

## **What Every Environmentalist Needs to Know About Capitalism**

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For those concerned with the fate of the earth, the time has come to face facts: not simply the dire reality of climate change but also the pressing need for social-system change. The failure to arrive at a world climate agreement in Copenhagen in December 2009 was not simply an abdication of world leadership, as is often suggested, but had deeper roots in the inability of the capitalist system to address the accelerating threat to life on the planet. Knowledge of the nature and limits of capitalism, and the means of transcending it, has therefore become a matter of survival. In the words of Fidel Castro in December 2009: "Until very recently, the discussion [on the future of world society] revolved around the kind of society we would have. Today, the discussion centers on whether human society will survive."<sup>1</sup>

### **I. The Planetary Ecological Crisis**

There is abundant evidence that humans have caused environmental damage for millennia. Problems with deforestation, soil erosion, and salinization of irrigated soils go back to antiquity. Plato wrote in *Critias*:

What proof then can we offer that it [the land in the vicinity of Athens] is...now a mere remnant of what it once was?...You are left (as with little islands) with something rather like the skeleton of a body wasted by disease; the rich, soft soil has all run away leaving the land nothing but skin and bone. But in those days the damage had not taken place, the hills had high crests, the rocky plane of Phelleus was covered with rich soil, and the mountains were covered by thick woods, of which there are some traces today. For some mountains which today will only support bees produced not so long ago trees which when cut provided roof beams for huge buildings whose roofs are still standing. And there were a lot of tall cultivated trees which bore unlimited quantities of fodder for beasts. The soil benefitted from an annual rainfall which did not run to waste off the bare earth as it does today, but was absorbed in large quantities and stored in retentive layers of clay, so that what was drunk down by the higher regions flowed downwards into the valleys and appeared everywhere in a multitude of rivers and springs. And the shrines which still survive at these former springs are proof of the truth of our present account of the country.<sup>2</sup>

What is different in our current era is that there are many more of us inhabiting more of the earth, we have technologies that can do much greater damage and do it more quickly, and we have an economic system that knows no bounds. The damage being done is so widespread that it not only degrades local and regional ecologies, but also affects the planetary environment.

There are many sound reasons that we, along with many other people, are concerned about the current rapid degradation of the earth's environment. Global warming, brought about by human-induced increases in greenhouse gases (CO<sub>2</sub>, methane, N<sub>2</sub>O, etc.), is in the process of destabilizing the world's climate—with horrendous effects for most species on the planet and humanity itself now increasingly probable. Each decade is warmer than the one before, with 2009 tying as the second warmest year (2005 was the warmest) in the 130 years of global instrumental temperature records.<sup>3</sup> Climate change does not occur in a gradual, linear way, but is non-linear, with all sorts of amplifying feedbacks and tipping points. There are already clear indications of accelerating problems that lie ahead. These include:

- Melting of the Arctic Ocean ice during the summer, which reduces the reflection of sunlight as white ice is replaced by dark ocean, thereby enhancing global warming. Satellites show that end-of-summer Arctic sea ice was 40 percent less in 2007 than in the late 1970s when accurate measurements began.<sup>4</sup>
- Eventual disintegration of the Greenland and Antarctic ice sheets, set in motion by global warming, resulting in a rise in ocean levels. Even a sea level rise of 1-2 meters would be

disastrous for hundreds of millions of people in low-lying countries such as Bangladesh and Vietnam and various island states. A sea level rise at a rate of a few meters per century is not unusual in the paleoclimatic record, and therefore has to be considered possible, given existing global warming trends. At present, more than 400 million people live within five meters above sea level, and more than one billion within twenty-five meters.<sup>5</sup>

- The rapid decrease of the world's mountain glaciers, many of which—if business-as-usual greenhouse gas emissions continue—could be largely gone (or gone altogether) during this century. Studies have shown that 90 percent of mountain glaciers worldwide are already visibly retreating as the planet warms. The Himalayan glaciers provide dry season water to countries with billions of people in Asia. Their shrinking will lead to floods and acute water scarcity. Already the melting of the Andean glaciers is contributing to floods in that region. But the most immediate, current, and long-term problem, associated with disappearing glaciers—visible today in Bolivia and Peru—is that of water shortages.<sup>6</sup>
- Devastating droughts, expanding possibly to 70 percent of the land area within several decades under business as usual; already becoming evident in northern India, northeast Africa, and Australia.<sup>7</sup>
- Higher levels of CO<sub>2</sub> in the atmosphere may increase the production of some types of crops, but they may then be harmed in future years by a destabilized climate that brings either dry or very wet conditions. Losses in rice yields have already been measured in parts of Southeast Asia, attributed to higher night temperatures that cause the plant to undergo enhanced nighttime respiration. This means losing more of what it produced by photosynthesis during the day.<sup>8</sup>
- Extinction of species due to changes in climate zones that are too rapid for species to move or adapt to, leading to the collapse of whole ecosystems dependent on these species, and the death of still more species. (See below for more details on species extinctions.)<sup>9</sup>
- Related to global warming, ocean acidification from increased carbon absorption is threatening the collapse of marine ecosystems. Recent indications suggest that ocean acidification may, in turn, reduce the carbon-absorption efficiency of the ocean. This means a potentially faster build-up of carbon dioxide in the atmosphere, accelerating global warming.<sup>10</sup>

While global climate change and its consequences, along with its “evil twin” of ocean acidification (also brought on by carbon emissions), present by far the greatest threats to the earth's species, including humans, there are also other severe environmental issues. These include contamination of the air and surface waters with industrial pollutants. Some of these pollutants (the metal mercury, for example) go up smoke stacks to later fall and contaminate soil and water, while others are leached into surface waters from waste storage facilities. Many ocean and fresh water fish are contaminated with mercury as well as numerous industrial organic chemicals. The oceans contain large “islands” of trash—“Light bulbs, bottle caps, toothbrushes, Popsicle sticks and tiny pieces of plastic, each the size of a grain of rice, inhabit the Pacific garbage patch, an area of widely dispersed trash that doubles in size every decade and is now believed to be roughly twice the size of Texas.”<sup>11</sup>

In the United States, drinking water used by millions of people is polluted with pesticides such as atrazine as well as nitrates and other contaminants of industrial agriculture. Tropical forests, the areas of the greatest terrestrial biodiversity, are being destroyed at a rapid pace. Land is being converted into oil palm plantations in Southeast Asia—with the oil to be exported as a feedstock for making biodiesel fuel. In South America, rainforests are commonly first converted to extensive pastures and later into use for export crops such as soybeans. This deforestation is causing an estimated 25 percent of all human-induced release of CO<sub>2</sub>.<sup>12</sup> Soil degradation by erosion, overgrazing, and lack of organic material return threatens the productivity of large areas of the world's agricultural lands.

We are all contaminated by a variety of chemicals. A recent survey of twenty physicians and nurses tested for sixty-two chemicals in blood and urine—mostly organic chemicals such as flame retardants and plasticizers—found that

each participant had at least 24 individual chemicals in their body, and two participants had a high of 39 chemicals detected....All participants had bisphenol A [used to make rigid

polycarbonate plastics used in water cooler bottles, baby bottles, linings of most metal food containers—and present in the foods inside these containers, kitchen appliances etc.), and some form of phthalates [found in many consumer products such as hair sprays, cosmetics, plastic products, and wood finishers], PBDEs [Polybrominated diphenyl ethers used as flame retardants in computers, furniture, mattresses, and medical equipment] and PFCs [Perfluorinated compounds used in non-stick pans, protective coatings for carpets, paper coatings, etc.].<sup>13</sup>

Although physicians and nurses are routinely exposed to larger quantities of chemicals than the general public, we are all exposed to these and other chemicals that don't belong in our bodies, and that most likely have negative effects on human health. Of the 84,000 chemicals in commercial use in the United States, we don't even have an idea about the composition and potential harmfulness of 20 percent (close to 20,000)—their composition falls under the category of “trade secrets” and is legally withheld.<sup>14</sup>

Species are disappearing at an accelerated rate as their habitats are destroyed, due not only to global warming but also to direct human impact on species habitats. A recent survey estimated that over 17,000 animals and plants are at risk of extinction. “More than one in five of all known mammals, over a quarter of reptiles and 70 percent of plants are under threat, according to the survey, which featured over 2,800 new species compared with 2008. ‘These results are just the tip of the iceberg,’ said Craig Hilton-Taylor, who manages the list. He said many more species that have yet to be assessed could also be under serious threat.”<sup>15</sup> As species disappear, ecosystems that depend on the multitude of species to function begin to degrade. One of the many consequences of degraded ecosystems with fewer species appears to be greater transmission of infectious diseases.<sup>16</sup>

It is beyond debate that the ecology of the earth—and the very life support systems on which humans as well as other species depend—is under sustained and severe attack by human activities. It is also clear that the effects of continuing down the same path will be devastating. As James Hansen, director of NASA's Goddard Institute for Space Studies, and the world's most famous climatologist, has stated: “Planet Earth, creation, the world in which civilization developed, the world with climate patterns that we know and stable shorelines, is in imminent peril....The startling conclusion is that continued exploitation of all fossil fuels on Earth threatens not only the other millions of species on the planet but also the survival of humanity itself—and the timetable is shorter than we thought.”<sup>17</sup> Moreover, the problem does not begin and end with fossil fuels but extends to the entire human-economic interaction with the environment.

One of the latest, most important, developments in ecological science is the concept of “planetary boundaries,” in which nine critical boundaries/thresholds of the earth system have been designated in relation to: (1) climate change; (2) ocean acidification; (3) stratospheric ozone depletion; (4) the biogeochemical flow boundary (the nitrogen cycle and the phosphorus cycles); (5) global freshwater use; (6) change in land use; (7) biodiversity loss; (8) atmospheric aerosol loading; and (9) chemical pollution. Each of these is considered essential to maintaining the relatively benign climate and environmental conditions that have existed during the last twelve thousand years (the Holocene epoch). The sustainable boundaries in three of these systems—climate change, biodiversity, and human interference with the nitrogen cycle—may have already been crossed.<sup>18</sup>

## **II. Common Ground: Transcending Business as Usual**

We strongly agree with many environmentalists who have concluded that continuing “business as usual” is the path to global disaster. Many people have determined that, in order to limit the ecological footprint of human beings on the earth, we need to have an economy—particularly in the rich countries—that doesn't grow, so as to be able to stop and possibly reverse the increase in pollutants released, as well as to conserve non-renewable resources and more rationally use renewable resources. Some environmentalists are concerned that, if world output keeps expanding and everyone in developing countries seeks to attain the standard of living of the wealthy capitalist states, not only will pollution continue to increase beyond what the earth system can absorb, but we will also run out of the limited non-renewable resources on the globe. *The Limits to Growth* by Donella Meadows, Jorgen Randers, Dennis Meadows, and William Behrens, published in

1972 and updated in 2004 as *Limits to Growth: The 30-Year Update*, is an example of concern with this issue.<sup>19</sup> It is clear that there are biospheric limits, and that the planet cannot support the close to 7 billion people already alive (nor, of course, the 9 billion projected for mid-century) at what is known as a Western, “middle class” standard of living. The Worldwatch Institute has recently estimated that a world which used biocapacity per capita at the level of the contemporary United States could only support 1.4 billion people.<sup>20</sup> The primary problem is an ancient one and lies not with those who do not have enough for a decent standard of living, but rather with those for whom enough does not exist. As Epicurus said: “Nothing is enough to someone for whom enough is little.”<sup>21</sup> A global social system organized on the basis of “enough is little” is bound eventually to destroy all around it and itself as well.

Many people are aware of the need for social justice when solving this problem, especially because so many of the poor are living under dangerously precarious conditions, have been especially hard hit by environmental disaster and degradation, and promise to be the main victims if current trends are allowed to continue. It is clear that approximately half of humanity—over three billion people, living in deep poverty and subsisting on less than \$2.50 a day—need to have access to the requirements for a basic human existence such as decent housing, a secure food supply, clean water, and medical care. We wholeheartedly agree with all of these concerns.<sup>22</sup>

Some environmentalists feel that it is possible to solve most of our problems by tinkering with our economic system, introducing greater energy efficiency and substituting “green” energy sources for fossil fuels—or coming up with technologies to ameliorate the problems (such as using carbon capture from power plants and injecting it deep into the earth). There is a movement toward “green” practices to use as marketing tools or to keep up with other companies claiming to use such practices. Nevertheless, within the environmental movement, there are some for whom it is clear that mere technical adjustments in the current productive system will not be enough to solve the dramatic and potentially catastrophic problems we face.

Curtis White begins his 2009 article in *Orion*, entitled “The Barbaric Heart: Capitalism and the Crisis of Nature,” with: “There is a fundamental question that environmentalists are not very good at asking, let alone answering: ‘Why is this, the destruction of the natural world, happening?’”<sup>23</sup> It is impossible to find real and lasting solutions until we are able satisfactorily to answer this seemingly simple question.

It is our contention that most of the critical environmental problems we have are either caused, or made much worse, by the workings of our economic system. Even such issues as population growth and technology are best viewed in terms of their relation to the socioeconomic organization of society. Environmental problems are not a result of human ignorance or innate greed. They do not arise because managers of individual large corporations or developers are morally deficient. Instead, we must look to the fundamental workings of the economic (and political/social) system for explanations. It is precisely the fact that ecological destruction is built into the inner nature and logic of our present system of production that makes it so difficult to solve.

In addition, we shall argue that “solutions” proposed for environmental devastation, which would allow the current system of production and distribution to proceed unabated, are not real solutions. In fact, such “solutions” will make things worse because they give the false impression that the problems are on their way to being overcome when the reality is quite different. The overwhelming environmental problems facing the world and its people will not be effectively dealt with until we institute another way for humans to interact with nature—altering the way we make decisions on what and how much to produce. Our most necessary, most rational goals require that we take into account fulfilling basic human needs, and creating just and sustainable conditions on behalf of present and future generations (which also means being concerned about the preservation of other species).

### **III. Characteristics of Capitalism in Conflict with the Environment**

The economic system that dominates nearly all corners of the world is capitalism, which, for most humans, is as “invisible” as the air we breathe. We are, in fact, largely oblivious to this worldwide

system, much as fish are oblivious to the water in which they swim. It is capitalism's ethic, outlook, and frame of mind that we assimilate and acculturate to as we grow up. Unconsciously, we learn that greed, exploitation of laborers, and competition (among people, businesses, countries) are not only acceptable but are actually good for society because they help to make our economy function "efficiently."

Let's consider some of the key aspects of capitalism's conflict with environmental sustainability.

### ***A. Capitalism Is a System that Must Continually Expand***

No-growth capitalism is an oxymoron: when growth ceases, the system is in a state of crisis with considerable suffering among the unemployed. Capitalism's basic driving force and its whole reason for existence is the amassing of profits and wealth through the accumulation (savings and investment) process. It recognizes no limits to its own self-expansion—not in the economy as a whole; not in the profits desired by the wealthy; and not in the increasing consumption that people are cajoled into desiring in order to generate greater profits for corporations. The environment exists, not as a place with inherent boundaries within which human beings must live together with earth's other species, but as a realm to be exploited in a process of growing economic expansion.

Indeed, businesses, according to the inner logic of capital, which is enforced by competition, must either grow or die—as must the system itself. There is little that can be done to increase profits from production when there is slow or no growth. Under such circumstances, there is little reason to invest in new capacity, thus closing off the profits to be derived from new investment. There is also just so much increased profit that can be easily squeezed out of workers in a stagnant economy. Such measures as decreasing the number of workers and asking those remaining to "do more with less," shifting the costs of pensions and health insurance to workers, and introducing automation that reduces the number of needed workers can only go so far without further destabilizing the system. If a corporation is large enough it can, like Wal-Mart, force suppliers, afraid of losing the business, to decrease their prices. But these means are not enough to satisfy what is, in fact, an insatiable quest for more profits, so corporations are continually engaged in struggle with their competitors (including frequently buying them out) to increase market share and gross sales.

It is true that the system can continue to move forward, to some extent, as a result of financial speculation leveraged by growing debt, even in the face of a tendency to slow growth in the underlying economy. But this means, as we have seen again and again, the growth of financial bubbles that inevitably burst.<sup>24</sup> There is no alternative under capitalism to the endless expansion of the "real economy" (i.e., production), irrespective of actual human needs, consumption, or the environment.

One might still imagine that it would be theoretically possible for a capitalist economy to have zero growth, and still meet all of humanity's basic needs. Let's suppose that all the profits that corporations earn (after allowing for replacing worn out equipment or buildings) are either spent by capitalists on their own consumption or given to workers as wages and benefits, and consumed. As capitalists and workers spend this money, they would purchase the goods and services produced, and the economy could stay at a steady state, no-growth level (what Marx called "simple reproduction" and has sometimes been called the "stationary state"). Since there would be no investment in new productive capacity, there would be no economic growth and accumulation, no profits generated.

There is, however, one slight problem with this "capitalist no-growth utopia": it violates the basic motive force of capitalism. What capital strives for and is the purpose of its existence is its own expansion. Why would capitalists, who in every fiber of their beings believe that they have a personal right to business profits, and who are driven to accumulate wealth, simply spend the economic surplus at their disposal on their own consumption or (less likely still) give it to workers to spend on theirs—rather than seek to expand wealth? If profits are not generated, how could economic crises be avoided under capitalism? To the contrary, it is clear that owners of capital will, as long as such ownership relations remain, do whatever they can within their power to

maximize the amount of profits they accrue. A stationary state, or steady-state, economy as a stable solution is only conceivable if separated from the social relations of capital itself.

Capitalism is a system that constantly generates a reserve army of the unemployed; meaningful, full employment is a rarity that occurs only at very high rates of growth (which are correspondingly dangerous to ecological sustainability). Taking the U.S. economy as the example, let's take a look at what happens to the number of "officially" unemployed when the economy grows at different rates during a period of close to sixty years (Table 1).

For background, we should note that the U.S. population is growing by a little less than 1 percent a year, as is the net number of new entrants into the normal working age portion of the population. In current U.S. unemployment measurements, those considered to be officially unemployed must have looked for work within the last four weeks and cannot be employed in part-time jobs. Individuals without jobs, who have not looked for work during the previous four weeks (but who have looked within the last year), either because they believe there are no jobs available, or because they think there are none for which they are qualified, are classified as "discouraged" and are not counted as officially unemployed. Other "marginally attached workers," who have not recently looked for work (but have in the last year), not because they were "discouraged," but for other reasons, such as lack of affordable day care, are also excluded from the official unemployment count. In addition, those working part-time but wanting to work full-time are not considered to be officially unemployed. The unemployment rate for the more expanded definition of unemployment (U-6) provided by the Bureau of Labor Statistics, which also includes the above categories (i.e., discouraged workers, other marginally attached workers, and part-time workers desiring full-time employment) is generally almost twice the official U.S. employment rate (U-3). In the following analysis, we focus only on the official unemployment data.

What, then, do we see in the relationship between economic growth and unemployment over the last six decades?

**Table 1. Change in Unemployment at Different Growth Rates of the Economy (1949-2008)**

Change in real GDP from previous year	Average change in percent unemployment from previous year*	Number of years	Years with growth in unemployment
<1.1	1.75	11	11
1.2-3.0	0.13	13	9
3.1-5.0	-0.25	23	3
>5.0	-1.02	13	0

\*A negative number indicates a growth in employment.

**Sources:** NIPA Table 1.1.1. Percent Change From Preceding Period in Real Gross Domestic Product.

Series Id: LNS1400000Q, Current Population Survey, Bureau of Labor Statistics, Quarterly Unemployment Rate.

1. During the eleven years of very slow growth, less than 1.1 percent per year, unemployment increased in each of the years.
2. In 70 percent (nine of thirteen) of the years when GDP grew between 1.2 and 3 percent per year, unemployment also grew.
3. During the twenty-three years when the U.S. economy grew fairly rapidly (from 3.1 to 5.0 percent a year), unemployment still increased in three years and reduction in the percent unemployed was anemic in most of the others.
4. Only in the thirteen years when the GDP grew at greater than 5.0 percent annually did unemployment not increase in any of these years.

Although this table is based on calendar years and does not follow business cycles, which, of course, do not correspond neatly to the calendar, it is clear that, if the GDP growth rate isn't

substantially greater than the increase in population, people lose jobs. While slow or no growth is a problem for business owners trying to increase their profits, it is a disaster for working people.

What this tells us is that the capitalist system is a very crude instrument in terms of providing jobs in relation to growth—if growth is to be justified by employment. It will take a rate of growth of around 4 percent or higher, far above the average growth rate, before the unemployment problem is surmounted in U.S. capitalism today. Worth noting is the fact that, since the 1940s, such high rates of growth in the U.S. economy have hardly ever been reached except in times of wars.

### ***B. Expansion Leads to Investing Abroad in Search of Secure Sources of Raw Materials, Cheaper Labor, and New Markets***

As companies expand, they saturate, or come close to saturating, the “home” market and look for new markets abroad to sell their goods. In addition, they and their governments (working on behalf of corporate interests) help to secure entry and control over key natural resources such as oil and a variety of minerals. We are in the midst of a “land-grab,” as private capital and government sovereign wealth funds strive to gain control of vast acreage throughout the world to produce food and biofuel feedstock crops for their “home” markets. It is estimated that some thirty million hectares of land (roughly equal to two-thirds of the arable land in Europe), much of them in Africa, have been recently acquired or are in the process of being acquired by rich countries and international corporations.<sup>25</sup>

This global land seizure (even if by “legal” means) can be regarded as part of the larger history of imperialism. The story of centuries of European plunder and expansion is well documented. The current U.S.-led wars in Iraq and Afghanistan follow the same general historical pattern, and are clearly related to U.S. attempts to control the main world sources of oil and gas.<sup>26</sup>

Today multinational (or transnational) corporations scour the world for resources and opportunities wherever they can find them, exploiting cheap labor in poor countries and reinforcing, rather than reducing, imperialist divisions. The result is a more rapacious global exploitation of nature and increased differentials of wealth and power. Such corporations have no loyalty to anything but their own bottom lines.

### ***C. A System that, by Its Very Nature, Must Grow and Expand Will Eventually Come Up Against the Reality of Finite Natural Resources***

The irreversible exhaustion of finite natural resources will leave future generations without the possibility of having use of these resources. Natural resources are used in the process of production—oil, gas, and coal (fuel), water (in industry and agriculture), trees (for lumber and paper), a variety of mineral deposits (such as iron ore, copper, and bauxite), and so on. Some resources, such as forests and fisheries, are of a finite size, but can be renewed by natural processes if used in a planned system that is flexible enough to change as conditions warrant. Future use of other resources—oil and gas, minerals, aquifers in some desert or dryland areas (prehistorically deposited water)—are limited forever to the supply that currently exists. The water, air, and soil of the biosphere can continue to function well for the living creatures on the planet only if pollution doesn’t exceed their limited capacity to assimilate and render the pollutants harmless.

Business owners and managers generally consider the short term in their operations—most take into account the coming three to five years, or, in some rare instances, up to ten years. This is the way they must function because of unpredictable business conditions (phases of the business cycle, competition from other corporations, prices of needed inputs, etc.) and demands from speculators looking for short-term returns. They therefore act in ways that are largely oblivious of the natural limits to their activities—as if there is an unlimited supply of natural resources for exploitation. Even if the reality of limitation enters their consciousness, it merely speeds up the exploitation of a given resource, which is extracted as rapidly as possible, with capital then moving on to new areas of resource exploitation. When each individual capitalist pursues the goal of

making a profit and accumulating capital, decisions are made that collectively harm society as a whole.

The length of time before nonrenewable deposits are exhausted depends on the size of the deposit and the rate of extraction of the resource. While depletion of some resources may be hundreds of years away (assuming that the rate of growth of extraction remains the same), limits for some important ones—oil and some minerals—are not that far off. For example, while predictions regarding peak oil vary among energy analysts—going by the conservative estimates of oil companies themselves, at the rate at which oil is currently being used, known reserves will be exhausted within the next fifty years. The prospect of peak oil is projected in numerous corporate, government, and scientific reports. The question today is not whether peak oil is likely to arrive soon, but simply how soon.<sup>27</sup>

Even if usage doesn't grow, the known deposits of the critical fertilizer ingredient phosphorus that can be exploited on the basis of current technology will be exhausted in this century.<sup>28</sup>

Faced with limited natural resources, there is no rational way to prioritize under a modern capitalist system, in which the well-to-do with their economic leverage decide via the market how commodities are allocated. When extraction begins to decline, as is projected for oil within the near future, price increases will put even more pressure on what had been, until recently, the boast of world capitalism: the supposedly prosperous “middle-class” workers of the countries of the center.

The well-documented decline of many ocean fish species, almost to the point of extinction, is an example of how renewable resources can be exhausted. It is in the short-term individual interests of the owners of fishing boats—some of which operate at factory scale, catching, processing, and freezing fish—to maximize the take. Hence, the fish are depleted. No one protects the common interest. In a system run generally on private self-interest and accumulation, the state is normally incapable of doing so. This is sometimes called the tragedy of the commons. But it should be called the tragedy of the private exploitation of the commons.

The situation would be very different if communities that have a stake in the continued availability of a resource managed the resource in place of the large-scale corporation. Corporations are subject to the single-minded goal of maximizing short-term profits—after which they move on, leaving devastation behind, in effect mining the earth. Although there is no natural limit to human greed, there are limits, as we are daily learning, to many resources, including “renewable” ones, such as the productivity of the seas. (The depletion of fish off the coast of Somalia because of overfishing by factory-scale fishing fleets is believed to be one of the causes for the rise of piracy that now plagues international shipping in the area. Interestingly, the neighboring Kenyan fishing industry is currently rebounding because the pirates also serve to keep large fishing fleets out of the area.)

The exploitation of renewable resources before they can be renewed is referred to as “overshooting” the resource. This is occurring not only with the major fisheries, but also with groundwater (for example, the Oglala aquifer in the United States, large areas of northwestern India, Northern China, and a number of locations in North Africa and the Middle East), with tropical forests, and even with soils.

Duke University ecologist John Terborgh described a recent trip he took to a small African nation where foreign economic exploitation is combined with a ruthless depletion of resources.

Everywhere I went, foreign commercial interests were exploiting resources after signing contracts with the autocratic government. Prodigious logs, four and five feet in diameter, were coming out of the virgin forest, oil and natural gas were being exported from the coastal region, offshore fishing rights had been sold to foreign interests, and exploration for oil and minerals was underway in the interior. The exploitation of resources in North America during the five-hundred-year post-discovery era followed a typical sequence—fish, furs, game, timber, farming virgin soils—but because of the hugely expanded scale of today's economy and the availability of myriad sophisticated technologies, exploitation of all the resources in poor developing countries now goes



on at the same time. In a few years, the resources of this African country and others like it will be sucked dry. And what then? The people there are currently enjoying an illusion of prosperity, but it is only an illusion, for they are not preparing themselves for anything else. And neither are we.<sup>29</sup>

#### ***D. A System Geared to Exponential Growth in the Search for Profits Will Inevitably Transgress Planetary Boundaries***

The earth system can be seen as consisting of a number of critical biogeochemical processes that, for hundreds of millions of years, have served to reproduce life. In the last 12 thousand or so years the world climate has taken the relatively benign form associated with the geological epoch known as the Holocene, during which civilization arose. Now, however, the socioeconomic system of capitalism has grown to such a scale that it overshoots fundamental planetary boundaries—the carbon cycle, the nitrogen cycle, the soil, the forests, the oceans. More and more of the terrestrial (land-based) photosynthetic product, upwards of 40 percent, is now directly accounted for by human production. All ecosystems on earth are in visible decline. With the increasing scale of the world economy, the human-generated rifts in the earth's metabolism inevitably become more severe and more multifarious. Yet, the demand for more and greater economic growth and accumulation, even in the wealthier countries, is built into the capitalist system. As a result, the world economy is one massive bubble.

There is nothing in the nature of the current system, moreover, that will allow it to pull back before it is too late. To do that, other forces from the bottom of society will be required.

#### ***E. Capitalism Is Not Just an Economic System—It Fashions a Political, Judicial, and Social System to Support the System of Wealth and Accumulation***

Under capitalism people are at the service of the economy and are viewed as needing to consume more and more to keep the economy functioning. The massive and, in the words of Joseph Schumpeter, “elaborate psychotechnics of advertising” are absolutely necessary to keep people buying.<sup>30</sup> Morally, the system is based on the proposition that each, following his/her own interests (greed), will promote the general interest and growth. Adam Smith famously put it: “It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest.”<sup>31</sup> In other words, individual greed (or quest for profits) drives the system and human needs are satisfied as a mere by-product. Economist Duncan Foley has called this proposition and the economic and social irrationalities it generates “Adam’s Fallacy.”<sup>32</sup>

The attitudes and mores needed for the smooth functioning of such a system, as well as for people to thrive as members of society—greed, individualism, competitiveness, exploitation of others, and “consumerism” (the drive to purchase more and more stuff, unrelated to needs and even to happiness)—are inculcated into people by schools, the media, and the workplace. The title of Benjamin Barber’s book—*Consumed: How Markets Corrupt Children, Infantilize Adults, and Swallow Citizens Whole*—says a lot.

The notion of responsibility to others and to community, which is the foundation of ethics, erodes under such a system. In the words of Gordon Gekko—the fictional corporate takeover artist in Oliver Stone’s film *Wall Street*—“Greed is Good.” Today, in the face of widespread public outrage, with financial capital walking off with big bonuses derived from government bailouts, capitalists have turned to preaching self-interest as the bedrock of society from the very pulpits. On November 4, 2009, Barclay’s Plc Chief Executive Officer John Varley declared from a wooden lectern in St. Martin-in-the-Fields at London’s Trafalgar Square that “Profit is not Satanic.” Weeks earlier, on October 20, 2009, Goldman Sachs International adviser Brian Griffiths declared before the congregation at St. Paul’s Cathedral in London that “The injunction of Jesus to love others as ourselves is a recognition of self-interest.”<sup>33</sup>

Wealthy people come to believe that they deserve their wealth because of hard work (theirs or their forbearers) and possibly luck. The ways in which their wealth and prosperity arose out of the social labor of innumerable other people are downplayed. They see the poor—and the poor

frequently agree—as having something wrong with them, such as laziness or not getting a sufficient education. The structural obstacles that prevent most people from significantly bettering their conditions are also downplayed. This view of each individual as a separate economic entity concerned primarily with one's (and one's family's) own well-being, obscures our common humanity and needs. People are not inherently selfish but are encouraged to become so in response to the pressures and characteristics of the system. After all, if each person doesn't look out for "Number One" in a dog-eat-dog system, who will?

Traits fostered by capitalism are commonly viewed as being innate "human nature," thus making a society organized along other goals than the profit motive unthinkable. But humans are clearly capable of a wide range of characteristics, extending from great cruelty to great sacrifice for a cause, to caring for non-related others, to true altruism. The "killer instinct" that we supposedly inherited from evolutionary ancestors—the "evidence" being chimpanzees' killing the babies of other chimps—is being questioned by reference to the peaceful characteristics of other hominids such as gorillas and bonobos (as closely related to humans as chimpanzees).<sup>34</sup> Studies of human babies have also shown that, while selfishness is a human trait, so are cooperation, empathy, altruism, and helpfulness.<sup>35</sup> Regardless of what traits we may have inherited from our hominid ancestors, research on pre-capitalist societies indicates that very different norms from those in capitalist societies are encouraged and expressed. As Karl Polanyi summarized the studies: "The outstanding discovery of recent historical and anthropological research is that man's economy, as a rule, is submerged in his social relationships. He does not act so as to safeguard his individual interest in the possession of material goods; he acts so as to safeguard his social standing, his social claims, his social assets."<sup>36</sup> In his 1937 article on "Human Nature" for the *Encyclopedia of the Social Sciences*, John Dewey concluded—in terms that have been verified by all subsequent social science—that:

The present controversies between those who assert the essential fixity of human nature and those who believe in a greater measure of modifiability center chiefly around the future of war and the future of a competitive economic system motivated by private profit. It is justifiable to say without dogmatism that both anthropology and history give support to those who wish to change these institutions. It is demonstrable that many of the obstacles to change which have been attributed to human nature are in fact due to the inertia of institutions and to the voluntary desire of powerful classes to maintain the existing status.<sup>37</sup>

Capitalism is unique among social systems in its active, extreme cultivation of individual self-interest or "possessive-individualism."<sup>38</sup> Yet the reality is that non-capitalist human societies have thrived over a long period—for more than 99 percent of the time since the emergence of anatomically modern humans—while encouraging other traits such as sharing and responsibility to the group. There is no reason to doubt that this can happen again.<sup>39</sup>

The incestuous connection that exists today between business interests, politics, and law is reasonably apparent to most observers.<sup>40</sup> These include outright bribery, to the more subtle sorts of buying access, friendship, and influence through campaign contributions and lobbying efforts. In addition, a culture develops among political leaders based on the precept that what is good for capitalist business is good for the country. Hence, political leaders increasingly see themselves as political entrepreneurs, or the counterparts of economic entrepreneurs, and regularly convince themselves that what they do for corporations to obtain the funds that will help them get reelected is actually in the public interest. Within the legal system, the interests of capitalists and their businesses are given almost every benefit.

Given the power exercised by business interests over the economy, state, and media, it is extremely difficult to effect fundamental changes that they oppose. It therefore makes it next to impossible to have a rational and ecologically sound energy policy, health care system, agricultural and food system, industrial policy, trade policy, education, etc.

#### **IV. Characteristics of Capitalism in Conflict with Social Justice**

The characteristics of capitalism discussed above—the necessity to grow; the pushing of people to purchase more and more; expansion abroad; use of resources without concern for future

generations; the crossing of planetary boundaries; and the predominant role often exercised by the economic system over the moral, legal, political, cultural forms of society—are probably the characteristics of capitalism that are most harmful for the *environment*. But there are other characteristics of the system that greatly impact the issue of *social justice*. It is important to look more closely at these social contradictions imbedded in the system.

#### ***A. As the System Naturally Functions, a Great Disparity Arises in Both Wealth and Income***

There is a logical connection between capitalism's successes and its failures. The poverty and misery of a large mass of the world's people is not an accident, some inadvertent byproduct of the system, one that can be eliminated with a little tinkering here or there. The fabulous accumulation of wealth—as a direct consequence of the way capitalism works nationally and internationally—has simultaneously produced persistent hunger, malnutrition, health problems, lack of water, lack of sanitation, and general misery for a large portion of the people of the world. The wealthy few resort to the mythology that the grand disparities are actually necessary. For example, as Brian Griffiths, the advisor to Goldman Sachs International, quoted above, put it: “We have to tolerate the inequality as a way to achieving greater prosperity and opportunity for all.”<sup>41</sup> What's good for the rich also—according to them—coincidentally happens to be what's good for society as a whole, even though many remain mired in a perpetual state of poverty.

Most people need to work in order to earn wages to purchase the necessities of life. But, due to the way the system functions, there is a large number of people precariously connected to jobs, existing on the bottom rungs of the ladder. They are hired during times of growth and fired as growth slows or as their labor is no longer needed for other reasons—Marx referred to this group as the “reserve army of labor.”<sup>42</sup> Given a system with booms and busts, and one in which profits are the highest priority, it is not merely convenient to have a group of people in the reserve army; it is absolutely essential to the smooth workings of the system. It serves, above all, to hold down wages. The system, without significant intervention by government (through large inheritance taxes and substantial progressive income taxes), produces a huge inequality of both income and wealth that passes from generation to generation. The production of great wealth and, at the same time great poverty, within and between countries is not coincidental—wealth and poverty are likely two sides of the same coin.

In 2007, the top 1 percent of wealth holders in the United States controlled 33.8 percent of the wealth of the country, while the bottom 50 percent of the population owned a mere 2.5 percent. Indeed, the richest *400 individuals* had a combined net worth of \$1.54 trillion in 2007—approaching that of the bottom *150 million people* (with an aggregate net worth of \$1.6 trillion). On a global scale, the wealth of the world's 793 billionaires is, at present, more than \$3 trillion—equivalent to about 5 percent of total world income (\$60.3 trillion in 2008). A mere 9 million people worldwide (around one-tenth of 1 percent of world population) designated as “high net worth individuals” currently hold a combined \$35 trillion in wealth—equivalent to more than 50 percent of world income.<sup>43</sup> As wealth becomes more concentrated, the wealthy gain more political power, and they will do what they can to hold on to all the money they can—at the expense of those in lower economic strata. Most of the productive forces of society, such as factories, machinery, raw materials, and land, are controlled by a relatively small percentage of the population. And, of course, most people see nothing wrong with this seemingly natural order of things.

#### ***B. Goods and Services Are Rationed According to Ability to Pay***

The poor do not have access to good homes or adequate food supplies because they do not have “effective” demand—although they certainly have biologically based demands. All goods are commodities. People without sufficient effective demand (money) have no right in the capitalist system to any particular type of commodity—whether it is a luxury such as a diamond bracelet or a huge McMansion, or whether it is a necessity of life such as a healthy physical environment, reliable food supplies, or quality medical care. Access to all commodities is determined, not by desire or need, but by having sufficient money or credit to purchase them. Thus, a system that, by its very workings produces inequality and holds back workers' wages, ensures that many (in some

societies, most) will not have access to even the basic necessities or to what we might consider a decent human existence.

It should be noted that, during periods when workers' unions and political parties were strong, some of the advanced capitalist countries of Europe instituted a more generous safety net of programs, such as universal health care, than those in the United States. This occurred as a result of a struggle by people who demanded that the government provide what the market cannot—equal access to some of life's basic needs.

### ***C. Capitalism Is a System Marked by Recurrent Economic Downturns***

In the ordinary business cycle, factories and whole industries produce more and more during a boom—assuming it will never end and not wanting to miss out on the “good times”—resulting in overproduction and overcapacity, leading to a recession. In other words, the system is prone to crises, during which the poor and near poor suffer the most. Recessions occur with some regularity, while depressions are much less frequent. Right now, we are in a deep recession or mini-depression (with 10 percent official unemployment), and many think we've averted a full-scale depression by the skin of our teeth. All told, since the mid-1850s there have been thirty-two recessions or depressions in the United States (not including the current one)—with the average contraction since 1945 lasting around ten months and the average expansion between contractions lasting about six years.<sup>44</sup> Ironically, from the ecological point of view, major recessions—although causing great harm to many people—are actually a benefit, as lower production leads to less pollution of the atmosphere, water, and land.

## **V. Proposals for the Ecological Reformation of Capitalism**

There are some people who fully understand the ecological and social problems that capitalism brings, but think that capitalism can and should be reformed. According to Benjamin Barber: “The struggle for the soul of capitalism is...a struggle between the nation's economic body and its civic soul: a struggle to put capitalism in its proper place, where it serves our nature and needs rather than manipulating and fabricating whims and wants. Saving capitalism means bringing it into harmony with spirit—with prudence, pluralism and those ‘things of the public’...that define our civic souls. A revolution of the spirit.”<sup>45</sup> William Greider has written a book titled *The Soul of Capitalism: Opening Paths to a Moral Economy*. And there are books that tout the potential of “green capitalism” and the “natural capitalism” of Paul Hawken, Amory Lovins, and L. Hunter Lovins.<sup>46</sup> Here, we are told that we can get rich, continue growing the economy, and increase consumption without end—and save the planet, all at the same time! How good can it get? There is a slight problem—a system that has only one goal, the maximization of profits, has no soul, can never have a soul, can never be green, and, by its very nature, it must manipulate and fabricate whims and wants.

There are a number of important “out of the box” ecological and environmental thinkers and doers. They are genuinely good and well-meaning people who are concerned with the health of the planet, and most are also concerned with issues of social justice. However, there is one box from which they cannot escape—the capitalist economic system. Even the increasing numbers of individuals who criticize the system and its “market failures” frequently end up with “solutions” aimed at a tightly controlled “humane” and non-corporate capitalism, instead of actually getting outside the box of capitalism. They are unable even to think about, let alone promote, an economic system that has different goals and decision-making processes—one that places primary emphasis on human and environmental needs, as opposed to profits.

Corporations are outdoing each other to portray themselves as “green.” You can buy and wear your Gucci clothes with a clean conscience because the company is helping to protect rainforests by using less paper.<sup>47</sup> Newsweek claims that corporate giants such as Dell, Hewlett-Packard, Johnson & Johnson, Intel, and IBM are the top five green companies of 2009 because of their use of “renewable” sources of energy, reporting greenhouse gas emissions (or lowering them), and implementing formal environmental policies and good reputations.<sup>48</sup> You can travel wherever you want, guilt-free, by purchasing carbon “offsets” that supposedly cancel out the environmental effects of your trip.

Let's take a look at some of the proposed devices for dealing with the ecological havoc without disturbing capitalism.

### ***A. Better Technologies that Are More Energy Efficient and Use Fewer Material Inputs***

Some proposals to enhance energy efficiency—such as those to help people tighten up their old homes so that less fuel is required to heat in the winter—are just plain common sense. The efficiency of machinery, including household appliances and automobiles, has been going up continually, and is a normal part of the system. Although much more can be accomplished in this area, increased efficiency usually leads to lower costs and increased use (and often increased size as well, as in automobiles), so that the energy used is actually increased. The misguided push to “green” agrofuels has been enormously detrimental to the environment. Not only has it put food and auto fuel in direct competition, at the expense of the former, but it has also sometimes actually decreased overall energy efficiency.<sup>49</sup>

### ***B. Nuclear Power***

Some scientists concerned with climate change, including James Lovelock and James Hansen, see nuclear power as an energy alternative, and as a partial technological answer to the use of fossil fuels; one that is much preferable to the growing use of coal. However, although the technology of nuclear energy has improved somewhat, with third-generation nuclear plants, and with the possibility (still not a reality) of fourth-generation nuclear energy, the dangers of nuclear power are still enormous—given radioactive waste lasting hundreds and thousands of years, the social management of complex systems, and the sheer level of risk involved. Moreover, nuclear plants take about ten years to build and are extremely costly and uneconomic. There are all sorts of reasons, therefore (not least of all, future generations), to be extremely wary of nuclear power as any kind of solution. To go in that direction would almost certainly be a Faustian bargain.<sup>50</sup>

### ***C. Large-Scale Engineering Solutions***

A number of vast engineering schemes have been proposed either to take CO<sub>2</sub> out of the atmosphere or to increase the reflectance of sunlight back into space, away from earth. These include: *Carbon sequestration schemes* such as capturing CO<sub>2</sub> from power plants and injecting it deep into the earth, and fertilizing the oceans with iron so as to stimulate algal growth to absorb carbon; and *enhanced sunlight reflection schemes* such as deploying huge white islands in the oceans, creating large satellites to reflect incoming sunlight, and contaminating the stratosphere with particles that reflect light.

No one knows, of course, what detrimental side effects might occur from such schemes. For example, more carbon absorption by the oceans could increase acidification, while dumping sulphur dioxide into the stratosphere to block sunlight could reduce photosynthesis.

Also proposed are a number of low-tech ways to sequester carbon such as increasing reforestation and using ecological soil management to increase soil organic matter (which is composed mainly of carbon). Most of these should be done for their own sake (organic material helps to improve soils in many ways). Some could help to reduce the carbon concentration in the atmosphere. Thus reforestation, by pulling carbon from the atmosphere, is sometimes thought of as constituting negative emissions. But low-tech solutions cannot solve the problem given an expanding system—especially considering that trees planted now can be cut down later, and carbon stored as soil organic matter may later be converted to CO<sub>2</sub> if practices are changed.

### ***D. Cap and Trade (Market Trading) Schemes***

The favorite economic device of the system is what are called “cap and trade” schemes for limiting carbon emissions. This involves placing a cap on the allowable level of greenhouse gas emissions and then distributing (either by fee or by auction) permits that allow industries to emit carbon dioxide and other greenhouse gases. Those corporations that have more permits than they need may sell them to other firms wanting additional permits to pollute. Such schemes invariably

include “offsets” that act like medieval indulgences, allowing corporations to continue to pollute while buying good grace by helping to curtail pollution somewhere else—say, in the third world.

In theory, cap and trade is supposed to stimulate technological innovation to increase carbon efficiency. In practice, it has not led to carbon dioxide emission reductions in those areas where it has been introduced, such as in Europe. The main result of carbon trading has been enormous profits for some corporations and individuals, and the creation of a subprime carbon market.<sup>51</sup> There are no meaningful checks of the effectiveness of the “offsets,” nor prohibitions for changing conditions sometime later that will result in carbon dioxide release to the atmosphere.

## VI. What Can Be Done Now?

In the absence of systemic change, there certainly are things that have been done and more can be done in the future to lessen capitalism’s negative effects on the environment and people. There is no particular reason why the United States can’t have a better social welfare system, including universal health care, as is the case in many other advanced capitalist countries. Governments can pass laws and implement regulations to curb the worst environmental problems. The same goes for the environment or for building affordable houses. A carbon tax of the kind proposed by James Hansen, in which 100 percent of the dividends go back to the public, thereby encouraging conservation while placing the burden on those with the largest carbon footprints and the most wealth, could be instituted. New coal-fired plants (without sequestration) could be blocked and existing ones closed down.<sup>52</sup> At the world level, contraction and convergence in carbon emissions could be promoted, moving to uniform world per capita emissions, with cutbacks far deeper in the rich countries with large per capita carbon footprints.<sup>53</sup> The problem is that very powerful forces are strongly opposed to these measures. Hence, such reforms remain at best limited, allowed a marginal existence only insofar as they do not interfere with the basic accumulation drive of the system.

Indeed, the problem with all these approaches is that they allow the economy to continue on the same disastrous course it is currently following. We can go on consuming all we want (or as much as our income and wealth allow), using up resources, driving greater distances in our more fuel-efficient cars, consuming all sorts of new products made by “green” corporations, and so on. All we need to do is support the new “green” technologies (some of which, such as using agricultural crops to make fuels, are actually not green!) and be “good” about separating out waste that can be composted or reused in some form, and we can go on living pretty much as before—in an economy of perpetual growth and profits.

The very seriousness of the climate change problem arising from human-generated carbon dioxide and other greenhouse gas emissions has led to notions that it is merely necessary to reduce carbon footprints (a difficult problem in itself). The reality, though, is that there are numerous, interrelated, and growing ecological problems arising from a system geared to the infinitely expanding accumulation of capital. What needs to be reduced is not just *carbon footprints*, but *ecological footprints*, which means that economic expansion on the world level and especially in the rich countries needs to be reduced, even cease. At the same time, many poor countries need to expand their economies. The new principles that we could promote, therefore, are ones of sustainable human development. This means *enough* for everyone and no more. Human development would certainly not be hindered, and could even be considerably enhanced for the benefit of all, by an emphasis on sustainable human, rather than unsustainable economic, development.

## VII. Another Economic System Is Not Just Possible—It’s Essential

The foregoing analysis, if correct, points to the fact that the ecological crisis cannot be solved within the logic of the present system. The various suggestions for doing so have no hope of success. The system of world capitalism is clearly unsustainable in: (1) its quest for never ending accumulation of capital leading to production that must continually expand to provide profits; (2) its agriculture and food system that pollutes the environment and still does not allow universal access to a sufficient quantity and quality of food; (3) its rampant destruction of the environment; (4) its continually recreating and enhancing of the stratification of wealth within and between

countries; and (5) its search for technological magic bullets as a way of avoiding the growing social and ecological problems arising from its own operations.

The transition to an ecological—which we believe must also be a socialist—economy will be a steep ascent and will not occur overnight. This is not a question of “storming the Winter Palace.” Rather, it is a dynamic, multifaceted struggle for a new cultural compact and a new productive system. The struggle is ultimately against the *system of capital*. It must begin, however, by opposing the *logic of capital*, endeavoring in the here and now to create in the interstices of the system a new social metabolism rooted in egalitarianism, community, and a sustainable relation to the earth. The basis for the creation of sustainable human development must arise *from within* the system dominated by capital, *without being part of it*, just as the bourgeoisie itself arose in the “pores” of feudal society.<sup>54</sup> Eventually, these initiatives can become powerful enough to constitute the basis of a revolutionary new movement and society.

All over the world, such struggles in the interstices of capitalist society are now taking place, and are too numerous and too complex to be dealt with fully here. Indigenous peoples today, given a new basis as a result of the ongoing revolutionary struggle in Bolivia, are reinforcing a new ethic of responsibility to the earth. La Vía Campesina, a global peasant-farmer organization, is promoting new forms of ecological agriculture, as is Brazil’s MST (Movimento dos Trabalhadores Rurais Sem Terra), as are Cuba and Venezuela. Recently, Venezulean President Hugo Chávez stressed the social and environmental reasons to work to get rid of the oil-rentier model in Venezuela, a major oil exporter.<sup>55</sup> The climate justice movement is demanding egalitarian and anti-capitalist solutions to the climate crisis. Everywhere radical, essentially anti-capitalist, strategies are emerging, based on other ethics and forms of organization, rather than the profit motive: ecovillages; the new urban environment promoted in Curitiba in Brazil and elsewhere; experiments in permaculture, and community-supported agriculture, farming and industrial cooperatives in Venezuela, etc. The World Social Forum has given voice to many of these aspirations. As leading U.S. environmentalist James Gustave Speth has stated: “The international social movement for change—which refers to itself as ‘the irresistible rise of global anti-capitalism’—is stronger than many may imagine and will grow stronger.”<sup>56</sup>

The reason that the opposition to the logic of capitalism—ultimately seeking to displace the system altogether—will grow more imposing is that there is no alternative, if the earth as we know it, and humanity itself, are to survive. Here, the aims of ecology and socialism will necessarily meet. It will become increasingly clear that the distribution of land as well as food, health care, housing, etc. should be based on fulfilling human needs and not market forces. This is, of course, easier said than done. But it means making economic decisions through democratic processes occurring at local, regional, and multiregional levels. We must face such issues as: (1) How can we supply everyone with basic human needs of food, water, shelter, clothing, health care, educational and cultural opportunities? (2) How much of the economic production should be consumed and how much invested? and (3) How should the investments be directed? In the process, people must find the best ways to carry on these activities with positive interactions with nature—to improve the ecosystem. New forms of democracy will be needed, with emphasis on our responsibilities to each other, to one’s own community as well as to communities around the world. Accomplishing this will, of course, require social planning at every level: local, regional, national, and international—which can only be successful to the extent that it is *of and by*, and not just ostensibly *for*, the people.<sup>57</sup>

An economic system that is democratic, reasonably egalitarian, and able to set limits on consumption will undoubtedly mean that people will live at a significantly lower level of consumption than what is sometimes referred to in the wealthy countries as a “middle class” lifestyle (which has never been universalized even in these societies). A simpler way of life, though “poorer” in gadgets and ultra-large luxury homes, can be richer culturally and in reconnecting with other people and nature, with people working the shorter hours needed to provide life’s essentials. A large number of jobs in the wealthy capitalist countries are nonproductive and can be eliminated, indicating that the workweek can be considerably shortened in a more rationally organized economy. The slogan, sometimes seen on bumper stickers, “Live Simply so that Others May Simply Live,” has little meaning in a capitalist society. Living a simple life, such as Helen and Scott Nearing did, demonstrating that it is possible to live a rewarding and interesting life while living simply, doesn’t help the poor under present circumstances.<sup>58</sup> However, the slogan will have

real importance in a society under social (rather than private) control, trying to satisfy the basic needs for all people.

Perhaps the Community Councils of Venezuela—where local people decide the priorities for social investment in their communities and receive the resources to implement them—are an example of planning for human needs at the local level. This is the way that such important needs as schools, clinics, roads, electricity, and running water can be met. In a truly transformed society, community councils can interact with regional and multiregional efforts. And the use of the surplus of society, after accounting for peoples' central needs, must be based on their decisions.<sup>59</sup>

The very purpose of the new sustainable system, which is the necessary outcome of these innumerable struggles (necessary in terms of survival and the fulfillment of human potential), must be to satisfy the basic material and non-material needs of all the people, while protecting the global environment as well as local and regional ecosystems. The environment is not something "external" to the human economy, as our present ideology tells us; it constitutes the essential life support systems for all living creatures. To heal the "metabolic rift" between the economy and the environment means new ways of living, manufacturing, growing food, transportation and so forth.<sup>60</sup> Such a society must be sustainable; and sustainability requires substantive equality, rooted in an egalitarian mode of production and consumption.

Concretely, people need to live closer to where they work, in ecologically designed housing built for energy efficiency as well as comfort, and in communities designed for public engagement, with sufficient places, such as parks and community centers, for coming together and recreation opportunities. Better mass transit within and between cities is needed to lessen the dependence on the use of the cars and trucks. Rail is significantly more energy efficient than trucks in moving freight (413 miles per gallon fuel per ton versus 155 miles for trucks) and causes fewer fatalities, while emitting lower amounts of greenhouse gases. One train can carry the freight of between 280 to 500 trucks. And it is estimated that one rail line can carry the same amount of people as numerous highway lanes.<sup>61</sup> Industrial production needs to be based on ecological design principles of "cradle-to-cradle," where products and buildings are designed for lower energy input, relying to as great degree as possible on natural lighting and heating/cooling, ease of construction as well as easy reuse, and ensuring that the manufacturing process produces little to no waste.<sup>62</sup>

Agriculture based on ecological principles and carried out by family farmers working on their own, or in cooperatives and with animals, reunited with the land that grows their food has been demonstrated to be not only as productive or more so than large-scale industrial production, but also to have less negative impact on local ecologies. In fact, the mosaic created by small farms interspersed with native vegetation is needed to preserve endangered species.<sup>63</sup>

A better existence for slum dwellers, approximately one-sixth of humanity, must be found. For the start, a system that requires a "planet of slums," as Mike Davis has put it, has to be replaced by a system that has room for food, water, homes, and employment for all.<sup>64</sup> For many, this may mean returning to farming, with adequate land and housing and other support provided.

Smaller cities may be needed, with people living closer to where their food is produced and industry more dispersed, and smaller scale.

Evo Morales, President of Bolivia, has captured the essence of the situation in his comments about changing from capitalism to a system that promotes "living well" instead of "living better." As he put it at the Copenhagen Climate Conference in December 2009: "Living better is to exploit human beings. It's plundering natural resources. It's egoism and individualism. Therefore, in those promises of capitalism, there is no solidarity or complementarity. There's no reciprocity. So that's why we're trying to think about other ways of living lives and living well, not living better. Living better is always at someone else's expense. Living better is at the expense of destroying the environment."<sup>65</sup>

The earlier experiences of transition to non-capitalist systems, especially in Soviet-type societies, indicate that this will not be easy, and that we need new conceptions of what constitutes socialism, sharply distinguished from those early abortive attempts. Twentieth-century revolutions



typically arose in relatively poor, underdeveloped countries, which were quickly isolated and continually threatened from abroad. Such post-revolutionary societies usually ended up being heavily bureaucratic, with a minority in charge of the state effectively ruling over the remainder of the society. Many of the same hierarchical relations of production that characterize capitalism were reproduced. Workers remained proletarianized, while production was expanded for the sake of production itself. Real social improvements all too often existed side by side with extreme forms of social repression.<sup>66</sup>

Today we must strive to construct a genuine socialist system; one in which bureaucracy is kept in check, and power over production and politics truly resides with the people. Just as new challenges that confront us are changing in our time, so are the possibilities for the development of freedom and sustainability.

When Reverend Jeremiah Wright spoke to *Monthly Review's* sixtieth anniversary gathering in September 2009, he kept coming back to the refrain "What about the people?" If there is to be any hope of significantly improving the conditions of the vast number of the world's inhabitants—many of whom are living hopelessly under the most severe conditions—while also preserving the earth as a livable planet, we need a system that constantly asks: "What about the people?" instead of "How much money can I make?" This is necessary, not only for humans, but for all the other species that share the planet with us and whose fortunes are intimately tied to ours.

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