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The Age of Planetary Crisis: The Unsustainable Development of Capitalism

ABSTRACT: The final years of the twentieth century have revealed three critical conditions likely to dominate the history of the coming century: (1) economic stagnation and globalization; (2) environmental decline; and (3) the weakness of antisystemic movements. As economic conditions stagnate and environmental conditions worsen, the material bases will emerge for a new, much broader movement of global resistance; one in which the struggle of labor vs. capital will be joined with the struggle of life vs. capital.

> I only want to explain General that very often between one historical period and another ten years suddenly might be enough to reveal the contradictions of a whole century. And so often we have to realize that our judgments and our interpretations, and even our hopes, may have been wrong. Wrong that's all.
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> Nineteenth Century British Intelligence Officer Sir William Walker in Gillo Pentecorvo's film *!Queimada!* (*Burn*), 1968

Future historians will no doubt view the period from 1989 to the close of the twentieth century as one of the crucial decades in world history, revealing the contradictions of a

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whole century—the twenty-first. Three critical conditions characterize this period: the globalization of capitalist economic relations and crisis tendencies; the onset of a planetary ecological crisis; and the weakness and disorganization of all anti-systemic forces (symbolized above all by the collapse of the Communist regimes of the Soviet Union and Eastern Europe). Together these three conditions point to an age of planetary crisis, in which the unsustainable development of the system has become a growing source of concern for all humanity, while social forces seem incapable at present of averting the headlong rush into destruction.

Each of these critical conditions dates back to the early 1970s. Each, however, had taken on new meaning by the 1990s. Economic stagnation and financial explosion emerged as key trends of the advanced industrial economies from the 1970s on, which, when coupled with the decline of U.S. hegemony within the capitalist world economy, led to international economic restructuring and finally to what has come to be known as the present phase of "globalization," marking a qualitative leap forward in the spread of capitalist economic relations worldwide. Concerns over environmental degradation, which had become widespread by the time of the first Earth Day in April 1970, had widened by the late 1980s—with the ascendance of such problems as global warming and the destruction of the ozone layer—into a growing alarm over the advent of global ecological crisis. The failure of social movements at the center of the world system to ignite radical change following the events of 1968 had been upstaged by the 1990s by a failure of revolutions worldwide in the context of a global offensive by capital against labor and all anti-capitalist forces, leading to claims on the part of defenders of the system that the "end of history" had finally arrived. In each case the crisis had not so much abated as taken on a new and more global form.

Historian Eric Hobsbawm has called the twentieth century "the age of extremes." At the end of the century it appears that only one of these extremes—unfettered capitalist expansion—has survived, and the dangers to the world (aside from the much diminished threat of "mutually assured destruction") are all the greater as a result. The logic of the system, which has made accumulation on a planetary scale into a law unto itself, points in a direction that will ultimately undermine its own bases of advance, generating continuing economic travails and environmental destruction. Moreover, the absence for the time being of social forces able to counter this historical trend ensures that matters will get much worse before they have a chance of getting better.

Still, populations are not standing idly by. Resistance, though relatively ineffectual at present, is widespread. Out of the new

conditions associated with the triumph of the market new contradictions and new forms of social struggle will emerge. To develop a fuller understanding of the nature of this planetary crisis and the ways in which it will likely be fought out it is necessary to examine more closely the objective forces generating economic and ecological crisis on a global scale, and how these dominant trends point not only to the degeneration, but also to the regeneration, of antisystemic movements worldwide.

STAGNATION AND GLOBALIZATION

It is difficult to remember that only a quarter-century ago most mainstream economists were extremely optimistic about the growth prospects of the system. As recently as 1970 there was a broad consensus among establishment economists that the "golden age" of rapid growth that characterized the first quarter-century following the Second World War would continue indefinitely and even accelerate in the near future. Thus OECD projections in 1970 pointed to real GNP growth rates of 5.1 percent per annum over the 1970s (McCracken 1977: 38–39).

Instead growth rates declined dramatically, accompanied by rising unemployment and excess capacity. From 1950–1973 the average annual rate of growth in output in the advanced industrial countries was 4.4 percent; in 1973–1994 it dropped to only 2.4 percent (OECD, *Economic Outlook*, various issues; Tanzer 1995: 4). Stagnation thus characterized the advanced industrial countries as well as much of the underdeveloped world, though in a few countries, mostly in Asia, growth rates over the same period were spectacular. During the first Industrial Revolution in Britain it took 60 years to achieve a doubling of income; China achieved this in only 10 years (Speth 1996; O'Connor 1996).

Responses to the economic slowdown at the center of the capitalist world economy when it first made its appearance in the 1970s were various. A majority of economists thought it a mere cyclical phenomenon or at worst a temporary slackening of the growth trend resulting from certain external shocks (after 1973 the OPEC oil price increase was commonly blamed). In contrast, radical economists tended to view the crisis as reflecting deep structural failings of the capitalist economy, demanding radical reform at the very least. Meanwhile a handful of theorists (mostly associated with the journal *Monthly Review* and therefore sometimes known as the "Monthly Review school") argued, from the very moment that the golden age gave rise to crisis, that the crisis was irreversible within the context of the system and reflected the *normal* stagnationary tendency of advanced capitalism.

Foremost among these was the Marxist economist Paul Sweezy, who in his 1971 Marshall Lecture at Cambridge University, spoke of "the profound tendency to stagnation which lies at the heart of present-day capitalism" (Sweezy 1972: 25). As he and Harry Magdoff were to explain a few years later in an analysis of the economic crisis of the early 1970s: "the *normal* state of the [capitalist] system in its monopoly stage is one of cyclical ups and downs in a context of continuing stagnation. If during any period of time this is not the *actual* state of the system, this fact requires to be explained by historical forces which operate on the system but are not presupposed as being essential to its existence" (Magdoff and Sweezy 1977: 56).

This argument, sometimes known as stagnation theory, had roots that went back to the 1930s and that rested on the work of such previous thinkers as Alvin Hansen, Michal Kalecki, Josef Steindl, and Paul Baran (writing with Paul Sweezy). For all of these theorists the essential problem was one of insufficient investment outlets for the savings (or surplus) that the system was capable of generating.

The fundamental dilemma can be understood more fully if we visualize matters in terms of a simple model of the capitalist economy, arguing admittedly at a high level of abstraction.[1] In this simple model the economy can be seen as being composed of two elements: Department I (producing means of production) and Department II (producing articles of consumption), with foreign trade (as well as extraordinary, epoch-making technological innovations) excluded from the picture. All income is assumed to be in the form of wages (the return to wage labor) and gross profits (the return to capital). Workers' savings are non-existent. The demand for capital goods is therefore equal to reinvested gross profits, while the demand for wage goods (the great bulk of the consumption goods sector) equals total wages. Rapid accumulation, under such conditions, requires a much faster growth in Department I than Department II, but this tends to generate inordinate productive capacity in relation to effective demand as the new investment turns into new productive capacity capable of producing even larger amounts of goods if fully utilized. "The tragedy of investment," Michal Kalecki once wrote, "is that it is useful" (Kalecki 1939: 149). Hence, one of the central contradictions of the capitalist economy—highlighted by this simple model—has always been the possibility of generating more surplus than the system is capable of absorbing, thereby leading to a crisis of overaccumulation, in the sense of excess surplus or savings (ex ante) coupled with overabundant productive capacity.

[1] "The legitimate purpose of abstraction in social science," Paul Sweezy (1942: 18) observed, is never to get away from the real world but rather to isolate certain aspects of the real world for intensive investigation."

But while this problem is endemic to capitalism it only became a serious obstacle to accumulation once the concentration and centralization of capital had reached such heights that a qualitative leap from freely competitive to monopoly capitalism can be said to have occurred—a transition that occurred at the outset of the twentieth century. The giant corporations that dominate the modern economy have a vast capacity, reinforced by technological advance, to expand production and to accumulate savings. The potential supply of investment capital therefore tends to increase as a proportion of total output. Under these circumstances growth will take place only to the extent that investment outlets of an equally massive kind are available. When this is not the case accumulation is retarded and the growth rate slows down. The problem is that there is nothing within the internal logic of the system that ensures that sufficient outlets for investment on the scale needed will be available (MacEwan 1994).

The rise of monopoly capital in and of itself, however, only constitutes part of the contemporary problem of stagnation, which is also affected by what has been termed the *maturation* of the economy—an historical process that tends to dampen the demand for investment capital as the system ages. Understood in Marxian terms, the issue of maturity appears historically, as Sweezy has written, "when Department I is sufficiently built up to supply all the needs of replacing worn-out means of production, and, in addition, to provide the inputs for an ample expansion of Department II." Beginning in the twentieth century, it was no longer as easy as it had been in the "maturing capitalism" of the nineteenth century for Department I to advance, for extended periods of time, at a faster rate than Department II, with the former largely feeding itself through the insatiable demand for investment characteristic of the early phases of industrialization (Sweezy 1981: 26–45).

Capitalism, which had emerged in a small corner of the world surrounded by a much larger non-capitalist environment, had been able to expand in part through the absorption of its non-capitalist environment (a process that classical economists like Adam Smith and Karl Marx referred to as "primitive accumulation"). As economic dissident Edward Herman states, "The market can grow by reaching into new geographic territories or by seeking out new customers in already occupied space; by filling in product gaps with new products; and by converting aspects of life that were once outside into marketable products (commodification)" (Herman 1995: 3; Magdoff and Sweezy 1987: 50–58, 1988: 27–33). Although the expansion of the system into its external environment has by no means ceased even today (witness the recent expansion into tropical rainforests and the commodification of children's playgrounds and even cyberspace), over the course of the twentieth century it has become relatively less important as

the non-capitalist environment has receded in the face of the expanding universe of capitalist commodity relations.

Likewise the demand for investment capital to *build up* Department I is relatively less important than it was early on in the industrialization process. All of the advanced industrial countries have well-developed capital goods industries which normally operate at less than full capacity. These industries are generally able to satisfy effective demand even in times of prosperity, as long as the upkeep and modernization of the means of production (easily funded out of depreciation allowances) occurs. There is thus no demand for the rapid expansion of net investment that was normal in the heyday of capitalism, when industry was being built up from scratch. (It should be noted that these conditions in the advanced industrial countries do not presently apply to the emerging industrial economies of Asia, where demand for capital for investment, and for the further building-up of Department I is high, and where "maturity and stagnation" has not yet set in) (O'Connor 1996).[2]

Maturation of the economy under the regime of monopoly capital is also associated with a tempering of what Joseph Schumpeter called "the perennial gale of creative destruction." Under monopoly capitalism the dominant firms in mature industries are rarely endangered by a process of low cost firms entering the industry and threatening the existence of the higher cost firms in a life and death struggle—as the theory of free competition would lead one to expect. Even under the current phase of globalization, which has dramatically intensified international competition among giant firms by reducing spatial barriers to capital mobility, it remains true that the giant oligopolistic firms in mature industries are generally able to maintain control of and even expand their core markets, and to dominate the product cycle to a significant extent, thus protecting their profit margins and their positions as growth poles within the capitalist economy. Thus few business analysts realistically expect the dominant global corporations to lose their dominance as a result of the product cycle, or to be displaced, within their core industries, by smaller, upcoming, technologically-innovative firms—despite the widespread perception that it is the latter rather than the former that are the source of the most dynamic technological innovation. The giant corporation of today thus serves to "rationalize" the process of

[2] The rapid growth of economies in Asia is one of the current countervailing factors to global stagnation. In this respect, as O'Connor has noted, "the fate of the DCs [developed countries], especially the United States, United Kingdom, and Japan, is thus in some significant part dependent on the continued expansion of the Asian (and Latin American and East European) EMCs [emerging market countries]....Given any major slack in Asian and EMC economic growth, the DCs will find themselves with a greatly enlarged productive capacity, especially in high tech sectors, with no compensating growth of home demand in sight" (O'Connor 1996: 124).

technological innovation (in the Weberian sense) as compared with the dog-eat-dog world of free competition—the heyday of entrepreneurial capitalism (Foster 1984).

Finally, new industries tend to have a smaller quantitative impact on the economy than in the days of early industrialization. Although computers and computer-related products represent one of the most dynamic outlets for investment demand in the contemporary economy, they have never played a dominant role in determining investment demand in the economy as a whole. In this respect the contrast with the railroad and the automobile in the nineteenth and early to mid-twentieth centuries is startling (Magdoff and Sweezy 1988: 31–32).

The result of all of this is a system in which the supply of investment capital tends to exceed the demand for such capital, leading to overaccumulation and stagnation. The early 1970s therefore saw a resumption of conditions of stagnation that had been interrupted by the Second World War (during which the economy, stimulated by the wartime expansion of demand, grew by more than two-thirds in a half dozen years) and by the "golden age" that followed (Marglin and Schor 1990).

The golden age, according to stagnation theory, was exceptional and can be accounted for by a number of favorable historical factors, all of which were self-limiting. In the immediate aftermath of the Second World War there was an enormous pileup of savings, reflecting pent-up demand on the part of both individuals and businesses, that was soon to translate into an explosion of demand for goods. The second great wave of automobilization occurred at this time, which was associated with the expansion of the steel, glass and rubber industries, the building of the interstate highway system, and a suburban housing boom. The Korean War, the Vietnam War, and the Cold War arms race all supplied additional demand that served to prop up the economy. Finally, the rebuilding of the economies of Western Europe and Japan, that had been destroyed in the Second World War, and the subsequent automobilization of these societies, served to boost golden age expansion.

Nevertheless, each of these stimuli proved to be short-lived, and by the 1970s stagnation resurfaced. The pent-up demand for consumer and investment goods, in the aftermath of the war, was rapidly exhausted. The wave of automobilization (including the entire auto-highway-housing complex) had essentially petered out by the mid-1960s, entering a phase of simple reproduction. The rebuilding of the war-devastated economies in Europe and Japan was eventually completed, resulting in a slowing down in the growth rate of these countries.

In line with this interpretation, the average annual rate of growth for the U.S. economy dropped from 4.4 percent in the 1960s to 3.2 percent in the 1970s, 2.8 percent in the 1980s, and

1.8 percent from 1990–95—a drop of about 60 percent between the 1960s and the early 1990s (Council of Economic Advisers 1997: 283). All of the symptoms of stagnation are present: a tendency for the surplus to rise; the atrophy of new net investment; high unemployment and excess capacity; declining wages; and a secular decline in growth rates. Net non-residential fixed investment plummeted from 4.4 percent of GDP in 1973 to half that much, 2.2 percent in 1989 (Council of Economic Advisers 1995, 274, 279, Tables B-17 and B-1; Gordon 1996: 81). Meanwhile, average real hourly spendable earnings for private nonfarm production employees in the United States (about 80 percent of employed workers) "declined with growing severity" over the 1970s and '80s. According to data presented by David Gordon in *Fat and Mean: The Corporate Squeeze of Working Americans and the Myth of Managerial "Downsizing"*:

> The average annual growth of real spendable hourly earnings [for private nonfarm production workers] reached 2.1 percent a year from 1948 to 1966, slowed to 1.4 percent between 1966 and 1973, and then dropped with gathering speed at a shade less than *minus* one percent per year from 1973 to 1989....By 1994...*real spendable earnings had fallen back to below the level they had last reached in 1967.* Growing massively over those nearly three decades, the economy's real gross output per capita in 1994 was 53 percent larger than it had been in 1967, but real hourly take-home pay was four cents lower. Referring to these trends since the early 1970s as "the wage squeeze" is polite understatement. Calling it the "wage collapse" might be more apt (Gordon 1996: 19–20; Peterson 1994: 35–37).

By July 17, 1995 even *Business Week* was openly pondering the question: "Wages: They're stagnant while profits are soaring. Are we headed for trouble?"

Indeed, the setting-in of stagnation has been associated with a vast increase in the concentration and centralization of income and wealth, which is more and more under the control of a relatively few giant corporations, with a tiny fraction of the population getting the lion's share of the benefits. The top 200 manufacturing corporations in the United States own more than 60 percent of all manufacturing assets, while the top 710, one-fourth of one percent of U.S. manufacturing corporations, account for over 80 percent. In the early 1990s the top 600 corporations in the U.S. economy took in more than 80 percent of all sales revenue (DuBoff 1989: 170–71; Heilbroner 1992: 117). As Edward Wolff has shown in *Top Heavy: A Study of the Increasing*

Inequality of Wealth in America, by 1989 the richest one percent of U.S. households owned approximately 48 percent of all financial wealth (bank deposits, financial assets, and equities) in the country, up five percentage points from 1983; while the bottom 80 percent of the population owned only six percent of such wealth, down three percentage points since 1983 (Wolff 1995: 11). One study of the economic surplus generated by the U.S. economy (following a methodology first introduced in Baran and Sweezy's *Monopoly Capital*) found that gross economic surplus rose from 50 percent in 1963 to 55 percent in 1988—an increase of five percentage points in a period of slow and declining economic growth (Dawson and Foster 1992).

The most important counteracting force to this tendency to overaccumulation and stagnation, preventing the economy from actually sinking into a deep depression, is the growth of the financial sector of the economy, which has served as a major absorber of the economic surplus. An "increasing reliance on debt permeated every area of the economy" in the 1970s and thereafter, so much so that "the center and focus of the capitalist economy has shifted from the production of goods and services to the buying, selling, and multiplication of financial assets" (Magdoff and Sweezy 1988: 14, 51). One indicator of this was the rise of corporate interest payments as a percentage of cash flow. In 1958 (the most debt-burdened year of the 1950s) interest payments by non-financial corporations accounted for 4.6 percent of the cash flow of these corporations; in 1985 (the least debt burdened year of the 1980s) this ratio had jumped to 15.9 percent—more than three times as much. The largest increases in debt in the 1980s took place in the core of the goods producing sector of the economy. In 1977 the ratio of debt to the total amount produced in U.S. manufacturing was 1.7 percent; by 1992 it had risen to 36 percent (Medoff and Harless 1996: 29). In fact, by the mid-1980s the net capital stock employed in U.S. manufacturing was less than the net capital stock employed in finance-related activities (Magdoff and Sweezy 1990).

Contrary to contemporary myth, this explosion of the financial superstructure of the economy was a response to rather than a cause of stagnation. The growth of finance and rising asset prices prevented demand from collapsing, enabling the large nonfinancial corporations to accumulate cash reserves which could be funnelled into financial expansion—given the lack of profitable investment outlets within production. "An important element" of the problem, Paul Burkett wrote in the *Review of Radical Political Economics*, "is that the productive capital investment required to satisfy finance-led demand growth is basically limited to replacement and/or modernization of existing productive capacity —especially given the continued existence of excess capacity in many industries" (Burkett 1991: 233). Consequently, the giant

nonfinancial corporations have become more and more entangled in a world of financial speculation, and "are themselves to an increasing extent constrained and controlled by financial capital as it operates through the global network of financial markets" (Sweezy 1994: 10).

All of this, although serving as a countervailing force to stagnation, has added to the long-run instability of the economic system. The rapid expansion of personal, private, and government debt itself "requires an indefinite continuation of the debt expansion process" (Magdoff and Sweezy 1988: 69). Yet, this can only be sustained as long as monetary authorities within the government serve as a "lender of last resort." To make matters worse, as the quantity of debt continues to expand without interruption, a structural change takes place and a "qualitative decline" occurs in the debt. This increased structural fragility magnifies the danger of a cascade of financial defaults, ushering in a major financial crisis. Still, confronted by periodic credit crunches the government has little choice but to give more financial slack to the system, pumping in credit where needed and relaxing all regulations limiting the financial sector. How long the financial bubble can expand before it bursts nobody knows, but the fragility of the solution is there for all to see.

Meanwhile, confronted with a secular slowdown in economic growth in the 1970s and '80s capital responded, not by seeing the main barrier to capital as capital itself, but by attributing the problem to labor, the poor, government, and barriers to capital mobility abroad. Thus for a quarter-century now capital has promoted a worldwide program of "structural adjustment" or restructuring: gutting government programs directed to the needs of labor or the dispossessed, deregulating industry and finance, privatizing state enterprises and property, promoting unemployment, breaking unions, forcing down wages, removing barriers to international capital flows, etc. Not content, moreover, to rest with clearing away obstacles to free market operations, the vested interests have sought to raise the returns to wealth by political means as well, restructuring the tax system in order to redistribute income and wealth from the poor to the rich.

The disastrous effects of this worldwide policy of restructuring are greatest where the third world and Eastern Europe are concerned. Despite the much celebrated expansion of China, South Korea, Taiwan, and a few other countries of East and Southeast Asia, the condition of most underdeveloped and/or developing nations in the 1980s and '90s has been one of stagnation or depression on top of imperialist underdevelopment, whereby the poorer countries are compelled to subsidize the growth of the richer ones. As the 1992 U.N. *Human Development Report* stated: "In 1983–89 rich creditors received a staggering $242 billion in net transfers on long-term lending from indebted

developing countries" (U.N. 1992: 45). According to the 1996 U.N. *Human Development Report*, more than 100 countries (1.6 billion people) have experienced a failure of growth over the last decade and a half with per capita income lower than it was 15 years ago. "Economic decline in much of the developing world," in the words of James Gustave Speth, Administrator of the U.N. Development Program, "has lasted for longer and gone deeper than in the Great Depression of the 1930s." Sixty percent of humanity, about 3.3 billion people, live on hardly more than $2 a day. Today the net worth of the world's 358 billionaires is equal to the combined income of countries with 45 percent of the world's population, 2.3 billion people (Speth 1996; U.N. 1996: 1–4).

At the heart of the problem lies the continuing concentration and centralization of capital on a world scale, which is taking such forms as intensified competition between global corporations, the growth of the world factory and of intra-firm trade, and the ephemeral accumulation of speculative assets. Already the largest 300 corporations in the world account for 70 percent of foreign direct investment and 25 percent of world capital (Dunning 1993: 15; Barnet and Cavanagh 1994: 15).

In general monopolization, imperialism, globalization, and the shift from production to finance are ways in which capital seeks to break out of the circle of stagnation, though this simply "shifts the contradictions to a broader sphere, and gives them a wider orbit" (Marx 1978: 544). Today the pace of this entire process is being set largely by the global expansion of financial capital. On a typical day world capital markets move $1.3 trillion or more, while the exports of the entire world add up to only $3 trillion per year. This means that in just over two days world capital markets move as much money as international trade accounts for in an entire year (Thurow 1996: 223). The increasing integration of global financial networks means that if and when the financial bubble bursts it could well encompass the entire capitalist world system—creating new and unprecedented dangers. Given the "absurd overvaluations" that characterize the modern financial system (in Japan prior to the 1990 stock market crash price-earnings ratios had risen to 100-1), MIT economist Lester Thurow argues, "it is only a question of when the market falls and whether the fall is slow or rapid" (Thurow 1996: 221). Moreover, in contrast to national economies, where the state is able to act as the lender of last resort and thus to stave off cascading defaults, the world system as a whole lacks any single entity capable of intervening on the necessary scale in the face of a sudden financial collapse—though it is true that the largest global financial institutions are attempting to forge common policies, in conjunction with states and international organizations, in order to intervene effectively in the case of any global financial panic.

The point here is not to predict such a financial collapse. Indeed, predictions *should be avoided* because it is the task of antisystemic movements to alter the status quo in order to escape from this irrational world order (Magdoff and Sweezy 1981: 148). The point rather is that the system is inherently irrational and on an expanding scale. Globalization in the face of stagnation only gives the crisis "a wider orbit."

THE CLOSING CIRCLE

If stagnation and globalization represent the principal economic contradictions present at the brink of the twenty-first century, an even larger and not unconnected crisis is associated with the advent of global ecological crisis. By the end of the 1980s, with the rise of such issues as global warming, destruction of the ozone layer, the razing of tropical forests, and an enormously high rate of species extinction, it had become obvious to all attentive observers that the world was experiencing an ecological crisis of truly planetary proportions. This development has roots in the five hundred year expansion of the modern world economy, but has taken on a new significance with the arrival of the latest phase of globalization.

The most influential way of understanding the economic ramifications of this global ecological crisis is in terms of the "limits to growth" perspective first introduced by the Club of Rome in the early 1970s and now widespread in environmental circles (Meadows et al. 1972).[3] This perspective—as presented in

[3] The Club of Rome's original report, *The Limits to Growth* (Meadows et al. 1972) argued that if economic and demographic growth trends remained unchanged, the planet's physical limits to growth would be reached within a century. The book made headlines around the world, was subjected to innumerable critiques, and was translated into 29 languages. The original argument focused on the effects of population growth and the drawing down of nonrenewable resources. It lacked any developed theory of ecosystem thresholds. The theory was also mechanistic in that it gave insufficient attention to social factors, including the differences between center and periphery of the global system. The argument on population was Malthusian in character, in that it was insufficiently attentive to economic and social conditions and implicitly blamed the world's poor (especially that of the Third World). Nonetheless, the original argument had the virtue of highlighting the fact that exponential growth of physical output in a limited biosphere meant that more and more critical strains would be placed on the biospheric capacity to renew, replenish, and restore.

Some of the failings of the original model have been overcome in today's more developed analysis of "the limits to growth" (Meadows 1992; Daly 1996; Wackernagle and Rees 1996), which emphasizes critical ecological thresholds (below the level of the entire planet)—many of which have already been crossed; the limits of "the sink" for global throughput (rather than focusing almost exclusively on the "tap"); and the different situations of North and South—specifically the need for the latter to grow, while the former must

the most developed version of the argument (Meadows et al. 1992)—emphasizes the fact that the human economy cannot expand indefinitely without crossing critical thresholds associated with the ecological limits of the biosphere. In many cases these critical thresholds have already been crossed, suggesting that from an ecological standpoint the issue is no longer one of limits on future growth but one of negative growth or deindustrialization, particularly where "overdeveloped" economies like that of the United States are concerned.

This can be best understood—as the authors of the 1992 study *Beyond the Limits* (a sequel to *The Limits of Growth*) have argued—if production is conceived as being made of a physical "flow or *throughput* from the planetary *sources* of materials and energy through the human economy, to the planetary *sinks* where waste and pollution end up." This is in accord with the first and second laws of thermodynamics, which tell us that matter and energy cannot be used up but only transformed; that energy dissipates into unusable heat; and that materials cannot be recycled 100 percent (Meadows et al. 1992: 44–56; Georgescu-Roegen 1980: 303–04; Georgescu-Roegen 1971: 1–21, 276–83). Even under the best circumstances therefore the human economy tends to degrade the environment. This is no longer a slow process, however, but—due to the growing throughput of materials and energy (plus the introduction of technology harmful to nature)—is leading to the rapid degradation of the earth's life support systems.

Put simply, the problem is that many of the crucial sources for the streams of energy and materials that feed human society and production are declining, while many of the sinks are overflowing. Environmental resources, including cultivable land, water, forests, and the world's species, are all being exploited at rates that probably cannot be sustained for long—whether the limits are to be counted in decades or centuries. In the fragile ecosystems of the world's tropical forests—where 50 percent of the world's species reside—half of the forest cover is now gone and half of what remains is fragmented and degraded. Even if cutting down

contract (which would translate into a far more equitable world distribution of resources). The rise of the concept of sustainable development has meant that even those interpretations of global ecological crisis that stress the role of population growth (including most "limits to growth" analysts), now argue—against strict Malthusians—that economic development in the Third World and a general redistribution of world product are needed if population growth in the poor countries is to be stabilized—which of course is not to deny the enormous role that social reforms, such as improving the status of women, can have in promoting the same end (Foster 1994: 14–18; Hartmann 1995). The major failing that still remains in this more developed "limits of growth" perspective (as argued in the text below) is a refusal to take into account the reality of capitalism, and hence a certain naivete with respect to the economic and social factors (e.g. accumulation, imperialism, the specific ecological contractions of capitalism) underlying the global ecological crisis.

tropical forests were limited to a constant two percent of the remaining forest per year, which would lead to a smaller and smaller annual cut, it has been estimated that most of the remaining tropical forests would be gone after a century. According to Harvard biologist Edward O. Wilson, one of the world's leading authorities on biodiversity, the extinction of species is now occurring at the staggering rate of 27,000 species a year—74 every day, three every hour. Wilson estimates that up to 20 percent of the world's species could become extinct over the next three decades, a level of extinction not experienced since the disappearance of the dinosaurs 65 million years ago (Wilson 1992: 278–80, 346; Foster 1994: 24–26). Many scientists believe that somewhere on the order of 50 percent of all living species may be extinct by the end of the next century, if current trends continue (Leakey and Lewin 1995). Even the global atmosphere and the oceans are being drastically affected by the rapidly expanding human economy: through the destruction of the ozone layer, global warming, depletion of ocean resources, and the dumping of hazardous wastes. As concern over the crossing of such critical ecological thresholds spread, attempts were made, beginning in the late 1980s, to develop models of "sustainable development" (which in capitalist terms means sustainable accumulation) that would allow for continued development within the limits set by the biosphere.

But sustained economic growth, insofar as it means an indefinite expansion of physical inputs, is, as British environmentalist A.J. McMichael points out, "ecological nonsense—nothing physical can grow indefinitely" (McMichael 1993: 308). A continuous 3 percent average annual rate of growth in industrial production, such as pertained for the world from 1970 to 1990, would mean that world industry would double in size every twenty five years. Yet already the world economy has increased in scale to the point that it rivals the major biochemical cycles of the planet, with potentially devastating consequences to the biosphere. Human beings now take or transform about 25 percent of the net photosynthetic product of the entire earth (land and sea) and 40 percent of that on land (Vitousek 1986: 368). "Furnaces and internal combustion engines exhaust into the air 20 percent as much carbon, in the form of carbon dioxide, as the two primary life processes: photosynthesis and respiration" (Piel 1992: 10). Under these circumstances it is clear that the biosphere would not be able to sustain the sixteenfold increase in the size of the world economy that a three percent rate of growth would bring in a little more than a century, much less the increase of 250 times the present size that the same rate of growth would bring in two centuries.

To be sure, economic growth is not all the same and the same level of GNP could be more or less damaging to the environment

depending on different input-ouput mixes, i.e., a less environmentally destructive technology can be substituted for a more environmentally destructive one (Edel 1973: 69–72). But this does not alter the general nature of the problem associated with economic expansion in a biophysically fixed environment. As Canadian ecological economist William Rees has commented, "There's no genius involved in saying that a system growing within a larger system that is fixed ultimately results in a total collapse of the two" (quoted in Gordon and Suzuki 1990: 166).

The existence of biophysical limits to growth does not mean that all economic growth (insofar as this involves increases in throughput) must cease. Nor does it suggest that the excessive burdens on the earth are mainly a product of overpopulation. In the poorer countries economic growth is essential if the ecology of the planet is to be stabalized—not least of all because of the need to carry out a demographic transition in such countries (Foster 1994: 14–18; Hartmann 1995). The underlying principle here can be understood with the help of the "ecological footprint" analysis introduced by Mathis Wackernagel and William Rees. An ecological footprint is the land (and water) area necessary to support a defined human population and material standard indefinitely at a given level of technology. More specifically, the ecological footprint concept, as introduced by Wackernagel and Rees, "is based on the idea that for every item of material or energy consumption, a certain amount of land in one or more ecosystem categories is required to provide the consumption-related resource flows and waste sinks" (Wackernagel and Rees 1996: 63, 158). By carefully aggregating consumption-demands and relating these to reasonable estimates of the land/water area required by a given population in order to sustain its current lifestyle Wackernagel and Rees have come up with various estimates of ecological footprints for different communities. The average U.S. resident, they calculate, has an ecological footprint of 5.1 hectares; or in other words an area in excess of three city blocks is required to maintain the average U.S. resident's current lifestyle. In contrast the ecological footprint of the average individual in India is only .4 hectares. This means that the ecological footprint of the average individual in the United States is more than 12 times as big as that of the average individual in India. Since the available productive land per capita for the entire world population is, according to Wackernagel and Rees, something on the order of 1.5 hectares, U.S. residents on average utilize more than three times their ecological fair share of the earth's resources at present (meaning that it would take three planets to satisfy human demands if the ecological footprint of the average U.S. resident pertained for the world as a whole), while the average person in India utilizes only about a quarter of his/her ecological fair share (Wackernagel and Rees 1996: 24,

88–89, 97–98). Sustainability (which is inconceivable without ecological equity) therefore demands that rich countries reduce their ecological footprints, while poor countries increase theirs. The "limits to growth" perspective, applied in this way, thus only serves to highlight the "ecology of rich and poor" (Athanasiou 1996).

Still, the limits to growth argument in the above sense, while ultimately correct, is not historically specific enough to trace the real limits to expansion for the capitalist world economy, which invariably have to do with the limits to accumulation, not growth per se. Capital does not recognize "absolute limits" (O'Connor 1991: 6). Instead the constraints on the system associated with environmental conditions take the form of added costs which increase the economic instability faced by individual firms. Environmental costs thus have a substantial bearing on economic crisis tendencies by undermining the elemental conditions of production (the health of human beings and the integrity of the earth's life support systems), while at the same time increasing costs to the firm and thus lessening the ability of particular firms to overcome constraints emanating from other causes such as market shortfalls.[4]

Some have argued that, faced with growing environmental problems and the attendant social costs, the state might intervene directly and on the scale necessary to "clean up" the environment, and that this might be a means of absorbing economic surplus (or soaking up excess demand). However, such social expenditures, on the scale necessary, would inevitably be seen by capital as an intrusion on the private sphere—a logic that is also evident in other areas such as education and health (Baran and Sweezy 1966: 161–75). Insofar as such expenditures are profitable, they tend to be relegated by the system to the private sphere—to a growing "pollution-industrial complex" that parallels the military-industrial complex (Gellen 1970). Insofar as they are not profitable, environmental expenditures are confined to the state and tend to be strictly limited.

Given these circumstances, numerous economic analysts have argued that—even if such expenditures are not undertaken by the

[4] Two of the ways in which the undermining of the environmental conditions of production might undermine the economy are indicated by Thomas Weisskopf, who points to: (1) the possibility of "technological regress" (an inversion of the technological progress assumed in economic models), in which "natural environmental conditions change in such a way as to *reduce* the real output that can be produced with given input of labor and capital"; and (2) the possibility that growing strains on the natural environment result in increasing expenditure on environmental maintenance activities, so that a growing proportion of real output is devoted simply to maintaining welfare rather than enhancing it. Under these circumstances "the true net output of the economy would grow more slowly, or even decline, and the distribution of the burden of that decline would become a contentious issue" (Weisskopf 1996: 382–83).

state directly—the further growth of the current state-subsidized waste management industry or pollution-industrial complex, geared to cleaning up environmental wastes, constitutes a potential major absorber of economic surplus (generating new markets in environmental products), and a remedy at least in part for the economic crisis tendencies of the system. The problem here, however, is that there is every reason to believe that once an initial competitive shake-down has taken place, this new "environmental" sector—organized around the most profitable areas of environmental management such as waste disposal and recycling—will tend to be monopolized by a relatively small number of corporations and to produce as much or more actual and potential surplus as it absorbs, in line with the general pattern of accumulation under monopoly capitalism.[5]

Here it is important to observe that much of today's pollution-industrial complex is in fact already controlled by giant corporations like Dupont, Dow, Monsanto, Union Carbide, General Electric, etc. whose main interest is in the production of waste, and only secondarily (to the extent that this is also profitable) in cleaning up the waste that they and like corporations have produced. As Martin Gellen argued in his classic *Ramparts* article, "The Making of a Pollution-Industrial Complex,"

> [P]ollution control, developed as a complementary industry, is a way to insure that the favorable balance between costs, sales and profits can be maintained and business can continue as usual—indeed, better than usual, for pollution control means new investment outlets, new income and new profits; the more waste, the better. Pollution control as conceived by the pollution control industry is merely an extension of the same pattern of profit-seeking exploitation and market economics which is at the root of the environmental crisis itself (Gellen 1970: 77).

There is no doubt about the fact that the pollution-industrial complex, in this sense, has grown by leaps and bounds in recent years. According to estimates provided by Management Information Services, a Washington, D.C.-based economic consulting firm, spending on environmental protection increased sixfold between the early 1970s and the early 1990s, from $28 billion (in constant 1992 dollars) in 1970 to $170 billion in 1992. Even though the rate of increase of such expenditures has declined in recent years, aggregate spending on environmental protection is

[5] I am indebted to Paul Burkett for drawing my attention to this point.

expected to reach the level of national defense spending by the late 1990s (Bezdek 1993: 7, 26).

Yet, despite this rapid increase in environmental spending the direction of this spending is quite narrow, when placed against the range of environmental problems, and is largely confined to end of the pipe pollution control and waste management (Bezdek 1993: 28). In practice, those environmental clean-up and adaptation activities which do prove profitable—and thus are easily integrated into environmental policy—tend to be strictly limited when it comes to the kind of institutional and systemic changes needed to address the ecological depredations of the capitalist economy (Cahn 1995). For example, economists and the world of officialdom generally, faced with the threat of global warming, quickly decided that for the next half-century at least it would be more consistent with maximizing economic returns to adapt to global warming rather than attack its causes (Athanasiou 1996: 267; Foster 1996: 224–26).

Hence, environmental clean-up activities and environmental regulation have strong corporate backing only if and when they sustain profitability. Conversely, corporations tend to avoid to whatever extent possible any non-functional (non-productive) environmental costs -those which are not associated with promoting greater profitability and which would therefore seriously threaten profit margins. Although environmentalists, as political ecologist Tom Athanasiou observes, "have long promoted the idea that companies can easily increase profits by reducing pollution...many corporations believe, with evidence, that their relatively easy environmental problems have already been solved" (Athanasiou 1996: 241).

"While tough environmental standards may yield significant positive results for the economy as a whole," Noah Walley and Bradley Whitehead (1993: 47–49) wrote in the *Harvard Business Review*, "individual companies will actually be battling increasingly complex environmental problems at a much higher cost than ever before." Surveys of corporate executives indicate that "top managers expect environmental expenditures to double as a percentage of sales [revenue] over the next decades." Consequently, the *Harvard Business Review* authors argue that, "companies should seek to minimize the destruction of shareholder value that is likely to be caused by environmental costs rather than attempt to create value through environmental enhancements" (Walley and Whitehead 1993: 47–49). Specifically, it is argued that corporations should introduce "triage" and implement those limited environmental changes that are consistent with maintaining stockholder value while letting the larger number of environmental measures that clearly conflict with these "values" die. "For all environmental issues, shareholder

value, rather than compliance, emissions, or costs is the critical unifying metric" (Waley and Whitehead 1993: 50–52).

One way of summing this all up is to say that the marginal efficiency of capital—expected profits on new investment—is extremely low where most future environmental expenditures are concerned. This reflects the fact that the costs of such expenditures—taken as a whole—are expected to increase nearly in tandem with (or at a pace even exceeding) that of the additional revenue generated.[6]

Indeed, to the extent that environmental costs are imposed that are not related to the increase in profits (or of stockholder value), these tend to be the result of social, political, and environmental pressures from below, and are subject to a process of relentless attack by corporate lobbyists, often resulting in the subsequent watering down of regulations. The major consequence of this domination of environmental clean-up and regulation by the pollution-industrial complex (which limits environmental management to those few areas that complement industry and its profit-making potential), is that the social costs of industry (resulting from the externalization of costs onto society and nature) keep on increasing—thereby producing even larger problems for society and for capital in the future.

For all of these reasons environmental clean-up activities under capitalism are unlikely to ameliorate significantly either what James O'Connor has called the "first contradiction" of capitalism (its tendency toward overaccumulation) or its "second contradiction" (the undermining of its conditions of production with the resulting increases in costs and reduced flexibility).

Orthodox economists have been inclined to see the entire environmental problem in terms of what is called the "externalization of costs" (the fact that environmental costs are usually unaccounted for). Ecological socialism, in contrast, draws its point of departure from the observation that the economy, far from being independent, depends on "conditions of production," which lie outside the realm of commodity production. In the words of O'Connor, the leading representative of ecological Marxism:

> Conditions of production are things that are not produced as commodities in accordance with the laws of the market (law of value) but which are treated as if they are commodities. There are three conditions of production: first, human laborpower, or what Marx called the "personal conditions of

[6] "According to Keynes, new investment is determined by the marginal efficiency of capital (MEC). The MEC is roughly the expected rate of profit on new investment. Keynes conceptualizes the MEC as the difference between the expected flow of revenue and the expected flow of costs" (Sherman 1991: 249).

> production"; second, environment, or what Marx called "natural or external conditions of production"; third, urban infrastructure and space, or what he called "general communal conditions of production" (O'Connor 1991: 12; Marx 1973: 485–503, 533, 606).

Sustainable accumulation requires that each of these conditions of production is available "at the right time and place and the right quantities and right qualities," otherwise serious bottlenecks arise that constitute barriers to accumulation (O'Connor, 1991: 12). Hence, capitalism, or the self-regulating market system, constantly strives to commodify the conditions of production (drawing them into its logic).

Here two contradictions enter in. First, capitalism, as the great environmental economist K. William Kapp observed, "must be regarded as an economy of unpaid costs, 'unpaid' insofar as a substantial portion of the actual costs of production remain unaccounted for in entrepreneurial outlays; instead they are shifted to, and ultimately borne by, third persons or by the community as a whole" (Kapp 1971: 231). It would be impossible, as Kapp has argued, for a capitalist system to internalize all such costs (and to do so predominantly within the private sector).

Second, insofar as capital does succeed in partially commodifying what Marx called the "conditions of production" and what Karl Polanyi later referred to as "the elements of production," it tends to undermine the ultimate material bases upon which production rests, which cannot be fully reproduced under conditions that give priority to economic values. Indeed, as Polanyi has observed, a self-regulating market system "could not exist for any length of time without annihilating the human and natural substance of society" (Polanyi 1944: 3). For this reason the history of capitalism takes the form of a "double movement": one of sudden shifts marked by attempts to incorporate more and more of the natural and human substance of society into the market, requiring relaxation of regulations designed to protect the conditions of production; followed by periods of renewed regulation to counter crises created by this very process.

All of this demonstrates the irrationality of orthodox environmental economics, which seeks to internalize environmental costs by managing the environment more and more in accord with the logic of the market. As ecological economist Michael Jacobs has written, "At heart, the neoclassical approach to environmental economics has one aim: to turn the environment into a commodity which can be analyzed just like other commodities....If only the environment were given its proper value in economic-decision making, the economist reasons, it would be much more highly protected" (Jacobs 1994: 69). This approach goes against not only

what we know about capitalism, but also the reality of entropic degradation itself. Capitalism is inconceivable except as a system that maximizes throughput of raw materials and energy, and that minimizes labor inputs by selectively promoting energy-using and capital-intensive high technologies. Or—to put the matter differently—it is a system guided by the imperative of raising labor productivity and the rate of exploitation, at the expense of all other ends (Foster 1994: 123).

The mistaken assumption of orthodox economics that the economy can be treated as an isolated system divorced from the environment as a whole has had the effect of creating an illusion with respect to the potential for the unlimited expansion of the system. As biologist Barry Commoner has written:

> The environmental crisis is somber evidence of an insidious fraud hidden in the vaunted productivity and wealth of modern, technology-based society. This wealth has been gained by rapid short-term exploitation of the environmental system, but it has blindly accumulated a debt to nature...a debt so large and so pervasive that in the next generation it may, if unpaid, wipe out most of the wealth that it has gained us. In effect, the account books of modern society are drastically out of balance, so that, largely unconsciously, a huge fraud has been perpetrated on the people of the world. The rapidly worsening course of environmental pollution is a warning that the bubble is about to burst, that the demand to pay the global debt may find the world bankrupt (Commoner 1971: 294).

The classical economist, David Ricardo, wrote at the beginning of the nineteenth century of the "indestructible" powers of the land and the "inexhaustible" character of air and water, thereby justifying the treatment of these as free goods (Ricardo 1951:69). Today we are confronted with planetary ecological crises in which each of these supposedly "indestructible" and "inexhaustible" conditions of production are threatened—on a planetary scale. Every ecosystem in the world is being degraded. More and more the economic system is confronted with the planetary reality of a "closing circle." The ultimate futility of an economic system that seeks to expand wealth by breaking out of the circle of life in order to "conquer" nature is becoming more and more apparent (Commoner 1971: 298–99). This futility can easily be seen in the seemingly paradoxical case of agriculture in the industrialized countries, where sharp rises in both yield per hectare and labor productivity have been associated with dramatic declines in real energy efficiency.

Meanwhile a kind of "primitive accumulation" continues to expand in the periphery of the global economy, with the globalization of capital taking the form of the elimination of all non-commodity based productive relationships, and the incorporation, as David Barkin has observed, of "new groups into a progressively internationalized labor force" (Barkin 1985: 38). Associated with this is the destruction of previous forms of production and consumption. In the underdeveloped countries the last few decades have seen the extension of forms of marketing and consumption developed earlier in the core capitalist countries—for example, "the growth of meal services as a major area for capital investment, not only in the processing of foods for home consumption (which has grown enormously) but also in the reorganization of the preparation and marketing of eating outside the home." This relentless commodification of production is both a cause and an effect of the demise of "peasant production and craft goods turned out in artisan workshops" and their replacement by "putting out operations at the service of capitalist enterprises and modern agricultural enterprise" (Barkin 1985: 39–41). The internationalization of capital therefore produces wealth while increasing poverty, ecological destruction, and cultural annihilation. With the commodification of life itself the economy expands to engulf more and more of the human relation to nature, with disastrous consequences for the latter—since nature and the human relation to nature cannot be reduced to a set of commodities without destroying the very conditions on which production is based (O'Conner 1991; Polanyi 1944).

Yet, at the same time as the environment is "closing in" on the economy, we are learning through our movements the necessity of actively seeking to close (to whatever extent possible) the circle of production and reproduction, creating new, more sustainable forms of production and social organization—a true human ecology. Indeed, long before the global ecological crisis forces us to confront the absolute limits of growth—symbolized by the apocalyptic adage of the German Greens that when "the last tree has been cut, one will realize that one cannot eat money"—the contradictory limits of accumulation will undoubtedly force humanity (if it is to survive) to revolutionize society in order to preserve the conditions of production (Altvater 1994: 88–89). No longer can we afford to operate under a system run on the principle of "*Après moi le déluge!*"[7]

[7] "*Après moi le déluge!*" is the watchword of every capitalist and of every capitalist nation. Capital therefore takes no account of the health and length of life of the worker, unless society forces it to do so" (Marx 1976: 381).

ANTISYSTEMIC MOVEMENTS

The year 1989 marked a turning point in world history, symbolizing not only the demise of what was once called "actually existing socialism" but also the immediate defeat of socialist and socialist-inspired movements around the world. It is this defeat of societies and movements identified with the socialist project which has led some defenders of the system to proclaim the "end of history."

The current weakness of antisystemic movements is evident in the fact that the old social movements organized along class-lines (i.e., the labor, social democratic, and socialist movements) have thus far failed to launch a strong resistance to the latest attacks of capital, and have been increasingly suborned, supplanted, or suppressed with each passing year. Meanwhile much of the oppositional terrain since 1968 has been taken up by new social movements, organized around particular identities/issues such as civil rights, feminism, peace, the environment, etc. These movements, however, have so far failed to articulate a politics of *material interests*, relying instead on discourses of culture, identity and rights. Ironically, at the very time that the system is fighting a growing *material* crisis on two fronts (one associated with economic crisis, the other with ecological crisis), what opposition there is, though considerable, is mainly concerned with disembedded *cultural* (that is culturally ideal rather than culturally material) practices, largely ignoring issues of material production.[8] Such movements, while radical in certain respects, easily lose their antisystemic character. In an age characterized by mass unemployment, restructuring, deregulation, and privatization, as well as increasing environmental degradation, movements organized purely along cultural lines and removed from issues of class are less and less equipped to deal with the problems raised by the system (Wood 1995: 46; Ahmad 1996: 10–11).

Ecologically informed historical materialist analysis, in contrast, suggests that it is precisely in the realm of material interests that the main hope lies for resurgence of a left capable of combatting the social and environmental depredations of capital. Such a resurgent left if it is to be successful will be organized on a broader basis than ever before, encompassing the genuine interests of both old and new social movements, while extending the terrain of struggle to the entire world.

[8] These comments are not meant to be critical of cultural analysis per se, but only of "cultural reductionism," which is no more adequate as a guide to theory and practice than economic reductionism. In this view the cultural materialism of thinkers like Antonio Gramsci, Raymond Williams, and E.P. Thompson constitutes the most developed form of historical materialist analysis (McChesney 1996: 12; Mulhern 1995; Williams 1981).

History teaches that the present phase of global restructuring may well lead to a revival of the class struggle of the oppressed on a world scale. How organized and effective that struggle will be—if and when it manifests itself—no one can say for sure. But there can be little doubt about the fact that such a global resurgence of working class struggle would shake the system to the core. The growing dominance of a handful of global corporations in world production, the increased global sourcing of production as well as resources, the removal of barriers to capital mobility, and the greater frequency with which manufacturing plants are located in the periphery (which should not be confused with the notion of "deindustrialization" in the core), all tend to create objective conditions for transnational class alliances that did not exist previously.

Notwithstanding the fact that the continued polarization of the world economy makes cooperation between antisystemic movements in center and periphery extremely difficult, it remains likely that the widening orbit of the system's contradictions will generate new material bases for a "people's internationalism" (sometimes referred to as "globalization-from-below"), which will become a larger and larger factor within the world political economy (Brecher and Costello 1994: 78–80). In this respect, the international alliances established in the anti-NAFTA struggle seem to be a sign of a new, more unified form of struggle. The irony of history in our time is that the restructuring of the world economy, which more than anything else accounts for the weakness of worker-based movements, is also the main factor creating the material basis for a possible renewal of working class revolt worldwide.

A movement organized on a purely class basis—even a global movement of this kind—would be unable by itself, however, to address the full crisis engendered by the globalization of capitalism's contradictions. New social movements, struggling directly on behalf of women, people of color, indigenous communities, the environment, peace, etc., will continue to play an expanding role in the overall resistance of the oppressed worldwide. As Immanuel Wallerstein has emphasized, the global struggle of the oppressed in the twenty-first century will depend on the combined legacies of 1848 (standing for traditional working-class struggles) and 1968 (symbolizing the rise of new social movements). In this regard, "we must head in the direction of creating a family of antisystemic movements" (Wallerstein 1990: 46). Such an alliance of antisystemic movements is likely to be strongest outside the historic center of the world economy, particularly in some of the "subimperialist" countries such as Brazil, Mexico, India, and South Korea (Marini 1972).[9] In the

[9] I owe this point to James O'Connor.

divided planet of today, characterized by an "ecology of rich and poor," the future of ecological struggle is to be found predominantly in the periphery (and among emerging industrialized economies), where the antagonisms are presented in their most elemental form, rather than at the center of the system. "History will judge greens," Athanasiou has written, "by whether they stand with the world's poor" (Athanasiou 1996: 304).

At this point, in order to understand the material underpinnings of social change in our time, it is crucial to return to the issue of conditions of production. Under capitalism the personal conditions of production, the external-natural conditions of production, and the general-communal conditions of production are all "fictitious commodities," that is, prerequisites of production that are treated as if they were produced to be sold on the market—even though they are not and never can be fully commodified. As O'Connor has written and as bears repeating:

> Nature is produced by evolution or god or human agency or all three; laborpower is produced by people organized into families or tribes, and states; urban space is produced intentionally and unintentionally by capital investment patterns and state policies. Yet all three are treated as if they are commodities, fictitious commodities. And all three have a fictitious price: ground rent for nature and urban space; wages for laborpower (O'Connor 1991: 24).

Capital strives irrationally to create a self-regulating market in which the conditions of production are capitalized. Meanwhile, new social movements (not really new at all) have historically emerged to protect these conditions of production. Women's organizations, ecological movements, and urban struggles are all popular rebellions, the material roots of which can be traced to attempts to counter the transformation of the personal conditions, natural conditions, and general-communal conditions of production into mere commodities. As the struggle over commodification has taken more and more universal forms (extending well beyond the workplace) the weakness of traditional labor movement has become manifest, in part because of the very "shift in focus by capital and social movements from production to production conditions" that has accompanied this process (O'Connor 1991: 9).

In capitalist society the force chiefly responsible for regulating the conditions of production is the state; hence struggles over production conditions often take on the appearance of purely political rather than political-economic struggles. Women struggle over the politics of the body, environmentalists struggle over the

politics of the preservation and restoration of nature, and urban movements struggle over public health, urban infrastructure, and public space—all of which are defined by the state. Meanwhile, the costs of maintaining the conditions of production fall heavily on the state and are thus tied directly into the battles over "the fiscal crisis of the state."

The foregoing argument reinforces the notion that there are common material interests within the crucible of capitalist development that are creating the bases of broader class-movement alliances. In this context work-wage struggles will continue to play a strategic role, given the power of labor-based class movements to upend the system, but much of the global contest will be concerned not with labor vs. capital, but life vs. capital, as the conditions of life themselves more and more become the point of departure for worldwide rebellion. A leading part is likely to be taken by a transformed environmental movement, as prefigured in the environmental justice movement of the 1980s and '90s, for which issues of social inequality and environmental degradation are seen as inextricably bound together. "Oppressed people," as Scott Douglas, director of the Greater Birmingham Ministries [an environmental justice organization] has stated, "do not have compartmentalized problems" (Foster 1994: 138). The more organized and universal such a movement is, and the more it seeks to transcend the economic and environmental contradictions of an entire century—the twenty-first—the more it will be recognized as socialist in nature, the inescapable antithesis of capitalist commodity society.

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Contemporary Documents and Commentaries in Political Economy

This section of the *Review* had its premiere in the Fall 1996 issue. Since then the editorial board has decided to make it a permanent feature, with short articles in the Summer and in the Winter issues. Editorial board member Michael Yates is the current coordinator of this section, and readers are encouraged to make submissions and suggestions either to him or to the editor Hazel Dayton Gunn. Materials submitted will not go through the usual review process, though of course they will be scrutinized carefully by the editor and the coordinator, as well as by board members if this seems necessary. We would like to see short, popularly written pieces which deal with issues important to both social scientists and the general public. For example, a document might be reviewed and analyzed, as were two pamphlets in the Fall 1996 issue: the economic position papers of the New Party and the Labor Party. Or, a document or proposal made by a government (a U.S. government budget proposal, for example), a labor organization (for example, "America Needs a Raise" by AFL-CIO president John Sweeney), or a political movement (such as communiques issued by the Zapatistas in Mexico) could be subjected to critical scrutiny. Finally, we encourage independent commentaries on any and all political economy subjects, with the proviso that they be brief and written for a general audience.

In this issue, we take a look at some of the institutions and statistics which are commonly used to describe the health of the economy. Every evening on the news, reporters solemnly announce the change in the Dow Jones average of stock prices. Over the past few years stock prices have been on a roll, rising at a dizzying pace. To hear the pundits tell it, this means that the economy is prospering. In his article on the connection between