THE JOURNAL OF THE COMMITTEE ON MONETARY AND ECONOMIC REFORM

COMER

$3.95 Vol. 18, No. 9 • SEPTEMBER 2006

CONTENTS

2 Is Society a Fish-Pond for our Banks?
5 Rational Choice and Social Value
7 The World is Pregnant with a New Pecking Order
9 Monetary Light for Beating the Heat?
11 Bailouts that Guaranteed the Next Bust
12 Life, Money and Illusion
13 The Cultivated Mysteries Leading to the Housing Slump and Beyond
15 On Imaginaries in Mathematics versus Their Use by Economists
16 Neglect of Human Capital a Key to Oil Shortage
18 Are Banks Becoming More Attentive to Their "Retail" Stores?
19 Out of the Horse's Mouth the Final Word on Oats

When Motivations of Too Large Corporations Become Entangled

We hear a great deal about banks taking over the other financial pillars and using their pools of liquidity for ends incompatible with banking – rather like undertakers practising surgery on the side for the one-stop convenience of customers. But let us note that regardless of who takes over whom,. size and power have their own potential villainies.

That seems to be the lesson that BP the British world-spanning oil company seems to be acting out for us. Even today when the world's thirst for oil has sent prices skywards, the most dynamic factor in the situation seems not so much the actual consumer demand for the stuff in the barrel, as gambling on oil futures.

And a key factor in creating such madness is the amount of winning from previous speculations sloshing around the world – the product of a long line of situations in which the gamble on economic scarcities as a source of profit has produced a world of grotesquely distributed excesses of predatory liquidity. The growth of rates of profit towards infinite degree simply have to be maintained because they have already been incorporated into share prices long in advance. And on those share prices depends the worth of share options that have long been a major means that high executives have of rewarding themselves. Unless a convincing appearance of continued growth – at least at the old rate of growth is maintained – those options become worthless paper. As does the use of corporation shares as collateral for the financing of other ventures. It would rip apart a mode of conquest and triumphant life style, for which so much has been sacrificed, university curricular rewritten, constitutions of countries ignored.

But surely we reach a new step of the incredible when a group of mammoth oil corporations in a year of booming oil prices should seek out miserly ways of cutting

Continued on page 6

COMER

FOUNDING EDITOR
John Hotson 1930–1996

PUBLISHER–EDITOR
William Krehm
(comerpub@rogers.com)

CONTRIBUTORS Vol. 18, No. 9
William Krehm
Richard Priestman
Dix Sandbeck
Keith Wilde

CARTOONIST
Allen Good

INFORMATION SECRETARY
Herb Wiseman (herbwise@cogeco.ca)

WEBMASTER
John Riddell

Economic Reform (ER)
(ISSN 1187–080X) is published monthly by COMER Publications
245 Carlaw Avenue, Suite 107
Toronto, Ontario M4M 2S6 Canada
Tel: 416-466-2642, Fax: 416-466-5827
Email: comerpub@rogers.com
Website: www.comer.org

COMER Membership: Annual dues (includes *ER* on request), in Canada CDN$50, Foreign US$45
***Economic Reform* Subscription only:** One year, 12 monthly issues, in Canada CDN$30, Foreign US$35

Send request and payment to:
COMER Publications
245 Carlaw Avenue, Suite 107
Toronto, ON M4M 2S6

***ER* Back Issues:** CDN/US$4, includes postage; additional copies same issue, $2; additional issue same order, $3. Send requests for back issues to Herb Wiseman, 56 Robinson Street, Peterborough ON K9H 1E8.

Copyright © 2006
COMER Publications
All rights reserved

Permission to reproduce is granted if accompanied by:
"Copyright © 2006 COMER Publications. Reproduced by permission of COMER Publications"

Publications Mail Agreement 40018485.
Postmaster please send address corrections to:
COMER Publications,
245 Carlaw Avenue, Suite 107
Toronto, Ontario M4M 2S6

LAYOUT
Tony Koch (comer@pagecraft.org)
Pagecraft Computer Services

PRINTING AND DISTRIBUTION
Watt Solutions Inc., London

Printed in Canada on recycled paper.

Is Society a Fish-Pond for our Banks?

Elsewhere in this issue we carry an article on the banks reversing their policy of the 1990s in shutting down branches. The mechanics of their bailout from their failed gambles of the 1980s made possible, indeed inevitable, by the deregulation which allowed the banks to take over the other "financial pillars" – stock market brokerage. insurance, and real estate mortgages. One feature of this bailout had been brought in by the Bank for International Settlements (BIS) – a central bankers' private club whose decisions have more effect on the lives of ordinary citizens than anything done in our Parliament. This declared the debt of developed countries "risk-free," and allowing banks accordingly to acquire it without putting up any money of their own. All they had to do was to clip the coupons. Canada's Prime Minister of the day, in the same spirit, attempted to put two principles into the Canadian Constitution:

1. The independence of the Bank of Canada from the Government of Canada. This was curious since it would disregard the very principle of property and ownership. For the Bank of Canada when it originally opened its doors in 1935, had 12,000 private shareholders, and in 1938, the Liberal government of Mackenzie King bought these out at a very good profit in a very depressed land. The detail of the ownership of the BoC's stock can be found in the *Bank of Canada Act* in subsection 17(2).

2. Moreover, subsection 14(2) of the *Bank of Canada Act* provides that "should there emerge a difference of opinion between the Minister [of Finance] and the Bank concerning the monetary policy to be followed, the Minister may…give the governor a written directive concerning monetary policy, in specific terms and applicable for a specified period, and the Bank shall comply with that directive."

However that is merely what the law of the land says. The Bank for International Settlements (BIS) however, had in 1991 in the annual report of its manager, Alexandre Lamfalussy, called for "zero inflation" without, of course, defining what inflation might be in a rapidly urbanizing world, requiring ever more education even for consumers let alone producers, with rapidly accumulating damage to our environment, to say nothing of increasing military adventures. For all of these items lead to a deepening layer of taxation in price that, rather than disappear, will grow still more rapidly.

Moreover, the accountancy in use by Canada and the governments of most of the world left much to be desired: until 1995, there was not a government that depreciated the physical investments of government – buildings, bridges, equipment – over their useful lives. Instead, they wrote them off in the year in which they were made. Any private corporation that tried treating its investments in that way, would be in trouble with the law.

Reworking the Government Books

This exaggerated the deficit, and accordingly drove up interest rates throughout the world. Imagine what interest rates a private corporation that ignored the value of its buildings and of the equipment in them would have to pay if it could get any credit at all. And since in year 2 of such investments their value appeared on the government books at $1, they could be privatized for let us say 5% of their worth and still show a profit, which could then be applied with patriotic flourish to reducing the national debt.

It was only when such BIS – dictated policies had collapsed the Mexican banking system, and threatened that of the world, that the Clinton government in Washington brought in accrual accountancy into books. This showed them to be not in deficit as had appeared before, but in surplus. That really meant bringing down interest rates drastically, and gave the country five years of boom that climaxed in the high-tech bust of 2000.

But even today no government treats the increasing investment in human capital – education, health and social services as investments, but writes them off as expenses in the year they are made. A budget that does that cannot and should not be balanced. Cut down on health and education and other human investment and you end up building more jails and penitentiaries.

But hardly anyone when the BIS talks of "zero inflation" asks about what "inflation" is supposed to mean.

"Zero Inflation" and the "independence

of the Bank of Canada" did not get into Canada's constitution. Even PM Mulroney's own Progressive-Conservative caucus in the Finance committee voted against putting it there. Nevertheless, the government and the Bank of Canada disregard the crucial provisions of the *Bank of Canada Act*, to follow the line of the Bank for International Settlements.

The curse on our banking system and transmitted by it to the economy as a whole, is that it is condemned to grow at least at the pace already incorporated the market price of corporation shares. That is what drove the banks to lobby and obtain the deregulation that led to the mass bankruptcies of banks in the US. In Canada all our major banks were "too big to be allowed to fail," so that the big ones did not fail. A cluster of small ones did. The biggies were bailed out by our government in a way that simply changed the distribution pattern of the national income. And it had to be done in stealth, because it could not have survived a parliamentary debate, or even a serious report in the major press. But when the lights are out when such key matters are settled, democracy lies wounded and bleeding.

The Constant Enhancement of the Scale of Failed Banking Policies

Moreover, the reprocessing of our banking proceeds ever in the same sense on an ever larger scale. *Our major banks are well advanced in having squandered much of the bailout moneys of the 1988-1991 bail out.* The CIBC settled out of court in a lawsuit brought against it by Enron for the so-called "trader" scandal designed by CIBC and financed by it and two other of our major banks. By this scheme a high Enron executive was not only able to end up putting non-existent assets on Enron's books, but siphoned major moneys from Enron to himself. It took high officials of the Canadian government to negotiate a settlement before trial. All in all the CIBC left a quarter of its capital on this count with the US courts, and agreed not to contest the other charges against it.

Not dissimilar experiences of the American banks were a main factor in the sudden revival of interest in branch banking. The American courts, be it noted, were far more vigilant than those in Canada and were important sources for Canadians about the use to which our banks had put the tax-payers' money that replaced their losses in the 1980s. And at the bottom of the inverted pyramid of near-money, was the banks' store of legal tender. And the means to replenish that was deposits of retail bank customers. *Especially since with the introduction of accrual accountancy in the US in 1996 and in Canada in 2000 – federal debt – i.e., legal tender – came to be in short supply.*[1]

But never should it be forgotten that the accumulation of legal tender as money base was just the preliminary for the specific bank function of near-money creation. Translated into operational terms that meant, that after the prosaic task of amassing a cash base, the specific current bank practice erects on that basis of legal tender a Tower of Babel of near-money – i.e., interest bearing loans. And with the deregulation of the prohibition of banks to acquire other "financial pillars" – stock brokerages, insurance and mortgages corporations, that transformed the nature of our economy and our society.

Thank you for your support!

Doomed to the Mounting Repetition of the Bank Losses of the 1980s

That guarantees the repetition of the bank losses of the 1980s on an ever grander scale. And indeed the financial press brings us no lack of tidings on that score.

The Wall Street Journal (28/7, "Bank of America Seeks a Crown" by Valerie Bauerlein and Clint Riley) tells us of the two American largest bankers pursuing different strategies to achieve the position of the world's largest bank by market value. "Fueled by more than 70 takeovers and a relentless strategy that has roiled the once genteel banking industry, the Bank of America is within striking distance of overtaking Citigroup Inc. As of yesterday, Citigroup was valued at $235.9 billion only 1% higher than Bank of America's stock market value of $232.83 billion. Based on the performance of the two banks so far this year, Bank of America could potentially seize the lead at any time.

"Citibank still would be number 1 in the US by assets, a key measurement in the banking industry, and is far larger than Bank of America outside the US and in investment-related businesses that give the New York company clout on Wall Street.

"Yet the toppling of Citigroup as the banking industry's king in stock market value in many ways would reflect the success of Bank of America has had in realizing its growth ambitions. At the same time, Citigroup had lost its focus on US consumer banking while trying to build up a financial supermarket for the world." What we have then is Citigroup leading in the new patterns of deregulated banking. These allowed banks to take over the other financial pillars. But the Bank of America stuck closer to traditional banking patterns as formulated in the US *Bank Act* of 1935.

Where the Game of Following the American Banking Lead Has in Store

"Five years ago, Citigroup was more than double the size of Bank of America. Since then, though, Citigroup has seen its market value shrink by 7.5%. While Bank of America has surged by 128%, Bank of America's market value has inched steadily closer to Citigroup's in recent months, as investors warmed to growing signs that the huge scale and convenience built through seemingly non-stop bank takeovers were mainly paying off in outsize profits. For the first time, Bank of America reported higher net income than Citigroup. The 1994 interstate banking law prohibits any US bank from making an acquisition that would give it more than 10% of all deposits. That cap doesn't apply to internal growth, however.

"Part of the explanation for Citigroup's stumble was neglect of its network of branches has left it one sixth the [current] size of Bank of America's.

"Bank of America's rise is one of the most colorful and controversial in the history of banking. The previous CEO, Hugh McColl aggressively struck deal after deal to turn his North Carolina National Bank into a truly national bank Kenneth. Lewis, his successor, continued to make acquisitions but also vigorously imposed a single corporation culture and aggressive efforts aimed at internal growth and profits from the bank's existing customer base."

What is most enlightening about the constraints that the "freeing" of banks to acquire interest the other financial pillars for access to their cash pools that serve the purposes of their own businesses. By applying the banking multiplier to such cash reserves, the banks are equipped for really big adventures that by now can hardly be contained on a single planet.

So where do we find one of these contenders for the crown of US banking – Citicorp – pinning its hopes. You have guessed it – in China.

The Wall Street Journal (8/8, "Citigroup

Book*Store*

Available from COMER Publications
245 Carlaw Avenue, Suite 107
Toronto, Ontario M4M 2S6
Price plus $2.50 P&H or as indicated:

Hazel Henderson

- *Building a Win–Win World – Life Beyond Global Warfare*, $15 + $6
- *The United Nations: Policy and Financing Alternatives: Innovative Proposals by Visionary Leaders,* Editors Harlan Cleveland, Hazel Henderson, Inge Kaul, $10 + $3

W.F. Hixson

- *It's Your Money,* $10

William Krehm

- *Towards a Non-Autistic Economy – A Place at the Table for Society,* $20 + $6
- *Babel's Tower: The Dynamics of Economic Breakdown,* $10
- *The Bank of Canada: A Power Unto Itself,* $5
- *Democracies and Tyrannies of the Caribbean,* second English and third Spanish editions available, $15 + $3
- *Meltdown: Money, Debt and the Wealth of Nations* (ed. by W. Krehm) $25 + $5
- *Price in a Mixed Economy – Our Record of Disaster,* $15 + $3

Kurt Loeb

- *White Man's Burden,* $15 including P&H

James Gibb Stuart

- *Fantopia. "*With much grace it sets out as a parable the case for monetary reform. A dry-as-dust but terribly vital subject is transformed into a highly readable tale" (W. Krehm), $8 + $2
- *Economics of the Green Renaissance,* $3 + $2

COMBO OFFERS:

- Special Gibb Stuart Package: *Fantopia* and *Economics of the Green Renaissance,* $10 + $2.50
- *Meltdown* plus either *The Bank of Canada* or *It's Your Money, $35 + $3*
- *Meltdown, Democracies* (English or Spanish), *Price in a Mixed Economy, Babel's Tower, The Bank of Canada* and *Towards a Non-Autistic Economy – A Place at the Table for Society,* $90, postage included.

and Société Générale Battle for Rare Prize in China – Warts and All" by Rich Carew) recounts: "Beijing – Guangdong Development Bank, a midsize lender based in southern China, is saddled with a large number of bad loans and hasn't published audited financial information in two years."

Yet "it is subject to the biggest takeover battle in China's banking history – a struggle between Citigroup Inc. and France's Société Générale SA for the rare chance to take management control of a Chinese bank.

"The year-long battle for what might seem an improbable prize highlights how foreign financial companies are racing to position themselves as China's banking sector is about to open up to full competition at the end of the year. Both banks have hinged their China strategy on winning Guangdong Development Bank and its network of branches, which could give the winner an immediate advantage over rivals.

"The tussle also illustrated the conflicts China's government faces as it seeks to tap foreign expertise to retool its long-troubled banks – without ceding too much control."

Uniting the Unsolved Problems of Two Distinct Banking Cultures

"A consortium led by Citigroup appeared to have won the bidding in January, when it narrowly appeared to have outbid rivals by offering $3 billion for 85% of Guangdong Development Bank. The government's decision dragged on as Beijing officials debated a bailout plan and whether to let the investors exceed the 25% cap on total foreign ownership in Chinese banks, according to people familiar with the situation.

"In April, following public criticism over foreign investment in the sector, China's banking regulator decided against letting Citigroup buy an outright controlling stake. Citigroup's bid would have given it and its partner, Carlyle Group LP, more than 50% of the bank, while Société Générale made a more conservative bid, asking 24% for itself.

"Any deal would be perhaps the most important foreign acquisition to date in China's banking sector. Beijing has allowed $35 billion of foreign investment in its banking sector to date. Those stakes have been nearly exclusively minority stakes that don't include a say in management, keeping control in the hands of the Chinese government and domestic investors. Citigroup, for example, owns a 5.62% stake in Shanghai Pudong Development Bank, bought in 2003.

"As part of its deal to join the World Trade Organization in 2001, China promised to let foreign banks tap its local-currency retail market this December. Currently, foreign banks can handle loans and deposits in foreign currency and provide yuan denominated services to enterprises in 25 cities. The change will give foreign banks full access to Chinese individuals, a huge pool of potential customers for products such as credit cards and mortgages.

"Foreign banks don't have the branch network that will let them take real advantage of the change. Guangdong Development Bank has 501 branches – more than the 181 branches operated by all foreign banks in China combined as of October. Guangdong has other advantages. Its home province, Guangdong is a booming powerhouse bordering Hong Kong that contributes about 12% of China's GDP. It is one of 17 Chinese banks with a nationwide branch license and boasted assets of 355.8 billion yuan ($44.5 billion) at the end of 2005.

"To profit from that network, the winning bidder will have to undertake a huge restructuring effort.

"Founded in 1988, Guangdong Development Bank had a history of both lax management and government-directed lending, analysts say. By the end of 2003,the latest period for which it published such data, the bank had racked up 35.7 billion yuan ($4.5 billion) in bad loans, about 18.5% of its total loans. That compares to an official average non-performing-loan ratio of 3.92% at the end of March.

"'In terms of its own outright attractiveness, it's pretty weak,' said Charlene Chu, an analyst at Fitch Rating in Beijing."

There you have the future of Canadian banks scrawled big. Driven to expand to maintain the growth rates that have already been incorporated into the stock-market prices, our deregulated banks are condemned to lurch between ever wilder foreign and domestic adventures and then restoring their cash reserves through government bail-out. And then, inevitably comes the next hare-brained speculative schemes to make use of wild leverage that its increasing control position in the other financial pillars has given them.

William Krehm

1. "Legal tender since the early 1970s has even officially been no longer gold, but the debt of our central government deposited by the banks with the Bank of Canada bears no interest – as was the case with gold deposited them there. Credit issued by private banks is created by being lent out, and thus bears interest by the very act of its creation. That is why it is called "near-money." Since that disqualifies it for serving as well as central government debt as money. Its main defect for that is that the value of pre–existent interest-bearing funded debt goes down when interest rates move higher.

Rational Choice and Social Value

The science of economics has for long struggled with questions about what kind of scientific basis it can claim. This is the outcome of the early neoclassical economists' attempts to reform economics into a quasi-exact science. The background was the old observations that the price mechanisms apparently caused economic actors to respond to price-quantity changes in a fixed way, and that utility has diminishing ratios. Behind the latter hides the well-known fact that as we consume extra units of any goods or services, the utility rendered by their consumption will taper off. Ice cream on a hot summer day tastes good but when eating the third one the pleasure starts to turn into qualm.

Despite making these observations, the classical writers had not been able to create a comprehensive system from it. First when the neoclassical economists added the idea of marginal change to the picture did the contours of a more wholesome framework start to appear. However, for the price mechanism to work as the foundation for a microeconomic system with a causality resembling the exact sciences, it required that economic actors responded to changes in a market's price-quantity relations in a rational way. Thus the question of how the economic actors arrived at their preferences and economic choices moved to the forefront, necessitating examining how behaviour and motivation formed in economic contexts.

Equating Rationality to Individual Self-interest

The early neoclassicists thought that the only way to conceive a rational motivation behind economic choices was to assume that we as economic actors turn into perfectly self-interested creatures. This assumption gave rise to the concept of "homo economicus," man as a fully rational economic actor who always will attempt to maximize self-interest. On the demand side of the economy, this is identified as maximizing individual consumption, while on the economy's supply side entrepreneurs are assumed to maximize profits.

However, it didn't take long before it became apparent that this approach had a number of stumbling blocks. The whole notion of rational motivations and decision-making was one that other sciences – notably behavioral psychology, sociology and cultural anthropology – didn't accept in the same unconditional way as economics did. Since the evidence that these sciences assembled were too strong to be ignored, a considerable part of the subsequent economic theoretical debate has revolved around the rationality question, as well as the derived questions of the strength of economic causality and predictions within the neoclassical framework.

Nevertheless, the attempts to revise the fundamental methodology and causality conception handed down by the neoclassical heritage has met with limited success. A primary reason is that the neoclassical heritage has become closely associated with a set of dominant social and political views. Basic tenets of these views are the inviolability of laissez-faire markets, and the Paretian conclusion that they represent the only institutional form that can lead to the highest efficiency possible in production and distribution. Since these views are in particular prevalent among the social strata that economists tend to belong to, there has emerged a bias that has manifested itself as a reluctance to abandon the original conception of the rationality of actors operating in laissez-faire markets.

Consequently, the approaches to remedy the inconsistencies of the neoclassical foundation has mostly been of limited scope. A prominent one has been the "bounded rationality" hypothesis that tries to eliminate some of the most obvious inconsistencies by acknowledging that some classes of systemic imperfections exist, for instance, imperfect information dispersal. However, bounded rationality still retains individual preference choices based on perceived self-interests as its core, and assumes that choices over time therefore will be consistent. Thus, the notion of economic decision-making as the rational selection of a preferred set of alternatives in markets is only dented by the acknowledgement that conditions might not always be perfect.

Another attempt to rescue the neoclassical rationality and thus the laissez-faire market concept was Milton Friedman's charming but fairly nonsensical proposition of the "as if" hypothesis. The starting point was the observation that good billiards players do not calculate that angles at which the ball has to hit and bound off from the edges in order to make a perfect shot. But by making perfect shots he acts "as if" he mastered the calculations. In the same way, a successful businessman do not necessarily use the rigid mathematical models of neoclassical economics before he makes his decisions. However, when he successfully develops his business, he also acts "as if" he masters all the calculations presumed by rational choice theory.

The "as if" hypothesis appeared to be a clever attempt to rescue the laissez-faire market foundation of economics, as it was based on empirical observations of post-facto success, which it then declared could only had come about if the preceding activity had been in conformity with laissez-faire bounded rationality. The problem, though, was that this approach appeared to give up all predictive power, which is considered a standard requirement of a scientific hypothesis. To return to the billiard player, since we don't know how he calculates his shot, an outsider cannot predict its course. An outsider is therefore limited to heuristically predict that he will have a high probability of making good shots, based on the already known fact that he is a successful player.

Another critique of the neoclassical conception, which was put forward as early as the 1930s, is the observation that the decision makers in firms apparently not always fulfill the neoclassical expectation of relentlessly trying to maximize profits. In line with this, modern sociology maintains that homo economicus is an unrealistic concept. Instead, it has proposed a "homo sociologicus" who acts not to pursue selfish interests but to fulfill social roles.

Cultural Contrasts

An even more radical point of the view is coming from cultural anthropology, which questions the very basis for the rationality concept as it is used within economics. Cultural anthropology maintains that rationality is a culturally bounded conception. What is considered rational economic acts with the spheres of our culture will not necessarily be considered so in others, and vice versa. Take for instance the Melanesian *kula* exchanges or the Potlach institution among the Northwestern culture, both social institutions with strong economic connotations. In the Northwest Coast culture, exchange is typically an individual affair – as it is in our culture – and therefore it often leads to some individuals acquiring considerable accumulations of wealth. However, wealth in the context of the Northwest culture has little meaning if it is just kept as idle per-

sonal possessions; persons amassing wealth are therefore obliged to dispose of it again by holding *potlatches*, feasts during which much of the amassed wealth are redistributed by gift giving to other members of the community. The ability to hold extravagant potlatches will impart the status of a *big man* on an individual and thus holding disposing of wealth through gift giving during potlatches are considered perfectly rational acts in this culture. This is of course a direct contrast to our culture, and its notion reinforced by mainstream economics that the highest economic virtue is to maximize wealth accumulation and individual consumption, even when it entails adverse social consequences for instance by creating harmful externalities.

Other newer elements in the field of economic theory, including modern subbranches such as game theory and experimental economics (both typically involving having scores of students performing large numbers of fictitious exchanges or game simulations) are too speculative and limited in the scope to be of much use in solving the rationality problem of mainstream economics. Some theoretical developments such as asset pricing models have been relatively successful, but this is precisely because they are limited to analyze aspects of financial market behaviour seen in isolation.

At the bottom of the problems encountered by the various attempts to reformulate rationality within the confines of the neoclassical approach, is a refusal to accept that any science that includes appraisals of value determinations must in its methodologies take into account that value formation contains aspects of a complementarity nature. In an economic sense, complementarity signify that some economic aspects, in a parallel to the wave – particle duality in subatomic physics, cannot be fully separated and appraised individually. When value formation occurs as the result of economic activities, the process involves clashes between conflicting interests. The seller wants to sell dearly, and the buyer to buy cheaply. Even if we have a perfect market situation in which everybody is price takers, we cannot determine which of the conflicting sets of value determinations that both sides independently assume to be rational can be elevated to be more "rational" or "correct" than the other. The complementarity aspect inherent in economic activity, which Marshall sensed when he formulated his famous "scissors" analogy, means that as long as decisions lead to changes that are incremental in nature, we cannot rule a supply-side or a demand-side interpretation to lead to a higher efficiency than the other on

---

Motivations *continued from page 1*

down maintenance at a cost in human life. But here we encounter completely ignored institutional factors. It is only since 1996 that the US government treated its vast physical infrastructures as investments rather than as current spending. Before that they were completely expensed in the year in which they were made and then carried on the government books at a token one dollar. That, of course, the private firms were not allowed to do. Had they attempted to, it would be considered tax-evasion and punished accordingly. That this was the practice of governments in their own affairs shows much moral flabbiness on many planes, above all in accountancy.

And then there is the question of the training and appropriate treatment for retaining competent staff in crucial areas such as key Arctic oil fields. Even the US government, which brought in the depreciation of its physical investment into its statistics starting with January 1996, has still not moved to do so with investment in human capital. That despite the monumental work of Theodor Schultz of the University of Chicago in assessing the extent of the mistaken forecasts of hundreds of economists that Washington had sent to Germany and Japan to predict how long it would take these powers to regain their position as formidable industrial exporters after repairing the devastation of the war. In the 1960s Schultz explained the misfired prediction he and his colleagues had made at the end of the war because they had concentrated on the physical devastation and overlooked that in these two countries the educated, disciplined work forces had come out of the struggle intact. From that he arrived at a most important conclusion that was rewarded with a so-called Nobel Prize for Economics and then completely buried. Obviously, had the government kept that important conclusion alive in its own affairs, the importance of human capital and the need to nurture and retain it would have been more vividly present in the minds of oil executives. *There is such a thing as an institutional atmosphere, that does not stop at the borders between public and private sectors.*

The Bad Example Shown Corporation Moguls by our Governments

Had the government been alert to the need to recognize its own investments in both physical and human capital, a certain amount of its concerns would have rubbed off on the future leaders in the private sector. There is after all a whole population of unarticulated ideas that populate everybody's subconscious. Among these, on the other side of that dark house, too, there is, let us call them ideas too mean to ever be formulated, let alone be brought into the light of day. In connection with the BP drama rather than a conscious reckoning it may exist as an unarticulated urge: the very price effects of oil spills from too niggardly maintenance will probably push prices still higher, whether on the commodity market or on the gaming table. Either way it may bring in more golden harvest to be translated into more lavish option and share prices.

Here is the passage from *The Wall Street Journal* (08/08, "BP May Now Feel Heat From Alaska" by Chip Cummins) that brought such a phenomenon to my mind: "For BP and its biggest partners in the field, Exxon Mobil Corp. and ConocoPhillips, the shutdown could also have a financial impact, crimping production and revenue. But it also comes amid a time of flush industry profits, and a rise in oil prices could enhance the industry's bottom line." These subconscious ambiguities that are not featured in business schools, probably leave their calling cards in the wee hours of the night in sleep or wakefulness, but they cannot be totally absent. I quote the impressive list of this great group of gigantic oil companies skimping on spending to prevent loss of precious oil, destruction of infrastructure and even human life, during the most lucrative oil markets ever seen.[1]

William Krehm

1. *The Wall Street Journal* (29/08, "BP Woes Deepen With New Probe" "Litigation Fill-Up"

March 2005: An explosion of BP's Texas City refinery kills 15 workers and injures about 170, prompting lawsuits.

March 2006: An Alaskan pipeline operated by BP spills about 200,000 gallons of oil. Federal investigations later begin a probe into whether BP knew about the pipeline's maintenance problems years earlier, based on reports indicating the system was vulnerable to corrosion.

June: Commodities Futures Trading Commission files a civil complaint, alleging that BP illegally manipulated a propane market in earl 2004, driving up prices.

July: A 54-year-old contractor dies after becoming pinned against a pipe at Texas City refinery.

August: BP shuts down a major pipeline in Prudhoe Bay, Alaska, after the discovery of corroded pipes, Alaska later issues the company subpoenas for documents on maintenance and corrosion control programs.

It is revealed that federal investigators have sent subpoenas to BP and energy traders concerning possible manipulation in the crude oil market in 2004 and unleaded gasoline markets in 2002.

theoretical arguments alone. If changes are not incremental, it might be possible to rule them out on theoretical grounds, but that will be because it then can be shown that the non-incremental nature of the changes will cause disturbances in the economy as a whole.

Rationality Originates and Ends in Textbooks

Thus for the bulk of economic phenomena there exist no independent rationality principle that we can judge them by. Since rationality is bounded by specific social and cultural norms, claims of rationality and derived predictive power are implicitly value loaded. Sure, we can predict that investors will bid up a firm's stocks when the firm announces that it will fire workers in order to cut costs. But can we, on the basis of being able to correctly make this prediction, conclude that the financial market's reaction to the change automatically means that the change – the firing of workers in order to cut costs – represents a higher economic efficiency? What if, say, the firm fires workers engaged in a temporarily money loosing project aimed at developing a product that promises to have a high social value by reducing polluting emissions. Modern CEOs, who receive a substantial part of their remunerations in the form of stock options, are quick to make decisions that they know will please the market in the short term, since this also serves their own private self-interests as stock option holders, But in many cases they might also know that in the long term abandoning such a project would entail a significant loss of potential value, both in social terms and as profits for the firm.

This indicates that there inherently exists a discrepancy between a market valuation of economic events and their social evaluations. It also indicates that there often exist discrepancies between short term and long term economic evaluations, even when they are made within narrowly market-based perspectives.

Economics can therefore never theoretically sustain value determinations that arise as the result of activity and reactivity occurring within narrowly defined market structures. Rationality and value conceptions are social and culturally bounded, which must be the starting point for all value appraisals, since this background contains the goals that economic efficiency ultimately must be measured against. It is for instance difficult to use purely market based arguments for reducing pollution and the resultant climate change, since these are processes spanning long time horizons. Thus they involve too many factual uncertainties to make it possible to use strictly "rational" economic arguments based on cost-profit parameters. Viewed from the point of current economic theory, ignoring such problems by adopting a free rider attitude therefore becomes the perfectly rational choice. But viewing them from social value perspectives, it is a simple matter to conclude that they destroy future social value, which makes it socially rational acts to try to limit them. This includes economic choices, even if that sometimes costs more time or money.

Dix Sandbeck

The World is Pregnant with a New Pecking Order

The world is pregnant with new pecking orders among nations. With ever blinder dedication each aspirant seems hurling head-on towards its own stone wall.

This is happening first and foremost in the increasingly deregulated financial empires that have taken over in their own countries. They are not only subordinating to their imperial plans once great industrial corporations, trade unions, political parties, but their auditors. However, the illusion of unlimitedness, not as an option but as an operational imperative, has its own vulnerabilities. There are simply too many unlimited scripts being acted out on an ever tighter planet. The recent demotion of the ex-planet Pluto by astronomers might be taken – with no more mysticism that is taught every day of the week in economics courses – as a solemn warning. It seeds need for exponential growth because such future growth has already been incorporated into share prices and executive option rewards. It triggers wild commodity markets that may unexpectedly return power to the hands of already eliminated rivals. As may the missionary meddling with their social systems inspired by marketers handing out more harmful advice than useful knowledge of the elementary needs of their populations.

The unforeseen power that American-inspired Deregulation and Globalization has put in the hands of Russia is the perhaps the most astounding current instance of this.

The adequately invoiced advice of US economists for reshaping of the post-Russian economy called for instantaneous privatization – even in isolated sources of oil and minerals in Siberia, where only government could provide the infrastructures that made the resource exploitation or even human life possible. But everything was privatized, and there were no investors in the land to buy up the shares democratically issued to people that had no idea of what to do with a share other than using it to buy tomorrow's breakfast. For there were no investors in post-Soviet Russia – just people no longer with jobs, gangsters, secret service heavies, and ex-commissars, who knew where the real valuable assets and bodies were buried. And that is how the regime of the oligarchs, who came out of nowhere, bought up the shares of valuable resources for a song, bullied, murdered, or bribed their way into control of immense fortunes. Above all in resources in which Russia is potentially rich, and has become even more so as a result as a result of Wall Street's commodity splurge of recent years.

The Russian Oligarch who has Made Aluminum a Very Political Metal

In its issue of 20/08, *The New York Times* ("Out of Siberia, a Russian Way to Wealth" by Andrew E. Kramer) reports: "At the tender age of 32, Oleg V. Deripaska, a former nuclear physicist, had already wrested control of the Russian aluminum industry from a netherworld of organized crime figures, mercenary legal officials and ambitious tycoons like himself, securing a spot among the wealthy, powerful and secretive class of Russian businessmen known as 'oligarchs.'"

Then comes an unexpected note that underlines how the open-ended Russian economy has been moving backward as well as ahead, and not quite knowing where it is going beyond seizing the next big chance ahead:

"A year later, in 2001, Mr. Deripaska established his political bona fides by marrying a woman who would soon become the step-grand-daughter of former President Boris N. Yeltsin, a marriage that was Russia's social event of the year. Access to the influential cadre of Kremlin advisers surrounding Mr. Yeltsin and his successor, Vladimir V. Putin, has been an important part of any oligarch's enrichment and survival strategy in Russia.

"Today, Mr. Deripasks, 38, controls a

privately held company called Russian Aluminum, or Rusal, that consists of factories, mines and other industrial concerns operating through a holding company, Basic-Element, which has benefited handsomely from a sharp rise in commodity prices internationally.

"*Vedemosti*, a Russian business daily, values Mr. Deripaska's holdings at more than $14 billion, which could make him Russia's richest man – or at least in the same ballpark as Roman Abramovich an oligarch in London, whose myriad holdings often have him ranked as Russia's number 1 mogul."

The Oligarchs Sally Abroad

"While Mr. Deripaska is a well-known figure at home, he has a much lower profile abroad. But that may be about to change. Mr. Deripaska and his fellow-oligarchs are going global. In an apparent shift from controversial and legally questionable practices in the 1990s, Russia's richest men are using their bank accounts, fattened by the commodities boom, to invest *outside* Russia, from Asia to South America.

"The goal is not merely to put assets beyond the reach of the Russian authorities, as some oligarchs did in the past; this time the aim is the same as another company's: bigger profits. Russian oligarchs are taking stakes in foreign industries as varied as steel and communications and are seeking legitimacy and access to Western capital along the way – but thus far, with only checkered results. Mr. Deripaska's own moves have been particularly bold.

"In the first six months of this year alone, Rusal has bought factories and mines in China, Guyana and Nigeria." We might note, in passing, incurring in this way hazards comparable or even exceeding those of many foreign businessmen investing in Russia just a few years ago.

"Emboldened by corporate profits that surged 56% to $1.65 billion in 2005, Mr. Deripaska has publicly vowed to unseat Aluminum Company of America as the world's leading producer.

"The global expansion by Mr. Deripaska and other oligarchs comes as Russia's super rich are hunkering down at home, after Mr. Putin's jailing of one of their number, the oil magnate Michail B. Khodorovsky. The subsequent breakup of Yukos, the oil company Mr. Khodorovsky assembled with a series of heavily criticized deals, left many oligarchs eager to move their assets out of the Kremlin's reach.

"In the first quarter of this year, direct foreign investment by Russian companies amounted to $5 billion, up from $3.2 billion in the same period last year, according to Russian central bank statistics. In the first quarter last year, for the first time ever, Russian companies invested more abroad than foreign companies did in Russia.

"This, of course, is not the first time that Russian companies have made bold claims of cleaning up their operations. Such promises accompanied a feverish gold rush in the 1990s that left many investors burned and benefited oligarchs and their political patrons at the expense of average Russians."

"In Europe, alarm bells rang last spring as the Russian state energy company Gazprom went on a buying spree, prowling for pipelines and energy deals. That prompted criticism from European leaders that Moscow was trying to extend its political influence through state-owned businesses.

"Suspicions of a different sort continue to plague private Russian operators, too. Many of them continue to find welcome mats pulled out from under their feet when they venture abroad, largely because of lingering fears about the influence of organized crime in Russian businesses or about poor corporate governance.

"Mr. Deripaska, too, has been wholly able to avoid such suspicions. Former partners and competitors have sued him in New York and London, making allegations of a seamy side to Mr. Deripaska's ascent in Russia's notoriously violent Siberian aluminum industry.

"The NY suit, filed by Miskhail Zhivilo, a former owner of the Novokuznetsk smelter, was dismissed on jurisdictional grounds, but Mr. Deripaska later paid Mr. Zhivilo unspecified millions to end the fight.

"Mr. Deripaska also faces a claim from Mr. Chernoy who, with his younger brother, Lev S. Chernoy, amassed a fortune in Siberian aluminum in the early 90's. Mr. Chernoy resurfaced this month to haunt Mr. Deripaska's effort to present Rusal to international capital markets by pressing his claim that he owns 20% of Rusal based on a buyout deal in 2000.

"'What all creditors, potential buyers of stock and Eurobonds in Rusal or Basic Element should know,' Mr. Chernoy said according to *Vedemosti*. 'Deripaska didn't settle his obligation with former partners and, by all appearances, he doesn't plan to.'

"Separately, Rusal is battling a lawsuit in London over control of the profits from one of the Soviet Union's largest smelters, the Tajikstan Aluminum Plant. The case is being watched as a test of Rusal's contemporary business practices.

"In a ruling last month, the London judge dropped Mr. Deripaska from the suit but ruled that Rusal must go to trial, according to Shakir Anveeally, a lawyer at Clyde & Company, the law office handling the claim. Mr. Deripasks, in an interview, declined to discuss litigation against Rusal, 'We had problems; we solved them,' he said simply.

"Few Russian oligarchs spring from as humble a past as Mr. Deripaska. Raised by his grandparents on a tiny farm in Southern Russia, sheer ambition propelled him into the dangerous swirl of post-Soviet business."

The Social Mobility of the Oligarchs

"Despite his modest upbringing, he enrolled in theoretical physics department of the prestigious Moscow State University. Mr. Deripaska was just 26 when he landed as director of the Sayansk Aluminum Factory, a Siberian smelter, having used his earnings from commodity trading to buy a large stake in the company during the pell-mell privatizations of the early 90s. He somehow survived the bloodbath that accompanied the privatization of the industry, where contract murders, savage beatings and general lawlessnesses were common.

"The director of a Rusal smelter nearby in Krasnoyarsk resigned after being beaten nearly to death in the entryway to his apartment. Later, another factory director was accused of ordering the assassination of a Siberian governor.

"So lawless was Siberia that one aluminum factory changed hands literally with a keystroke, when one large shareholder was deleted from the database of owners and had little recourse to the powerless courts.

"Mr. Derpaska never faced any criminal charges during that period, though Mr. Zhivilo and others who worked with him have been charged.

"In the struggle that came to be known as the Aluminum Wars, Mr. Deripaska first allied himself with a British metals trading group, Trans-World, as a protégé of Michael Chernoy, the Siberian deal-maker now living in self-imposed exile in Israel. The partnership soured in 2000 leading to Mr. Chernoy's threat to sue.

"Questions over Mr. Derilaska's role in the Aluminum Wars led the State Department to deny him a visa until last year, after he mounted a high-level lobbying effort in Washington to have the restriction lifted.

"Mr. Deripaska offers a hint to his larger,

global strategy in the industry today. He said that owning a monopoly on supplies of the raw ingredient for aluminum – alumina, or bauxite – lets him force rivals out of business."

"Russia's purchase of bauxite mines outside Russia have alarmed even its biggest competitors, including Alcoa and the aluminum division of Norsk Hydro of Norway. Both have deals to cooperate with Rusal in Russia.

"Mr. Deripaska said his strategy to win business from competitors rests primarily on one advantage: cheap electricity from hydropower in Siberia. That power cannot be exported via high-tension cables because it is too remote; instead, it is used in aluminum smelters.

"'Its like a physics equation,' he said, writing off competitors in the US that have already closed because of high energy costs. 'If a country imports energy or energy-related products, it will not be able to produce aluminum.'

"Whether Mr. Deripaska's remote relationship with the former Russian government head, Boris Yeltsin, helps or hinders Mr. Deripaska's business relations with the present government, he wouldn't say. It is one sign of his good standing, however, that the Russian government short-listed Rusal's proposal to complete a huge Soviet-era Siberian hydropower plant and aluminum smelter using cut-rate loans from the national petroleum windfall.

"While privatization may be over, the government under Mr. Putin, as understood by all players, suggest strict quid pro quo of government largess in exchange for fealty and payments to Kremlin-designated pet projects. This year, Gazprom, the state gas monopoly, is plowing money into a ski resort outside the town of Sochi as Russia bids for the 2014 winter Olympics.

"Mr. Deripaska is bidding to rebuild a nearby airport."

There is an interesting angle to the tale that the *NY Times* misses: Were it not for the wastrel consumption of the world's commodity and particularly energy resources, and the dangerous reliance on military adventures that it has encouraged, the ball of surging power would not have returned to Russia's court. As the world's resources are squandered those left with more than enough of them come to enjoy a quasi-monopoly advantage. That can have unhelpful effects both in Russia, in the US and the world at large.

William Krehm

Monetary Light for Beating the Heat?

Currently topical concerns over global warming (Al Gore's book and movie, *An Inconvenient Truth*) and controversy over the Kyoto Accord are reinforced by illustrative news items. A recent article in *The New York Times* reported that "a coal mining boom… is devastating large swaths of north China, where some of the nation's richest coal deposits lie. China is the world's largest producer of coal.... [In Shanxi province, which] provides [much of] the fuel that powers China's sizzling economy, thousands of acres of land are sinking because of the ravages of underground coal mining.... [At one locale, residents recounted how] their village was rocked by what everyone thought was an earthquake. The ground shook. The houses trembled. And the earth cracked open. Moreover, coal fires are burning uncontrollably below ground here and through much of northern China, adding to global warming by releasing huge amounts of carbon dioxide into the atmosphere ("The Not So Good Earth" by David Barboza, June 23, 2006). Other reports blame coal mining for a significant share of desertification in China, and pollution from both its dust storms and industrial smokestacks is reaching North America."

On the same day as the *Times* article, the International Energy Agency announced its finding that oil and electricity consumption across the world could easily be cut by half, with major benefits for the environment, if clean energy technologies that are currently available were applied. "A sustainable energy future is possible, but only if we act urgently and decisively to promote, develop and deploy a full mix of energy technologies.… We have the means, now we need the will." The IEA report was written in response to a request last year from G8 leaders, for discussion this year at St. Petersburg (Rory Mulholland, *Agence France Presse*, June 23, 2006).

The weight of expert opinion, as assembled for example by Al Gore, points strongly to a conclusion that beneficial use of carboniferous fuels has reached a point of no return. It not only diminishes human comfort in several ways, but through its devastation of the biosphere it threatens our very survival. The dilemma is acute because fossil fuels consumption is the established driver of industry and regarded as indispensable in conventional attitudes toward economic policy. The problem is exquisite, as illustrated in a very interesting small book about the central place occupied by coal in the emergence of the world as we of the twentieth century have known it (*Coal: A Human History* by Barbara Freese, 2003. Cambridge, MA: Perseus Books Group).

The Coal Industries Feel Threatened

The author describes herself as a former environmental attorney for the state of Minnesota whose interest in her subject grew from "a legal proceeding [by the state] that tried to quantify the impact of its electricity use on global warming. Most of Minnesota's electricity, like that of the U.S. as a whole, comes from coal, so this meant trying to figure out what effect the emissions from our coal-burning power plants would have on the earth's climate.

"When the proceeding began, few realized what an exquisitely sensitive nerve it would touch. Representatives of the nation's coal industry…intervened in our hearing.... They brought in a phalanx of scientists who testified that Minnesota should ignore what the vast majority of their colleagues around the world were saying about climate change and argued instead that the climate was not changing except in small ways we were all going to enjoy.… The industry's aggressive response was fueled by its recognition that climate change threatens its very existence. Climate change is mainly caused by burning fossil fuels–namely, coal, oil, and natural gas–and of these fuels, coal creates the most greenhouse gases for the energy obtained. Today, the United States burns more coal than it ever has, almost all of it to make electricity….

"Minnesota's decision makers flatly rejected the industry's notion that climate change would be limited to climate improvements.… I was left not only deeply concerned about the changing climate but thoroughly intrigued by the lump of carbon at the center of the storm, this often-overlooked fuel that reveals so much about us and the world we've built. The more I dug, the more I could see that a deep, rich vein of coal runs through human history and underlies many of the hardest decisions our world now faces. Following that vein

in the intervening years has taken me far a field–from paleobotany to labor issues, from ancient history to modern geopolitics, and from the massive state-of-the-art power plant a few miles from my home to a primitive little coal mine in Inner Mongolia. This book is the result of that journey."

Freese's account is highly sympathetic to the coal industry insofar as its product has played an essential role in what must be acknowledged as human triumphs. In concluding that the era of coal must be brought to an end, she points to technological alternatives that already show sufficient promise as adequate replacement. And opposition from the coal industry per se is to be expected. The question she does not address is the role played by finance in both propping up the existing industry and obstructing transition to beneficial and sustainable energy supplies. Given the critical role of energy sources to civilization as we know it, this is an important domain for thinking about the role of monetary institutions and policies in economic management. To underscore that assertion, the following conclusions drawn by Freese from her historical exploration are highly thought-provoking.

Our Civilization was Created by the Use of Coal

"We've made a lot of mistakes over the centuries as we've struggled to understand the nature and impact of coal and its smoke. Some thought coal grew underground from seeds or in mines guarded by demons or dragons. Some saw in the mines scientific proof of the biblical flood. Some credited coal with protecting people from the bubonic plague; others accused it of promoting baldness, tooth decay, sordid murders, caustic speech, and fuzzy thinking. More recently, many of us believed we could burn vast amounts of coal indefinitely without disrupting the natural balance of the planet. No doubt we still have much to learn about coal, but at least we've been able to dispel many of the old myths.

"There is, though, at least one truth that was more widely understood in the past than it is today–the critical importance of coal in shaping the fate of nations, and of the world as a whole. Coal transport lured the British to the sea, promoting the nation's growth from a small rural nation into a world-class commercial power. The Royal Navy was kept strong largely to protect the coal convoys; and in war time, it seized the coal ships and crews to fight its battles, helping Britain rule the seas. Thanks to coal, London grew into a metropolis large enough to become a vital center of commerce and cultural achievement. With an economic, military, and cultural influence far out of proportion to its size, this tiny nation began building a global empire of unprecedented reach, defeating native populations and European rivals such as France and Spain – nations with far more land and people, but far less coal.

"And then there was the industrial revolution – fueled by coal, built around coal-smelted iron, and driven by two key innovations first developed to meet the needs of the coal industry: the steam engine and the railway. Coal alone did not make the industrial revolution happen any more than coal alone made Britain a global superpower, but neither event could have happened without it.

"To grasp the magnitude of coal's global impact, we must try to picture history without the momentous, high-intensity pulse of industrialization that started in Britain and then swept the world. The mainly agrarian world would have stayed in place for decades or centuries longer, with slower technological progress, less material wealth, and more gradual social change. Mass-production capitalism would not have soared to prominence, industrial working classes and places like nineteenth-century Manchester would not have mushroomed, and the *Communist Manifesto* would never have been written. The North might have lost the American Civil War, or it might never have started, and the transformation of the American West would have happened slowly by wagon rather than quickly by rail. The World Wars might never have exploded without the industrial rise of coal-rich Germany. Colonial conquests would have been far less sweeping, dramatically altering the history of all the societies that were dominated by foreign industrial powers, including China's (whose ancient history would have been altered as well). The labor and environmental movements, if they had existed at all, would have taken very different forms. In short, none of the defining and epic struggles of the nineteenth and twentieth centuries would have played out as they did.

"This is not to suggest the world would have been necessarily stable and peaceful, as a glance at our planet's violent pre-industrial history shows. If human progress had been more dependent on harnessing surface energy rather than mineral energy, it's possible, for example, that slavery might have become an even more entrenched evil. And, although our air would have been cleaner and our climate less threatened, our forests and wilderness areas might have been more widely depleted. The pressure on the land would have been far greater because it would have been drawn upon for fuel as well as for food. No doubt, eventually somebody would have figured out how to turn heat into mechanical motion, inventing the steam engine or something like it, and the pressure on the remaining forests would have intensified. In such a world, heavily wooded nations like Sweden might have achieved global prominence. Oil and natural gas resources would have been tapped, too, but probably much later than they actually were...."

But its Continued Use Now Threatens our Survival

Turning to the downside, Freese briefly explains the problems with coal burning. Sulfur dioxide (SO_2) was the first hazard clearly identified, as causing the acidification of lakes and the killing of marine life. The particulates from coal fires that carry SO_2 were reduced substantially, but the killing impacts persist. Centre stage has been taken by carbon dioxide, however, as a major contributor to global warming. The only solution on the horizon for this problem, and the one preferred by the coal industry, is carbon sequestration. This amounts to pumping the gas into old mines or under oceans. It is a huge waste management problem, akin to wastes from nuclear fission.

Freese therefore prefers that we swear off coal entirely and embrace alternative technologies that exploit more direct sources of solar energy, including wind power. These other sources can be used to power the release of hydrogen from water, to be stored in tanks. Hydrogen fuel can then be used for motive power, in automobiles and airplanes. The technology for this is already sufficiently advanced that recent news showed test buses operating on hydrogen fuel cells in Beijing. Major investment is still required to make the technology cost-effective for a mass market. Coal industry people prefer to carry on with the game they know and with the comfortable, unregulated context they have created by successful lobbying with the current government in Washington. This could inhibit the possible good scenario until it is too late.

The question for readers and writers of this journal is where to place the blame for failure to take appropriate action? It is not difficult to understand the interest of the

coal mining and coal burning industries. The more interesting question concerns the viewpoint of those who provide the financing, whether it is to continue funding the coal industries or to speculate seriously in alternatives. Where is the principal source of opposition to financing developers of solar collectors and hydrogen fuel cells, e.g.? To what extent can blame be assigned to the financial and banking industry? Does the influence exerted on legislators and presidents come only from the financial resources husbanded by the coal industry from its own operations? Is the malign influence of finance mainly an indirect one that stems from the existence and evolving nature of financial instruments and the ancillary, complementary practices of measuring and calculating values in numbers that represent money? Or is it none of the above? To what extent is it the "mythology of growth" and the doctrine that it is the laboring class that chiefly benefits from policies that encourage investment in "growth industries" via job opportunities? And that prompts a question of which social classes today gain the most from the kind of growth that has been experienced over recent decades. Has it been workers or speculators?

Keith Wilde

Bailouts that Guaranteed the Next Bust

It should be clear in retrospect for those who did not foresee it, that when the banks had already gotten themselves in trouble again in 1994 it was because of the very terms of the previous bailout. For these allowed the banks to load up with government bonds with nothing down on grounds that they bonds were risk-free requiring no down-payment.

But the real point was missed: "Even if the banks themselves had been risk-free their ensuing deregulation allowed them to take over firms in the other financial pillars and put them at major risk incompatible with banking, something excluded under the Roosevelt 1935 *Bank Act* that had become the model internationally. For the Bank for International Settlements – a central bankers' club based in Basel, Switzerland, that did not encourage governments to send elected officials to its sessions – was now insisting on absolute zero inflation, to be achieved by higher interest rates. In their enthusiasm they were putting the banks, loaded up as they were with government bonds in jeopardy.

What BIS and the central bankers overlooked is that as interest rates were pushed high, the market value of pre-existing bonds with lower coupons would drop in value bankrupting the banks anew. The Mexican banks as a result had to be nationalized again. 85% of them were eventually bought by foreign banks when they were put up for sale after the their new losses had been taken over by the government.

And every time the banks were deregulated and allowed to get into trouble again, they were deregulated further. Thus they were permitted to acquire interests in the other "financial pillars" – the stock markets, insurance and mortgage companies. That opened up to them the big-game hunting that they set their hearts on and had been closed to them by legislation brought in during the Great Depression of the 1930. Once they were free to acquire positions in the other financial pillars – stock market brokerage, insurance, and mortgages – they had inside knowledge of the entire financial industry and and were thus uniquely equipped to act as advisers in Mergers and Acquisitions (M&A). The entire policy of governments was bent to favour them. Thus, as the central banks of the world laid another goose egg and raised interest rates to fight inflation and thus thrust the banks of Mexico into ruin, the US Secretary of the Treasury devised an elegant way out of the mess.

A Mockery of Double-entry Bookkeeping

Up to that point just about every government in the non-Communist world had used "cash accountancy" rather than accrual accountancy which is standard in the business world. Under accrual accountancy when a firm acquires a building or a machine, it depreciates its cost over its useful life, and sets up the depreciated value of the asset against the debt incurred to acquire it. Not governments. They wrote off the value of the asset acquired in the year of it s acquisition and carried it at a token one dollar. That produced several distortions all of which favored the banks and other financial interests.

Firstly it showed an exaggerated debt of the government when – if serious double-entry bookkeeping were applied – might show the governments accounts in balance. That bogus deficit was used as a pretext for slashing social programs and drove up interest rates because it exaggerated the risk of lending to the government.

But most serious of all, it presented a case for privatizing buildings, schools, highways that were carried on the books at a token dollar. Inevitably, this led to some scandalous bargains – in Canada he privatization of the CNR, the largest railway in the country by selling it to a company headed by the former chief civil servant, Paul Tellier. Buying up government assets for a song and then listing them on the stock market at the real value became the most popular game of international banks. It was to protect this lucrative and vast field of nationalizing government assets that the Government of Canada had resisted the recommendations of three royal commissions over four decades. And when it was finally brought in in the US in 1995 it was to rescue the banks from the disaster of higher interest rates.

The central banks of the world had simply overlooked the inevitable effect of those higher rates on the hoards of bonds that the banks had accumulated. The tough resistance of the Finance Minister Paul Martin to bringing in accrual accountancy four years after the US had made the move shows clearly that the government was concerned about it interfering with privatization plans for government assets. When accrual accountancy was brought in it was presented as not as elementary accountancy but to enable the government to adequately cost its research programs by knowing what the space taken up in its buildings really cost the government.

That will give the reader some points of reference to judge how important M&A had become in this land. The CNR, Canada's largest railway, had been put together at immense cost by the government partly from local lines that had been built to provide a good part of the country's backbone. Once privatized, many of these strategic local lines were sold off and American transcontinental lines were acquired so that in essence a CNR terminal was shifted to Southern California, but it no longer served our Maritime provinces.

William Krehm

REVIEW OF A BOOK BY MIKE NICKERSON

Life, Money and Illusion

Living on Earth as if we want to stay.

"Money is to civilization what blood is to an individual. Money connects billions of people in mutual provision in the same way that blood connects billions of cells toward the same end." Mike Nickerson

"Money is the life blood of civilization. Without money it would be very difficult for any but small communities to work together in mutual provision. By enabling millions of people to cooperate, money provides a great service. With this service, however, comes danger. Money gathers and flows in economic streams. The greater these flows, the greater the temptation to tap in and drink deeply."

Mike Nickerson's thesis is that the capitalist, market economic system has been very successful at producing goods which people need or want, but has done so at the expense of depleting natural resources, destroying or polluting the environment, and people who are living in poverty. Wealth, as measured in money or possessions, is plentiful, but wealth, as measured by the well-being of people, is lacking. The economic system uses Adam Smith's recognition that self-interest provides the incentive for individuals to find better ways to produce things, and thereby create more wealth for themselves and their community, but has forgotten that Smith's philosophy also recognized a free and open market – not one where prices are distorted by very large players – and that "the wealth of nations is measured by the welfare of the people." A system which leaves many in abject poverty while accumulating vast wealth for a few cannot be considered successful when measured by the yardstick of "the welfare of the people."

The book explains in a very convincing way why we (western, developed societies in particular) *must* change our economic system from one based on growth to one based on sustainability. Nickerson's 10 years of research is very apparent as he relates this theme over and over again to historical data. Nations became addicted to "growth" because it produced wealth, because they have been able to push external environmental and human costs "under the carpet," and because money, as a measure of growth, was so easily created. By the 1970s the dangers of continuous growth were broadly understood, culminating in the 1983 UN resolution creating the World Commission on Environment and Development. Its report in 1987 (Our Common Future) confirmed that "we are indeed faced with a crisis of proportions unparalleled in recorded history" – that what is needed is "sustainable development" to meet the needs of the present without compromising the needs of future generations – but business as usual has continued. The rational question raised by the book is, why? What are the forces maintaining the status quo?

Those who are benefiting the most from the present system deny the facts because to accept them would lead to a major change in their life styles – and they have the wealth and the power to resist such changes. Add to this the millions of people who have been led to believe that economic growth is necessary, and the inertia becomes almost impossible to overcome. Conventional economics has become the religion of the modern world, and to question economic growth has become heresy. "Traditional economics accounts only for the interactions between people. We need to expand economic accounts to include interactions with our ecological foundations."

The book provides a brief history of the development of "money, markets and an orderly world." Money not only facilitates trade, but also division of labour, production and development. With increased trade, markets developed and became an efficient mechanism for balancing supply, demand and price, providing the market remained free of manipulation. Today, much market activity is manipulated to increase demand in order to keep the economy growing. People are encouraged to keep buying even if it means going into debt, and debt adds another incentive to produce in order to get out of debt.

While money has made the market system workable, money itself is a major problem because it is created as debt (primarily by private banks) and the money created is only for the principal; it does not include the interest. Therefore, the economy must grow in order to create additional money to pay the interest. Trading in debt instruments and other financial paper now comprises the greatest volume of market transactions. The private banking system is immensely powerful and remains so because governments have given them the privilege of creating money (and then paying interest to them) instead of creating it themselves at cost. Monetary reform is urgently needed. Nickerson discusses several examples of currencies not dependent on money created as debt.

Having outlined the problems of our runaway economic and monetary systems, we are faced with the question of what to do about it. It would be helpful to have a means of measuring well-being – social, environmental and economic – rather than just economic conditions. Measuring the wealth of a nation by its GDP is much easier than measuring its well-being, and fits in with the current economic system, but making decisions based only on how much money is being made and ignoring social and environmental factors often leads to disasters. An instrument to measure well-being has been developed called the Genuine Progress Index (GPI). Those promoting this concept are members of groups such as GPI Atlantic, Alberta GPI and the Canadian Policy Research Networks, and other individuals including the author. With the help of Joe Jordan, MP, a Private Member's Motion was passed on June 3, 2003, stating that "the government should develop and report annually on a set of social, environmental and economic indicators of the health and well-being of people, communities and ecosystems in Canada."

Obstacles to Change

"An economy based on sustainability makes sense when people think about it, but it's not a possibility that gets much exposure through conventional channels. It will take widespread popular assertion before sustainability is adopted as society's goal. Material expansion presently brings great wealth to those with fortunes to invest. They secure their fortunes by controlling the commercial media and, thereby, how most people view the world." Nickerson says it is a "Question of Direction." "Should our goals be based on the life perspective, or the money perspective?" While the life process cannot be changed, the economic system is adjustable. The huge impulse toward economic expansion has yet to recognize that today's biggest problems result from its success.

"Anyone who thinks that an economy can be expanded forever, within the confines of a finite planet, is either a madman or an economist." *Kenneth Boulding, Economist*

We must decide if we wish to continue as we are, or change direction and follow the path of sustainability.

My gut reaction to "Life, Money and Illusion" is: this is fascinating; it's an eye-opener; it grasps the essence of life and human society. In particular, it speaks in easily understood terms about people working together, trading their skills and knowledge to satisfy needs, and the importance of money in facilitating this trade. From the perspective of monetary reform, it shows how money has been used and misused, how its misuse has contributed to the concept of perpetual growth and why we must, as a community, take control over money creation and its use if we are to change from a growth dominated society – which will eventually collapse – to a sustainable one. These ideas should be discussed in our schools from about Grade 7 and up! The book is well indexed with 115 references.

Richard Priestman

A summary of the book is at www.SustainWellBeing.net/LMI/lmisummary.html

Life, Money & Illusion *is available for $30 (price includes postage and handling). Cash, cheques made out to the "Sustainability Project," and most credit cards are accepted. Send orders to Sustainability Project – 7th Generation Initiative, 2799 McDonald's Corners Road, RR 3 Lanark, Ontario K0G 1K0, or order by phone at (613) 259-9988. Email: sustain5@web.ca.*

The Cultivated Mysteries Leading to the Housing Slump and Beyond

If ever there were a predictable event it was the housing slump that has suddenly descended on areas of the US. All that was needed was to connect the points so generously provided in the press. But the carefully tracked dogmas of official economists prevent official economists from doing so. *The Wall Street Journal* (23/08, "Housing Slump Proves Painful for Some Owners and Builders" by James A. Hagerty and Michael Corkery) could not be clearer on the matter.

"The pain that home owners and home builders are now feeling follows a raging national house party. As Americans soured on the stock market after the tech bubble burst in 2000, they poured money into real estate, spurred on by the lowest interest rates in four decades, looser lending standards and surging demand that created home shortages in California, Florida and the Northeast. Over the five years ending December 31, average US home prices jumped 58%, according to a federal housing index.

"Then mortgage rates began rising, and last year, a surge of building finally overtook demand. Though economists had been predicting a slowdown for years, many homeowners and builders were surprised by how fast the market changed. 'It's like somebody flipped a switch,' says Lynn Gardiner, a real-estate auctioneer in northern Virginia."

Housing's Unjoined Dots

That gives us a few of the dots that must be joined if we are to get to the root of what is happening around us.

1. "Inflation," the suppression of which was redefined as the *single* purpose of our central bank in the 1970s and the 1980s is taken to mean *any* rise in the price level. To suppress that, central banks are now allotting a single "blunt tool" – raising their benchmark interest rate. Reducing the trouble to a single key problem, with a single blunt tool to deal with it, imposes a high degree of certainty about our task. That hardly turns out to be unwarranted.

The only variation recognized in recent years is between core "inflation" and "non-core inflation." "Core inflation" is read from a price index with the items of food and fuel not included because of their volatility. However, even if you remove the explicit items of food and fuel from your index, every remaining item still includes them in its costs. That's no theory, but the simple fact that we all must eat, keep warm, and work in a setting well above freezing point.

But that still doesn't bring the official "inflation" concept within hailing distance from reality. Since WWII Canada has changed from a semi-rural land to an industrialized, highly urbanized one. This requires vast, costly infrastructures – subways for our largest cities; new technologies calling for educated consumers let alone producers. That implies an immensely higher level of education. That costs money. Economists in the 1960s reached the conclusion that investment in human capital is the most productive of all investments – based on the rapidity with which both Germany and Japan were able to rebuild their economies after the physical destruction of the war – because their highly educated and disciplined populations had been preserved substantially intact. A great economist, near-forgotten today, Theodor Schultz of Chicago University, was awarded a so-called Nobel Prize for Economics for arriving at that view after studying the rapid recovery of Germany and Japan from the physical destruction of the war. There are in fact a constantly increasing host of non-marketed factors without which our society could not survive, that are created or financed by government and paid for by taxation. This results in an ever deeper layer of taxation in price. Ignoring these needs and dubbing them "externalities," as official economists do today, avoids looking crucial facts in the eye. Since many of these needs are vital to society's survival, their neglect should not be hailed as a means of balancing our budgets, but seen as a debit item in our society's accountancy. That is what makes the world we live in a "mixed economy" rather than a "market economy" But this bad bookkeeping continues and has even been strengthened. For it supports the ever more deeply entrenched power position of the financial sector.

You need only consider the present state of the world. Wars of one sort or another have been raging on almost all continents for a decade or two. Yet today we are still farther from a durable peace than when the Bretton Wood Conference was called in 1944. At that time, though the world economy was far less complex than it is today, and nobody spoke of "one blunt tool" to "lick inflation" during WWII – instead of a single blunt tool to keep prices down there was a cluster of policy devices for the purpose. To mention just a few of these: price controls, foreign exchange controls, wage controls, special licenses required for the purchase of scarce materials, tariffs on foreign trade.

But above all the *Bank Act* brought in under President Roosevelt in the US in 1935 had taken special care *not* to proclaim a single factor the "one blunt tool" for running the economy.

That was an important principle based on what was taught us in our first year algebra classes in high school. If you have a situation with two identifiable independent problems, you need two policy tools so that you can assign one to each independent problem. One won't do. There were no one-

legged races for centipedes in the world of your grandparents. That was formulated in scientific terms by Jan Tinbergen, a Dutch economist who had trained as a physicist and it became known as "Tinbergen's Counting Rule."

That sort of reasoning found its way into Roosevelt's *Bank Act*. It provided not one but at least two major means for keeping the economy in reasonable balance, with a plethora of subheadings.

There was a *benchmark* interest rate for overnight loans between banks, set by the central bank, that influenced most of the interest rates in the economy. But the weakness in relying too much on that was that it hit everything that moved or stood still in the economy. Above all the unemployed who could not be contributing to inflation. So another major device for regulating the economy was devised – these were the "statutory reserves" – a proportion of the deposits that the banks received from the public – particularly in chequing and other short-term accounts. These reserves had to be redeposited on an interest-free basis with the central banks. In chequing accounts, that proportion varied from about 8% to 12% and earned no interest. If the economy was "overheated" and prices were rising, to increase the amount of lending banks could do as a multiple of the cash they carried was decreased by increasing the proportion of these reserves, and thus decreasing the leverage of the banks' lending. If the economy were depressed the reserves would be decreased, and hence the lending powers of the banks increased.

There were several good reasons for no interest being paid on the statutory reserves: they replaced the gold and silver reserves when gold and/or silver had been legal tender, and since precious metals earned no interest by their mere existence, they provided the government with an interest-free use of borrowings from the central bank within the limits in force. Then, of course, the central bank and the government behind it were the lenders of the last resort in the event of a run on the banks – and that could be a very costly service.

But of more immediate relevance was the detail that any interest paid on such reserves would weaken their effect in controlling the leverage of lending allowed the banks, and require higher benchmark rates. For if the reserves earned interest from the central bank, the difference between what the banks could earn lending out credit based on higher reserves and what they could have earned on the market, would decrease. And the effectiveness of the whole reserve function would be impaired. There was a firm logic that united the entire *Bank Act* of 1935. To an extent it became the model for the non-Communist world of the day.

The 1980s were a disastrous decade because of the increasing deregulation of banking. It was an ongoing two-step drunken dance – the banks were bailed out from their speculative losses, and immediately deregulated further so they could gamble bigger if not better. The Roosevelt *Bank Act* had severely restricted the banks' acquiring interest in any of the other "financial pillars," i.e., stock brokerages, insurance and mortgage corporations. The reason was clear – each of these other financial corporations maintained its own pool of liquidity for the needs of its own industry. If the banks were allowed to control these, they would use them for banking purposes, that is to lend out many times the base money thus acquired and flood the economy with bank credit.

And that or course, would create a speculative inflation with the inevitable speculative bust – exactly what brought on the great Depression of the 1930s. And that happened again in the 1980s especially in the United States where the banks acquired control of the Savings and Loans that had been originally limited to lending out money as real estate mortgages to the shareholders of the S&Ls. In the process many banks and former S&Ls lost their capital and more. It fell to the government to take over the mountains of bad debt and then sell the banking corporations made whole in this way at the expense of the tax-payers.

This coincided with the breakdown of the Mexican banking system, the Eastern Asian bank crisis and the Russian default on its debt.

Two Sharp Tools for Bank Bailout

To bail out the world's banks from their immense losses, the Bank for International Settlements, a sort of central bankers' club, issued its *Risk-Based Capital Guidelines* in 1988 that declared the debt of developed countries to be risk-free, and hence requiring no down-payment for banks to acquire. All they had to do was clip the coupons of government bonds to make up for the capital they had lost in past and future gambles. As a result Canada's banks quadrupled their holdings of Government bonds by adding another $60 billion dollars, and the Government to make that possible had the central bank reduce its holdings of government debt. However, when the central bank holds government debt the interest paid on it finds its way substantially back to the central government, since it has been the sole shareholder of the Bank of Canada since 1938. When the private banks hold the same bonds, even though they have put down none of their own money to acquire them, that interest stays with them. That was the purpose of the bailout.

Three years later in 1991, the *Bank Act* in Canada came up for its decennial reexamination, and the statutory reserves that banks had to redeposit for a modest part of the deposits received from the public was phased out over a two-year period. That increased the leverage with which the banks could use the legal tender held by them into an ever higher structure of loans and investments. And ongoing deregulation allowed them to take over every major brokerage house, every major mortgage and trust company, so that the bank multiplier which in 1946 had amounted to 11:1, by the end of the millennium had reached 400 to one. Then with the crash of the high tech stocks on the market it retreated through bankruptcies to around 360. And new technologies of speculation ("risk management") have crammed the US law courts with high-finance swindles, the bank "multiplier" has probably approached 1000 to, involving as it does high-power derivatives that even the experts don't understand, hedge funds that take over and force the liquidation of producing companies for quick killings.

And out there was a further unforeseen factor that added to the explosive growth and fury of financial speculation. We have noted that the BIS at the very time, possibly aghast by the storm flood of credit it had unleashed, decided that it had to put its "one blunt tool" – interest rates – into high gear to contain the financial inflation. But overwhelmed by what it had let loose, it overlooked what would happen to the bank's hoards of 100% leveraged bond hoards if interest rates were pushed into the skies. So the BIS came out for absolute zero inflation. The result was the collapse of the Mexican banking system.

To meet the emergency, the US Secretary of the Treasury Robert Rubin, a keen alumnus of Wall Street, hurried in with a solution. Throughout the world governments had been treating their investments as current expenses. They wrote them off in the year when they were completed, and thereafter carried them on the books at a to-

ken one dollar. Naturally that distorted the fiscal state of governments, especially when it was combined with a campaign to keep prices flat with high interest rates.

To meet the emergency, Rubin decided that the time had come to recognize this ignored public investment and save the world financial system from total collapse. But the one firm principle of his President, Bill Clinton, was never to lose the "political center" that forked out the means of funding political campaigns. So bringing $1.3 trillion of neglected physical investments onto the government's balance sheets, starting with January 1996, was misnamed "savings." However, that term implies cash or near-cash form, and what was involved here was buildings, highways bridges, equipment. "Savings" implied but in bricks and mortar and steel. However, a wink and a nudge to the bond appraisers brought down interest rates. That not only gave Clinton his second term, but produced the high tech boom that swelled until the 2000 bust. But at the root of the accountancy was the end of the statutory reserves. The impossibility of bailing out the banks with totally leveraged government debt and bringing in high interest rates at the same time had brought the world to the brink of disaster.

The end result was both the deregulation of the banks that allowed them to take over the other financial pillars' pools of liquidity and incorporating the resulting flood of credit into the world's capital and price structures. Such an economy has been imbedded into today's stock and option prices the growth rates – real or fictitious – projected into the indefinite future. No space is left for burp, hiccough, or more serious adversity.

At this point we can resume our reading of *The Wall Street Journal's* piece on the US housing slump. "As Americans soured on the stock market after the tech bubble burst

MATHEMATICAL CORNER

On Imaginaries in Mathematics versus Their Use by Economists

This corner appears at irregular intervals in *ER* to help non-mathematicians over the hurdles of bad mathematics that underlie official economics. For this installment we will draw largely from a classic in the history of mathematics – *The World of Mathematics of James R. Newman*, Simon & Schuster, NY, 1956.

My subject is the concept of "zero inflation" which is entirely the product of artificial assumptions concerning a non-existent – hence "imaginary" – market. On it all actors are of such insignificant size that nothing they do or leave undone individually can influence market indexes. It is simply *defined* to be self-balancing, and consequently the equilibrium point towards which it tends can be found by simply equating the rise of the price level – its first derivative in infinite calculus – to zero. Such has been the "mathematical" basis for at least four decades, at an inestimable cost to society in blood and treasure. A second assumption is that the use of sophisticated mathematics *per se* in itself is claimed by economists as a scientific credential for the hocus pocus they practice.

It has occurred to me that there is a parallel between the handling of the imaginary "zero inflation" goal of orthodox economists and the brilliant handling of the "imaginary" numbers by the great 18th century mathematician Leonard Euler, Except that Euler and his followers kept strict account of what they were up to and economists have not.

At this point I switch to the Newman book (Vol. 1, page 29): "Here it is convenient to depart from the historical order and briefly consider the meaning of what are called 'imaginary' expressions. If we are given the equation $X^2 - 1 = 0$, its solutions are evidently $x = +1$ and $x = -1$. For the squares of +1 are + 1 and –1 are both equal to +1. But if we are given the equation $X^2 + 1 = 0$, analogy would lead us to write down the two solutions $x = +i$ and $x = -i$ where "i" is defined as the square root of –1. But there is no positive or negative 'number' which, when multiplied by itself, gives a negative 'number.' Because of this, 'imaginary numbers' were rejected by René Descartes [the discoverer of analytical geometry] a century before Euler derived black magic from what Descartes had cast aside.

"Thus $X^2 - 1 = 0$ had two solutions, but $X^2 + 1 = 0$ had none.

"Now suppose, for a moment, that we can have 'imaginary' roots (square roots of -1 which we designate by i and that –1 multiplied by i = –1. Then in the above equations *all* quadratic equations (equations of the second degree) would have two roots, i.e., solutions, although the square roots of negative quantities would [be] 'maginary.'" [Occasionally, I paraphrase Newman to keep the example simple.] "The imaginary numbers we have introduced keep our equations and their solutions formally perfect general. [*All* equations of the second degree have two solutions. All Equations of the fourth degree have four solutions though some of these solutions may be imaginary. All equations of the nth degree would formally have n solutions.] This will enable us to make calculations the results of which will contain both real terms and 'imaginary' terms. Provided that we keep the two perfectly separate at every stage, and never lose sight of the fact that the imaginary terms in the result must be related to the imaginary terms in the problem as represented, and the real terms in the conclusion with the real terms of the problem, we will be immensely further ahead. We will have taken advantage of the structural lines crossing over through imaginary territory and picking up their real effect when they emerge as real number after passing through it. Considerably later, mathematicians in fact were able to attribute real values to what had been imaginary ones by introducing further dimensions of space."

This first principle introduced by Euler is violated by economists in their basic theory. The imaginary scaffolding for the processing of the problem – the assumption of a self-balancing market, is imaginary precisely because it contains assumptions that hardly exist: that all actors are of such negligible size – in this age of Deregulation and Globalization, – that nothing they do or leave undone can affect the self-balancing market ; that looking after the environment, spending on human capital – and until very recently on physical public capital – are "externalities" – is preserved, and what is removed in the processing is the vital structures of the economy. And to enforce this bizarre result the revenue of the financial sector is proclaimed the sole "blunt tool."

And to top it all, this strange discipline cashes in on such bogus credentials to claim mathematical rigour!

William Krehm

in 2000, they poured money into real estate, spurred on by the lower lending standards." And meanwhile to move houses lenders with an ever bigger excess of money to invest, began devising "interest-only mortgages." All of which adds to the explosive power of the final denouement.

That excess of money was birthed by the ability of banks to acquire government bonds on the cuff, and the central banks' brakes reduced to just higher interest rates. To a greater or lesser degree the same drama is being enacted throughout much of the economy. Thus the *WSJ* (21/08, "Oil's Price Drop Reignites Debate On Turning Point" by Ann Davos and Bhushan Bahree) writes: "A nearly 8% decline in crude prices in the past two weeks, and the market's flirtation Friday with prices below $70 a barrel, is reigniting a debate: Is there an oil price bubble and could it burst? What has been a bigger factor buoying oil prices in the first place: record investor inflows into commodities or supply-and-demand fundamentals. The answer will go a way toward setting the tone for broader financial markets and the economy. High oil prices have affected everything, from consumer spending, to the stock and bond markets, to interest rate increases by the Federal Reserve to curb inflation.

"'Institutional money managers have $100 billion to $120 billion in commodities, at least double the amount three years ago and up from $6 billion in 1999,' says Barclay's PLC. Much of that money was delivered as seed money to the banks recently as the bailout from their previous speculations.

"If oil continues to slide even as international tensions flare, it is going to be much more difficult to argue that crude oil remains a bull market and that all dips are opportunities, says Tim Evans, a futures analyst with Citigroup Inc. 'Too much money has been chasing too few commodities futures,' is how Philip Verleger an independent economist argues. He says that so long as economic growth continues, oil could climb as high as $100 a barrel in the fourth quarter of 2007. If the economy slows and the demand for petroleum eases, investors will scramble to the exits. There is no floor. The price could fall to single digits. It won't stay there for very long, but it could fall."

With the hot spots erupting throughout the world, the handiest seeming solution is jumping in to further military adventures. For war is the greatest of all consumers, though not the least expensive one.

William Krehm

Neglect of Human Capital a Key to Oil Shortage

Elsewhere in this issue we tell how one of the largest of world oil companies BP, apparently found it more profitable gambling on the oil markets than in maintaining the infrastructures that are so vital for preserving its output. It took a US government initiative to disclose the leaky, rusted conditions of its key pipeline from its Prudhoe Bay oil field, the largest in the US. Last year there was the blow-up with a heavy loss of lives in its refinery at Texas City. But our present tale has to do with the spotty record of the prospering oil industry in looking after another branch of its infrastructure – human capital.

Treatment of Public Investment is an Important Key to the Distribution of Political Power

The actual state of such infrastructures – both physical and human – can put a big question mark over the accountants' figures that stock market analysts usually confine themselves to. And in this, amazingly enough, companies like BP may simply be playing around with vital accountancy principles much as most governments have themselves done for years. When governments as the US did until 1996 and the Canadian until 2000, wrote off the entire physical capital expenditures in a single year – i.e., used so-called "cash accountancy." By this they wrote down the whole investment of government in the year when the money was "spent" and carried the investment on its books at a token dollar, the purpose was underestimating the government's investment to discourage further spending – particularly on social services, i.e., investment in human capital.

It also allowed governments to sell off assets at a negligible fraction of their value. When firms do the opposite, by not spending enough for maintaining their infrastructure, they sell their shares to investors for *more* than they are worth. And they reward their fictitious management's achievements with unduly rich options and bonuses.

But properly treating human capital for what it is, is another matter. The amortizing of human capital was raised and celebrated briefly in the 1960s, when Theodor Schultz analyzed the rapid recoveries of as Japan and Germany from the destruction in the Second World, arrived at the conclusion that investment in human capital, education, and to preserve it, health, and social services, are the most productive investment that a government can make. But recognize that and you change the power distribution in the land. Many things – including the curricula of economic courses and the method of keeping government books are both determined *by* the distribution of power in the given country, and in turn help determine *how* that power is distributed. And that is something that not readily surrendered. The conclusion arrived at by Theodor Schultz in the early sixties, which netted him a so-called Nobel prize in economics, has been deeply buried in subsequent decades. It should not, therefore, come as a surprise, that that the failure to maintain competent human personnel to organize the tricky fuel resources left to the world today is as least as disastrous as the inadequate maintenance of the oil industry's physical infrastructures.

Much of our oil crisis today can be tracked to the gross underestimating of the importance of human capital in finding, developing, producing and marketing an industry as complex as oil.

The Shortage of Petroleum Professionals Hampers Oil Supplies

The Wall Street Journal (22/08, "Energy Security Is Hostage to Supply of Oil Professionals" by Chip Cummins) reports: "Baghdad – Mohammed al-Jibouri belongs to Iraq's premier business finance men who run the country's vast oil industry.

"Through decades of war and trade sanctions, these professionals kept Iraq pumping. By last year Mr. Jibouri, an oil economist, was a top contender to head the State Oil Marketing Organization, that sell's Iraq's oil abroad.

"But senior Iraqi oil men were getting caught up in bitter political feuds. Some were being murdered by insurgents. One of Mr. Jibouri's aides was gunned down. So instead of lobbying for the important oil post, the 57-year-old industry veteran packed up late last year and moved to Jordan, joining a legion of elite technocrats fleeing the chaos.

"Iraq, sitting atop the biggest conventional oil reserves after Saudi Arabia, is facing what may be the direst threat in its eight

decades as a petroleum powerhouse: a brain drain. When the Saddam Hussein regime fell in 2003, a large cadre of oil professionals who had stayed on through Mr. Hussein's wars and purges, were seen as the key to expanding Iraqi output. But the ranks of these technocrats are thinning rapidly.

"Of the top 100 or so managers running the Iraqi oil ministry and its branches in 2003, about two-thirds are no longer at their jobs, according to Iraqi and outside analysts. The ministry says it doesn't track this, but about one hundred official and lower-level engineers and technicians have been murdered, along with about 150 oil field security guards. The oil ministry lost hundreds of managers when US officials fired members of Mr. Hussein's Baath Party in 2003. Others were caught up later in serial political purges. Others have taken leaves of absence or stay home because of the violence. This has been a serious blow to the fragile new government that the US encourages. It also compounds another challenge: the struggle to ensure stable energy supplies.

"Some fear that after facing many threats, mankind has finally begun exhausting the earth's reserves of crude oil. Consumption is surging in China, India, oil-producing nations themselves. Nations that control as much as 90% of global reserves are unable or unwilling to exploit those riches because of rebel threats or national policy.

"But among the most immediate obstacles to energy security is a short supply of oil-field know-how. On this front Iraq has been the hottest battlefield. The 2003 invasion stirred hope in the Bush administration that ousting the Hussein regime would lead to fresh investment, a developing industry and new supplies. Instead, it set off one of the biggest disruptions in crude supplies in a quarter of a century, as calculated by the US Department of Energy. Rebels and bandits keep at least 20% of potential Iraqi supply shuttered.

"To keep Iraqi oil flowing, American commanders are training thousands of Iraqis to guard the country's network of pipelines and fields. US warships circle the country's Persian Gulf export terminals.

"But it will take more than arms to keep Iraq pumping. The entire global oil industry faces a manpower crunch. In the US and Europe, where prices were low during past years, oil companies slashed staff. Now there is a scramble to hire engineers. The problem is far worse in certain volatile regions, where politics and war have hollowed out the expertise of entire state industries and contributed to production shortfalls. Without that, world crude prices would be far lower than $70 a barrel.

"One is Venezuela, where President Hugo Chavez fired 19,000 state oil-company employees during a strike in 2002 and 2003. Many technicians were replaced with inexperienced workers, delaying or botching projects. That is still depriving world markets of a million barrels a day, by some estimates.

"Iran's production, too, remains depressed. Technocrats fled after the 1979 revolution and the subsequent 8-year war with Iraq. Some who stayed were sidelined by ideologues. Iran's output, which had hit a peak of six million barrels a day before the turmoil is still running at about two million barrels a day shy of that, and former Iranian officials say a major reason, among several, is the loss of talent.

"Iraq's talent vacuum is in many ways already much worse than those in Iran and Venezuela, with personnel losses paralyzing large chunks of the industry. Work at Iraq's State Company for Oil projects, which spearheads oil-field construction efforts, recently dried up after a series of attacks and threats against executives. Kidnappers snatched Muthanna al-Badri, the director-general, in June. He is still missing.

"Mr. Badri's replacement resigned after being threatened. And that man's successor quit after being abducted and beaten for a night, according to current and former officials. Three other senior executives recently received threats and took leave, says an official still at the agency.

"Efforts to restart Iraq's rich northern fields have been hobbled by the kidnapping last month of Adel Kazzaz, long-time head of state-owned North Oil Co. Iraq was pumping about 2.5 million barrels a day of crude before the 2003 invasion. Production remains about 500,000 a day below that level, and outages account for much of the drop. Mr. Kazzaz remains missing.

"According to US and Iraqi officials, corruption and smuggling also plague the oil ministry and the several state-owned oil companies under its umbrella. To be sure, many oil engineers are still in the country. Iraq's southern fields are pumping about what they were before the US-led invasion. On recent months, South Oil Co., the state-owned company operating those fields, has managed to increase its oil production to two million barrels a day. That represents the bulk of Iraqi production, since the country's northern fields are still bottled up.

"But there's been so much turnover in the oil-marketing agency Somo – six different directors since the 2003 invasion – that it is now believed to have just two or three executives fluent in English, the lingua franca of the global oil industry. Somo officials are making some simple goofs. An independent audit release this month found that the agency had undercharged a customer by about $4.8 million late last year because officials used the pricing formula for the wrong month on the invoice. This month, Iraq's oil minister suspended three Somo executives after accusing the agency of corruption.

"Mr. Jibouri hails from a prominent Sunni farming family near the city of Mosul in the North. After studying economics in Scotland, he returned to Iraq in the early 1980s and joined the oil-marketing agency. He was part of a team of 14 who worked two shifts, fielding bids for Iraq's crude from Asian, European and American buyers, by phone, fax and telex machine.

"He and other petroleum economists met monthly to debate global market trends, gauge thirst for Iraqi oil, and establish prices for buyers. 'Pricing is key,' says Dhiaa al-Bakkaa, a former Somo head, 'If you're no good you can leave millions of dollars on the table.'"

Oil Production Requires Political Stability

"Like other bureaucrats, Mr. Jibouri was swept up in the intrigue of the Hussein era. He joined the ruling Baath Party. Hussein's 1980-1988 war with Iran damaged Iraq's oil terminals and fields. Two years later, just as these facilities were getting back to normal, Mr. Hussein invaded Kuwait. Somo executives were barred from travel, and Mr. Jibouri quit the Baath Party, in what he says was a protest against the invasion of Kuwait.

"Iraq kept the industry together, in part by cheating. Under the oil-for-food program that let Somo market some of Iraq's oil abroad, the new regime imposed secret surcharges, and a state-sponsored smuggling operation spirited oil to neighboring countries. Mr. Jibouri says he and others disapproved, but followed instructions.

"When the Hussein regime fell in 2003, looters carted off every chair and desk from Somo's compound. Oil-ministry officials put the word out that each state-controlled oil company should elect new leaders.

Continued on page 20

Are Banks Becoming More Attentive to Their "Retail" Stores?

A few years ago you could enter almost any branch bank and find a few harassed tellers coping with snaking lines of clients to the doorway. It was as though they were pushing the customers out the door to deal with their ATM machine. Today tellers are becoming unusually courteous and seemingly reluctant to let their customer, no matter how small, go.

After the Great Bailout of 1991, when the statutory reserves that banks had to put up with the central bank as a modest portion of the deposits they received from the public had been entirely abolished in Canada, interest rates were left as the "one blunt tool" for guiding the economy. Moreover, since banks throughout the world had lost much, all, or more than their capital in areas incompatible with banking, the Bank for International Settlements – a non-governmental club of central banks – declared the debt of developed countries "risk-free," so that banks could replace their lost capital merely by acquiring government bonds without putting down any deposit. All the banks needed was scissors to clip and cash the government bonds acquired this way. Understandably they not only didn't have the time of the day for their retail customers, but paid them next to nothing in interest on their deposits. Meanwhile the central banks stepped in to push up the interest rates the banks charged to their borrowers into the skies – allegedly to "lick inflation."

The banks that had been expressly forbidden to acquire interests in the other financial pillars – stock brokerages, insurance, and real estate mortgages – now came to be encouraged to do so. The official scenario was that our banks needed such freedom to compete with the big American and Japanese banks. We did try to point out to those remaking the world in this way, that some of the Japanese banks in question had already lost their capital in the offshore dollar market, and were no longer lending. But our banks – arrogant with their new political power – felt they had a date with destiny. That left no time for the one-stop banking that had been promised the retail customer if banks were deregulated.

The New York Times (9/08, "Branches, Branches – Everywhere You Look There's a Bank" by Eric Dash) reports: "At the intersection of 32nd St. and Park Ave. in Manhattan, a Citibank branch sits on the northeast corner. A Commerce Bancorp branch is across the street. A North Fork bank stands over the south-west side. And taking up the fourth corner spot: a new branch for J. P. Morgan Chase, which is not more than a short sprint from an HSBC banking center up the block.

"Too many bank branches? Maybe.

"Big banks have been on a branch building binge in the last few years, trying to grab and hold onto customers. But this recent push may be nearing its final frontier.

"Deposit growth is expected to slow, and some data suggest that banks are stealing customers from each other rather than enlarging the overall size of the market. Higher interest rates and new internet only savings accounts have led some customers to move their money into products offering higher yields. And prices for bank real estate have been soaring nation-wide, especially in New York.

"Kenneth D. Lewis, Bank of America's chairman and CEO, said, 'we think there is some saturation, but that is typical for banking where there is a herd instinct. [But] the amount of money that retail banks are taking in is significantly outpacing the number of new branches being built.'

"The rush into retail banking reflects a fundamental shift by the industry. A decade ago, most big banks were shedding their branches, not building more. They steered their customers away from their teller lines and encouraged them to use their cash machines and telephone banking services, which were less expensive to operate.

"Today, there has been a serious change. Banks view their branches as gold mines, not costs. Their checking accounts can generate a steady stream of income. Their tellers can sign customers up for new products, spurring overall sales. All the while, branches can collect millions in cheap deposits that can be lent out at higher rates. Even as they offer options like online banking and kiosks in convenience stores, banks still hope to lure customers inside a physical branch."

The New York Times piece omits an important point. Our banks' expected triumphant sallies into those other "financial pillars" opened up to them under the deregulation following their previous bailout (1988 to 1993) have turned out a very mixed bag. Three of the five largest Canadian banks, paid heavy *settlements out of court* in connection with the Enron case. CIBC, which actually designed the so-called "trader" scam – in which Enron itself charged that it had been victimized by the CIBC – ended up paying some US $2.4 billion – some one quarter of its entire capital in a pre-trial settlement. Apart from the monetary loss there was the black eye for Canada as such, since Ottawa itself had to intervene, to arrange the out-of-court settlement. As a whole, the experiences of our banks in competing with the large international banks were less than brilliant. The American experience was hardly better. Banks, it seems, can do better at retail banking at home.

Retail Refurbishes Banks' Cash Reserves

Moreover, retail banking gives a bank the possibility of refurbishing its cash reserves. At the end of WWII, when banks were severely confined to banking, the amount of credit that the banking system could create was about 11 times the amount of the cash they kept in their vaults or the central bank to support it. The enabled the central banks to come up with the cash deposited with them when a client reclaimed it. Today, with the deregulation of the banks, they are involved in taking over corporations in the other "financial pillars": stock market brokerage, insurance, and mortgages, to say nothing of Mergers and Acquisitions, derivative boutiques, credit cards. And they have thus acquired access to the cash pools that each of these other "pillars" maintains for the needs of its own business, and apply to it the banking multiplier, that multiple that by 2000 had soared to some 400 to 1. Apart, of course, from the detail that what deposits they receive as cash can be used as cash basis for near-money creation.[1]

And the inside information to which they have access in their new situation qualify them uniquely as advisers in Merger and Acquisition operations throughout the economy and abroad. And yet, since the rate of growth under our financial system is immediately projected into the indefinite future and incorporated into the current

market price of a publicly listed corporation. On the basis of such expectations, options are issued to executives that become security for further financial structures – all based on this immediate capitalization of extrapolated growth already attained in fact or fiction – and you have a system that must collapse. And that is why our banks have rediscovered the charms of retail banking. It allows them to rebuild their capital with real money.

"The upshot is that big banks are treating their branches more like traditional retail outlets than ever before. Wells Fargo executives refer to their branches as 'stores.' And across the industry there is greater focus on branding, customer service and placing more products – from home equity to retirement savings accounts – into existing customers' hands. Branch banking, after all, is big business.

"Last year, US banks earned $40 billion to $45 billion from deposit gathering activities, according to Mercer Oliver Wyman, a financial services consulting firm. That is roughly the same amount they earned from credit card lending and mortgages combined.

"Not surprising then that branches should have been behind a series of recent banking deals. This spring, Capital One snapped up North Fork bank in a $14.8 billion deal for its 355-branch deal network. J.P. Morgan swapped its corporate trust business for Bank of New York's 338 outlets. And so forth.

"And in what may be one of the industry's tell-tale signs, Bank of America's success riding the retail wave has made it poised to overtake Citigroup as the biggest bank in the country. Its coast-to-coast network of 5,700 branches towers over the 894 Citibank locations nationwide.

"Five years ago, a bank branch in New York, the country's wealthiest market, has in many ways been emblematic of the resurgence in retail banking. Five years ago, a bank branch in New York City was an endangered species; many were closing or moving from corner store fronts to cheaper locations on second floors. Today, it is hard to miss one if you stroll down any street.

"This rapid build-up of branches may be difficult to sustain in New York. From 2002 to 2005, retail deposits grew an estimated 6.7% to $470 billion in New York's metropolitan region, according to the findings of a Mercer Oliver Wyman study. The number of retail branches, meanwhile, increased at a 2.8% annualized rate, to 5445. That implies that the average New York-area branch increased its deposits each year by about 3.72%, barely outpacing the area's average rate of inflation, 3.3%.

"Nationally, from 2000 to 2005, deposits have risen at a 6.2 percent annualized rate, to 4.6 trillion, while the number of branches has grown 1.3% a year. Deposits per branch grew about 4.8% a year, well above the national average annual rate.

"The data suggests that instead of attracting the dollars of new customers, the big banks are hoping to take mney away from one another. There are signs that the New York market may be close to approaching a peak, leading to frenzied bidding that has at times nearly doubled neighbourhood rents. In the boroughs outside Manhattan, one developer has bought out several delis, a dry cleaner and a hardware store to find space for major banks. Kevin P. Fitzsimmons, a banking analyst with Sandler O'Neill, thinks the retail banking revival may soon end."

William Krehm

1. "Near-money" is credit money created by being loaned out, and by that very act of creation bearing interest. "Money," also known as "cash" or "legal tender," is today the credit of the central government that is created by being "spent" by the government. Gold or silver money likewise earned no interest by the act of its creation. For that it had to be lent out – an act distinct from its creation. Earning interest by its very creation is a flaw in the case of money, and hence the name "near-money." If it bears interest, its value goes down as the prevailing interest rate rises – and that infringes on near-money's stability – a serious defect in any replacement of cash.

Out of the Horse's Mouth the Final Word on Oats

The grand, endless debates on the relative virtues of the public and private sectors rested on a misunderstanding. Almost always from the right and the left and in between the issue was presented as a simple confrontation: private versus public enterprise. However, private enterprise could not cross the street unbedraggled unless it were paved beforehand by the municipality, and even Lenin had to bring back a bit of private enterprise to make sure that his embattled armies could be fed.

But the clincher in showing how disoriented the debate carried on in these simple terms comes from *The Wall Street Journal* (21/08, "With Its Future Now Uncertain Bell Labs Turns to Commerce" by Sara Silver): "Lucent Technologies Inc.'s Bell Labs, the birthplace of the transistor and the laser, has been through a decade of turmoil during which it was reduced to a third of its size. Now some of its scientists are warily embracing a former submarine officer and entrepreneur as perhaps the laboratory's best hope of maintaining its relevance.

"Jeong Kim took over last year with a direct plan for saving the storied laboratory: Make it profitable. Among his first moves, he set more of its scientific stars to work on breakthrough technologies that could quickly turn into businesses – the opposite of the pure research many live for.

"Each of these projects is expected to make back six times what it spends on research. Those with the biggest financial potential get the most funding. Researchers often condense their work into eight-minute PowerPoint presentations. Mr. Kim also seeks more government research grants and is aiming to speed the transformation of technology into products by seeking corporate partners and venture capitalists.

"In earlier days, Bell Labs' scientists might have rejected Mr. Kim's commercial approach to science. Not now."

From Pure Research to Profitable Development of Technologies

"Industrial labs have been losing clout for years as corporate parents looked askance at spending money on research that offered little immediate return. And in addition Lucent is planning to merge with Alcatel SA of France, a company that doesn't do the fundamental kind of research that made Bell Labs famous. 'Bell Labs does research with a big "R"; Alcatel does research with a little "r",' says Neil Ransom, Alcatel's chief technology officer until 2005.

"The deal has stirred anxiety among scientists about what will happen if Alcatel, whose shareholders will own 60% of the combined company, asserts control. Some Bell Lab scientists, worrying that their jobs could be among the 9,000 expected to be cut after the deal is completed, are scouting for new work.

"Executives of Alcatel decline to say where Bell Labs will fit into the combined company, though Alcatel's chief technology officer, Olivier Baujard, says Alcatel believes research is a balanced mix of advanced and applied research.

"As Sept. 7 shareholder votes on the

deal near, some directors have been selling Lucent stock, suggesting they aren't sure the deal will go through. Since word of it became public in late March, the stocks of both companies are off nearly 20%, though both regained some ground last week.

"Over eight decades, Bell Labs produced a series of seminal inventions, including the solar cell, the electronic microphone and the digital computer. Scientists were free to pursue projects that sparked their interests, even ones their supervisors discouraged. As a result, 11 Bell Labs scientists have shared in six Nobel prizes, including one for proving the Big Bang theory.

"But while the labs won glory, other companies marketed and profited from its inventions. In part, this was because its research was funded with public money – a special tax on phone bills – and inventions were available to anyone for a small fee. In any case, Bell Labs managers had little financial incentive to pursue commercialization of new technologies. AT&T had a lock on the phone business and was swimming in cash.

"The 1984 breakup of AT&T, followed by the 1996 spin-off of Lucent, ushered in an era of uncertainty for the labs. Lucent slashed funding after the technology and telecommunications bubble burst and demand for Lucent's products shrank. To stave off bankruptcy, it cut tens of thousands of jobs through buy-outs and layoffs and by spinning off or selling units such as Agere, Avaya and Optical Fibers Solutions. It eliminated entire departments at Bell Labs, such as those working on statistics, psychology and economics.

"By 2003, Bell Labs' research budget had fallen to about $115 million, less than a third its mid-1990 level of $350 million, current and former managers estimate…. Entire hallways on the Bell Labs campus are dark.

"Today the worries about the Alcatel deal loom large for scientists, as most analysts consider the deal an acquisition by the French company. Lucent says a balanced number of executives from each side are filling top slots, and the European directors must be mutually agreed upon. The new parent company is to be called Alcatel Lucent and based in Paris. Bell Labs' headquarters will remain alongside Lucent's current headquarters in Murray Hill, NJ.

"The task of keeping Bell Labs going beyond the merger has fallen to Jeong Kim, the first leader who didn't rise through the ranks. He isn't promising a return to the glory days. To reshape the lab into a commercial machine – and preserve its relevance to a multinational corporation – he wants to unleash its scientists' entrepreneurial spirit. His mission is to create new revenue streams to make up for those eroded by competitors, especially Lucent's core business selling telecom equipment.

RENEW TODAY!
(SEE PAGE 2)

"Without income from its overfunded pension plan, instead of a profit, Lucent would have posted a loss so far this fiscal year which ends September 30."

"A Fair Dose of Corporate Speak"

"Bell Labs has tried building start-up technology businesses before, and in 2002 it aborted one attempt. Lucent says it sold the bulk of its interest in 27 companies for less than $100 million and the remaining interest for an undisclosed sum later that year. Since then several of those start-ups have sold for hundreds of millions of dollars.

"Mr. Kim first joined Lucent in 1998 after it bought his broadband startup Yurie Systems Inc. for $1 billion. He pocketed $500 million and joined Lucent's executive team. He left in 2001 to join the engineering faculty at the University of Maryland, where he endowed an engineering building that bears his name. Mr. Russo hired him back in April 2005 to try to spread his entrepreneurial success throughout Bell Labs.

"He served up a fair dose of corporate speak rarely heard before at the labs. Applying:matrix management" principles, he pulled together scientists from disparate departments to work together on special projects.

"Mr. Kim, a 45-year-old who lived in South Korea until the age 14, issued a 'call for volunteers' to attend marathon evening sessions to reshaping the labs. He asked scientists to put their ideas in one of two groups, like drug makers classifying pills. One group was 'vitamins' – which have no instant benefit but are low-priced because they are widely available. The other was 'painkillers' which can command a premium price because they address an immediate need. The result of the brainstorming session: 150 ideas for technologies, including videogames, cell phone payment methods and batteries the size of an atom. Physicist Sharad Ramanathan is currently trying to figure out how nearly blind spiders can weave roughly symmetrical webs. 'It is important to have some people released from the constraints of immediate or even of remote applicability of their research,' he says, and that's what makes the Bell Labs special.

"Scientists accustomed to writing academic papers sometimes gripe that billing their research into PowerPoint presentations leaves no time for crucial details. But Mr. Kim is using this format to spread the gospel about the labs' usefulness within Lucent."

There is clearly some nostalgia when the government via its tax credits would allow abstract research essential for revolutionizing the technology of a mixed economy.

W.K.

Oil Shortage *continued from page 17*
American officials ruled that Baath Party members couldn't keep ministry posts.

"Mr. Jibouri was deemed free of taint and won top job at Somo. American officials dropped off a stack of $100 bills for new office furnishings. Within weeks, Mr. Jibouri had Somo selling again, checking tanker arrivals by satellite telephone from the sun-baked roof of his office where reception was best.

"He managed to acquire gasoline for a lower price than Haliburton Co. did under a Pentagon contract. But turmoil mounted. A US-chosen interim government appointed as oil minister Ibrahim Bahr-al-Uloum, an expatriate consultant and son of a prominent Shiite cleric. He purged several long-serving technocrats and demoted Mr. Jibouri.

"Mr. Jabouri quit and started a consultant business in Baghdad and Amman. After Iraq's first free elections last year, politicians sounded out Mr. Jibouri about staying on as trade minister or taking the top job at Somo again, But he said that many of the top technocrats he had worked with had left, and political appointees bloated the agency.

"Last year, just before Mr. Jibouri stepped down as trade minister, gunmen killed one of his deputies. A few months later, Mr. Jibouri packed up and moved his wife and three children to Amman in Jordan. 'I wanted to stay in Baghdad,' said Mr. Jibouri on a recent afternoon over grilled fish at a new Amman restaurant serving Iraqi dishes and filled with exiles. 'But if you are honest, you will be killed.'"

In its own way, Iraq is proving that competent personnel is hardly less important than the oil in the ground.

W.K.