

Action is Understanding

Global System Collapse:
The Causal Mechanism and Alternative

Keynote Address

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The destabilization of the world's climate and hydrological cycles is a catastrophic effect of a more general disorder to which it is not connected - the failed global market experiment and its regulating money-value system which brings degradation and despoliation of human life and life support systems at virtually every level of life organization.

At the turn of the millennium, the ecological data and trends already indicated a planetary life-system collapse, and I share a record I made then.¹ The profile is Easter-Island-like on a world scale. "Almost 100 acres of the earth's mantle of rainforest is cut every minute, while an estimated two hundred species go extinct every day from sea and land habitat destruction, at least 1000 times the background evolutionary rate."² Accumulating air and atmospheric pollutions increasingly unleash unprecedented floods, mudslides and wind-storms across continents, make the sunlight carcinogenic, and kills increasing hundreds of thousands of people a year by respiratory diseases.³ Stratospheric ozone depletion by industrial pollutants transmutes the sun's rays into an ultra-violet blaze that destroys amphibians' capacity to reproduce and the phytoplankton which forms the base of the ocean food chain. On the earth's mantle, twenty-six billion tons of topsoil are lost to soil erosion every year across 50 per cent of the world's remaining arable land.⁴ More than 60,000 square kilometres of land in over 100 countries becomes desert annually, hastened by the global warming caused by man-made effluents which have risen 16-fold in the past 30 years.⁵ The world's coastal waters and coral ecosystems bearing the most biologically rich life-zones of the planet are increasingly destroyed by pesticide and fertilizer-run-offs and water-temperature and atmospheric changes - with over three quarters of the world's coral reefs, which host 25% of all fish species, in catastrophic dieback.⁶ The ocean bottoms themselves are strip-mined of fish and aquatic life across vast tracts by factory-trawlers that drag the ocean floors for marketable fish stock whose take has increased more than fourfold in the four decades, and which has led to the collapse of 16 of the world's 17 major ocean fisheries.⁷ Above the ocean, three-quarters of all bird species are in decline, one of every four mammals is endangered, and one-third of plant species is extinct or threatened with extinction. Water tables and fresh water sources are so depleted and polluted so that the United Nations estimates that two-thirds of the world will be short of water by 2025.⁸ The polar icecaps are rapidly melting - 40% of the Arctic ice have already liquified- and threaten coastal communities and ecologies with the rising sea-levels they cause, dragging more nutrients, organochlorines and heavy metals into rivers, leaching waste-site and sewer toxins, bacteria and viruses into the seas, and destroying wetlands which act as the earth's natural water-filtering system.⁹ A

continent-sized hole in the stratospheric ozone layer persists and grows, acid and carbon loads stored in polar ice are unlocked, and the United Nations Intergovernmental Panel on Climate Change predicts progressively extreme floods, storms, droughts and infectious diseases as global temperatures continue to rise from atmospheric gases and industrial emissions.¹⁰ Synergistic interrelations of these simultaneously increasing loads will likely compound their destructive toll.”

Despite all these documented signs of money-capital globalization as ecocidal in nature, not one effective change in the causal mechanism has been instituted. On the contrary, corporate media and parties in power continue to hymn the need to compete harder in driving the terrestrial life-system collapse - including in particular the Bush administration and its Northern incubus, the Harper Reform group mutated as Conservative.

At the symptomatic level, the false opposition between “the environment” on the one hand, and “the economy” on the other, when the one is the material condition of the other, reveals the metaphysical disconnect which rules us. Indeed, the very conception of this system as “the economy” is absurd. For its absolute global imperative to turn private money into ever more money for money possessors alone is a fanatical sectarianism. That this spectacularly diseconomic regime - by far the most wasteful and destructive of life support systems in history - is still assumed to be “the economy” indicates how far the reversal of reality has become assumed as a factual given.¹¹

Understanding the Causal Mechanism From Inside

There is a common pattern to historical catastrophes over millennia, none of them as deep-structurally ruinous of life support systems as this. We have seen it in mass-murderous phenomena like the Mongol reign of terror across Asia, transnational Roman Church Inquisitions across Europe, ecogenocides in the Americas over centuries, and - dare I say it - in Iraq and Palestine in our own time. Life-blind rule is capable of imposing any catastrophe on peoples because its is driven - I quote from my definition in forthcoming Sage Encyclopedia of Case Study Research - by “a screening system of thought which is defined and recognized by a set of properties across cultures and macro-micro cases: (i) a ruling set of *group presuppositions* which are conceived to be (ii) *as given as the structure of the world* and (iii) *demand the compliance of each for collective survival* so as to (iv) *frame social ideation and communication* to (v) *select only for what confirms this order* and to (vi) *block or invalidate whatever does not* to (vii) *generate stereotypes or myths as replacement standards* which (viii) *only enemies or inferiors reject* who (ix) *are variously attacked to sustain or extend the group’s ruling value program*. While this set of characteristics is diversely expressed and admits of *polar degrees of rigidity and extreme of harm* by its operations the ruling group-mind is a discrete unitary mechanism whose interlocking operations constitute (x) *a life-blind mind-set of mutual understanding and self-identity of group members*.

The Bush regime, along with its Harper occupier - Harper declared at his 2006 Canadian press

conference with Bush that “Canadian and American values are exactly the same” - are contemporary examples of its reigning blindness. Harper has, indeed, gone further than Bush in denouncing even the widely instituted carbon tax to mitigate the rising climate catastrophe as “crazy”.

These diagnostic criteria explain what does not otherwise make sense. Genocides of foreign or alien peoples in the name of divine sanction or necessary defence; enslaving of other cultures or races as uplifting them in the name of civilization; subjugating women to beast-of-burden status as natural and virtuous social order across millennia; and now systematic sacrifice of environments and countless people to corporate globalization are successive disorders of the ruling group-mind. A philosophical godfather of the current fanaticism is Leo Strauss who has long been a teacher of academic members of the US National Security Committee. Strauss weaves his argument from the works of Plato, Hobbes, Locke, Nietzsche and Max Weber to validate private capital rule as grounded in the laws of nature prior to any national or international order. In place of God or international law, he affirms the primordial “natural right of our own group” to assert global dominion over all else by increasing force and scale of organizational command.

As with this ruling paradigm in all its forms of expression, the destruction of countless lives, cultures and ecological orders is bracketed out of human concern. At bottom, only more commodities and greater scales of productive powers count. A strange oneness with Stalinist productivity as directive mechanism silently bonds meaning - but from the standpoint of “our own group”, the capitalist class, rather than the workers. “The spirit of capitalism”, Strauss writes in *Natural Right and History* (1957, p. 60) is “rightly identified with the view that limitless accumulation of capital and profitable investment of capital is a moral duty, perhaps the highest moral duty”.

The Money Code of Value as Meta Program

In the more exactly planned money-capitalist mechanism, global humanity is reduced to an aggregate pool of desires to stimulate increase of sales and profits to private transnational corporations and corresponding votes for business party brands to run government. The winner of these contests then variously strips government of its public-interest functions outside of the corporate money market : most recently by ever more tax cuts to pump-prime and extend private money-capital accumulation and market demand. This requires defunding civilian public sectors and further degrading the public’s capacities to protect shared life support systems.

The world is, in a word, reduced to a limitless marketing site for more money and commodities for fewer money possessors as the meaning of terrestrial existence. That, for example, three billionnaires in the global market have more money wealth than the total incomes of the 48 least-developed countries whose people and environments are most of all devastated by the system remains represented as “spreading freedom, democracy and wealth around the world”. Thus no effectively corrective action is taken on any level. The life-blind creed is locked in.

How does such a rapacious mechanism go on without more insurgency against it? One tactic is to not report the global resistance or to demonize it, especially after 9-11 when the pretext was officially set for making any opponent who resisted a “terrorist”. For the rest, humanity who always hopes for transformation to higher life is reduced by the media of mass communication to a mass ad-hook to sell and sportscast the system around the clock. The plan in recent days to transfer up to a trillion dollars of public money to non-productive Wall Street money-sequencers for leading the run of the American economy into bankruptcy is yet another sign of the extent to which this global looting system has occupied governments as above the law and accountable to nothing but itself.¹²

The Theoretical Base of the Money-Capital Mechanism

The eminent theoretical economist, Nicholas Georgescu-Roegen, long ago disclosed a fundamental feature of the ruling diseconomy. [Its] mechanics”, he begins, “knows only locomotion, and locomotion is both reversible and qualityless”- that is to say, a-priori life-blind . Yet this “drawback”, he continues, “was built into modern economics by its founders”.¹³ Georgescu-Roegen goes on to explain that the Second Law of Thermodynamics is thereby forgotten, and the propensity of free energy to become unavailable after utilization is blinkered out. Thus it follows straightforwardly that this new economic system increases entropy as it uses up non-renewable fuels. Georgescu-Roegen observes: “*According to this new discipline a pile of ashes may very well become capable of heating the boiler [again]. Also, a corpse may resuscitate to lead a second life in exactly the reversed order of the first.*”¹⁴

As the mechanical money-circuit model is universalised to all existence, a totalitarian reality follows in accordance with two primary principles:

(1) *All that exists on earth is a potential site for invasion of this perpetual motion mechanism of money-into-more money demand* (eg., genes, water, available energy supplies, climate destabilization and social injustice themselves: observe how in one way or another all are money-sequenced for private-profit sustainability and market growth).

(2) *Whatever is not a priced product for profitable exchange must become one as the condition of its future funding and existence* (eg., public health, education, pensions, and all social life support systems: observe how no domain of life remains free from this commodification for profit with armed or media war against any society which which resists).

Thus the Bush administration has declared at the head of the world empire of money sequencing that “the market is the best safeguard of the environment”: to which the Bush-North Harper regime naturally agrees, and by which the policies of such predecessors as Newt Gingrich and Mike Harris are perpetuated in new forms. And so the new Director of the U.S. Environmental Protection Agency proclaims “more progress, faster” for “national competitiveness” to bear environmental fruit.¹⁵ New initiatives are thus set in motion for deregulated oil extraction in the

Arctic National Wildlife Refuge, logging of national forest habitats, drilling protected Rocky Mountain areas, reducing oil pollution measures, reversing legislation habitat and river protections, turning over more management of the environment to the for-profit industries exploiting it, and refusing to honour U.S. signing of the Kyoto Accord. Again, the Harper administration in Canada directed by the same transnational corporate group-mind follows in tow by presiding over the world's biggest point-source of carbon pollution in the Alberta tar sands, and now silently gutting Canada's historic and only effective environmental legislation of the Fisheries Act at the same time.¹⁶ Throughout, major oil and energy businesses like ExxonMobile fund endless "doubt studies" of global overheating which the corporate-ad media publicize to their mass-market sites, with a new class of for-rent academics providing lushly funded denial science. Throughout euphemisms replaced reality with cozy and misleading descriptors like "warming" and "change" in place of "destabilization".

The Taboo Zone

The one taboo across economic, political and policy-forming bodies - including the U.N. - is any limit on money-capital and corporate-commodity invasions into any domain from which private corporations, banks and syndicates can generate more profit. Most abhorred are directly enforced government standards to protect the common life interest of society. All are "despotic" to the ruling group-mind, and are eradicated wherever possible (as in long effective performance requirements which have been declared illegal under compulsory trade-treaty edicts since the FTA). This is why even as the climate catastrophe is being built into the planetary life-host as irreversible, the known strategy of *rations* on carbon to prevent wasteful use and pollution is unthinkable within the ruling mind-set.¹⁷

The policy of rationing comes from the word "ratio", meaning rationality, while the principle of "economic efficiency" means "absence of waste" - a perfect match of reason and economy. Ration against massive waste and despoliation of humanity life conditions. Self-evident necessity, however, is unthinkable within the lock-step of the global market mechanism. Any publicly prescribed conservation to stop wasteful and unneeded carbon-emitting production or consumption - whose elimination would in fact make people's lives dramatically healthier and quieter, without no loss but only great gain of life goods - is an unspeakable resolution. Not even the Suzuki Foundation mentions the R-word. To stop the squandering of short fossil fuels by the rich and ignorant wasting it on their gas-guzzling products, habits and luxuries which pollute other people's air, the water, the soil and hearing fields is heresy.

If the stock response is that "*who is to decide what is needed?*", the answer is no-one. A need is that without which organic life capacity is reduced - an objective fact in every case of need. If what burns oil in its commodity cycle of extraction-to-trash reduces life capacities rather than increasing them (as all unneeded oil-and-gas squandering now poisoning the earth at every stage), it should be rationed out. It is an attack on the common life interest in exact proportion to its degradation, destabilization and destruction of life and life support systems.

Instead, we are confronted by the ruling mind-lock. Even the most educated citizens promote “revenue neutral carbon taxes” which make no distinctions between waste and economy or need and luxury, give away the revenues required for public investment at the same time, and do not solve the problem. Or they seek highly expensive and untried sequestration schemes which do not stop the waste, may be disastrous to life support systems, and do not solve the problem of rising volumes. Or desperate schemes to block the sun and dump iron filings into the ocean are floated by the same techno-market magical thinking to which real economy is anathema.

Real Economy the Solution

On the other hand natural biosequestration by (i) *radically reducing deforestation and land clearing* (accounting for up to 25% of global emission of heat-trapping gases) is life-system coherent, as are (ii) *more tree and plant photosynthesis*, (iii) *organic agriculture replacing factory farming*, and (iv) *consumer and business rations rigorously selecting against unneeded waste and pollution by fossil fuel cycles*.

Each and all are real-economy solutions, and admit of schedules of ascension for smooth implementation. Each and all build up degraded and at-risk life support systems instead of throwing more life-blind techno-market remedies at their cumulative collapse. And, as this paper explains ahead, the exact methodological shift of rationality and science towards life-system coherence is the missing link of understanding from which all ecologically and morally sound remedies follow.

In the wider picture of human life conditions and flourishing, real economy makes the world a far better place to live. In fact, there is no life loss by these measures, only life gain of the most far-reaching kinds. Our air, our atmosphere, our sound fields, our soil, our bodies of water, the habitats of fellow life, our sightlines and rural beauty, the liveability of our cities - all are made undeniably better. The only loss is of gluttony. Only acceptance of a fanatical value-program can explain the structural ignorance of our condition which has persisted so long and deeply. Such is our captivity. As Steve Biko said before he died and Apartheid came down: “The greatest weapon the oppressor has is the mind of the oppressed”.

Cycling Within the Closed Mind

For the most part, the mind of oppressor and oppressed remain locked in. The resolution at this stage is to produce another global market panacea on top of the failed one - namely, by government handouts of rights-to-pollute to large-scale polluters to trade for profit - with no demonstrated effect of reducing the carbon emissions which, in fact, continue to rise. The “enormous new market in greenhouse emission rights” instituted by 167 nations at the climate conference in Morocco in 2001 has been the lead UN policy, but continues to operate within the framework of the corporate market mechanism which has produced the disaster. In silenced fact, the fast-developing “environmental futures market” is (I quote) structured to engender “huge profits from selling carbon dioxide absorption to polluters” by new global businesses for

“storage” of the primary pollutant, rather than reducing their outputs. Dr. Hermann Ott, Director of the Wuppertal Institute for Climate, Environment and Energy in Germany observes: “We have no idea what reactions might be triggered [beyond the new market in pollution rights]. These CO² deposits could have a far-reaching effect on the [oceanic] food chain, for example”.¹⁸

A major study of a U.N.-brokered market in carbon offsets in place of mandated reduction - falsely promoted as the Kyoto “Clean Development Mechanism” - finds that, in fact, “between one and two thirds of all the CDM offsets do not represent actual emission cuts”.¹⁹ What has happened instead is that a market in carbon credits has developed in which European corporations and governments which avoid meeting their carbon caps merely buy credits in which certifications of offsets in developing countries are routinely abused by further unaccountable corporations in the chemical, wind, gas and hydro businesses. Once again, a profitable transnational market - worth over \$100 billion within four years - replaces actual carbon cuts.

Market magic always substitutes for collective action. Critical response now moves to “*personal carbon trading*” as the solution within the group-mind circle with no end - one more marketing solution many times more complicated and less effective than what is needed by human and planetary life-organization to survive.

Avoiding the Causal Mechanism

It is over 20 years since the Brundtland Commission, and almost a decade since over 200 hundred scientists of the UN Inter-Governmental Panel on Climate Change predicted that “millions of people worldwide will die” from climate change induced by still- increasing greenhouse gas emissions combined with cumulative weakening of natural absorptive capacities.²⁰ Yet the eminent scientists did not connect these systemic and lethal disasters to their prior causal structure, the “five-to-ten times industrial market growth” approved by the Brundtland Report itself - more specifically, the money-capitalist system of growth with no planning. This is the material causal mechanism which it is also taboo to see. When the climatologists strongly concluded that “we deplore the lack of serious political action to address this issue and we deplore attempts by many large corporations to block meaningful change”, they recognise the *symptoms* of the ruling global disorder, but not the system-deciding causal mechanism itself.

Jared Diamond’s celebrated work, *Collapse* appears to finally confront the situation judging by his title.²¹ But he sustains the ruling group-mind even as he reports the problem. He provides an impressive global documentation of ecosystem collapse, but systematically evades connecting structural cause and effects - as indicated by his single-pointed focus on China in entries under the index category of “globalization and environmental problems” (pp. 358-59, 369-73), and his incoherent standpoint that “globalization means nothing more than improved worldwide communications”(p. 517).

The ecological collapse is, in fact, built into the ruling diseconomy as its long-term effect. For

the air we breathe, the ozone-mediated sun most life requires, the water all life needs, the forests which provide the earth's lungs and flood control, and the ecosystems which circulate nutrients, store carbon, assimilate wastes, regulate climates, and host biodiversity are all blinkered out of its life-blind value calculus a priori.

Adapt or Die: From the Structure of Social Injustice to Inventing the Enemy

In a recent article in the business leader and free-trader flagship, *The Economist*, led by the kicker “Climate change and the poor”, reports the generic facts of social injustice wrought upon the poor by the climate catastrophe, avoiding as always the causal mechanism.

Evidence is growing that climate change [sic] hits two specific groups of people disproportionately and unfairly. They are the poorest of the poor and those living in island states: 1 billion people in 100 countries. - - - The first impact of global warming has been on the very things the poorest depend on most: dry-land agriculture, tropical forests, subsistence fishing - - - Global warming erodes coastlines, spreads pests and waterborne diseases and produces more erratic weather patterns - - - They are too poor to defend themselves - - and their own carbon footprints are tiny - - [Thus] the poorest pay for behaviour of the rich.²²

These observations are surprisingly critical for the *Economist*. Yet there is no hint of the global market disorder itself being adapted to meet the problem. Rather, the title conclusion of the article is, “Adapt or Die”. The logic of fanaticism remains constant. It is better to sacrifice hundreds of millions of people and continue the collapse of the planetary ecosystem than to question or change the global corporate system propelling the catastrophe. It abhors any community but itself. As for the mass-homicidal injustice, the alternatives are clear. Either the victims adapt, or they die. All follows from the deranged first premise of this value calculus - that anything but money cost to business is an “externality” and counts for nothing. What is called “economics” is in fact the logic of ecogenocide.

Not only the poor one billion people suffer. All of the life-support conditions we depend on for continued breathing, our inner metabolisms, our sense fields of life, our livelihoods, our vital relations with the world are systematically re-engineered, occupied or bought and sold for price and profit until they are so depredated they cease to function.

A nameless terror beneath consciousness thus permeates the world - the mysterious “feel bad factor” which even the OECD has observed.²³ What outlet can there be for this growing life insecurity can be found? The answer is that terror is projected onto the Other - the movements of the dispossessed themselves against the oppressors and their life-blind system. *The deep law of social injustice is: whatever is a barrier to global market growth must be sacrificed or eradicated.* Whatever provides people with goods without a private price - all of Nature and the evolved civil commons of social infrastructures is, therefore, attacked as “protectionist”, “market distorting”, “a monopoly”, and “despotic”.²⁴ Whatever dares to oppose the waste-mechanism

with an *economic alternative* is evil - and so is warred upon, as the socialist infrastructure of Iraq that led the Middle East despite the rule of the CIA asset, Saddam Hussein, and now the *pueblo protagonico* of Venezuela.

Surely Rationality Will Save Us

Deeper analysis discloses five distinct steps set of controlling assumption which are not distinguished or justified: (i) *self-maximizing strategies in (ii) conditions of scarcity or conflict over (iii) desired payoffs at (iv) minimum costs for the self to (v) succeed or win*. This is the unrecognized meta-program of what is called “rationality”. Yet without notice it leads the collapse of global economic, social and ecological systems as the ruling strategic calculus. This is why research for high-end destructive weapons, mass consumables which deplete human health, and oil-consuming, polluting and carcinogenic commodities and additives and life-blind mega projects multiply in deleterious effects with no feedback loop of scientific recognition or principled correction of them. Contra-indicative phenomena on life-system levels are thus blocked out. “Peer-reviewed science” within this mechanism becomes a cudgel to silence independent criticism. In the background, pervasive invocations of “the necessity to compete in the global market” drown out voices of opposition. The test of its hold is to try to find any exception to its dominion in *any* decision structure across disciplines, institutions and domains of power.

The instituted protection of academic freedom itself is not free of its rule -with the contemporary academic career structured to a self-maximizing career path where many compete for scarce goods to achieve rank and income over others at minimum cost to self. The question, “What choice is there?” reveals the depth of the disorder. In fact, the true academic vocation entails an opposite set of regulating principles at every step: (i) *to maximize learning advancement and dissemination by (ii) knowledge sharing without limit for (iii) understanding as value in itself at (iv) any cost of difficulty to (v) develop humanity’s more inclusive comprehension of natural and human phenomena*.

Amartya Sen comes closest to moving beyond the limitlessly self-maximizing atoms of economic rationality in his aptly titled article “Rational Fools” (Sen, 1977, 317-44) which points out that “self-maximization” for individual choosers admits of other alternatives than more pecuniary payoffs to oneself.²⁵ Yet Sen simply blinkers out the money-capitalist system which affords no such alternatives within its mechanisms. When Sen comes to win the Nobel Prize for Economics decades later, it is clear that he still does not think in system terms beyond private choosers. The actually regulating money-capital system remains abstracted out along, and no public-choice alternatives are conceived. As analysis of the text and monumental bibliography of Sen’s Nobel Prize Lecture, “The Possibility of Social Choice” (1998), demonstrates, his conception of social choice does not include rational collective agency stewarding the capitalist system itself - for example, by binding life standards built into the market’s exchange mechanisms by constitutional public authority.²⁶

All including Sen remain confined within the neoclassical metaphysic of atomic selves and

aggregated private preferences. Common life grounds and cooperative agency of decision are thus screened out in principle. Two instituted errors of rational choice and comprehension are thereby locked into ruling conception without notice: (1) *A fallacy of division is built into the reigning framework of rationality which cannot be detected from within it* (i.e., social choice is fallaciously reduced to the sum of the private choices of the separate individuals constituting the social organization); while simultaneously (2) *social life standards to rationally regulate choices to cohere with the enabling rather than the disabling of life systems are blinkered out a-priori*.

The original modern-to-contemporary turn of this atomic-choice mechanism is nicely formulated by Frances Edgeworth without the usual mystification of premises. A founder of neoclassical theory, he explains this ruling paradigm of logico-mathematical life-blindness in one crystalline sentence: “The conception of man as a *pleasure machine* [driven by self-maximization alone]”, he writes, “may justify and facilitate the employment of *mechanical terms and mathematical reasoning* in social science”.²⁷

In exquisite core irony, a ruling value mechanism which seeks to subjugate the academy as everything else is assumed as the defining inner logic of “individual free choice”. Few notice that the “individual freedom” of homogeneously self-maximizing atoms within a mechanical system is a contradiction in terms. All are expected to self-maximize; to prefer always more to less money; to compete in the market with whomever desires what one also wants; to know that there is no standard of value that can overrule the rules of the game; to accept that one is born into it and goes where one is assigned with no moral claims beyond its order; to accept the options and outcomes as they are set to maximize one’s own position; to hold one’s course of choice consistently to succeed; to not worry about others or what is not your assigned job; to stick to one’s place within the given order; and to not expect that any who are better positioned have contributed more to human life or need what they have.

Decoding Our Condition: True versus False Rationality and Science

Rationality of any kind must be consistent with its objective to qualify as rational. This is well known. The unseen problem is that true and false forms are not distinguished. Distinction between what consistently enables and what systematically disables life fabrics is not made. Any life despoiling plans, processes and cycles at all may be “rational and scientific” so long as more non-living quantities go to self-maximizing selves. This is the inner logic of the corporate-military academy and science that re-engineers the natural and human world to maximize private transnational money sequences.

The ultimate life incoherence here may be laid bare by identifying the true and false sequences of rationality. The *life sequence of value* (Life | Means of Life | More Life, or $L / M\text{-of-}L / L^1$) is alone rational at the life-system level. It always deploys means of life to yield better life. And better rather than worse life is the only rational and sovereign objective of human beings. On the other hand, *the money sequence of value* ($\$ / L$ as $M / \1) deploys life and lives as *its* means - including the possessor of it - and seeks only to maximize money possession, or as it is

mindlessly called, “value added”. It is an irrational choice sequence because it leaves all life requirements out of account. It eventually leads, as it now has, to the collapse of life support systems across the world.

Observe that it is only when we widen the framework of consistency with fact and other statements to *consistency with life requirements* that we overcome the cultural insanity of our era. The derangement can be understood only when scientific rationality is made coherent with and accountable to life-system standards. This is the paradigm shift required to steer out of cumulative life system collapse, and its rational regulator is consistency with, rather than blindness to, life support systems.

As we come to understand that life coordinates must always be taken into account to be consistent with our terrestrial condition, reason awakes. It recognizes that sound logic, science and rational choice must meet three criteria of truth:

- (1) *consistency of premises with evidence;*
- (2) *consistency of inferences with premises; and*
- (3) *consistency of objectives with life support systems.*

These criteria together constitute the *full coherence principle*. In general, the countless contemporary models of scientific rationality are simply blind to criterion (3). That is, they are indifferent to whether their means and ends disable rather than enable life support systems, and in this lies their scientific meta-program of rootless disaster.

The Principles of Transformative Economics

Principle 1: *Real goods are means of life without which life capacity is reduced (e.g. from*
nourishing food to learning to stable climates and hydrological cycles)

Principle 2: *The ultimate organizing principle of any real economy is the production and distribution of life goods otherwise in short supply through generational time.*

Conversely: *Commodities which do not directly or indirectly provide means of life are wasteful.*

Principle 3: *The means of life which all humans require as human, without which they deteriorate or die, are:*

- i. atmospheric means of life - breathable air, sense-open space, and daily light;
- ii. nutritional-hygienic means of life - clean water, nourishing foods and self-waste disposal;
- iii. livable housing - shelter from the elements with ample space for sleep and function;
- iv. holistic environment - surrounding elements and contours which contribute to the whole;
- v. caring association - intimate love, social inclusion, safety and health support;
- vi. education-recreation - language-logos and art-play forms provided to choose and learn from;
- vii. human vocation - regular work of meaning to self and value to others
- viii. freedom - self-governing choice in i-vii's enjoyment consistent with each's provision

Principle 4: *The performance or development of any society is measured by the increased/decreased means of life its members enjoy in comparison to a previous state of the society, or to another society (eg., greater/lesser nutritional-intake, clean water accessibility/inaccessibility, literacy gain/loss, life expectancy rise/fall, livelihood participation/exclusion, effective freedom to communicate/express in society; stable/destabilized climate and hydrological cycles).*

Conversely: *Since growth of aggregate commodities sold/incomes received in a society (GDP/average income) measure only priced transactions/monetary payments, and exclude life effects, they are false measures of the performance or development of any economy.*

Principle 5: *The primary capital of any economy is Life Capital ($LC \rightarrow LC^1 \dots \rightarrow LC^n$), the commonwealth of means of life that produces more wealth of means of life in cumulative yield through time (ie., species/ecological, social, technological and knowledge capital).*

Conversely: *Capital which does not directly or indirectly yield means of life is parasite capital.*

Principle 6: *The efficiency of any capital is measured by the extent to which it is organized to:*

- i: *recycle materials and energy towards fewer/zero ecological extractions and pollutions, consummating in a closed loop of production (eg., organic farming);*

ii: *produces more goods by less necessary inputs* (eg., lower labor/fuel-per-unit machines);

iii: *develops life capabilities of citizens to enable more fields of life enjoyment and function than before* (eg., by educative work).

Conversely: *Insofar as any capital fails to realize any such efficiency, but provides only more money returns to private investors, it is exploitative capital which is inefficient by the margin of its externalization of costs of pollution, resource depletion, and/or dehumanizing labor.*

Principle 7: *Consistent with Principles 1-6, the sovereign purpose of any economic order is to provide means of life for individual, community and biodiverse flourishing without sacrifice or waste of any.*

Conversely: *Any decision or ordering to trade off life capital for any other gain is in principle anti-economic* (e.g., carbon effluents traded off against climate stability)..

Public Policy for Transformative Economics

1. Constitutional public accountability of currency and credit creation by up to 100% reserves for private interest-bearing loans.
2. Public authority's allocation of investment funds, loan credits, interest-rates and taxation levels to select for life capital formation.
3. Internalisation rather than externalisation of costs of corporate commodity cycles by conditions of market sale, ban of all commodities of mass destruction, and application of precautionary principle for all market commodities.
4. Natural capital inventories and well-being/ill-being index to measure and achieve the true efficiencies of economies.
5. Repudiation of debt of societies incurred without the consent of the indebted people or already paid by debt servicing, and institution of an international currency clearing house to prevent attacks on the means of exchange of sovereign nations.
6. Discontinuance of transnational trade and investment rules which abolish rights of sovereign nations to foreign capital controls and negotiated performance requirements on foreign capital use of natural resources, electromagnetic bandwidths, and/or public-service budgets.
7. Upgrading of trade and investment treaties to equally bind with accession schedules all parties selling or investing across borders to comply with minimum labour and social security

standards, commodity cycle environmental protections, international standards of public communications across borders, minimum levels of corporate taxation, maximum levels of market share, and compliance with international criminal laws as conditions of cross-border entry of products.

8. All private-profit loans across national borders be secured by minimum hard-currency reserves deposited in a world reserve fund as fiduciary authority for administration and extension of debt issuance in accordance with 1 to 7.

The Life-Value Compass

Once we have a life-value compass to guide us, we know the regulating logic of alternative to the global diseconomy of squandering waste and violent oppression. We know the common cause of one catastrophe after another which the corporate media, academy and business parties block out. We know the systemic connections between the manufactured 1980 debt crisis to liquidate social infrastructures and the 9-11 event to turn back the resistance to the global corporate program. We know the common cause of the meltdown of one claimed “miracle economy” after another since the global market turn - in Mexico, Brazil and Argentina, and then in Indonesia, Korea and Thailand. We know that the same causal mechanism of turning money into more money for money possessors and more junk commodities for peoples across borders has led the pollution crises of air, water, the soil, the obesity and cancer epidemics, the exhaustion of fishstocks, forests, and oil, and the erosion of democracy into corporate privatization and image markets. We know that the corporatization of the university has debt-enslaved students and privatized research for profit, and that government has cut spending on everything but rising billions of public dollars a day to subsidize ecocidal factory agribusiness, military-industrial complexes and Wall Street. We know, in short, that a diseconomic order rules from which the global catastrophe predictably unwinds - a failed global experiment with an ecogenocidal code written into its ruling money sequences.

On the one hand, there is a great vacuum of disaster, greed and life-value amnesia. On the other hand, there is the civil commons everywhere awaking to the money-sequence system driving the catastrophe every step, and to the shared life infrastructures and choices outside its closing circle. The path of liberation is rejection of everything this system sells to reclaim the common life interest and the life-ground . There is no moment of daily existence within the catastrophically failed experiment that is not open to alternative. Not one of the commodities of the money-into-more-money-for-money-possessors need be bought. Not the Bush-North prime minister set to dismantle and marketize the Canadian public sector. Not the mass media image machines and tree-skins occupying our homes. Not the bank and stock-market services and products by which old age savings are plundered. And not the grocery-chain non-foods or the gas-guzzling pollution machine inside our cities. What can replace all of them is already there - from the fighters of the corporate agenda in politics and education, to the coops and credit unions to the independent sellers of real food, thought and entertainment, to organic, fair trade, and third-world collective movements, to the people everywhere who share in the truth of the

falling empire and cult of life ignorance going down a vast hole. This system can only continue to destroy the planet's life support systems if enough remain silent.

John McMurtry
October 1, 2008

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1. The overview was published as the introduction to an article on money and life sequences of value and their choice-spaces of reconciliation in *Just Ecological Integrity: The Ethics of Maintaining Planetary Life* (eds), Peter Miller and Laura Westra (Boston and Oxford: Rowman and Littlefield, 2002, pp. 180-81.
 - 2.. "East and South: The Facts", *New Internationalist*, September 1990, p. 12. Digby J. McLaren, "Reply to Colin Rowat", *Delta Newsletter of the Global Change Program* (Royal Society of Canada) Vol.7: No.3 (1996), 3.
 - 3.. The 700,000 figure is estimated by the World Resources Institute for fossil fuel pollutants alone (cited by *Greenpeace Magazine*, Winter 2000, 6).
 - 4.. Richard Sandbrook, "The Planet through Pollyanna's Eyes", *Globe and Mail*, April 16, 1994, D7.
 - 5.. I am indebted here to the manuscript of my colleague, John Leslie, subsequently published as *The End of the World* (New York: Routledge, 1996).
 6. James Smith (researcher) and John Hunton (producer), *Warnings From the Wild*, KCTS/KYVE documentary film, 1998. Dr. Tom Goreau, Director of the Global Coral Reef Alliance, reports that oscillations of water and current temperatures from climatic warming have caused "a climate-induced mass extinction - - with one half of the coral reefs of the world experiencing catastrophic mortality in one year alone". It is interesting to note the response of America's business leadership to such reported effects of global warming(emphasis added): "The main problem with Kyoto, however, is that it is a drastic solution to a *problem that may not exist*" (James Glassman, "It's No Time To Go Wobbly on Kyoto", *Wall Street Journal*, May 11, 2001, A14).
 - 7.. In 1950, the world caught 19 million tons of fish a year. In 1989, the catch was 89 million tons (Tim Radford, "Filled With More Than A Grain of Truth", *Guardian Weekly*, November 17, 1996, 19). Destruction of aquatic life not counted as fish stock is not included in these commercial counts. The collapse of 16 of 17 of the world's ocean fisheries was observed reported by World Watch in its September-October 1998 Report.

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- 8.. Colin Graham, “Will the Public Expect the Global Economy to Self-Destruct?”, *The CCPA Monitor*, July-August, 1998, 20-1.
 - 9.. *Earth Island Journal*, Spring (Southern Hemisphere), 1996, 13.
 10. United Nations Intergovernmental Panel on Climate Change (IPCC) Report, February 19, 2001.
 11. Not all jurisdictions are so life-blind regarding ecological life support systems. Article 1 of the new “Rights for Nature” chapter of the Ecuador constitution reads: “Nature or Pachamama, where life is reproduced and exists, has the right to exist, persist, maintain and regenerate its vital cycles, structure, functions and its processes in evolution. Every person, people, community or nationality, will be able to demand the recognitions of rights for nature before the public bodies.” The U.S.-based Legal Defense Fund has meanwhile assisted communities in the U.S. – in Pennsylvania, New Hampshire, and Virginia – to draft and adopt first-in-the-nation laws that change the status of ecosystems from being regarded as *property* under the law to being recognized as *rights-bearing entities* (e.g., in Tamaqua Borough in Pennsylvania, Barnstead in New Hampshire, and Halifax in southern Virginia).
 12. The carcinogenic nature of the global money-sequence system decoupled from any material life function but multiplication of itself is analysed in depth in McMurtry, *The Cancer Stage of Capitalism*. London: Pluto Press, 1999.
 13. Nicholas Georgescu-Roegen, *The Entropy Law and the Economics Process* (Cambridge Mass: Harvard University Press, 1971), p.1.
 14. *The Entropy Law, ibid*, p. 7.
 15. Dan Glaister, “Bush plans don’t set salmon leaping”, *Guardian Weekly*, December 10-16, 2004).
 16. Krysyn Kelly, Vice President, Lake Ontario Waterkeeper, reports: “A new version of the Fisheries Act, now being rushed through Parliament, threatens to take away Canadians’ right to clean waters and healthy fish - - a complete overhaul, eliminating the rule that a community will participate in an environmental assessment if fish habitat is to be destroyed - - the rule that ensures that at least one-third of ever river is always unobstructed - - the rule that ships can’t sweep coal ashes into our waterways - - [and] the key definitions that prohibited the deposit of deleterious substances - pollution - into Canadian waterways” (*Waterkeeper*, Spring 2007, p. 50). In parallel to this corporate-government contempt for Canada’s water, “the [Conservative Alberta] government has given away the rights to use all available water, in some cases licensing over 100% of the average flow of rivers”(*Ecojustice*, Summer, 2008).
 17. Governments, political parties, corporations and mass media never use the R-word, although George Monbiot, a well known “radical” columnist has advocated a free market in rations in which the poor could sell their “icecaps” - the new currency in ration cards which he recommends (*Heat: How to Stop the Plane from Burning* (Toronto: Doubleday, 2006). Observe how Monbiot still posits the market exchange-system as the necessary

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- medium for validity, a medium which enormously complexifies the ration system at far greater costs of introduction and opportunity for counterfeiting. Observe also that the marketized system reduces carbon less because those who do not use up their rations now sell them. Thus even Monbiot is blocked from standing for the already tried and successful public process independent of any market mechanism which has worked in many places in war and peacetime. Only self-maximizing exchange through the market sanctifier can compute.
18. Philippe Bovet and Francois Ploye, "Clean futures market", *Le Monde Diplomatique*, July 2002, p. 10.
 19. John Vidal "Billions wasted on UN climate program", *Guardian Weekly*, May 30-June 5, 2008, p.1.
 20. "Declaration On Climate Change," *CCPA Monitor*, November 2000, pp. 1, 6.
 21. Jared Diamond, *Collapse* (New York : Penguin, 2005).
 22. "Adapt or Die", *The Economist*, September 13, 2008, pp. 67-8.
 23. Thus *New Republic* senior editor, Gregg Easterbrook, writes in his book, *The Progress Paradox: How Life Gets Better While People Feel Worse* (New York: Random House, 2004) of the anomaly of bigger average incomes and houses and demographically lower crime rates, on the one hand, and a "tenfold increase in unipolar depression", on the other. Easterbrook expresses the regulating market group-mind not only in his incomprehension of people's mood reflections of failing life conditions while markets go on growing, but in his reversal of the facts of these conditions themselves by selective reporting - for example, his contentions of "a cleaner environment" and "lower military spending" in the face of the alarming facts of climate destabilisation by accumulating "greenhouse gases" (the very term inverts their meaning) and still climbing U.S. military expenditures of over \$1000 million a day after the Cold War (when 20% of the country's children are malnourished or starving and public budgets at every other level of social service and infrastructure are slashed or inadequate). The lead work in the booming market of denial has been Bjorn Lomborg's *The Skeptical Environmentalist: Measuring the Real State of the World* (Cambridge: Cambridge University Press, 1998), now exposed as the fraudulent manipulations of statistics by a junior statistician with no evident knowledge of the ecological systems he assures us are in better condition than ever. (See, for example, Mark Lynas, "Septic Environmentalist", *The Ecologist*, March 2003, pp. 26-9).
 24. Complementing the attack strategy is the positive spin strategy. When received commentary on "the commons" speaks as follows, as the *Economist* does in its September 2008 issue, we find profound confusion about regulatory regimes biased as always towards the commercial interests of trading for profit. The argument is crystallized for clarity. "Scientists find proof that privatising fish stocks can avert a disaster. - - Most fisheries have an annual quota of what can be caught - - But this can result in "a race to fish" the quota - - which can lead to overfishing: a classic tragedy of

the commons. - - Fishing can turn into a race so intense that the season had shrunk to just two to three frantic days - - Privatisation halts the collapse of fisheries.” What is not recognized is that the rules of the original situation here were *not* a commons, but a poorly regulated contest for private appropriation of fish where the quotas assigned far exceeded the capacity of the fisheries to yield quota catches for all. That is why the “race to fish” occurred: precisely because the fisheries were and are not regulated as a commons - that is, with “open-access goods *organized to reproduce and develop*”. The fisheries were and are, on the contrary, first organized to privatize the stock by a contest to get the quota first, leaving everyone else behind with less than the quota or none still available to them, and, second, privatized further upstream with rights to sell quotas for a public good for private profit (“individual transferable quotas”) - thus conferring a quasi-monopoly on the good for private quota holders, with still no assurance that the stocks still won’t be exhausted over time. Once monetized assets start to be flipped on the market with no stewardship required, but only the goal of the biggest money returns fastest, as in the rest of the global market, the problem recurs again on another level. We may observe here the magic-thinking invested in the market rule-paradigm, with the “tragedy of the commons” not solved, but compounded with no public authority or common life interest protected except in market rhetoric. Only when the commons is the civil commons, strictly regulated to preserve its life goods over time - including by strict rations of appropriation - can the vicious race to system collapse be reversed.

25. Amartya Sen, “Rational Fools: A Critique of the Behavioral Foundations of Economic Theory”, *Philosophy and Public Affairs*, 6, 317-44.
26. Amartya Sen, “The Possibility of Social Choice”, Nobel Lecture, December 8, 1998, published in *American Economic Review*, 89, July 1999.
27. Edgeworth, Frances (1881[1932]). *Mathematical Psychics* (London: London School of Economics, 1926), p.15, cited by Bernard Hodgson *Economics as Moral Science*, Heidelberg: Springer. 2000, p.84.