing from an earlier time of abundance and low prices to a new era of shortages and high prices. Economists refer to this perverse phenomenon as a type of “Cobweb Theorem”: alternating high prices and surpluses with low prices and shortages.

Although domino theories have been less popular recently with the thaw in the Cold War, consider this sequence of events. A major oil cutoff would surely hobble energy-insufficient Japan and Europe. As major trading partners, their economic implosion could throw our economy into a free fall, jeopardizing jobs.

The loss of control of the oil fields in the Persian Gulf could shake the foundations of the international banking system. Why? There are scores of oil-importing, underdeveloped countries which owe tens of billions of dollars to overexposed major banks. A sharp, sustained increase in crude oil prices and those nations may not be able to service their debts.
The world's biggest and most vulnerable banks would take significant broadsides. If the banks are pushed to the edge, those who suffer won't just be bank stockholders. We, all of us, our enterprises, and our loved ones could also suffer, at least temporarily, due to financial deflation and confusion.

What would have happened if an Iraq with expanded territories had developed a monopoly on Persian Gulf oil in 1990? With Iraq's treasury rebuilt, it could have financed terrorism by stopping oil shipments sporadically to coerce Western support for its agenda. In fact, Iraq might have decided on a rate that suited its politics, even though it might not necessarily be profit maximizing.

For better or worse, Frederic Bastiat's expression in the 19th century applies: “If goods do not cross borders, armies will.” And if it is in our national and international interest to assure a stable flow of oil from the Persian Gulf at reasonable prices then, alas, troops from western nations could be rotated into the Persian Gulf for many years to come.
VII. Oil In the Family

There have been many energy crises. In 1973, Arab nations, through the newly formed OPEC, refused to sell to Israel's allies, then tripled prices. In 1980, Iran's revolution and the Iran/Iraq war resulted in panic buying led by Japan. That caused world oil prices to spike to an all-time high of $40 a barrel. In 1986, Saudi Arabia flooded the market, drove prices down to $12 a barrel and effectively eliminated, for several years, some of our recoverable reserves.

Is oil merely "another commodity"? No, it powers the engine of our market economy and fortifies our national defense. We cannot have it both ways. We cannot have low-priced, offshore fuel from unstable foreign sources while we sacrifice our strategic defense capability and our own recoverable energy reserves.

Economists have long known that quantity available in the marketplace, both supplied and demanded, is always a function of price. It would be best to avoid the temptation of making energy predictions on the assumptions that our stockpile, technology, and environment are fixed. Throughout our history, various crises and technology breakthroughs have had a way of bringing new resources into existence while rendering old ones valueless.

Consider that for a thousand years from approximately 900 A.D. until the 1860's, mankind's principal source of lubrication and lighting came from whale oil. By the time of the
Civil War, the relative scarcity of whales and the tandem upward price spike of whale oil led to the development of refining processes for the then so-called non-resource crude oil, discovered in Pennsylvania in 1859. More on this later.

If economists know anything, it's that free markets, when allowed to operate in their own channels, have a way of resolving shortage and surplus conditions. Prices will respectively rise and fall in response to supply and demand conditions.

The 1990-91 Mid East crisis, and Operation *Iraqi Freedom* in 2003, removed the world's cushion of excess petroleum production. The global supply system has remained tight, fragile, and vulnerable to further shortfalls in volume and delivery (for example, the Gulf Coast disaster which hammered drilling rigs, pipelines, refineries, and storage facilities).

Although domino theories have been out of vogue lately with the thaw in East-West relations, consider again this sequence of events. A major oil cutoff would surely hobble Europe and Japan. As major trading partners, their economic implosion could throw our economy into a free fall.

One big winner in the short run? Russia is a large oil producer. The break-even point for Saudi production is about $11 a barrel. The U.S. breakeven point is $14. For the Russians, it is approximately $19 a barrel. The rise in oil prices partially rescues the Russian economy. Ironically, that could simultaneously impair Russia's primary customers: fuel inefficient Eastern Europe.
VIII. Creative Juices Flow

Entrepreneurs with a good feel for applied science brought the Petroleum Age into full flower. We owe them much of our standard of living (labor saving products), our material comforts (heating and cooling), our transportation (cars, planes, trains, etc.), and our longevity (medicines from petroleum bases). Only when we try to bypass ordinary market processes and throttle creative juices, do we then face possible prolonged and protracted energy crises.

From the birth of America to the mid 1800s, the principle sources of energy in the U.S. were wood, coal, and whale oil. Around 1829, the demand for whale oil was so great, and the cost of hunting whales so high, that prices increased over 400%. The only other oil available was kerosene made from petroleum that had seeped to the surface.

Crude oil sold for $42 a barrel in 1850 dollars. Then, using data provided by a Yale chemist, a group of New Haven investors decided to drill for oil. On Aug. 27, 1859, near Titusville, Pennsylvania, they struck oil, and a new industry was born.

Our supply of fossil fuels is finite; however, we are certainly not in the last days of the Petroleum Age. Curiously, at frequent intervals over the last 140 years, various government bodies (the Revenue Commission, the Bureau of Mines, and the Department of Interior) have respectively and oft declared the end of our reserves to be 10 to 20 years hence.
Then, new reserves would be discovered, often exceeding all previously known reserves and all oil pumped out of the ground to that date. Examples abound from Texas, Oklahoma, and Louisiana 100 years ago to the more recent and major finds on the north slope of Alaska and in South America.

Margin-rich oil fields, that is, seemingly tapped out but paid for, have been known to respond very well to secondary techniques of injecting steam or the dreaded CO₂ (greenhouse gases) to break loose formerly unrecoverable reserves, tripling the original output to date.

Again, there is a price at which shale and oil could be extracted from tar sands, liquefied coal. Come what may, we will have the energy we need, and we will pay for it at rates that, in the short run, may seem like a "gold arm and a platinum leg."

No doubt we will end up with far more energy at lower prices in the long run if we can avoid so-called quick fix solutions. Such was the case with the abortive price controls attempted in past decades. Those controls attacked symptoms, were cosmetic, obscured root causes, aggravated shortages, curtailed buyer-seller freedom, masked true market costs, encouraged wastefulness, and discouraged exploration.

Government policies have often kept the price of domestic oil and gas well below world market values. This has discouraged
conservation because the public simply hasn’t considered it necessary to skimp on a low cost commodity. Legislative controls on prices at the same time discouraged exploratory drilling that would have led to increased supplies.
X. Energy Facts Of Life

So, what are the energy economic facts of life? Those who lobby against coal-fired power plants, nuclear energy, off-shore drilling in our own backyard, exploration of mineral rights on federal lands will need to consider being more reasonable, or we may have to shut down the economy in its present form and return it back to our native Americans.

How can we fight back against the painful swings in world oil prices? One approach could be to implement a countervailing tariff whenever the price drops below, say, $50 a barrel. If the price falls to $45, the fee would be $5. When, and if, the price goes up above $40 again, this variable import fee disappears.

The revenue generated can be used to refill our 700 million barrel Strategic Petroleum Reserve (SPR) stored in underground salt caverns (30 days supply). If and world oil prices surge on the spot market, oil could be released from the SPR to dampen the price increase. In effect, we would buy low and sell high, at the expense of the Mid East oil cartel.

America’s energy dilemma is serious and real, but much good can come from it as has been the case with past crises. Price spikes? Yes, from time to time. But there is no shortage of energy reserves waiting to be identified and commercially developed. Then, the 21st Century will also be known as the “American Century,” and you can take that to the bank.
EPILOGUE

Crude (Oil) Humor

In energy crises, each of us has a role to play. The problem is, nobody wants a walk-on part. Should we look to more small cars as the answer for everyone? Some of those new models are so small now that when you take one to a car wash, you have to wait for a full load. Make our cars any more compact, and they will be afraid to come out of the garage whenever there's a hawk in the sky.

At best, severe conservation measures might cut in half our growth in energy usage requirements. Such was the case in one hotel in 1979 which posted small signs beside wall switches, "Oh say, can you see by the dawn's early light? Then turn off this switch!"

It really does come down to a choice between laughing and crying. In that regard, there is a prediction afoot of a shortage of humor by 2009, and the cost of a barrel of mirth could go as high as $95. Six years ago, a barrel of crude laughs was selling as low as $15, and it was difficult to give the stuff away.

By raising the price of a barrel of mirth to $95, we might wake people up to the fact that, unless strong conservation methods are taken, we could run out of humor by the year 2012. In fact, the price of refined laughter could go as high as $120 a barrel. We'll have to live with it. We can't have recession and inflation and expect cheap humor to boot.
Abe Lincoln said it best, “You can ‘fuel’ all the people some of the time, and you can ‘fuel’ some of the people all of the time ... but you can’t ‘fuel’ all the people all the time.”

As we pull ourselves together and hang loose, are there worse things than an energy crisis? Sure. Having an “identity crisis” and an “energy crisis” at the same time: not knowing who we are and being too tired to try to find out!

Have courage, dear reader. If we do have an unlikely recession, at least we’ll use less gasoline going down hill. Laugh or cry. Pay your money; take your choice.
ACKNOWLEDGMENTS

The *Entrepreneur* is a quarterly journal addressing contemporary economic issues from a moral perspective. One may not agree with every word printed in the *Entrepreneur* series, nor should he feel he needs to do so.

It is hoped that the reader will think about the points laid out in the publication, and then decide for himself. Hopefully, the material herein will motivate people to further study and also toward a greater understanding of God’s will on life’s stewardship issues here on Spaceship Earth.

In this expository monograph, many sources have been consulted in the preparation of this material. The References section enables those who desire to do further study to consult those sources. If any such acknowledgments have been inadvertently omitted, the author would appreciate receiving information, so that proper credit may be given in any future printings.

Special thanks goes to Trina Hoofman, Cara Glover, and Megan Hitt, staff members all, for their perseverance with me, especially on matters of form and style on this project. May their tribe increase. Care has been taken to trace the details of specific events and trends.

Every effort has been made to include only reliable information, and yet present it in a way that will not quickly date this publication. The
author would welcome knowing about any possible errors in content.
REFERENCES FOR FURTHER STUDY


“All About the Oil,” by Adam Zagorin, Time, February 17, 2003.


“Economic Fallout will be Massive,” by David Lynch, U.S.A. Today September 1, 2005


“How to Escape the Oil Trap,” by Fareed Zakaria, Newsweek, August 29/September 5, 2005

“Hurricane Cases Fuel Supply Crisis,” by Sue Kirchoff, U.S.A. Today, August 31, 2005

**The 2006 Index of Economic Freedom**, The Heritage Foundation and The Dow Jones Company.

“Iraq Building E & D Project List for Post-UN Sanctions,” *The Oil and Gas Journal*, vol. 95, no. 15, April 14, 1997.


“A Looming Conflict Over Terror Pre-Stages a Novel Kind of War,” by Carla Anne


*Rescuing a Planet Under Stress and a Civilization In Trouble*, by Lester Brown, President, Earth Policy Institute.


“Round Table on Declining Oil Prices and Its Political Consequences in the Middle East,” *Middle East Studies*, vol. 6, no. 1, Spring 1999.


“Strengthening National Energy Security by Reducing Dependence on Imported Oil,” by Charli E. Coon, J.D., and James

“Storm Could be a Windfall for Some,” by Mark Mattkrantz, U.S.A Today, August 31, 2005

“Storm Worsens Gas Problems from Bad to Horrendous,” by James R. Healey, U.S.A Today, August 30, 2005


“The Tank is Half-Empty or Half-Full,” by Peter Coy, Business Week, July 11, 2005


“UA Study Claims Best Gas Pricing Formula,”

“Uncertainty of OPEC Keeps Oil Prices High,”


“US Confronts Significant Challenges in Implementing Sanctions Against Iraq,”


“What We Need is Policy,” by Jane Bryant Quinn, Newsweek, July 17, 2006.


“Why Isn’t Big Oil Drilling More?,” by Peter Coy, Business Week, Jun. 21, 2002.


“World Energy Reserves Expanding, Not Shrinking,” America’s Future. Vol. 41,
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Dr. Don Diffine is Professor of Economics at Harding University and Director of the Belden Center for Private Enterprise Education. Senior Research Associate of Harding's American Studies Institute, Dr. Diffine is listed in the Heritage Foundation's Guide to Public Policy Experts.

A member of the Governor's Council of Economic Advisors, Dr. Diffine has provided Congressional testimony on business problems, economic impact statements, and inflation-recession dilemmas. He has 10 books and 20 monographs in print and serves on the Board of Directors of the Arkansas Council on Economic Education.

The recipient of the $7,500 Freedoms Foundation Principle Award for Excellence in Private Enterprise Education, Dr. Diffine has received 16 Freedoms Foundation awards in categories of Non-profit Publications, Economic Education, Public Affairs-Advertising, Public Address, and Published Works. He is the faculty winner of a $1,000 First Place prize in a national essay contest judged by Nobel Economist Milton Friedman.

In 2000, Diffine was inducted into the Samuel Moore Walton Free Enterprise Hall of Fame. He received the "Champion of Enterprise" award in 1995 from the Students In Free Enterprise Hall of Fame in Kansas City. The First Annual Distinguished Scholar Award was also presented in 1988 to Dr. Diffine in Cleveland, Ohio, by the Association of Private Enterprise Education.

Dr. Diffine's wife, Dion, is from Kailua, Hawaii. She is a math teacher in the Searcy public schools. The Diffines have two children: David, a family practice physician in Kennett, MO; and Danielle, a senior financial analyst in Washington, D.C.
25% of the world’s proven crude oil reserves are within the borders of Saudi Arabia.

The Saudis are the only OPEC producers who have significant idle capacity.

Some experts believe that the Saudi’s 2 million barrels a day idle capacity doesn’t really exist. Rather it represents approximately how much wiggle room they are currently using to fudge on existing OPEC quotas.

How reliable a supplier would Saudi Arabia be if the ruling royal family were overthrown by anti-western extremists?

The world burns 80 million barrels of oil a day.

When prices hover around $40, probably $10-12 of that is due to a fear factor (about terrorist violence that could disrupt worldwide petro deliveries). It’s a war-tax, if you will.

Crude oil consumption is expected to increase by 50% by the year 2028.

When demand grows faster than supply, prices go up. This, by the way, allows oil and gas companies to increase exploration and production expenditures.
If we complain when prices go up, shouldn’t we also give thanks when prices go down?

Geo-politics

At this writing, the dollar has lost 40% of its value against the euro in the last three years.

This translates into huge losses for oil-producing countries. They logically respond by raising prices.

Most SUV drivers, weighing a number of factors beyond just annual fuel costs, will hang onto their prized SUVs.

Domestic and foreign (especially China) demand for petroleum has been surging to new records each of the last 10 years.
V. War and Peace

It seems that few of us in the United States have slept well lately. We have had that socked-in-the-stomach feeling over a possible successful conclusion to the Persian Gulf War which began 14 years ago. There was no peace treaty then, only an uneasy armistice. What in the world was at stake as the so-called Operation Desert Swarm in 2003 became Operation Iraqi Freedom, and descended on that country?

And harkening back to a Tuesday, the 11th of September, 2001, how shall we gauge the future of our own land so recently visited with terrorism against our twin pillars of capitalism? Since then, there have been some very dark days, but also some incredibly bright hours. We have lost our innocence. The stakes are high. Josiah Bailey said it best long ago:

The American Republic and American Business are Siamese Twins; they came out of the same womb at the same time; they are born in the same principles and when American business dies, the American Republic will die, and when the American Republic dies, American Business will die.

Words such as a prayer, a God, a and a America a are now being used in the same sentence in many public forums. Thankfully, few seem to object. The Scriptures certainly hint that in clashes between good and evil on this earth, duly constituted governments are the vehicle through which to right the wrong done to the innocent public.
Seventeenth century legal theorist Hugo Grotius, the father of international law, listed six conditions that a *just war* must meet: (1) the cause must be just; (2) warfare must be conducted in proportion to the injury or threat; (3) the war must be winnable; (4) war must be declared publicly and (5) by a legitimate authority; and (6) the war must be a last resort.

It's a tough call. No wonder we feel pulled every which way but loose, as we try to sort it all out. When the proverbial sands settle, will the reasons why we are "over there" add up? It really is a judgment call.

We do need to try to acknowledge all the reasons, to avoid cruelly punishing ourselves and others with false guilt. We will still have some collateral frustration to work through—to keep us from being literally sick at heart. There is even a medical term for that. It is now known as the "CNN/Fox News Syndrome."
VI. Which Way to the Front?

America has not normally been a warmongering nation, but rather a cautious trustee of our planet. With the collapse of the Soviet Union, and for the first time since the Roman Empire, only one colossus straddles the globe. Only the United States is strong enough to be the guardian of justice.

As our President stated during the 1990-91 Operation Desert Storm, "...such is the price of leadership." We desire so much to live in a world where fighting will not be necessary. Terrorists and their enablers do not always view things that way, raging against the very institutions and accomplishments that, deep down, they wish they could have.

Can we fight everybody's war? No. Any American president of either party would be impeached for trying that. Therefore, we have to fight only those wars in which we have a vital national interest. If we learned anything after Operation Desert Storm, where a ruthless aggressor is involved, a bogus peace can lead to a bigger war later.

Additionally, sanctions don't restrain a leader who protects his military first while sacrificing his civilian population. We now know that there can be no trusting deals any terrorist leader makes under diplomatic pressure. Such false trust would be an appeaser's peace, fated to erupt later in a sucker's war.

After September 11, 2001, we also came to know that we were no longer insulated
on the east and west by oceans and on the north and south by weak neighbors. So, in late 2001, Operation Enduring Freedom became nothing less than an effort to sustain the well-being of billions of people, including Americans.

Anything less than defeat for terrorism could have both the Arab world and the Western democracies once again threatened by the biggest rogues on the regional playground; they could soon become more bold, reckless, and unpredictable. History tells us that aggressors throughout the ages have advanced in the face of weakness and retreated in the face of strength.

We would like to have our fine American G.I.'s back right away, but we cannot simply withdraw and cross our fingers that there will be no more such crises. Like it or not, we have embarked on a course that will continue to require collective resolve, diplomatic savvy, and mega quantities of manpower and equipment.

Wishing and hoping and longing for peace are wonderful personal traits: however, such are very shaky foreign policy if one examines history. Alas, war hath no fury like non-combatants. Regarding terrorism, some shrill voices would exclaim, "If we kill, we are just like them!" We can let them kill us. We'll be dead; they'll be alive. That's being different. Someday, we are told, the lion will lie down with the lamb. Fine. We should be the lion, just in case that lamb turns out to be another wolf in sheep's clothing. Remember 9/11!
VII. COMING HOME TO ROOST

Was it being inconsistent to expect a painless solution to that 1990-91 Persian Gulf War? To some extent, we created that Persian Gulf situation ourselves—all the coalition countries did—starting a decade earlier by arming Iraq against Iran. This isn’t the first time; history does repeat itself.

Who hasn’t criticized General Custer’s charge in 1876? But where do we suppose the Indians assembled at Little Big Horn obtained all those repeating rifles that General Custer’s men lacked? From gun-running Americans. Go figure. Truly, the 1990-91 allied coalition members were unwitting partners in creating Iraq’s fortress in the first place (and a decade earlier) as we feared Iran would defeat Iraq.

Iraq’s aircraft and tanks are Russian- and French-made. Italy and France designed Iraq’s nuclear reactor. Those chemical plants were constructed by Germany. U.S.-made computers, dual-use chemicals, and U.S.-grown food flowed into Iraq throughout the 1980’s. The British engineered Iraq’s underground bunkers. A similar approach in the 1980’s, albeit sincerely attempting to arm Afghans against the USSR invaders, created the climate for the 1990’s hornet nests of terrorism in Afghanistan.

Consider this fable of a knight and his men who have returned to their castle after a long, hard day of fighting. AHow are we faring?@, asks the King. ASire,@ replies the knight, AWe
have been looting and pillaging on your behalf all day, burning the towns of your enemies in the West. 

_AWhat?_! shrieks the King, _I don’t have any enemies to the West!_ 

_Oops,_ says the knight, _Well, you do now._

There may not be any quick and painless way for the so-called Coalition of The Willing to win the war against international terrorism. Whenever our American expeditionary forces go into battle, we do what we can. We arm them with the best technology and hopefully ourselves with Thomas Jefferson’s watchword, _Eternal vigilance is the price for peace._

History can continue to be a good teacher here. In 1938, Germany gobbled up neighboring Czechoslovakia; the West did nothing. A year later, much stronger, Germany began its invasion of Poland, followed by Belgium, the Netherlands, Luxembourg, France, and threatened Great Britain.

If only we and they had dealt with Germany early on. At great cost and personal sacrifice, the United States liberated and rebuilt Europe. And all we ever asked for, as Secretary of State Colin Powell recently chided the French, was _enough room to bury our dead!_

Although we Americans often have our differences, we still join together in times of crises. Especially at these times, our strength is awesome. Among all the world’s nations, America still stands out in front. We should never forget that we are Americans, first, last, and always.