Report

What did the Asian Meltdown Teach Us About Conventional Economic Policies?*

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It is an honor and pleasure to chair this session on a subject of continued importance. Our distinguished panelists bring global perspectives: from Canada, Nicholas Parker, Senior Vice President and Director, Technology Development Corporation, Toronto; from the Bahamas, Jane Siebels-Kilnes, Founder and Chief Investment Officer, Green Cay Asset Management, Nassau; from Switzerland, Barbara Stuckey, Board Member of VTZ-Green Money for the Blue Planet, Zurich; and Andrew Pringle, Senior Vice President, Friends Vils-Fischer Trust Company, New York and the UK.

When I suggested this Session to my colleagues on the Executive Committee for this Conference in late 1997, the US and European markets were recovering from the first shocks from the Asian meltdown. Uncertainty ruled. After shocks still reverberated in global currency markets. Then even as predictions that the loss of Asian markets would hurt company earnings in North America and Europe —the "safe haven" effect began to come to the rescue.

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By early Spring, the bull market in the US was roaring again. Asia was discounted — even as the US Administration's efforts to get the $18 billion replenishment for the International Monetary Fund (IMF) stalled in the U.S. Congress.

My take on the US bull market includes: 1) The "safe haven" effect as billions withdrew from Asian markets back to Wall Street and into Europe; 2) The new money still pouring into mutual funds and 401Ks, etc., had to be invested somewhere; 3) Portfolio managers and institutional investors in the USA are constrained by asset allocation models and the *prudent man rule*. This can create "herd behavior"-bidding up the stocks in the big indexes (rather than the traditional "efficient market" hypothesis suggests); and 4) The Fed's view that the Asia meltdown would be sufficient to damp down Wall Street without raising rates. A deeper Fed dilemma was that *raising* rates would cause a significant market slide and would hit Asia's currency and debt harder — in turn, effecting Western creditors.

Certainly, the deflationary effect of the Asian meltdown has not yet been fully felt. Indeed, the US and European stock markets have been pumped up with billions in flight capital seeking safer havens. A fast feedback loop is created by the "herd behavior" of asset managers following asset allocation theory and obliged to buy the big indexes: Dow Jones, Standard and Poor's, and London's FTSE100. This herd behavior effect is reinforced in the USA by the "prudent man rule," which prevents asset managers from straying far beyond such blue chip stocks. I call it "the prudent lemming rule."

Indeed, at the turn of the new century, well into the post-Cold War era, the world is still dealing with the unsolved 20th century dilemma: of nations that collectively aspire to integrate their national markets more deeply.[1] Generations of policymakers—observing the lessons of World War I, the League of Nations, the Great Depression, World War II, culminating in the Bretton Woods accords of 1945— have drawn attention to three conflicting goals of nations and the various balancing acts they attempted between regulating and coordinating 1) exchange rates, 2) domestic monetary policies, and 3) international capital flows.[2] Economic ideologies have moved beyond the simplistic formulas of "sound money": the gold standard and attempts to balance national budgets — after witnessing the costs in unemployment and social breakdown of the Great Depression.

But remnants of these earlier economic orthodoxies remain today in calls for: unfettered markets, more privatizations, free trade, opening economies to global capital flows, insulating central banks from "political interference," deregulating domestic economies, making labor markets more "flexible," while downplaying concerns about human rights, labor, and environmental standards as "trade distorting." All such economic policies, still taught in many universities and business schools, assume efficient markets and full-cost prices — till far from reality. For two decades, I have stressed the need to correct prices to reflect external costs and to retrain all economists in systems, chaos, and game theory, anthropology, and ecology. I have urged the need to hold the applied economics profession to similar licensing and standards of accountability routine for doctors and lawyers — and to expand policy models to include multidisciplinary approaches and experts, as in technology assessment, systems dynamics, and futures research methodologies.[3] Such interdisciplinary approaches to the World Trade Organization (WTO), NAFTA, and other trade rulings would go beyond GNP-denominated national accounts and current "externalized" social and environmental costs toward full-cost prices, life-cycle costing, and internalizing such costs in investment decisions and capital asset pricing models (CAPMs) — as many free trade critics also propose.

Today many different hypotheses concerning the so-called "New Economy" can be seen within today's global context of social system transition. Contemporary hypotheses have set the many local, ethnic, and community as well as nationalistic backlashes against the backdrop of globalization.[4] The unregulated $1.5 trillion daily global currency markets, the speculative 90% of which is unrelated to actual world trade, continues to erode the sovereignty of every nation—more visibly every day. Today spreading global markets still operate with neo-classical economic-textbook theories of maximizing individual self-interest, efficient markets, privatization, smaller government—generally known as the "Washington Consensus." This one-size-fits-all recipe for economic progress, promoted by US efforts to link democracy with free markets and by the World Bank and IMF, is measured by growth of Gross National Product (GNP). Yet a growing band of economists, pressured by environmentalists and grassroots human rights groups and labor unions, now admits that this index is deeply flawed (omitting environmental costs and values as well as the annual $16 trillion of unpaid work in the world's household and informal sectors, estimated by the UNDP's *Human Development Report*, 1995). Meanwhile, useful, broader indicators are proliferating — from the UNDP's Human Development Index (HDI), published annually since 1990, the World Bank's Wealth Index, released in 1995, and many others based on Herman Daly and John Cobb's Index of Sustainable Economic Welfare (ISEW), *WorldPaper's* Triangle Wealth Index, as well as my own Country Futures Indicators (CFI©) and its first version in the USA, the Calvert-Henderson Quality of Life Indicators℠, co-created with the Calvert Group, Inc., of Washington, DC. Watch for them on www.calvertgroup.org

Today's "New Economy" and other hypotheses stem from different paradigms and interpretations, which produce conflicting forecasts of: productivity, inflation, deflation, effects of the Asian meltdown, ete. Such statistical paradigms underlie GNP/GDP, Purchasing Power Parity(PPP), Consumer Price Indexes (CPIs), and new approaches to include in national accounts: asset balance sheets, social and environmental capital, unpaid work, and externalities. As I pointed out at our first Conference last July, some of this statistical work is underway, but still underfunded--from retooling GNP/GDP to account for natural and human capital and subtract social and environment costs to recalculating the CPIs. CPIs should reflect higher quality in some goods and the shift to services. Macro-economic policies should also account for the valuable public goods and services that add to quality of life but are unpriced (e.g. police and fire services, the SEC, the Bretton Woods Institutions, etc.), without which complex technological economies cannot function. Thus, the U.S. CPI may be overstated by as much 1.5%, as the US Boskin Commission says, or by more than this if the value of unpriced public services are factored in. Or the CPI could be *understating* inflation if energy and food prices continue to be excluded from the "core" rate — along with pollution abatement and depreciation of infrastructure and other national assets. The *Economist* now recommends adding financial and real estate asset inflation to Consumer Price Indexes (May 9, 1998). All this statistical revisioning will end up recalibrating U. S. Federal Reserve policy and the Non-Accelerating Inflation Rate of Unemployment (NAIRU), as well as the budget, social security, and the deficits. Meanwhile, GNP/GDP still lacks an asset account (except in New Zealand and Switzerland) — leading budgeteers to continue "expensing" long-term investments in infrastructure in a single year. Try running a corporate balance sheet that way! So we all should question traditional economics as we assess the Asian meltdown.

Today, the search for more comprehensive and dynamic models of our economies is made more urgent by recognizing statistical illusions that drove the Asian bubble and also drive globalization and electronic markets. Forecasters from many disciplines: economics, technology assessment, game theory, ecology, or chaos and complex adaptive system models, now agree that equilibrium models drawn from Cartesian-Newtonian worldviews of a deterministic, "clockwork" universe no longer cut it. In fact, the Post-Cartesian Scientific Principles that I have been urging for the past 20 years are now almost conventional wisdom.[5] The tightly interactive global economy is increasingly dynamic — creating a world in a hurricane of change. Nations and institutions are restructuring due to such forces. Such a world cannot be understood by conventional macro-economic models assuming equilibrium. Economics textbooks' "Rational Economic Man" with his unchanging preferences still underlies macro-economic models and the statistics that drive most decision-making in our economies.

Futurists use multiple scenarios to guide disciplined thinking about the cross-impacts of today's trends. Scenarios are constructed from these major trends and how they may cancel or amplify each other and interact with "wild card" events to create surprises. These futures research methods came into use during the 1960s and 1970s when straight-line projections — whether of economic growth or technology and innovation an into what economic forecasters called "external shocks" (for example, the escalation of the Vietnam War, oil supply shocks and holes appearing in the planet's ozone shield). These methods underlie such financial risk-assessment tools as value-at-risk (VAR) analyses used by Deutsche Bank, Credit Suisse, Bankers Trust, and J.P. Morgan.

Contrary to observation, Rational Economic Man never learns or grows or changes his preferences for maximizing his material self-interest in competition with others. Psychologists would say that this model represents humanity's primitive reptilian brain. Robert Lucas won a Nobel Memorial Prize for promoting the "Man's" higher forebrain functions and his rational expectations. But if they fully discount all government actions and market information — this leaves us with only nihilism. In the face of new global conditions: from pollution, growing gaps between the rich and poor, spreading deserts, burning rain forests, and ozone depletion, Rational Economic Man waits for the market to act while Pareto Optimality, which assumes that information, wealth, and power are given, still rules its collective decision making. Technology is also assumed to be a parameter in most economic models — rather than as futurists see it; the driving variable of the still-evolving Industrial Revolution — now well into its post-industrial, information-technology-dominated phase. Yet while acknowledging these unrealistic assumptions, economics professors still keep on teaching with them.

Thus, futurists contend that most economic models in the public and private sector are still backing us into the future looking into the rear-view mirror. Human agents *are* still seen as either the guinea pigs in the computer models of fashionable social simulators or as the golf balls or atoms of traditional Newtonian physics. This "objective" view (which *does* make the math easier!) assumes that all human actions in society are irrelevant, statistically damped out by the Law of Large Numbers. Even powerful producers in many computer models are assumed to have no impact on the structure of the economy. On the contrary, some economists and most futurists acknowledge that financial markets are influenced by large institutions — from governments to global corporations and institutional investors — in increasingly interwoven global real-time networks, where over-shoots and herd behavior are amplified.

Thus, game theory, chaos models and psychology become sharper tools for examining how markets are affected by the interactions of mutual expectations of players. Unfortunately, the "Artificial Society"-models of mathematical economists often program their simulated "human agents" with the same competitive, self-maximizing, economic behavior — and, unsurprisingly, recreate poverty gaps and trade wars.[6] At least, the "quants" and "rocket scientists" whose computer models calculate the prices of derivatives allow a 20-40% risk factor due to their own models (which have often led to huge losses, such as those in Orange County, California, Natwest in the UK, and Metalgesellschaft in Germany).

Of course, one or two innovative economists (borrowing models from systems and game theory and from chaos and complex adaptive systems studies) have moved beyond this Industrial Age, Cartesian- Newtonian worldview. For example, the Santa Fe Institute's W. Brian Arthur uses 50-year old cybernetic, feedback driven systems models to illustrate that in network markets there are increasing (not diminishing) returns to scale and path-dependency in innovation (i.e., initial conditions will amplify in non-linear systems).[7] Buddhists call this "laying down a path in walking." This phenomenon underlies Microsoft's market domination and suggests new ways to deal with such global market power, while calling into question neo-classical monopoly theory. Stanford University's Paul Romer reminds his fellow economists of what futurists have known for decades: that technology must be incorporated as a key variable in all macro-economic models. Others include Michael Rothschild, who in his book, *Bionomics* (1990), revisions economies as ecosystems in terms long familiar to futurists and ecologists. (See my *Creating Alternative Futures: The End of Economics*, 1978, 1996.) Clearly, interdisciplinary dialogues between all these worldviews would create sharper analytical tools.

All this underlies today's pop debate in the financial press about the nature of "The New Economy" and the explosive U.S. stock market rises and whether US Federal Reserve Board Chairman Alan Greenspan's new view of the statistical lag in measuring productivity is correct. *Business Week* has frequently editorialized that globalization and the increasing competition it brings, *does* discipline even the biggest firm's pricing — just as it does wages — echoing calls for dumping the Phillips Curve, as I have urged since 1978. Even Phillips didn't believe in the Phillips Curve. All this *has* shifted the NAIRU into lower territory so that interest rates *can* be reduced and sustainable economic growth *can* proceed in a new virtuous cycle. All this sounds great and it's half right, as a market "flow model" (i.e., the conventional monetarist "bathtub" model of the national economy as a hydraulic system). In the UK, Roger Bootle makes a similar case in his *The Death of Inflation* (1996, 1997) but with a longer time scale interpretation beyond simple monetarism and a more radical conclusion: that OECD economies face a future of deflation. Asia will be another deflationary factor.

As I also pointed out at our last Conference, beyond these expanded economic models, the less-examined other half of the story relates to assets (stocks of built, natural, and human capital) as well as liabilities, debt, and other aspects of restructuring outside much market data and models. Here, the gloomier view of our $1.5 trillion daily global casino emerges, and the $50 trillion in outstanding derivatives positions where individuals hedge their own risks by adding to systemic risks. Today's tidal waves of "hot money" and speculation can simultaneously devalue currencies and hammer economies on one side of the world while feeding asset bubbles somewhere else. Today's central bankers are charged with the now-impossible job of managing national economies and currencies. They still foolishly play at the same casino table with highly-leveraged, profit-maximizing currency traders, who arbitrage interest rates and national government policies alike.[8] The central bankers, under pressure from banks and financial interests, have stripped themselves of other macroeconomic tools: adjusting bank reserve ratios and stock brokers' margin requirements, as well as capital controls. They now must rely on interest rates alone to cool inflation and financial bubbles. Central bankers' new Catch 22 is that they are now *afraid to use* interest rates to cool economies — not only because this throws the real economies of Main Street into recession and unemployment — but *also* pricks asset bubbles too drastically. Thus, central bankers today are left with "jaw-boning" stock markets about "irrational exuberance." Canada's Finance Minister, Paul Martin, offered leadership in his proposal for a "global supervisor" of national financial supervisory systems, which has gained support from other G7 finance ministers.

Even for its own players, the global financial system needs regulatory harmonization of rules on: accounting, disclosure, insider trading, money laundering, etc., as even George Soros has emphasized. Asia proved a minefield for many investment bankers. Lehman Brothers and Schroeders are cutting back — as Peregrine's bankruptcy continues to chill Asian markets, down an average of 50% since early 1995.[9] Beyond all this, global financial markets need better settlement systems, custodial reserve requirements — indeed a "Global Securities and Exchange Commission" to deal with future Mexican and Asian-type crises, as the G-7 and Treasury Secretary Robert Rubin have acknowledged. As far back as April 1997, Michel Camdessus of the IMF warned that "the next Mexico" would start with a banking crisis. Certainly, Asia's current banking problems have reverberated worldwide, for example, with the merger of Union Bank of Switzerland (UBS) and Swiss National Bank precipitated by over $600 million of UBS derivative losses unreported by the financial media for several weeks. Japan, the world's second largest economy, has revealed at last the extent of its private and public debt — estimated at 250% of its GDP. Other structural changes include aging populations in OECD countries, billions of uncollectable sovereign debt, rising personal bankruptcy rates and widening income gaps in the USA —with its external debt now at record levels. The USA owes some $5 trillion to dollar-holders abroad and its trade deficit is expected to reach $300 billion in 1998.[10] As the *euro* begins to compete with the dollar as a reserve currency after January 1999, the U.S. will face new constraints. The *euro* itself will burden its initial eleven member countries with tight monetary policies a la Bundesbank-style — which will further erode domestic safety nets and may raise European unemployment from its current average 11% levels.

Hyping cash flows and GNP/GDP indicators cannot mask structural problems for very long. All these structural issues first erupted at the World Bank IMF meeting in Hong Kong, September, 1997, after the currency debacles in Thailand, Malaysia, Indonesia, and the Philippines which roiled markets in Singapore and Hong Kong. Deeper than the much publicized feud between George Soros and President Mahatir Mohammed of Malaysia, were the open debates about whether financial markets now had too much power over sovereign governments — while disputing whether blame lay with "the Washington Consensus" economic growth model or speculators, or the mistakes of the erstwhile Asian Tigers them-selves. All this highlighted the issue of "moral hazard" when governments bail out financial markets any-where — from widespread propping up of foolish banks to the "socialism" on Wall Street, i.e., the Federal Reserve pumping liquidity into financial markets during the 1987 downturn and bailing out US banks and savings and loan companies, to the IMF's dubious efforts to prop up Suharto's economy in Indonesia.

Another new view in many disciplines (from game theory, psychology, political science, anthropology, and ecology) states that human beings are *fundamental actors* driving evolving economies and societies, as well as corporations and financial market institutions (*World Futures*, Heinemann, Vienna, 1998, forthcoming), and a spate of recent books on corporations as living organisms. Are we only pawns in society, as neo-classical economics insists? U.S. Assistant Treasury Secretary Larry Summers still believes so in a recent interview.[11] Yet are we not also powerful visualizers: of innovations, new technologies, new cities and architecture, new design principles, new disciplines, such as risk analysis, technology assessment and futures research, new social arrangements, such as insurance, pensions, mutual funds, as well as economic sanctions and treaties instead of wars?

We can also redesign malfunctioning central banks and misguided government macroeconomic policies. We humans have always been instigators of powerful movements for social change toward universal human rights, democracy, environmentalism, feminism, ethical responsibility for future generations, and socially responsible investing. Since the Calvert Social Investment Funds were founded in 1982, I have listened, as a member of its Advisory Council, to debates on Wall Street. They range from Milton Friedman's followers who say the only moral behavior for fiduciaries and corporate managers is to maximize their investors' rates of return (whether from tobacco or land-mine companies)—to the emerging socially responsible investment view that investors have many complex goals and investment objectives. They seek competitive returns *and* more. Happily, as documented by research and practitioners, investors can have competitive returns *and* hold portfolios that reflect their broader social goals and values.[12] Such social value investors are currently changing the economics of the tobacco industry, and account for $1.1 trillion in managed assets in the USA alone.[13]

Obviously, I believe that humans are powerful actors. As in chaos models, an initially small group of determined people (less than 5% of a population) can leverage change in whole societies. History confirms this both for better and for worse — as in *coups de'etat*, where today a few dissidents can bring down a government by capturing a radio or TV station. Humans have equal propensities for win-win sharing, caring, and cooperative behavior as for win-lose competition, which game theory has demonstrated. While economists focused on competition and markets, game theorists studied the whole range of human ways of being and behaving and in 1994 won Nobel prizes in economics.

How all these issues, global trends, and the Asian crisis unfold will be profoundly affected by business decision-makers and institutional investors as well—as they interact with governments of nation states, now weakened by the forces of globalization and electronic commerce. Thus, more demands than ever should and will be placed upon business and investors by the public. Business executives and their associations are helping change some of the archaic statistics and text-book conventions of the current marketplace to fit new global realities. For example, the executives of the World Business Council for Sustainable Development advocate correcting prices by internalizing social and environmental costs; and call for capital asset pricing models to also reflect and include these external costs so as to guide investments more rationally.[14] Additionally, they have joined with the Business Council for the Social Summit in calling for shifting taxes from payrolls and incomes to waste, pollution and resource depletion, as I have urged for a decade. This will create many more jobs (about 1% reduction in unemployment for each 1% shifted off payroll taxes in the USA.) — *and* it will cut resource depletion, waste, and pollution as well. How's that for a win-win?

Business leaders have joined in calls for repeal of the estimated $750 billion to $1 trillion of subsides to obsolescent polluting, resource-intensive corporations of the Industrial Age — which could at last allow a level playing field for the emerging industries of the Solar Age (see Figure 1, "Restructuring Industrial Economies").[15] Insurers could join with Swiss Reinsurance in their efforts to get fossil fuel industries to assume some of the risks they create by their atmospheric CO_2 emissions and to shift their own investment portfolios to less risky renewable resource and energy efficiency sectors. Banks could better assess borrowers from environmentel and social risk standpoints. Oil companies could follow British Petroleum and take climate change seriously by investing in solar energy. And new indicators reflecting longer-term costs and benefits and broader measures of quality of life and political risks are emerging. For example, the Calvert-Henderson Quality-of-Life Indicators allow such broader, longer-term assessments.

The New Attention Economy

We in OECD countries are well into the "Information Age." We are transiting to the Age of Knowledge, where scarce human time and attention as well as living ecosystems, are recognized as more valuable than money. At the same time, we live in "mediocracies" where a few media moguls now control the attention of billions of people — for better or worse and politicians can be toppled by people power amplified on global TV news. All this has changed politics and economics forever. We are already living in the new Attention Economy.[16] Attention deficit is not a disorder. We now live in Attention Deficit societies where each of us is bombarded with information overload from advertisers, media, politicians, teachers, health providers, not to mention junk e-mail. The good news is that this is forcing us to "go inside ourselves" and ask some pretty basic questions: What do I *want* to pay attention to? Who am I and what do I want written on my tombstone? Such basic defensive reactions will define the growing sectors of our Attention Economies and their inexorable shift from material goods, (measured by traditional GNP/GDP per capita) to services and more intangible factors in living standards, culture, and quality of life measured by new scorecards such as my Country Futures Indicators (CFI). As our economies dematerialize, it will be harder for governments to hype goods-based GDP-growth in the global economy without also measuring toxic wastes, resource-depletion, dirtier, shrinking water supplies, polluted

Figure 1

Restructuring Industrial Economies

Obsolescent Sectors (Unsustainable, entropic)	Emerging Sectors (Sustainable, low entropy)
• Industries, companies based on heavy use of non-renewable energy and materials	• Industries, companies based on efficient use of energy and materials and human skills
• Bureaucratic, large, less flexible	• Entrepreneurial, small, flexible
• Non-recyclable products, packaging	• Recyclable products, re-manufacturing
• Military contracting	• Conservation, innovation
• Products involving toxic, non-biodegradables, polluting materials, throwaway items	• Fuel efficient motors, cars, mass transit
• Planned obsolescence	• Solar, renewable energy systems
• Chemical pesticides, inorganic fertilizers	• Communications, information, services
• Heavy farm equipment	• Infrastructure, education, training
• Polluting, inefficient capital equipment, process machinery, processing systems	• Space communications satellites
• Extractive industries with low value added	• Peace keeping, surveillance of treaties
• Fossil fuels, nuclear power generation	• Efficient capital equipment, processes
• High tech hospital based medical care	• Restorative industries, re-forestation, desert greening, water quality management
• Highly processed foods	• Health promotion and disease prevention
• Advertising encouraging waste and polluting practices	• Organic agriculture, low till systems
• Shopping center developers	• Integrated pest management
• Speculative real estate development	• Pollution control, clean up and prevention
• Large, fuel-inefficient vehicles	• Natural foods
• Mono-culture farming	• Waste recycling and reuse
• Hardwood and tropical forest products	• Community design and planning
	• "Caring" sector

Source: Hazel Handerson, PARADIGMS IN PROGRESS, 1991.

air, unsafe streets, drugs, money-laundering, poverty, global epidemics, and the loss of cultural and biodiversity.

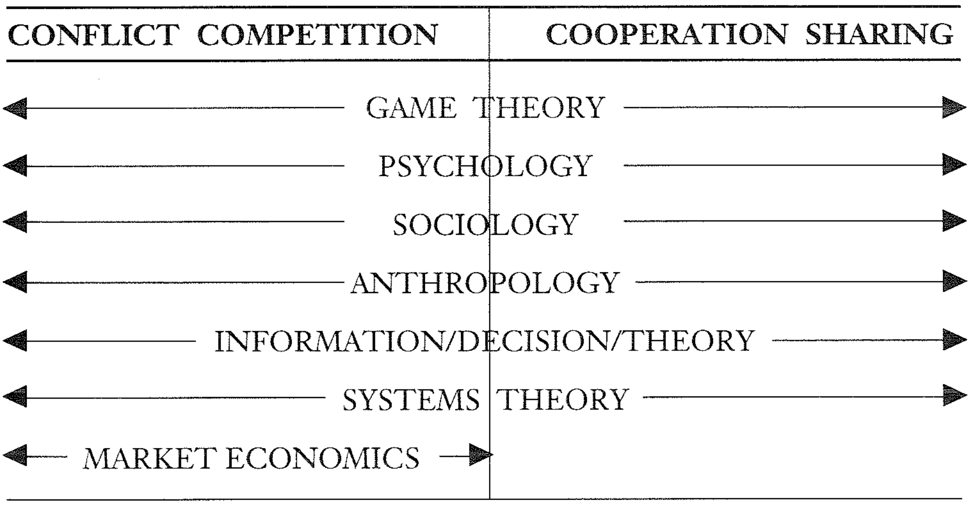
In mature OECD countries, the limiting factor is now *time* rather than *money*. There are only 24 hours in each day and already, in the USA for example, the average citizen now spends 91/2 hours per day (up from 71/2 hours in the 1980s) watching TV, movies, etc., or online. If GDPs were re-categorized and re-calculated for the USA and similar OECD countries, we would find that these information/services sectors already are dominant. For example, mass media and entertainment are a growing percentage of global trade and tourism is the world's largest industry at 10 percent of global GDP. In response, 28 percent of US citizens are "down-shifting"-a form of "tuning out" this dominant culture of information overload and costly mass consumption oriented value system.[17] They are choosing more free time and less money income and moving to quieter, less expensive, rural towns where life is slower and communities and local culture are still intact. Consumers are seeking their own (not advertisers') definitions of "quality-of-life."

These Attention Economy characteristics include concern for more caring, attention-based health services geared to self-knowledge, prevention, and wellness, as well as cleaner, "greener" products, eco-labeling (e.g., Germany's Blue Angel and U.S. Green Seal) and the newer "social" seals of approval (e.g., CEP SA8000 labor standards) as well as the rise of socially responsible investing. In addition, there are increasing demands for global corporations to reduce emissions and employ fair labor standards and promulgate Codes of Conduct (e.g., the CAUX and CERES and McBride principles). The clash is escalating between individual value changes, concern with community and quality of life vis-a-vis market-driven globalization of finance and trade. This leads to further domestic political turmoil in OECD countries, as their information-overloaded citizens try to sort out all the issues of globalization. Meanwhile, their politicians' mixed messages do not help: i.e., they support more free trade and globalization and then cite the resulting "global competitiveness" as excuses for their own powerlessness to solve domestic issues: loss of macroeconomic management options, unemployment, shredding of social-safety nets, social and environmental deregulation, tax shortfalls, and budget deficits. In addition, many global corporations demand tax holidays and more deregulation in their location decisions. National governments must soon face up to the new era of corporate mega-mergers, which further erode national and consumer sovereignty.

An example of the growing values schism between global corporations and financial players versus citizens and their democratically elected politicians was the firestorm of protest and derailing of the OECD's Multilateral Agreement on Investment (MAI). Citizen watchdog groups correctly labeled the MAI a new "Bill of Rights" for global investors and corporations. Now, the same financial special interests are trying to slip a new form of MAI into the WTO and to change the IMF charter to prevent countries from imposing capital controls. We all know that rights bring balancing responsibilities. "Investors" are often individual *human beings*, not corporations, and millions of them in today's globalized economy are very conscious of their responsibilities: e.g. not to invest in companies manufacturing addictive drugs like tobacco and alcohol; those producing land mines and other weapons; manufacturers whose products and processes pollute our environment; those who exploit employees or refuse to respect their human rights; or those who do business in countries that oppress their own citizens. These conscientious human investors' ranks are growing in many OECD countries, but still represent a 10 percent active, creative minority. Through their ownership of such ethical and green mutual funds, they helped to end apartheid in South Africa. They raise public concern about child labor, "slave" wages, toxic and radioactive waste dumping in the world's oceans, pollution of the atmosphere. They and their portfolio managers often join with labor unions and civic groups—taking their responsibilities to their fellow humans seriously.[18] These creative "contrarians" illustrate the full repertoire of human behavior — beyond conformity to existing rules and economic ideologies of global competition and win-lose games, to the broader, cooperative strategies of win-win coalitions for future generations and sustainable development. (See Figure 2, "Repertoire of Human Behavior.")

Today, these see-saw struggles—*human* employees, citizens, voters, consumers, and investors versus faceless mega-corporations, banks, and financial institution—are playing out on a changing global stage. MAI should be to regulate investments and create a "Global Securities and Exchange Commission" to hold investors, traders, brokers, and all market players to the highest ethical principles and enforceable standards for human rights, labor, and environmental protection. In countries where voters, unions, and civic organizations win local and national standards to protect their health, safety, well-being, and "safety-nets" that their taxes support—corporations move offshore to find less democratic but more "economically liberal" and "business-friendly" nations, in search of politicians willing to further de-regulate. *This is the way that real national sovereignty is being eroded*—our elected political leaders and business lobbies are de-regulating this sovereignty away to global corporations and finance. In the USA, corruption of politicians has reached epidemic levels. Many other scandal-ridden governments put their taxpayers' funds on the global auction block, along with their workforces, natural and environmental resources in the new global bidding war to lure (bribe) corporations, banks, and financial institutions to locate in their countries.[19] Heads of state troop dutifully to the World Economic Forum in Davos to offer these deregulation "sweeteners," subsidies, and tax breaks to corporate CEOs. They bargain away their citizens' sovereignty in the now-familiar global "race-to-the-bottom." In the U.S.A., 70 percent of Americans no longer trust their politicians or government officials in Washington. Both Democrats and Republicans have accepted millions of dollars in illegal corporate funds. Democracy is perverted worldwide to serve these special interests.[20]

Figure 2 Repertoire of Human Behavior



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Meanwhile, *The Economist's* Clive Crook tells us that governments are not in retreat—but getting bigger—citing percentages of nations' GNPs spent by governments.[21] These overall figures do not tell us how much of this government spending is steered by financial and corporate interests into the billions of annual subsidies they enjoy — along with their other legislative priorities, such as the MAI. Indeed, many governments have become corporate "cash cows" (a point I made in Creating Alternative Futures in 1978), while some have sunk into "kleptocracies."

All these issues drive fears of "loss of national sovereignty" and a new confused protectionist politics from left to right. Creative leadership to interpret the good and bad news of globalization and the shape of the "New Economies" is held back by the lobbying power of global Industrial Age corporations and the subsidies their fossil fuels, metals, mining, transport, construction, chemicals, and agro-business companies have won over the years. Leveling playing fields by gradually removing such perverse subsidies is essential and can help the shift to sustainable Solar Age/Knowledge Economies. (See Figure 1.) Together with full-cost pricing and similar corrections to capital asset pricing models (CAPMs), public and private investments can be shifted into capitalizing these ecologically and socially efficient markets of the 21st century. In addition, globalization needs to be steered with better global standards setting, harmonizing of rules for international investment, finance and trade, banking regulation and oversight, full-disclosure accounting transparency in securities markets, as well as circuit-breakers, currency exchange fees or controls to tame daily speculative flows of hot money. Such policy shifts, along with shifting taxes from incomes and payrolls to pollution, waste, resource depletion, and other social "sins" can lower unemployment and welfare rolls while leading to eco-efficiency and cleaner environments. Such measures can also help avoid future debacles in derivatives trading, crony capitalism, financial asset inflation, and more Asian-type meltdowns.

The continuing woes of Asian economies — particularly the tragic loss of life in the process of ousting Indonesia's Suharto regime — taught the world a lesson about what's wrong with conventional economic prescriptions. Headlong globalizing of financial markets and privatizing of state enterprises and services to woo private investors, crank up exports, and go for GNP-measured growth — all proved unsustainable. Of course, such dirty dashes to GNP-growth can show spectacular numbers — no trick when they are based on slave wages, social repression of dissent, and environmental destruction. The uncalculated cost of social disruption and environmental damage are still assumed to be ameliorated in the future, for example, by traditional economists' eccentric models of a supposed Environmental Kuznets Curve.[22] Over the past ten years, grass-roots activists, global citizens, and alarmed scientists from many disciplines have documented the appalling, often irreversible, social and environmental consequences in Asia and other developing countries of this narrowly focused, short-term GNP growth. As global direct investment and portfolio flows quadrupled between 1990 and 1997, now estimated at $8.3 trillion, the World Bank, the International Monetary Fund (IMF), central bankers, and their private banking colleagues all hailed the Asian growth miracle — promising further rising living standards trickling down to lift millions still in poverty. Ironically, China with its own brand of market-socialism, so far has been insulated from Asia's worst problems.[23] In my view, this is largely due to its insistence on limited convertability of the *yuan* and its resistance to following the Washington Consensus path.

Today, we learn that bankers knew all along about the "crony capitalism" of insider-dealing, lack of transparency, lax regulatory supervision, imprudent borrowing and lending, as well as rising excess capacity in many manufacturing sectors. Their advice is still to further deregulate, privatize, and open markets. During these heady years, little warning was given to the public on the growing fragility of these financial markets — even after the Japanese asset bubble burst in the early 1990s. Few bankers or their economic experts admit that the widespread banking and financial deregulation they encouraged in the 1980s helped create today's daily trillion dollar global electronic markets. Today, electronic commerce in our newest global commons of cyberspace is exacerbating nations' tax-collection problems, budget deficits, and adding to money supplies.

How could these bankers not know that removing all the "firewalls" between the world economies — via deregulation, privatization, and free-trade agreements, like NAFTA, the GATT and the WTO — could inevitably increase such interactive financial flows and exacerbate volatility in floating currency exchange rates, as the history of this century has shown.[24] How could these experts not have known that these tidal waves of hot money sloshing around the planet every day would lead to rising uncertainty, continual industrial sector restructuring, mega-mergers, corporate downsizing, the rise of "contingency employment," i.e., part-time and temporary jobs and their adverse impacts? Surely they expected today's massive use of hedging such new financial risks via the growth of derivatives now standing at over $50 trillion?[25] Why did central bankers not warn the public sooner about the worldwide asset bubble inflating ominously in Asia and on Wall Street since the early 1990s?[26] Instead, they focused on beating inflation in wages and Consumer Price Indexes (CPIs) relying on high real interest rates — whatever the social costs in recessions and unemployment. Today's dangers lurk in central bankers' decades-long push toward political independence and "zero-inflation." Now deflation in consumer prices and company earnings are fed by the Asian implosion. Japan's weakening economy could well spread deflation worldwide.

Most Asian governments today are sadder and wiser — saddled with massive debts and IMF-bailout conditionalities, which may spare elites while causing further suffering for the most vulnerable citizens.[27] Meanwhile, citizens in Japan wonder why they should bail out their reckless banks after recently coughing up for a costly rescue of their *jusen* (savings and loans). It has been well known for several years that if Japan's Nikkei stock index falls below 15,000, many Japanese banks would be technically bankrupt. The Hashimoto government's much-bandied multi-trillion yen "stimulus packages" have failed to "talk up the Nikkei index."[28]

The extent to which the world's banks have mismanaged the global economy is only now becoming visible. Short-sighted, imprudent, badly supervised banking systems, as well as deregulated and virtually unregulated financial markets, changing technology and globalization have been at the heart of these problems.[29] The Bank for International Settlements (BIS) rule on 8% reserve capital requirements, promulgated in 1988, has also proved inadequate. The Toronto-based Committee on Monetary and Economic Reform and its newsletter, *Economic Reform*, is the best source in Canada on these issues.[30] All this costs the world's taxpayers, employees, small businesses and investors dearly. The world's poorest citizens remain the most tragic victims of maldesigned, malfunctioning financial systems and the debacles caused by the false promises of a generation of economists. Add to all this, formidable technical and political challenges are posed by the start of the European Monetary Union and the launching of the *euro* on January 1, 1999, and the simultaneous effects on banks of the multi-billion dollar costs of upgrading their computer programs to handle the "Year 2000 Problem." In Europe and the USA, some 30% of small banks are probably too late to prevent their computers crashing and may have to close their doors on January 1, 2000. We hope that it will not take such catastrophic learning experiences for current decisionmakers to rethink and reshape the global economy into the win-win game that it can become.

Even Wall Streeters wonder whether the IMF prescriptions have not worsened Asia's diseases — causing unnecessary loss of confidence, bank closings, and further currency sell-offs. The public now understands the "moral hazard" when lenders, borrowers, and investors grow reckless — expecting government (taxpayers) bailouts. Many isolationists *and* concerned global citizens in the U.S. baulk at the $18 billion replenishing of the IMF bailout fund. Such new funds for the IMF also contravene a US law that calls for bailout funds to go only to countries that respect human rights and International Labor Organization (ILO) conventions on employees' rights. In Indonesia's inter-regnum, General Suharto's family could still contribute as much as $20 billion with plenty left over. Some U.S. businesses joined with environmentalists and labor unions in trying to block IMF bailouts, which will benefit their Asian competitors--thus causing layoffs of U.S. employees. Meanwhile, anti-abortion religious fundamentalists hold hostage both the IMF and the UN's back bues owed by the USA. The lessons of global economic interdependence still have not been learned. Unusual coalitions across old party and ideological lines may help provide new paradigms and approaches.

Thus, the principles articulated at Bretton Woods, on which the IMF was founded: that nation states' domestic economic policies *do* affect each other and *do* need surveillance and coordination is as important as ever. The global financial system will continue affecting nations as its ever more interlinked web of information technology and electronic commerce advance. Thus, international regulation of corporations and markets as well as coordination of national policies and standards are vitally needed. If not, global financial crises will continue to erupt and the current wave of global mergers of corporations and banks will continue — ad hoc efforts to control roiling markets in the fruitless game of global economic warfare. "Globalization" at last has become a household word. Predictably, national politicians both praise it as "the growth of free trade" and blame it for their loss of control over domestic economies, flows of drugs and money laundering, loss of taxes, budget shortfalls, eroding safety nets and environmental standards. At least, President Clinton brought some proposals for international agreements on money—laundering to the G8 meeting May 15-16 in Birmingham, UK, and UK Prime Minister, backed the People's Summit and its Jubilee 2000 campaign to cancel the clearly unrepayable debt of the most indebted countries. Politicians, financial players, and mass media may at last heed the warnings of thousands of civic organizations documenting such disruptions and widening poverty gaps — so in evidence in Asia's meltdown. The Global Commission to Fund the United Nations[31] (on which I serve) has a charter that seeks to promote defense of our planetary commons, i.e., our air, oceans, biodiversity, electromagnetic spectrum, space, and cyberspace from destructive uses and commercial exploitation via such cooperative agreements and systems of user fees, fines, and taxes for abuses, such as currency speculation, cross-border pollution, and arms trading.

Surely it's also time for a fundamental rethink of the role of banks and the way central bankers create money, oversee monetary policy and credit and to reveal the politics underlying economic theories, such as the Washington Consensus. If bankers do not shape up, we can go around them with today's "info-currencies": direct electronic exchange, high-tech barter, local scrip, swaps, and global countertrade — now estimated to comprise up to 25% of all world trade. The World Bank, the IMF, private bankers, and global financial players should join the call for a "Global Securities and Exchange Commission," currency exchange fees, circuit breakers, and many other needed regulations and/or capital controls to tame today's global casino, as described in *Building a Win-Win World*, Chapters 12 and 13. The rules can and must be rewritten so that markets can serve — not dominate — our societies. All markets require rules to function — as we see in Russia, Eastern Europe, and Asia. Markets and rules are two sides of the same coin. The "invisible hand" turned out to be our own. Now we are at last taking responsibility for creating more ethical markets.

Global financial and corporate interests supporting "Washington Consensus"-style GNP growth have forced millions of local small and micro-businesses into bankruptcy, despoiled the environment, drawn self-reliant rural people into low-wage city jobs, and exploited children. At the UN, global corporations captured the IMF and the World Bank long ago—turning them towards priorities of their investors, bond-holders, and other market players.[32] The World Bank has responded somewhat to demands of grass-roots global citizens and now funds some restoration of its environmental damage, as well as funding credit for micro-enterprises. Other reforms include encouraging more credit unions and charting new types of collateralized local banks for community deposits and lending.[33] The IMF, under the sway of Washington Consensus policies, needs a paradigm shift toward sustainable development, as does the WTO.

Institutional investors and corporations can continue and broaden their standard-setting activities in partnership with relevant government agencies, civic and consumer groups. They can build on the ISO 14001 and Environmental Management Systems (EMS) and eco-labeling and the prior 100 years of such voluntary standard-setting across a range of products from electrical goods to pharmaceuticals. Corporations could continue publishing codes of conduct and fostering such global standards and best practices. (See *Business Week*) Special Report, October, 1995 and October, 1996.) The International Organization of Securities Commissions (IOSCO) has taken the leadership in bringing a greater transparency and order to global securities, currency, and futures markets. The "Big Four" accounting firms and hundreds of new companies are increasing environmental and social auditing of corporate performance. Many institutional investors and portfolio managers have joined with these business leaders and those which have signed on to the CERES (Coalition for Environmentally Responsible Economies) Principles, the Sullivan and McBride Principles, CAUX Principles, and those of the Minnesota Center for Corporate Responsibility. Much of this activity in assessing corporate performance owes its impetus to the pioneering work of New York's Council on Economic Priorities and its much-honored founder, Alice Tepper Marlin, and that of other innovators such as Amy Domini, author of *Socially Responsible Investing* (1987) and the Domini 400 Social Index, which regularly out-performs the Standard and Poors 500.

Some 90 percent of global industrial companies lobby to keep and capture standards at current levels while often succeeding in *reducing* their regulatory requirements. The other 10 percent are the "contrarians": i.e., the mostly smaller, younger, innovative enterprises, investment funds, venture capitalists, and investors already positioned in the cleaner "greener" social markets of the 21st century. These firms are also organized, but in less powerful trade associations. They lobby to *raise* global standards to higher levels of social and environmental accountability. Such trade associations include the U.S.-based Business for Social Responsibility, the Future 500, the Minnesota Center for Corporate Responsibility, the Social Venture Network (USA and Europe), the US and UK-based Social Investment Forum, the Prince of Wales Business Leaders Forum, the Copenhagen Centre for Social Responsibility, the Business Council for the Social Summit, the Caux Roundtable, and others. Newer efforts include The Task Force on Socially Responsible Business of the World Business Council For Sustainable Development. Such groups promulgating their own more stringent codes of conduct will only be credible as they are willing to be audited by the legions of accounting firms now offering social, environmental, and ethical audits. By thus raising the ethical floor under the global playing field these "contrarian" companies can win. Their analyses of their markets are systemic and future-oriented — rather than focused on traditional short-term economics and market returns. It is now urgent for all UN agencies to promulgate their own standards on human rights, labor, and environment in all contracts with private corporations, as UNICEF and UNESCO have done and UNDP is in the process of doing. This can help level the playing field to allow smaller, clean, green, ethical companies to compete.

Technologically, we are moving into the Age of Light, i.e., photonics. We must strive to make it a New Age of Enlightenment as well. (See Figure 3, "The Age of Light.") The dimensions of the Attention Economy (already 70% in services in the USA) continue to grow. The overall U.S. government expenditure percentage of GDP remains at some 33 percent. This figure would be much higher without the unpaid volunteer economy (some 89 million Americans volunteer at least 5 hours per week) tracked by the Washington-based think-tank, the Independent Sector. When the US economy is re-classified to fully reflect the growth of such attention-based services we can see the growth of the "attention sector" as part of this new pattern.[34] This new Attention Economy, much misunderstood by cyber-libertarians, still is based on energy and raw materials but subject to continual improvements in efficiency and minimization of material components over the past 15 years.[35] An expanded view of total productivity is shown in Figure 4, "Total Productivity System of an Industrial Society."

Beyond Asia, as more markets and businesses move into cyberspace, what are some key and broader implications? Let's start with electronic commerce. Most companies assume that money-based transactions will monopolize cyberspace through better security, encryption systems, credit card handling, and e-cash systems. However, electronic commerce does not *require* money-based transactions, but could lead to pure information-based transactions, i.e.

high-tech barter. The implications of this are clear: money and information are now equivalent — we are already off the money and gold standard and on the information standard worldwide. Banks thrive on money-based scarcity and, understandably, are trying to reintroduce scarcity into cyberspace transactions via their debit and credit cards. Yet today, billions of dollars of services and goods are bartered each year in the USA by corporations and individuals on PC-based electronic trading networks. The implications for the world's central bankers are clear: if they don't improve their currency issuance and monetary management and control operations — through overhauling the Bretton Woods institutions and making credit widely available, not just to their cronies in governments and corporations — then they will be bypassed by pure info-based transactions. Today's state-of-the-art computer-based markets in cyberspace can make such info-based, high-tech bartering efficient with minimal transaction costs. Developing countries will no longer need to earn foreign exchange but can trade all their commodities among themselves—doing three, four, five and six-way trades with the computers keeping the audit-trails as to settlement agreements (which is what money is and does). I have spelled out the implications of all this, including the need for three different kinds of currency: 1) a global reserve currency, 2) national currencies and monetary unions of them, where appropriate, and 3) local currencies to clear purely local markets.[36]

Nations will need to regain some of their lost sovereignty in order to maintain their political legitimacy and manage their domestic economies democratically for the benefit of the majority of their citizens. All this will now require international agreements to set up new "Bretton Woods-type" global mechanisms to protect human citizens, employees, and investors — not only paper financial institutions. The Global Securities and Exchange Commission can harmonize securities markets and their regulations — full disclosure, accounting protocols, safeguards against money-laundering, insider-trading, bear raids,[37] and the kind of speculations that helped threaten even the Hong Kong dollar and other well-managed currencies like Brazil's *real.* I expect a further shift to "safe haven," high-tech barter transactions both locally and globally. Local currencies and PC-based trading systems are flourishing in the USA, Canada, Europe, Australia, and New Zealand. Indeed, I have used them as leading indicators of the incompetence of central banks and macro-economic management authorities in many countries.

At the global level, tax-evaders are catered to by increasing numbers of usually small, island countries and regimes deliberately offering anonymity, dummy corporations, money-laundering, and tax-havens. Internet-based commerce and intranet-based trading make all of this easier.[38] Nation-states, now

Figure 3

The Age of Light

Emerging Lightwave Technologies (**PHOTONICS**)

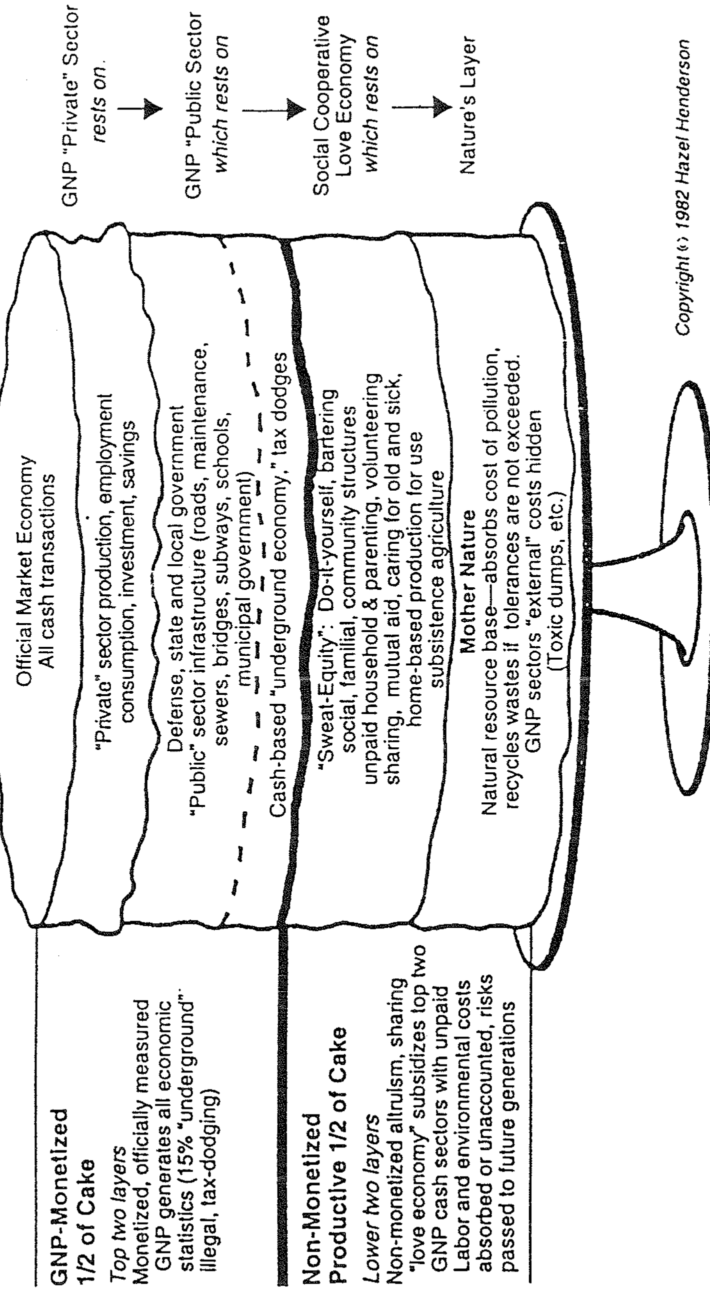
• Fiber optics	...communications cabling, voice, data, etc.
• Optical scanners	...supermarkets, banks, on-line computer systems
• Lasers	...laser surgery, laser printers, laser phonographs turntables, laser bottles to see atoms, laser propulsion, Star Wars laser weapons systems, laser art
• Holography	...computer assisted design (CAD), computer assisted manufacturing (CAM), computer integrated manufacturing (CIM), art
• Solar technologies	...passive solar heating and cooling, Trombe walls, solar-thermal energy conversion, ocean thermal, tidal and wave power, bio-energy conversion, hydroponics, aquaculture, solar reflector "power towers," photochemical conversion (artificial and natural photosynthesis), photovoltaics, solar cell arrays for powering satellites, space based solar collectors, solar sails for deep space voyages
• Optical computers	...use light pulses instead of electrical impulses—pushing toward the speed of light
• Multiprocessor, parallel computers and neural net computers	...very fast architecture allows simultaneous, rather than sequential processing, speech and voice recognition, language and artificial intelligence (AI) applications
• Imaging technologies	...TV images, liquid crystal screens, magnetic imaging diagnostics
• Biotechnologies	...gene splicing, designing, molecular engineering, medical diagnostics, immunology, tissue culture, cloning, plant hybridization and "re-designing", and bio-remediation
• Gene machines	...which automate the synthetic assembly of genes
• DNA sequencers	...which "speed read" the DNA code in cells
• Tagging and tracking chemicals and genes	...using luciferase, etc.
• Nano technologies	...molecular "machines" to assemble, repair molecules, in many diverse ways (e.g. theories of Eric Drexler in *Engines of Creation*, 1986)

Photons (sunlight) falling on the earth supply enough energy in 10 minutes to put our entire five billion population in orbit!

Source : Hazel Handerson, PARADIGMS IN PROGRESS, 1991.

Figure 4

Total Productive System of an Industrial Society (Three-Layer Cake with Icing)



Source: The Politics of the Solar Age H.Henderson,1988 with chronic budget deficits due to tax-losses from deregulation, are breaking up. Conservative financial advisors are telling investors how to move offshore, obtain duplicate passports and dual citizenship, buy small islands, and other maneuvers to evade taxation. The continued growth of electronic commerce into today's autonomous global casino will continue to erode the power of governments while also denying them the tax revenues they formerly received from domestic bricks and mortar commerce. On the national and micro-level, the tax issue will involve a fight for equitable tax treatment between traditional bricks and mortar businesses and those in cyberspace.[39] There are already two kinds of Web-based businesses: those which *link and empower* existing bricks and mortar retailers (such as those in the jewelry business linked on the Colorado-based, worldwide POLYGON Network) —and those which *bypass* bricks and mortar local, retail businesses (such as bookseller, AMAZON.COM). When the Clinton administration, prematurely pandering to the "digerati sector," announced that it would not tax transactions on the Internet — it heard an instant chorus of complaints from state governments and the bricks and mortar businesses across the USA, which might thus be condemned to penury. Yet, the Internet itself is very fragile, with a few voluntary standard-setters and little legal underpinning to protect the growing global activity it carries, as I outlined at the Comdex Computer Convention on April 21 in Chicago.

Global financial markets are now in a new domain of volatility on which traders thrive. U.S. Federal Reserve Chairman Alan Greenspan has pointed to the preponderance of market players who now benefit from this volatility. This continued volatility will bring acceleration of the efforts of G-8 leaders to cobble together a rudimentary Global Securities and Exchange Commission. After the UN Kyoto Climate Conference in December 1997, a new Bretton Woods-type institution, the International Bank for Environmental Settlements,[40] emerged from the deliberations, and will be discussed further in Buenos Aires in late 1998. I urge you to go to hear about this new "Green IMF" from its founder, Professor Graciela Chichilnisky. This new Bank would be governed by all signatory nations, allocated carbon credits and debits between nations (hopefully, on an equitable, per-capita basis), and eventually oversee an electronic derivatives exchange for environmental commodities, including water and biodiversity. So far, such emissions trading in the USA has been unfair, since the government *gave only polluters* these rights to trade their sulphur dioxide emissions — thus penalizing everyone else, including "greener" companies. I also expect central bankers will wise up and stop sitting around the same table in the global casino with profit-maximizing currency traders speculating on large margins. The central banks may decide that their role as protectors of their nations' currency demands that they set up their own FXE with the United Nations (UN) and the Bretton Woods institutions as a "public utility"-with specifically designed state-of-the-art electronic trading systems and audit trails.[41] These could be designed to capture information on money-laundering and speculative movements while offering systems for user-fees and circuit-breakers.[42] Instead of reliance on now ineffective open-market buying operations, interest rate hikes, and the domestic recessions they engender, central banks can use such new tools. There is no reason central banks cannot manage their currencies and financial markets as closely as they manage their sovereign bonds. Chile and China have shown how some restrictions on "hot money" work well.

Lastly, new global systems of political risk-management are now possible, which can reduce the world's military budgets — by employing insurance instead of weapons. For example, the Global Commission to Fund the United Nations, has proposed the United Nations Security Insurance Agency (UNSIA), a public-private-civic partnership between the UN Security Council, the insurance industry and the hundreds of civic, humanitarian organizations worldwide which engage in conflict-resolution and peace-building.[43] Any nation wanting to cut its military budget and redeploy its investments into its civilian sectors could apply to UNSIA for a peace-keeping "insurance policy." The insurance industry would supply the political-risk assessors and write the policies. The "premiums" would be pooled to fund both properly-trained peace-keepers and a rapid-deployment, on-line network of existing civic, humanitarian organizations "on the ground" to build trust and confidence. The UNSIA proposal is now backed by several Nobel Prize winners, including Dr. Oscar Arias and other leaders, is taught at the London School of Economics and other major institutions. UNSIA was debated in the UN Security Council in April, 1996, the first time that body had considered the need to bring civic humanitarian organizations into peace-keeping operations. In May 1996, the Security Council called on the Secretary General to investigate the feasibility of " a rapid-deployment humanitarian force" and, in October 1996, the Norwegian government pledged $1 million to this project.

Finally, I am delighted that global, multi-cultural public access TV is now a reality. Here again, Canada has provided global leadership in launching WETV (the WE stands for "We the People" and the "Whole Earth"). Citizens in mediocracies and Attention Economies are already sick of much of the content of online, cable, and broadcast media. They demand more useful content and coverage of community problem-solving, higher quality entertainment, education, and children's programming. WETV, headquartered in Ottawa, is a pudlic-private-civic network with a state- of-the-art multi-media backbone now in 30 countries with programming for human development--allowing self expression from NGOs and the grassroots on global and local issues. We are learning that cultural diversity is as important as bio-diversity, and both are the bedrock wealth of nations. WETV is growing through program-bartering and partnering with similar media. Funded by the humanitarian aid programs of seven countries, led by Canada's IDRC, WETV has obtained rights to all UN television programming and that of many other public service producers. WETV is now opening some ownership to private investors and I am proud to be one of its first. As a member of its Business Advisory Council, I am now working to bring in other socially responsible investors and businesses who will accept WETV's stringent code of conduct and standards for all private sector partners. Even more innovative is WETV's proposal for equity participation by civic groups and NGOs which provide programming for WETV distribution. This kind of entitlement to shares in WETV can both incentivize their audience-building outreach and earn dividends when WETV is profitable. Such creative hybrids as WETV are typical of Information Age-based companies and can open up new grassroots, multi-cultural communications far beyond the reach of the Internet alone (still unavailable to most people in the world).[44]

Companies and countries are shifting slowly from obsolete textbook economics, focusing on competitive, money-based individual, self-maximizing behavior as that of "rational actors" while ignoring (and thereby punishing) altruism, volunteering, cooperation, sharing and caring (that estimated $16 trillion worth of production of goods and services simply missing from annual global GDP statistics, see Figure 4). In all other social sciences, including psychology, sociology, anthropology, game theory, systems and decision sciences, the full repertoire of human behavior from competition to cooperation is acknowledged and studied (see Figure 2). Only in market economics, which is the predominant driving theory underlying GNP growth and the globalization of markets finance and trade, is the focus only on competition, i.e., "win-lose" strategies. Expanding to a multidisciplinary focus for both domestic and globalization policies can reveal all the positive-sum, "win-win" games, the new public/private/civic partnerships and new strategies that can help all actors imagine, develop, and build toward a win-win world in the next century. (See Figure 5, "Exploring the Evolving Global Playing Field.") Humans must now acknowledge their responsibility for their active roles in the evolution of societies. Today, in a world we have made increasingly interdependent, we are learning the differences between money and wealth and finding that, in a planetary context, all our self interests are identical. Ethical investing and socially responsible business have simply become pragmatic.

Figure 5 Exploring the Evolving Global Playing Field

New markets	New commons
•Telecom service	•Space, Earth systems science
•Desert greening	•Electromagnetic spectrum
•Pullution control	•Oceans, water resourced
•Renewable energy	•Atmosphere, ozone keeping
•Recycling, eco-resource management	•Security, peace keeping
•"Caring"sector (day care, counseling, re-hab, nursing)	•Forests
•Infrastructure(exlending transport, telecommunication,etc)	•Health
•Eco-restoration, bio-remediation	•Global economy

Notes

1. The Robert Mundell and J. Marcus Fleming model (IMF Staff Papers, 1962) essentially showed that governments and central banks overseeing open economies cannot simultaneously maintain 1) the independence of their domestic monetary policies, 2) stable exchange rates, and 3) uncontrolled global capital flows.
2. See, for example, Oskar Morgenstern, Jacques Rueff, and Bertil Ohlin in Ragnar Nurske, *Report of the Delegation on Economic Depressions*, Parts I, II, and III, League of Nations, Geneva (1944).
3. See Hazel Henderson, *Creating Alternative Futures* (1978, 1996), *The Politics of the Solar Age* (1981, 1988), and *Paradigms in Progress* (1991, 1995).
4. See, for example, J. Orstrom Moller, *The Future European Model* (1995), Praeger/Greenwood, Westport, Connecticut; and Samuel Huntington, "Clash of Civilizations," *Foreign Affairs*, Summer 1993, Vol. 72, No. 3.
5. *Ibid., The Politics of the Solar Age.*
6. See, for example, Joshua M. Epstein and Robert Axtell, *Growing Artificial Societies*, the 2050 Project of Brookings Institution, The Santa Fe Institute, and the World Resources Insitute, MIT Press, 1996; and Richard J. Pryor et al., "Aspen Model," Sandia National Labs, New Mexico, USA.
7. The United Nations University pioneered such work, for example, the Proceedings of its 1984 Symposium in Montpelier, France, *The Science and Praxis of Complexity* (Tokyo, Japan).
8. See Henderson and Kay, "Introducing Competition to Global Currency Markets," *Futures*, UK, 1996.
9. "Investment Banking: From Riches to Rags," *The Economist*, May 9, 1998, p. 75.
10. *Business Week*, March 9, 1998.
11. *WIRED*, May/June 1997.
12. See, for example, John B. Guerard, Jr., "Is There a Cost to being Socially Responsible in Investing? (which found no significant difference), Vantage Global Advisors, Inc., New York, NY, 1996."
13. Social Investment Forum, Washington, DC, 1997.
14. See Stephan Schmidheiny et al., *Financing Change*, MIT Press, 1996
15. See my *Politics of the Solar Age*, 1988.

16. H. Henderson, *Building a Win-Win World* (McGraw-Hill UK, 1996, 1997), Chapter 5.
17. Merck Foundation, Harwood Group, Silver Spring, Maryland, USA (1995).
18. See H. Henderson, "Transnational Corporations and Global Citizenship," UNRISD, Geneva, September 1996.
19. *The Economist*, "Thoroughly Modern Mercantilists," February 1, 1997, pg. 25.
20. See, for example, Alan F. Kay, *Locating Consensus for Democracy*, Americans Talk Issues Foundation (forthcoming, 1998).
21. *The Economist*, February 14, 1998.
22. *Ecological Economics*, "Economic Growth Carrying Capacity and the Environment, " critiques of the so-called Environmental Kuznets Curve assumptions, Vol. 15, No. 2, Elsevier Science, Amsterdam, November 1995.
23. *The Economist*, February 14, 1998, pg. 37.
24. See, for example, Franklin E. Edwards, *The New Finance: Regulation and Financial Stability*, American Enterprise Institute, Washington, DC (1996).
25. The U.S. General Accounting Office, *Financial Derivatives: Actions Needed to Protect the Financial System*, Government Printing Office, Washington, DC (1994).
26. See, for example, Louis W. Pauly, *Who Elected the Bankers: Surveillance and Control in the World Economy*, Cornell University Press, Ithaca, New York (1997); and Henry Kaufman, "Structural Changes in Financial Markets," *Economic Review*, Federal Reserve Bank of Kansas City, 2nd Quarter, 1994.
27. *Foreign Affairs*, "Refocusing the IMF," Martin Feldstein, March/April 1998, pg. 20.
28. *Business Week*, March 9, 1998.
29. *The Economist*, "Cleaning Up Dirty Money," July 26, 1997, pg. 18.
30. 3284 Yonge Street, Suite 500, Toronto, Ontario M4N 3M7 Canada. e-mail: wkrehm@ibm.net
31. See its first report, *The United Nations: Policy and Financing Alternatives* (U.S. edition, 1996; UK edition, Elsevier Science Ltd. UK, 1995), co-edited by Harlan Cleveland, Hazel Henderson, and Inge Kaul.
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33. *Ibid.*, Franklin Edwards.
34. See *WIRED*, "New Rules for the New Economy," December 1997, and "Encyclopedia of the New Economy," March 1998.
35. See, for example, *Factor Four*, Ernst von Weiszacker, Amory and Hunter Lovins, Wuppertal Institute, Germany, 1995.
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