

A Strategy to Redirect Our Civilization

"What is ultimately required by the crisis of ecological scarcity is the invention of a new mode of civilization, for nothing less seems likely to meet the challenge."

- William Ophuls, *Ecology and the Politics of Scarcity* (1977)

1. INTRODUCTION

Over the past several years it has become widely accepted that humankind's economic activities are causing profound ecological damage and that natural thresholds are being consistently violated. Many people have also become aware that fossil fuel depletion threatens the material basis of our industrial societies, in particular the oil-based agriculture on which much of the world's population now depends.

What is less widely understood is that our economies are inherently unsustainable, and that moderate reforms cannot resolve our predicament. Instead, we must radically transform our economic systems so that they operate on an entirely different set of principles. William Ophuls, in the quotation above, is correct - the gravity of our situation compels us to invent a new mode of civilization. This document outlines a strategy for economic change that is intended to achieve this revolutionary shift.

The necessity for fundamental change is graphically illustrated in figure 1:

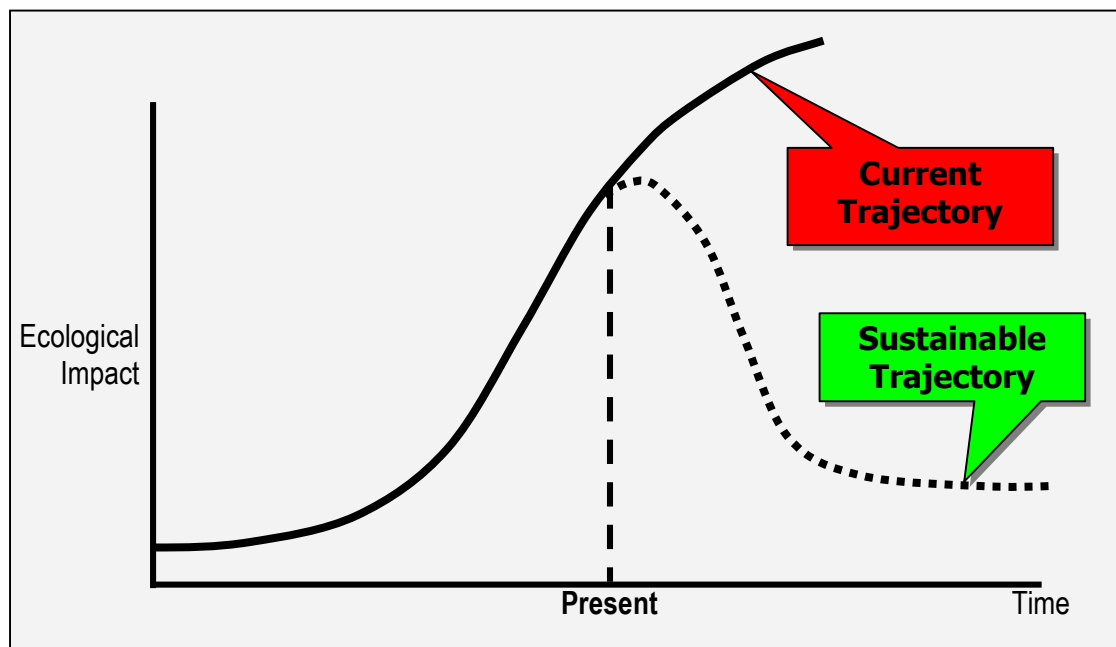


Fig. 1: Current and sustainable trajectories

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The graph depicts humankind's ecological impact over time, with our early history greatly compressed. Our current trajectory (solid line at top) shows a rising impact that has slowed somewhat due to higher resource efficiencies and other "green" initiatives. However, it continues to climb because of economic growth and population increases. The sustainable trajectory (dashed line at bottom) diverges sharply from the current pattern. Ecological expansion is replaced by rapid contraction, ending in a stable and environmentally acceptable impact level. The position taken here is that such a trajectory cannot be achieved through policy initiatives within the present economic order, but will instead require its revolutionary transformation.

If we are to achieve this transformation in a rational manner, two key questions must first be answered: how flexible is our species with respect to change, and what is the current stage of our development?

2. OUR CAPACITY FOR CHANGE

Probing our capacity for change means asking an uncomfortable question: is there an enduring biological basis for human behavior, or are our actions based entirely on historical circumstances? In brief: does human nature exist? This question is rarely posed in progressive circles because the answer may set limits to human malleability, thereby disqualifying some desired social solutions. Intellectual integrity nevertheless compels us to answer it honestly.

The work of Edward O. Wilson, Steven Pinker,¹ and other scientists has convincingly demonstrated that human nature is both real and highly significant for social thought. Their research reveals that human behavior results from the interaction of our biology, expressed primarily through our genes, and our cultures. Our genes are the products of several million years of evolution, and constitute the species-wide, slowly changing basis for our actions. Our cultures are the products of our language skills and other special abilities, and constitute the socially specific, rapidly changing basis for human actions.

Culture is influenced, but not exclusively determined, by biology. It grants us broad leeway to shape our societies, thus providing hope that humankind can respond adequately to the present crisis. We must be aware, however, that resistance to change will grow as we move further away from our genetic core. In Wilson's words: "... cultures can be rationally designed. We can teach and reward and coerce. But in so doing we must also consider the price of each culture, measured in the time and energy ... [and] human happiness that must be spent to circumvent our innate predispositions."²

Peak oil analyst Richard Heinberg shares this view of our nature: "... it is clear that we humans are, at least to a very large degree, simply animals responding to biological urges and environmental circumstances. Our vaunted moral and intellectual capabilities may enable us to alter our behavior, but perhaps only within rather narrow limits. What those limits are remains to be seen."³ This common-sense and scientifically validated perspective on humankind underpins the present strategy.

3. OUR CURRENT STAGE OF DEVELOPMENT

Humankind has for many thousands of years been a highly successful species that has largely followed its biological drives with respect to production, consumption, and population. To an unsettling degree we have behaved like any other species endowed with ample resources and living space, and have continuously expanded our ecological impact.⁴ Around AD 1500, when social and technological conditions were ripe, powerful social forces exploited these drives to create the economic system we now call capitalism. This system has over time accentuated certain attributes of human nature, such as self-interest and aggression, while suppressing others, such as altruism and cooperation.

Human history is thus marked by an important continuity: our economic activities have always been guided primarily by our biological nature. That is, economic outcomes such as production quantities and population levels have been based on our evolved tendencies, not on conscious reflection with respect to our planetary condition. Capitalism transformed gradual expansion into raging hyper-expansion and distorted our nature, but it did not alter this essential fact. Humankind's development up to the present can therefore be called the *biological era* of our species, and our history since AD 1500 the *capitalist period* of this era. See figure 2.

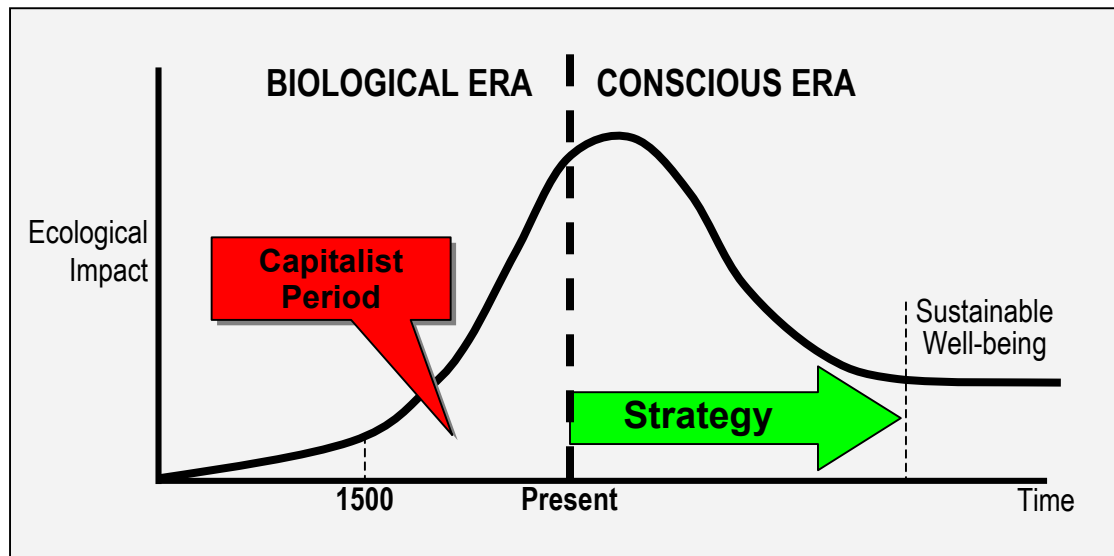


Fig. 2: The biological and conscious eras

For humankind to move to a sustainable trajectory we will have to place far less emphasis on the ingenuity that today dominates our intelligence, and instead place far greater emphasis on the wisdom we have sporadically displayed. We will have to restrain our biological tendencies, become fully aware of our fragile ecological situation, and subject our economic activities to rational oversight. Such a sharp departure from our age-old habits will constitute a new era in human development that can reasonably be called the *conscious era*. The economic goal in this new era will not be growth or abstract wealth, but *sustainable well-being*. As indicated in figure 2, the strategy is intended to help us achieve this difficult transition.

Because capitalism is currently the primary economic expression of our biological drives, it is necessary to identify this system's key attributes.

4. WHAT IS CAPITALISM?

Capitalism is an economic organization based on the separation of society into two main classes: those who own productive assets and those who sell their labor power to these owners.⁵ The system's economic components are its logic and institutions, which coordinate its operations. Its political components are the ideology and power that skew these operations to favor the ownership class.

Capitalism's *logic* is the set of incentives that drive the system's activities. This logic is based on the satisfaction of consumer wants and the maximization of corporate profits. It is responsible for the system's growth compulsion and largely determines what the system produces, at what quantities, and at what costs to people and planet. Capitalism's *institutions*, which include markets, laws, private property, and corporations, implement this logic through their central roles in the various economic tasks.

Beyond the system's logic and institutions lie the more obscure realms of ideology and power. *Ideology* in this context refers to the system's capacity to shape our thoughts and emotions to suit the interests of the ownership class. This is accomplished through the control of news media and education, the stranglehold on people's livelihoods, pervasive advertising, and numerous other ways. *Power* is the capacity of specially placed individuals and groups to intervene directly in the system's functioning through such acts as the manipulation of markets, the subversion of democracy, the assassination of threatening figures, and the manufacture of events that alter our perceptions of the world.⁶

Given the danger of ecological disaster, perhaps the most significant fact about capitalism is that its growth compulsion is both inherent and irrevocable. It is not simply an attitude or obsession, and it cannot be adequately understood through the requirement for social stability.⁷ A brief explanation of capitalism's growth compulsion is the following: The system depends on profits, which are derived from labor. Competition among capitalists spurs technological advances, causing labor productivity to rise. Higher labor productivity means less labor, hence lower profits. Capitalism's tendency is thus to depress profits, thereby undermining the system's foundations. Economic growth compensates for this tendency. An expanding economy maintains the absolute quantity of labor even as the relative quantity shrinks, thereby preventing profit erosion. Growth is capitalism's unconscious response to developments that threaten its profitability, and is thus part of its systemic core. A stable capitalism is a contradiction in terms - a non-viable entity that would soon cease to exist.⁸

5. THE DILEMMA POSED BY CAPITALISM

Anyone who seriously contemplates humankind's future will quickly encounter the dilemma posed by capitalism. On one hand, the system's growth compulsion is environmentally suicidal, which implies that capitalism must be abolished. On the other hand, the system is deeply entrenched and no clear alternatives exist, which implies it must be retained.

The dilemma exists because humankind, over the past 500 years, has become conceptually ensnared in the capitalist worldview. Although our species was here long before the system arose and will likely persist long after it fades away, we now perceive our economic requirements almost entirely through capitalism's eyes. We rely on the system not only to achieve our economic objectives, but also to tell us what those objectives are.

Imagine, for example, that capitalism has disappeared. Now consider the quantities of cars, houses, or vegetables an economy "should" produce. Without profits, wants, and markets to steer us, that "should" has no meaning, and those quantities are indeterminate. Having become deeply embedded in capitalism, we have failed to develop an independent economic logic to guide our basic economic decisions. Reclaiming this autonomy is central to the following strategy and to the dilemma's resolution.

Distancing ourselves from capitalism may not be as difficult as it first appears - a precedent exists with respect to nature. Ecological thinkers have long recognized that the system cannot be permitted to dictate how an economy interacts with the environment. Nature's resources must be scientifically evaluated to establish limits to their exploitation, just as human health must be objectively analyzed to establish limits to pollution. Capitalism is then compelled by society to modify its operations in order to conform to these constraints. Although this principle is frequently violated, in the conceptual sense we have succeeded in emancipating nature from capitalism. Our challenge now is to extend this autonomy to humankind.

6. THE STRATEGY

The proposed strategy for economic change consists of three steps: First, acknowledge the realities of humankind and capitalism, thus placing our actions on a sound empirical foundation. Second, emancipate ourselves conceptually from capitalism's grasp through a new guiding logic. Third, vigorously apply this logic in order to revolutionize the economy. These steps are outlined below.

A. HUMAN AND HISTORICAL REALISM

Human realism means that we accept the existence of human nature and thus the implied restrictions on social change. In many respects it would be preferable if humankind were a blank slate, allowing each historical period to mold its citizens as desired. However, this contradicts the established biological facts; pretending otherwise would be fatal to rational thought about our future. Although human nature can express itself in a broad range of social possibilities, its underlying presence must always be taken into account when considering social modifications.

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Historical realism means that, while the reasons for capitalism's historical appearance can be debated, its current existence and massive impact are beyond doubt. Denying the system's dominant presence, or mystifying it through such references as "market economy," "money economy," or "industrial system," obscures economic reality and hinders effective change. The same holds true for subtle falsifications such as the term "natural capital." Although this formulation can be effective as a popular metaphor, it is now falsely treated as a coherent economic concept, thereby undermining our understanding of the current crisis.⁹ In brief, historical realism means seeing capitalism as a class-based, growth-driven economic system whose operations are significantly impacted by ideology and power. Since the fall of the socialist bloc in the early 1990s it has become the world's most prevalent form of economic organization. Capitalism now guides most of humankind's economic decisions and must be treated as the starting point for the necessary civilizational shift.

B. CONCEPTUAL AUTONOMY

The strategy's second element refers to humankind's conceptual emancipation from capitalism's influence. This means that the system's logic is rejected for the purpose of guiding our economic activities, and is replaced with a guiding logic that reflects the needs of humankind as a whole. The intended result of conceptual autonomy is that key economic decisions are no longer made implicitly through the dynamics of wants and profits, but explicitly through the analysis of human needs and natural limits. A proposal for this new logic is discussed below.

Conceptual autonomy itself does not replace capitalism or alter the way it works. It is an intellectual revolution that permits us to consciously determine our economic objectives. It also gives us a non-capitalist perspective on the economic world, allowing us to more intelligently counter the system's political pressures. By asserting our economic autonomy we are doing what liberal economists have long espoused: independently defining the public's economic interests by specifying socially desirable ends.

As an example of conceptual autonomy, assume that capitalist logic would result in the construction of 5,000 large houses in a certain area. There are enough consumers who want these houses and can pay for them, and businesses will profit adequately from providing them. From the capitalist perspective this construction should therefore proceed. However, if we apply an alternative logic based on needs and limits, it may turn out that it is better to build 20,000 small houses. Replacing capitalist logic in this instance means rejecting its outcome of 5,000 large houses and insisting that 20,000 small houses be constructed instead.

Governments have in many cases interceded in market operations to make similar adjustments for social reasons. However, such interventions are based on a modified version of capitalist logic, not on an independent human logic. While enlightened governments can improve on capitalist results, they cannot bring about the radical restructuring needed for a new mode of civilization.

C. ORGANIC CHANGE

The strategy's change process begins with a capitalist economy in its present form. By applying our guiding logic, we establish independent economic objectives. We then challenge the economy's existing institutions to achieve them. If the institutions are successful, they are retained for these purposes. If they fail, they are quickly reformed or replaced. Any new institutions that arise are similarly tested in subsequent cycles. This sequence of setting objectives, evaluating results, and making rapid institutional modifications continues until the transition to sustainable well-being is complete.

This process is called organic change because it has much in common with biological evolution. As with natural selection, capitalist institutions and their replacements are continuously tested in the new environment. The winners are provisionally retained, while the losers are ruthlessly eliminated. There is no leap to a presumed solution because no a priori knowledge exists that could guarantee its success. The system evolves in an unknowable direction, based on the adjustments made in response to social trial and error.

Organic change is both conservative and revolutionary. It is conservative because all modifications to a capitalist economy must be justified empirically by failures to achieve desired ends - the default is to leave things as they are. The process assumes that capitalism, despite its many failings, includes institutions, incentives, and modes of action that are deeply rooted in human nature. These can provide essential continuity at a time of rapid change and should be retained if they help achieve the specified objectives. Organic change is economically revolutionary because its objectives are based on needs and limits, which constitute a sharp departure from capitalist logic. The modifications also have no predetermined limit, implying that no commitment exists to retaining the present system or its social relations.

There is no straightforward answer to the question of what might replace existing institutions, or how they might be reformed. Our ecological predicament will likely force us to innovate extensively, and many useful suggestions on this score are presently circulating. An important recent document, for example, lists 18 steps intended to achieve "a new economy of sufficiency, equity, sustainability and peace."¹⁰ The steps include the rapid decrease in fossil fuel use, the speedy transition to small-scale and locally-oriented economic activities, and reorienting the rules relating to trade, investments, and standards. Proposals such as these, while inadequate without an accompanying strategy, provide useful raw materials for the economic revolution.

It is important to add that capitalism's political components - ideology and power - can severely impede organic change. The historical record indicates that capitalist elites will defend their positions by all means they deem necessary. Organic change must therefore be seen not only as an economic transition, but also as an intense political struggle. The participation of progressive political thinkers will be required to formulate approaches and strategies to guide our actions in this challenging sphere.

The dilemma of capitalism's existence can now be resolved. When viewed as a self-directing system - that is, one guided predominantly by its own logic - capitalism must be abolished as soon as this is feasible. When viewed as a set of institutions and behaviors, it can be retained insofar as these help us achieve the objectives of our guiding logic. While this is somewhat ambiguous, it accurately reflects the complexity of our historically evolved economic reality.

7. A NEW GUIDING LOGIC

The conceptual core and motive force of this strategy is the independent economic logic that replaces the logic of capitalism for the purpose of economic guidance. Although such a conceptual structure has long been required to rigorously challenge conventional thought, it has never been developed. As a result there is now a troubling vacuum in progressive minds. The problem is that, whereas the expansionism of the biological era has gone with the flow of human nature, the contraction and stability of the conscious era will go against it.¹¹ Unless we adopt a powerful economic logic to neutralize our deep-seated tendencies, growth will continue and sustainability will remain a distant dream.

The Economics of Needs and Limits (ENL) is the author's attempt to fill this void. The framework is based on the underlying realities of humankind and nature in order to step outside capitalism and to drive a civilizational shift. It defines value, the central concept in economic thought, as the satisfaction of objective needs rather than subjective wants. Using this and other reformulated concepts, ENL addresses production, consumption, ecological constraints, resource utilization, population, and trade. It also redefines productivity and efficiency, both for its own purposes and to counter the ideological influence of conventional interpretations. ENL allows progressive analysts to set economic objectives that balance human needs and natural limits so as to achieve global equity, well-being, and sustainability. Both an overview of ENL and a book on the topic are available for those interested in the framework's details.¹²

8. ALTERNATIVE APPROACHES

Many individuals and groups have responded to the ecological crisis by suggesting approaches to fundamental economic change. Several of these are critically examined below in order to compare the present strategy with its main alternatives. These are grouped into three categories: green reformism, spontaneous change, and political revolution.

GREEN REFORMISM: This category is the most crowded of the three because it demonstrates concern for the environment while remaining within the safe confines of capitalism. Green reformism, which includes the academic field of study called ecological economics, is represented by the unsustainable trajectory of figure 1 above.

If green reformism has a bible, it is *Natural Capitalism*.¹³ This book's core message is that the power of capitalist markets can dramatically increase resource productivity, thus allowing growth to continue indefinitely without causing excessive ecological damage. To achieve this result, businesses must treat "natural capital" like other forms of capital, implying that resources will be carefully conserved in order to maximize profits.

A fatal defect of green reformism is that it falsifies capitalism's underlying reality. In the case of *Natural Capitalism* this is done by assuming that the system can re-orient capital, its defining component, to embrace natural sources and sinks. This is impossible because it would require capitalism to alter its essential nature, in effect rendering itself obsolete. A different tack is taken in *The Bridge at the Edge of the World*,¹⁴ where James Gustave Speth insists that capitalism lacks an inherent growth tendency, despite his own evidence to the contrary. Besides this type of

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distortion, green reformism suffers from an excessive commitment to capitalist institutions - markets in particular - and from a willful ignorance about the system's ideology and power.

The most dangerous aspect of this approach is that, by supporting a greenwashed version of business as usual, it entrenches a mode of civilization that must now be superseded. Contrary to the claims of green reformists, the goal isn't progressive policy within the prevailing order, but a sharp break with this order. To the extent that carbon taxes, industrial efficiency, and the like succeed under capitalist direction, the conscious era is further postponed. With few exceptions, a short-term triumph for green reformism is thus a long-term setback for humankind.

SPONTANEOUS CHANGE: In his 2007 book, *Deep Economy*, Bill McKibben tells us that "change is bubbling up from underneath."¹⁵ He explains: "I don't foresee a coordinated change in our economies, but a gradual one, faster in some places than in others, pulled by personal desire and pushed by environmental necessity."¹⁶ David Korten has a similar message in *The Great Turning*, where he says: "... change, if it comes, will emerge through the leadership of millions of people creating new cultural and institutional reality from the bottom up."¹⁷

Such comments offer the world a false dichotomy by implying that the only alternative to spontaneity from below is imposition from above. This is false because the key alternative to spontaneous change is not imposed change, but *guided* change. Millions of people don't have to be told specifically what to do, but they would benefit greatly from an economic framework that accurately reflects their needs and interests, and from a strategy that effectively channels their energies.

The key problem for McKibben, Korten, and others who share their approach is that they lack an independent logic to guide the massive economic change they know is required. They understand that capitalist logic is destructive and wisely avoid it, but they stubbornly refuse to seek its replacement. Having rejected the old while spurning the new, they are left with no motive force but spontaneous activities. They laud this bottom-up approach as a virtue of democracy and community, but it is instead an alarming dereliction of intellectual leadership.

POLITICAL REVOLUTION: This category is today less common than the previous two, but it retains its grip on some progressive minds. Among these are the Marxists at Monthly Review magazine and parts of the anti-globalization movement. The shared perspective is that capitalism must be replaced by socialism through revolutionary political action.

In the past, a common justification for political revolution was that socialism is superior to capitalism in managing growth-oriented economies. Most adherents now understand that this claim is no longer valid - our challenge is not to switch the class leadership and structural details of hyper-expansion, but to abandon the expansionist path altogether. Today a more subtle claim is frequently made: that capitalism must be removed so that sustainable economic reconstruction can begin with a clean slate.

The error here is lack of human realism. Virtually all political revolutionaries reject the biological underpinnings of human nature and insist that our behavior reflects only the prevailing historical circumstances. The logical consequence of this view is that capitalism includes nothing of lasting value, and that the system must therefore be uprooted and discarded. From this perspective, fundamental social change proceeds not from existing social reality in organic fashion, but on the basis of biologically blank human beings, guided by unspecified principles. As the 20th century

has amply demonstrated, such claims are potentially disastrous and must be categorically rejected.

A second reason to spurn political revolution is that it looks to the socialist past for solutions to humankind's current predicament. But the crisis we face is unprecedented, which means that the past has no solutions to offer. Considered more broadly, this objection also applies to those who are striving for a non-socialist goal such as localized economies. If localization is an essential aspect of humankind's future, this formation will arise organically from the change process suggested above. As a general statement, we must remain agnostic about the structure of future economies. Our task is not to find or envision a solution, but to organically *create* one.

9. INTELLECTUAL LEADERSHIP

As this strategy makes clear, overcoming our ecological predicament will require a decisive intellectual breakthrough, one that permits humankind to gain conceptual autonomy from capitalism and to enter the conscious era of its development. The world's progressive intellectuals thus bear a special responsibility for humankind's future. Redirecting our civilization will be possible only if they shift their energies from the clever investigation of present reality to the imaginative construction of future reality. Sustainable well-being can be achieved only if they creatively challenge prevailing concepts and courageously confront the dominant system.

A high priority for such thinkers is to acknowledge the theoretical vacuum in economic thought. In virtually all the analyses now being offered, our crisis is perceptively probed, but the need for a new guiding logic is ignored. Instead, vague solutions are offered based on values, spiritual awakening, story-telling, technological innovations, and scientific advances. While all these have their place, the ecological crisis has profound economic roots, and much of the solution must therefore be sought in the economic sphere.

Fundamental social change is rarely possible without the confluence of events and ideas. Galvanizing events are required to jolt public awareness and to weaken prevailing authority. But when the shocking events occur, the necessary ideas must be in place. The grand tragedy of today's world is that, while glaciers are melting and habitats are being destroyed, the world's progressive intellectuals still refuse to initiate the revolution in economic thought that is now indispensable to human progress.

Frank Rotering
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Notes

¹ See especially Steven Pinker, *The Blank Slate: The Modern Denial of Human Nature* (New York: Penguin Books, 2002). Pinker insightfully addresses the various issues - violence, selfishness, gender, etc. - that normally arise in nature-nurture debates. The book's major failing is its benighted treatment of Thomas Malthus and ecological limits, particularly on pp. 236-239.

² Edward O. Wilson, *On Human Nature* (Toronto: Bantam Books, 1978), 154. The author also makes the following provocative statement: "... there is a limit, perhaps closer to the practices of contemporary societies than we have had the wit to grasp, beyond which biological evolution will begin to pull cultural evolution back on itself." (*Ibid.*, 82) Wilson is likely too conservative here, but his point regarding the pull of biological evolution is unquestionably valid.

³ Richard Heinberg, *The Party's Over: Oil, War and the Fate of Industrial Societies* (Gabriola Island: New Society Publishers, 2003), 261.

⁴ "... given certain broad conditions, human societies everywhere will move towards greater size, complexity, and environmental demand." (Ronald Wright, *A Short History of Progress* (Toronto: House of Anansi, 2004), 65.)

⁵ This obvious fact is rarely acknowledged by standard economists. An honorable exception is Robert L. Heilbroner, who candidly states that capitalism, "... is at bottom a system of class dominance and mass acquiescence." (*The Nature and Logic of Capitalism* (New York: W.W. Norton, 1985), 141)

⁶ An example of events that may well have been manufactured are the "terrorist attacks" of September 11, 2001. Extensive scientific, documentary, and eyewitness evidence indicates that the official account of these events is substantially false. Only a new and objective investigation can establish the full truth of what happened that day.

⁷ An example of the social stability argument is the following: "By its very nature, capitalism constantly displaces labor, which can erode the economic demand, essential to maintaining capitalism's vigor. Economic growth - sustained in part by a culture of consumerism - absorbs displaced labor into new jobs and industries. The process both maintains demand and ensures that the unemployed and underemployed don't coalesce into an angry and destabilizing underclass." (Thomas Homer-Dixon, *The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization* (Toronto: Vintage Canada, 2007) 193). The author begins correctly here, citing capitalism's systemic displacement of labor. However, informal terms like "vigor" and "culture of consumerism" have little explanatory value, and profit - the system's lifeblood - is inexplicably ignored.

⁸ For a more complete explanation, see Karl Marx, *Capital - Volume 3* (London: Penguin Books, 1981), 329.

⁹ The insidious notion of "natural capital" is explored in my article, "'Natural Capital' as Metaphor and Concept," at needsandlimits.org. The direct link is: http://members.shaw.ca/needsandlimits/pdf_files/articles/natural_capital-dec_2008.pdf

¹⁰ *Manifesto on Global Economic Transitions* (September, 2007), edited by Jerry Mander. This document is a project of the International Forum on Globalization, the Institute for Policy Studies, and the Global Project on Economic Transitions.

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¹¹ New York Times columnist Thomas Friedman has made this point with respect to China: "... taking China from Communism to capitalism was actually easier than trying to take it from dirty capitalism to clean capitalism. Because going from Communism to state-directed capitalism ... involved taking the lid off a people who were yearning to be entrepreneurial, wildcatting capitalists. It involved unleashing something long suppressed in the Chinese culture But going from Dirty GDPism to Green GDPism is about restraining and redirecting all that natural energy" (*Hot, Flat, and Crowded* (New York: Farrar, Straus and Giroux, 2008), 353.) Ecological contraction is far more challenging than the "Code Green" initiatives Friedman proposes, and requires a much deeper foundation.

¹² See needsandlimits.org. The direct links are:

Overview -- http://members.shaw.ca/needsandlimits/pdf_files/overview.pdf

Book -- http://members.shaw.ca/needsandlimits/pdf_files/needs_and_limits-2nd_edition.pdf

¹³ Paul Hawken, Amory Lovins, L. Hunter Lovins, *Natural Capitalism: Creating the Next Industrial Revolution* (New York: Little, Brown, 1999). Thomas Friedman's *Hot, Flat, and Crowded* (see note 11) is a recent addition to the "natural capitalism" literature. Friedman demonstrates some genuine environmental awareness in this book, but his approach is obsessed with growth ("a bedrock principle" - p. 186) and with the unbounded promise of American entrepreneurship.

¹⁴ James Gustave Speth, *The Bridge at the Edge of the World: Capitalism, the Environment, and Crossing from Crisis to Sustainability* (New Haven: The University Press, 2008). Speth first acknowledges that growth is inherent to capitalism (p. 121), but then flees from this troublesome conclusion through the "hope" (p. 122) that growthmania is characteristic of postwar capitalism only. Despite this crude evasion, the book is useful because the author is a mainstream figure (Yale University dean, former member of the Carter administration) who now openly questions capitalism's future because of its devastating environmental impact.

¹⁵ Bill McKibben, *Deep Economy: The Wealth of Communities and the Durable Future* (New York: Times Books, 2007), 3.

¹⁶ McKibben, *Ibid.*, 106.

¹⁷ David Korten, *The Great Turning: From Empire to Earth Community* (San Francisco: Berrett-Koehler, 2006), 13. The same "bottom-up" approach characterizes numerous progressive statements over the past decade. Besides the *Manifesto on Global Economic Transitions* (note 9), examples include: Emma Bircham and John Charlton, eds., *Anti-Capitalism: A Guide to the Movement* (London: Bookmarks Publications, 2001); Maude Barlow and Tony Clarke, *Global Showdown: How the New Activists are Fighting Global Corporate Rule* (Toronto: Stoddart, 2001); Jeremy Brecher, Tim Costello, and Brendan Smith, *Globalization from Below: The Power of Solidarity* (Cambridge: South End Press, 2000); and *Alternatives to Economic Globalization: A Better World is Possible* (San Francisco: Berrett-Koehler, 2002). The latter report was issued by the International Forum on Globalization (ifg.org).