

# The current economic crisis and its historical antecedents

By L S Gonick

**This article makes a counter diagnosis of the current state of the world-economy; arguing that it is on the brink of collapse. Second, it illustrates that evidence aside, a wide cross section of major mineral-producing states have internalized the language and ideology of recovery and have misdirected their resources into policies which run contrary to historical reality.**

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## Introduction

The dominant authoritative formulation regarding the current state of health of the world-economy is articulated by the International Monetary Fund and the World Bank. The current diagnosis offered by these hegemonic institutions is that the crisis that the world-economy experienced in 1980-82 was not malignant. The prognosis; "hesitant recovery" with optimistic prospects for "sustained growth". The treatment; liberalized free trade, arrested growth within the public sector, unleashing of domestic market forces and the removal of "artificial" subsidies on basic staples. This language of recovery and the growing conventional wisdom regarding the health of the world-economy has been internalized by a wide cross section of both domestic and transnational actors. Business, the state and the majority of labour leadership alike have joined in a consensual understanding of the workings of the world-economy, the language of which is, in general, supplied by the hegemonial leadership of the international lending institutions. It is the distinct absence of rival conceptual frameworks, policies and a "counter-hegemonic" language which defines the hegemony of the current ideology.

In this article I intend to make a counter diagnosis of the current state of the world-economy; arguing that it is on the brink of collapse. Second, I will illustrate that evidence aside, a wide cross section of major mineral-producing states have internalized the language and ideology of recovery and have misdirected their resources into policies which run contrary to historical reality. The second half of the article seeks to make use of a wide range of historical materials in making the case that since the 15th century, world-economic crises and the associated rise and decline of dominant states within the incipient world-system, has consistently brought about irreversible shifts within the structuring of international division of labour. These

realignments, which correspond to long waves within the world economy, have brought some mineral-producing countries, endowed with preferred commodities, to be highly integrated into the workings of the world-economy, and others to be left untouched and thus remain unincorporated into the network of capitalist trade and exchange. The lesson from this historical exercise will be to underscore that while the crisis of the late 20th century deepens, mineral-producing states, both responsible for and products of the commodity crisis, will not find themselves on the road to economic recovery by simply adopting a basket of policies prescribed by international lending institutions. The final section of the article offers some suggestions on alternative conceptions, language and policy options so as to begin to challenge the conventional wisdom and thus give rise to a rival hegemony in-the-making in which a new consensus can be built.

## The myth of recovery

According to the World Bank, the world economy is in the fifth year of recovery from the deep recession of 1980-82. The output of the 21 major industrial economies grew 2.6 percent in 1983 and by 4.9 percent, 2.8 percent and 3.1 percent in the three years 1984-1986.<sup>1</sup> The overall size of the employed labour force within industrial countries has grown between 0.4 and 1.9 percent since 1982. According to the IMF, this means that more people are working today than ever before. With more people working, more goods are available and inflation has dropped by more than half in the industrial countries from a 3 year average between 1980-1982 of 8.3 percent to a four year average (1983-1986) of 4.1 percent. The associated earning capacity of workers in the industrial countries has kept about 1 percentage point above the inflation rate ranging from 5.0-5.9 percent from 1983-1986. Interest rates have continued to fall to their lowest levels in

nearly a decade. Gold remains stable and stock prices continue to break volume records in all the major international banking and trade centres. All these data tend to confirm the conventional wisdom that things are better today than they were 4 or 5 years ago. These and other indicators are regularly marched out and appear in IMF and World Bank publications. The sub-text which entails the proverbial *Other World Development Report* while not deliberately left out, remain hidden in the mountains of data contained in these documents. Chronic problems of 30 percent interest rates, 30 percent increases in Consumer Prices, increasing gaps in the distribution of wealth along with continuing marginal increases in quality of life indicators like nutrition, shelter, literacy, medical treatment all describe how the other half lives. Even this condition of impoverishment and worsening socio-economic reality elicits a typical example of the "spirit of the recovery". For example, in the 1986 World Bank *World Development Report*, the authors speak of "Opportunities For Growth" within the Third World. As if total consensus exists, the report goes on to say

"developing countries have taken many steps to improve their economic performance and to adjust to the changing international economic environment. But as they look ahead to the rest of this decade and beyond, they recognize that there is room for further improvement.... Developing countries cannot assume a stable or favorable external environment. It is, therefore, important to outline the kinds of policy which would improve their ability to adapt to unpredictable circumstances... to sustain...growth.

By implication, in this and much of the Development Report, the capacity of weaker developing economies to follow

the direction of economic growth characterizing stronger industrial economies is dependent upon its *willingness* to comply with formulae laid out by the latter. World Bank enthusiasm aside, in point of fact the myth of recovery is not one based on a bifurcation between the strong and weak, between the industrial and the developing worlds. The apparent recovery of the industrial economies is itself more appropriately a pyrrhic victory.

The "recovery" in the advanced capitalist economies has been built on the back of a historically unprecedented policy configuration of debt and deficit spending coupled with an equally unsurpassed commitment to the military economy. The two largest international borrowers are not Brazil and Argentina but the USA and Canada. The process of financial colonization has begun in the United States. Nearly half of the 1986 US budget deficit of about 180 G USD was financed by foreign capital. The solid increases in output among a number of economies is based on the uneven balance of trade between the US and its trading partners. The current trade deficit is hovering around 160-175 G USD. One banking official recently calculated that even if the US was to knock 20 G USD off the deficit every year, that by 1995 the external debt would be about 1 500 G USD and interest about 120 G USD.<sup>2</sup> Total domestic national and short term debt of non-financial institutions (corporations) in the United States will exceed 3 600 G USD. Finally, the debt of the developing countries to governments and banks is in excess of 1 000 G USD. The sum total is a nightmare of a seething developing world and a over extended industrial world ready to burst.

### The ideology of recovery

Yet the ideology of recovery remains pervasive. Even in mineral-producing economies, faced with continued flat and

often times shrinking markets for their raw materials, the talk seems to be always marked by the illusionary notion that the road to recovery is just around the corner. From Australia to Zambia from currency devaluation to food riots, while the measures becomes more severe the rhetoric of imminent recovery becomes more urgent and desperate.

The collective condition of the major mineral-producing states, (defined as either major contributors, or those countries highly dependent on the export of non-fuel minerals) is bleak. The average annual increase in GDP among mineral-producing countries during the period 1972-1983 is only 3.4 percent. The meager increase in the size of the central exchequer among mineral-producing states has led to slashes (ranging up to a decline of nearly 50 percent, in the case of Brazil, 64 percent in Bolivia and 76 percent in Mexico) in fiscal allocation to vital social programmes including health and education. The general malaise facing mineral-producing economies is not based solely on the weak commodity markets. A rather complex calculus of domestic and global factors needs to be considered. Nevertheless, for the current discussion a cross-sectional sample of mineral-producing states will prove illustrative of both the condition and the response of state, capital and labour to the economic depression.

### Zambia: acute dependency

High above Cairo Road in Lusaka Zambia, in the air-conditioned offices of the Bank of Zambia sits Zambia's director of balance of payments and international economic relations. Mr Mumba and his colleagues have just packaged together a position paper and response to the IMF's conditions for extending further credits to Zambia. Mr Mumba's colleagues are in Washington negotiating with the IMF while Mr Mumba remains in Lusaka to hold down the bank. The situation in Zambia according to an IMF commis-

sioned report is "catastrophic". The Bank of Zambia, Mr Mumba readily concedes, can do no more to affect monetary policy than write scripts to international lending agencies talking about the optimistic prospects for recovery. Long term corporate planning in both the public and private sectors is non-existent. With a research team of fewer than 10 persons, the staff of the Bank of Zambia can do no more than dedicate itself to writing and reworking documents for the lenders. Corporate policy planners in the mining sector admit that the condition in the country will get "much worse before we see a ray of sunshine, and then it might be too late". Complying with conditions laid down by the World Bank, the Zambia Consolidated Copper Company, the second largest employer in the country, has embarked on a "Survival Strategy" which includes severe austerity measures including the reduction and elimination of 9 000 mine workers' jobs (approx. 15 percent of the labour force) by the end of the decade. Other sectors of the Zambian economy are equally hard hit with everyone from university faculty to poor villagers cursing their lot. The social consequences for the society are devastating. Unemployment, alcoholism, violence, urban slums, increased military presence, breakdown of communication and transportation facilities, are among the noticeable fall out. And yet, without exception, from the top government official to the trade union leader, from the factory worker to the peasant, no one challenges the infallible logic of IMF directives which cripple their country. Even the December 1986 food riots seem more likely to have been orchestrated by the State House, for its own designs, than by some spontaneous eruption of protest in a country consumed by state repression.

The Government of Republic of Zambia, the Bank of Zambia, the Zambian Consolidated Copper Mines, have agreed to the terms of the lenders but more importantly have acquiesced with-

out any dissent to the language, aims and priorities of the lending agencies. Even the Mineworkers Union of Zambia, representing the most militant trade union tradition in the country has been paralyzed and is unable to mount any counter - offensive to the plan of massive layoffs, subsidy reductions, cut backs in social services, education opportunities and job skill training.

These involuntary planning directives embraced by the corporate planning sector has in effect meant that the *National Commission for Development Planning (NCDP)*, the national institution empowered to develop medium and long term planning, has been supplanted by the host of international consultants used by the IMF and World Bank. In turn, these consultant consortia with multi-million dollar budgets not only have direct access to the highest authorities in the Government of the Republic of Zambia, but also have been empowered to espouse development policies in mining and other sectors *on behalf* of the government.

Since mid 1984, two critical reports commissioned or developed by the IMF and the World Bank have received official approval from Prime Minister Kenneth D Kaunda on behalf of the ruling party (UNIP) and its government. This broad endorsement of policies include, reduced deficit financing, decontrolling of prices and 5 percent wage freeze (later modified to 10 percent), putting the kwacha on the auction block to rationalize the allocation of scarce foreign exchange, creating a more attractive investment climate for foreign capital, building a large and more productive agricultural sector based on commercial rather than peasant farms or cooperatives, expand manufacturing by a more aggressive export oriented approach and resuscitating the mines by reducing costs and closing the unprofitable operations.

The specific policy recommendations of these two important documents were embraced *carte blanche* in less than 24

hours of official analysis. The capacity of the National Commission for Development Planning to respond to these recommendations was not only limited by time, a budget of a approximately one-tenth of the consultant groups' but also the fact that there was less than two weeks to go before the Paris Club meetings where Zambia was to present its case for re-scheduling outstanding loans. More important was that government implicitly undercut the authority of NCDP by embracing one of the key recommendations of the World Bank to consolidate the Planning and Budget exercises under the authority of the Ministry of Finance, thus relegating the NCDP to functionaries of the Ministry of Finance. Nevertheless the NCDP managed to develop some alternative policy recommendations including a call for genuine import-substitution and closer state supervision of nationalized state corporations. While receiving the official backing of the Government, general consensus within the NCDP concedes that the policy recommendations of the international consultants have carried the day.

Rather than being premised on mere survival, the package of policy directives dictated by international lenders have been garbed in the language of resuscitation, restructuring, and recovery. The underlying strategy of this orientation is to evoke the collective national memory of a better yesterday and asserting that a heavy dose of hard fiscal retrenchment will allow Zambia to return to the pre 1975 period of relative prosperity. This then is a flagrant violation of a weak state's national ego and a manipulation of that ego for questionable purposes. While the most important forces within the state have succumbed to this implausible dream, no dissenting force has managed to evoke the memory of the independence struggle and the idealistic visions of indigenous growth and socialist humanism which were part of that struggle.

Zambia, while an extreme case of

both arrested economic growth and the willingness to embrace the IMF directives, is not the only state to have succumbed to the ideology of recovery. Examples abound of less dependent countries who have also felt compelled to entertain the policy prescriptions of the international financial community.

### **India: surrendering self-reliance**

In the case of India, a nation with vast wealth and even more poverty, the new direction of policy development, particularly in the mining sector, resounds with the language and logic of policy development being espoused by the World Bank and the IMF.

The twin pillars of Rajiv Gandhi's perspective plan for India for the year 2000 are based on liberalized freer trade and the de-regulation within the state-run sector. According to S S Ahuliawa, a long time prospective planner at the Government of India Planning Commission, this shift in policy direction is so drastic, such a departure from the entrenched Indian system of self-reliance, and a state-directed economy, that the national constitution itself may need to be altered to allow the Prime Minister to carry through with his plans.

Revisionists within the new regime have begun to rewrite the history of India's political economy to coincide with these new policy objectives. The Minister of Energy, perhaps the most outspoken of the lot has gone so far as to claim that 'the whole concept of the public sector was uneconomic and non-viable from its very inception'. The other side of the policy, freer liberalized trade has become, according to Mr. Gandhi, the only available mechanism through which India can join the ranks of the emerging technologically advanced economies. By implication, high technology and mechanization are viewed as the magical ingredients for dealing with India's cornucopia of woes.

A number of important opposition

voices have called out against freer liberalized trade arguing that it carries with it many detrimental direct side effects, not the least of which is the problem of unemployment, displacement, and a further schism between the relatively small consuming class (10 percent or 85 million) and the teeming millions who live below the official poverty line.

But within most of the economy's productive sectors, including mining, the language and hope of free trade and a dismantling or at least severe dismembering of the state-based economy has become a conventional wisdom. Whenever asked, officials within the state bureaucracy, mining industry and all the major local trade unions in the mining industry failed to see any negative effects of the plan.

While not linked directly to conditions laid down by the international lending agencies, Gandhi and the new generation of Indian policy makers have borrowed the language and associated policy prescriptions in their attempt to keep the new consuming class placated and the international community, particularly the US, happy with the signals that are contained within the language of the 7th Five Year Plan (1985-1990).

Within the mining sector, iron ore and steel remain the backbone of India's industrialization plan. The proscriptions for the iron ore and steel industry articulated in the Seventh Five Year Plan clearly show the government's intentions. Without a major infusion of capital, the state-controlled integrated steel plants are being directed to increase their production output nearly 45 percent from 1984-85 to 1989-1990 while the private sector, with the acquiescence and cooperation of the state has managed to negotiate a major loan from the World Bank in order to complete its modernization scheme. Thus five of the six state run plants, built over 25 years ago are struggling to maintain their historical position within the economy whilst the private sector forges ahead. There is no in-

attention within the 7th Five Year Plan to expand the domain of the public sector within the steel industry. The government has placed the future of the steel industry within the hands of the privately owned Mini-Steel Plants.

The integration of new high technologies and further mechanization threatens to displace a large portion of the work force. Within the private sector steel operations, Tata Iron Ore and Steel remains the single most important economic force in the Steel Belt. Mr R S Sethi, one of the original Tata men in Jamshedpur, the Steel City, emphasizes that what makes Tata special is the commitment and sense of "family". Today, Mr Sethi is the assistant general superintendent of Tata Steel. He speaks with a great sense of pride, reflecting on the accomplishments of Tata and in particular its efficiency. The future of the steel industry is in modernization, says Mr. Sethi. Phase one of modernization has brought the work force down to 28 000 (a decline of 23.5 percent from 1974). Phase two is committed to a further reduction to 18 000 and by the end of the 1990s Tata will be a slim but highly efficient work force of only 10 000. By the end of the 1990s, the unskilled work force will be cut in half.

Although committed to no forced redundancy, and even a commitment to integrating off-spring into the Tata family, Sethi is confident that high technology will not lead to lay offs among the current work force. The plausibility of this proposition is not challenged by the Tata Workers' Union. The Union asserts that the company has a computer simulated programme which has forecasted the natural retirement trend within the work force. This coupled with incentive early retirement programme has left the union confident that mechanization and high technology are good for the workers.

Trade union officials at the Bhilai Steel plant, the largest state-run operation take the same view, although they concede that they have never seen the

supporting data. As Mr. Sethi asserts, 'the union is sold on the idea that their growth is tied to the health of the industry.' In point of fact, in a country committed by the directives of its national Five Year Plan to eliminate poverty and attain full employment by the year 2000, the Steel and Iron-Ore sector, the major economic motor of the economy has failed to produce, in aggregate terms, any new jobs for over a decade.

The supply of iron ore to the steel plants highlights the commitment of management to introduce mechanization and the contradictions that occur therein. Production relations in the pits reveal some of the most interesting confrontations between the wholesale acceptance of what might be called "technical rationality", and the struggle to resist.

At the state-run, Soviet built Bhilai Steel Plant, iron ore is supplied to the plant from the adjacent captive iron-ore mines at Dalli Rajhara. In the name of "competitiveness" and "efficiency", the management of the steel plants has embarked on a plan of total mechanization of the mines. The plan to mechanize operation at the Dalli pit has been on the drawing board since 1977. The current configuration sees about 4 500 (men and women) miners manually picking and hauling about 9 000 tons of ore on a daily basis to trucks which takes the raw materials to a mechanized crushing facility. Mr Dahake the Assistant General Manager responsible for the mines at Dalli and Rajhara, claims that the aim of mechanization is to increase productivity. Within 24 months, Mr Dahake suggests, the situation at Dalli Rajhara will be totally transformed. The end result will see only 300 workers working the pit utilizing Soviet made heavy duty mining machinery .

This inevitability has outraged the miners all of whom are from the lowest social order in India, the scheduled tribal people. With the assistance of a small group of non-aligned militant organizers, the mineworkers have managed to

fight management on the transformation of the pits for over a decade. The cost has been heavy including the loss of lives during bloody battles in the initial years of organization. Currently, the tribal mineworkers raise 30 percent more ore within an eight hour day than the automated crusher can process. This will all change as the crushers capacity is upgraded from 1.72 Mt in 1987 to 2.15 Mt by the end of the decade. By then, argues management, there will be no other option than moving to mechanization in the pits.

Corroborative evidence to support management's claim is not overwhelming. The consequence of this plan will lead to displacement, social unrest, and a heightening of communal tensions. The economic savings are dubious. According to one respected economist, the cost of extracting a tonne of iron ore from a fully mechanized mine is between 20 and 65 percent more costly than a semi-mechanized operation or manual operation. Those mines in India that are currently fully mechanized run below 70 percent of capacity (as low as 22 percent).

Under these conditions, it is possible that on purely economic grounds, the manual labourers at Dalli Rajhara engaged in semi-mechanized mining may continue to be viable. On political grounds, the mineworkers' organization represent a thorn in the side of the master planners. Management, it is clear, viewed the tribal peoples as a reserve army of human mules to be used and then dispensed with as mechanization became more plausible. Today, the mineworkers and their militant organizers have become a liability to the state-run managers. When the company failed to provide the mineworkers and their families with health care and education, the mineworkers' built their own hospital and schools.

In many ways the condition between the state, its mining directors and the traditional position of trade unions with-

in the steel and iron ore industry provides a microscopic case of the trend across the country in the mining sector, within agriculture, primary and intermediate goods production and finally assembly. The capacity of the tribal workers in resisting the implementation of mechanization within their pit, remains the exception in the struggle to resist the strategy of technological innovation as a means of solving the economic and social woes of the society.

As the workers at Dalli Rajhara argue, the pursuit of freer liberalized trade as manifested in the wholesale dumping of mining machinery is very much connected to their struggle for jobs and sustenance. In India, argues Shankir Niyogi, a leader of the Dalli Rajhara mineworkers' organization, whenever the mechanization of a mine has been undertaken, it occurs as a result of a special binding agreement with another country. Developed countries, be they capitalist or socialist, 'dump' machinery on India. The sale of these machines keeps their workers in the home country fed and clothed, as well as making profits to public or private manufacturers. Asks Niyogi, 'if we are able to resist the pressures to mechanize, how will the sale of Russian or Japanese machinery take place? How will Russia and other machine exporting countries dump their goods in the Third World? Again, this experience provides an insight into processes that are taken place across India. It is ironic that it is the most exploited social community in the country which has taken on the struggle to present this potentially counter-hegemonic condition to the country. Niyogi invokes the memory of Mahatma Gandhi. "Mechanization", posited Gandhi "is good when the hands are too few for the work intended to be accomplished. It is an evil when there are more hands than are required for the work." If this opinion of Gandhi was important when India's population was only 360 million, it is doubly so in the India of 850 million.

Ultimately, what Ghandi says and what the struggle in the iron ore mines of Dalli Rajhara shows is the fallacy of the underlying assumption of freer liberalized trade. The corner stone of the ideology of recovery, as expressed by the Reagan administration and the World Bank, is located in the intellectual tradition of comparative advantage. Countries, according to the famous Ricardian formulae, were to process and export in those areas of the economy where they held a relative or comparative advantage in the production of that good. If all countries followed this logic, then there would be a net gain for all traders. The crisis in mineral commodities shows some of the tragic human costs which the economic model fails to account for. In essence the formulae fails to suggest how and at what cost displaced labour in country x is to be reintegrated in the economy. The cost, as many mineral-producing countries have found out, is very high.

### Canada: rich and dependent

Canada is viewed to be a prime example of a country whose natural factor endowments make it a prime supplier of raw materials to those markets interested in refining raw materials. Canada has had a long tradition of providing staple goods to the world economy. During its colonial rule, Canada provided fish and fur to the crown. Later forestry, wheat, mining and petroleum all served as Canada's link to the British and later American dominated world political economy. While the strength of prices for lumber and oil allowed Canada to withstand the initial pressures of the global recession in the 1970s, by 1981-82, the world-wide depression caught up with the Canadian economy. The claims of the Mulroney government aside, capital investment has failed to regain its pre-recession peak. Like many resource dominated economies, all sectors of the Canadian economy, with the exception of next ex-

ports have contributed to the decline (See Table 1). Competition from alternative sources and synthetic substitution has led to substantial reductions in Canada's market share for several minerals. Canada's current third place ranking among the world's mineral-producing countries has been challenged. According to a spokesperson for BP Selco, 'Canada's market share is slipping badly' and the world mineral market in which it participates is 'stagnant and contracting'.

In the period between 1973 and 1983, Canada's share of world wide nickel production dropped from 42 percent to 19 percent. Canada's domination of the asbestos market has declined from 42 percent to 20 percent in the same period. With the exception of potash, sulphur and gold Canada's market share in key minerals has slipped considerably.

The regional impact of this slow down is of even greater significance. In Quebec the situation, according to the Association des Mines de Metaux du Quebec, is "particularly gloomy". Since the outset of the general recession in 1973, copper production has declined by over 35 percent, zinc production by over fifty percent, asbestos production by nearly 60 percent. Iron ore production has dropped by 25 percent between 1978 and 1983. Over the past decade, nearly 200 mining communities across the

country have felt the economic pinch of the global commodity recession. More than 18 700 miners have lost their jobs; more than 10 000 indefinitely. Mining layoffs between 1982-1986 alone, cost government in excess of 500 M CAD. The losses directly affect about half of the country's mining communities having a total population of close to 800 000. The commodity recession precipitated the permanent closure of the main employer in some communities, (Schefferville, Gagnon, Uranium City, Tasu, Faro, Stewart), resulting in severe social readjustment and relocation for most of their residents and businesses.

In contrast to economies where the mining sector has been nationalized or where the government holds a large share of mining investment, in Canada, the mining sector is private. A number of large firms, including multi-national enterprises like Noranda, INCO, and Falconbridge control the largest portion of the mining economy. While uneconomic mining in economies where state interests are high, necessitates a policy on redundancy based on both economy and social consequence, the decision to close mines in Canada is done on the basis of profit levels determined by private capital.

Developing mechanisms for addressing mining community problems remains a burden to be undertaken by the

**Table 1**

**Average annual spending (constant 1971 dollars) % change**

	Total	Consumption	Gov't	Business investm	Housing investm	Gov't investm	Net Exports
A) 1950-73	5.3	4.4	6.1	6.8	6.7	6.8	-0.4
B) 1974-84	2.5	2.8	1.6	2.3	-0.1	1.2	0.8
B/A	0.47	0.64	0.26	0.34	-0.01	0.18	2.0

**Source:**

Gonick C W, *The Great Economic Debate*, Lorimer 1987

trade unions community groups and government. Recent consideration by a joint Federal - Provincial Task Force offered five options for further consideration within the mining sector. The one recommendation which formally placed some responsibility on the mining companies received low priority. Following a programme developed in Sweden, the task force undertook a review of a policy that would see mining company choose between putting a certain percentage of their profits into an investment fund (to be used in the case of mining closures) or pay taxes on those profits. In its final set of recommendations, instead of advocating such an alternative to share the burden of mining closures, the report gave priority to a scheme based on government contributions and to a policy recommendation encouraging individuals to save towards making adjustments.

The response of the Canadian state and industry to the world-wide commodity crisis and more generally to the recession as a whole continues to be informed by a retreat from the economic liberalism which dominated post World War II economic thinking. Shadowing the language and spirit of recovery espoused by the major international financial institutions, the Mulroney government has adopted a strategy which is premised on the assumption that once unions have been shackled and entrepreneurs liberated, markets will automatically generate expansion.

Like India and Zambia, Canada has followed the IMF's "hard medicine" in seeking to diminish the state's economic role as a means of creating a better climate for economic recovery.

The corner stone of the Conservative government's strategy has been free-trade negotiations with its largest trading partner the United States. Currently Canada exports approximately 60 percent of her mineral exports to the United States. Because it has failed to place checks on the mobility of mining capital,

the economic recession has allowed both Canadian and non-Canadian based mining investment to exit Canada to more profitable locations. In order to lure back significant mining investment, the government appears committed to offer US capital a sort of controlled-laissez faire policy wherein it offers potential investors unfettered access to markets and numerous incentives to assure longer term corporate commitment to the mining sector. While the immediate prospects for greater control of Canadian resources by American capital is unlikely, given international market conditions, the pursuit of a policy directed towards unfettered American investment in Canada could prove costly in the medium and longer term. When the base industrial metals market do recover, the desire to investment in the Canadian market will be great. Without the regulation of the flow of capital between Canada and the US it is unlikely that the Canadian economy will benefit from the increased mineral wealth. The situation in the Canadian mining industry may be gloomy and even desperate but even so it does not follow that Canada should mortgage its natural resources on the good intentions of American investment.

## Conclusion

While the level of socio-economic development varies, this cross-section of mineral-producing states, all share a number of common characteristics. The global commodity crisis which has beset producers over the past 15 years is part of the more general world economic crisis brought on by the decline of American hegemony. The absence of a single dominant political power has led to an ever-increasingly important role for international financial institutions. The semblance of order and stability within the international division of labour has been maintained by the most important global coordinating financial

institutions; the International Monetary Fund and the World Bank. By virtue of the power they hold, these interests have succeeded in disseminating a particular vision of the way in which national economies should respond to a range of economic predicaments. The examples of Canada, India and Zambia illustrate the capacity, of what has been termed the "ideology of recovery", to filter into the national policy configurations of this cross-section of mineral-producing countries. Governments, mining industry and even trade union leaders have either lauded, or at the very minimum acquiesced, to the policy prescriptions of these powerful institutions.

The intended implication is not to argue that no recovery will take place. The historical survey outlined in part two of this article, illustrates how, over a period of 500 years, numerous mineral-producing states have gone from the periphery of the world economy to its center and in the same processes of global economic contraction and expansion, some mineral economies have been manoeuvred from being highly incorporated to the margins of the same economic system.

The current crisis will in all likelihood follow the historical precedent. Economic crisis, manifested in commodity crises, will produce structural transformation within the hierarchy of the international division of labour. Dominant suppliers will fade from the major roles they play as supplier and at the same time new mineral-producing states will take their place. The insertion of collective human agency into the historical unfolding of these structural developments requires an understanding of the patterns of domination, exploitation and collaboration which characterize the world political-economy.

Drawing upon lessons from the past, part two of this article, concludes with a conceptual analysis of these patterns and introduces a general strategy for intervention.

## THE CURRENT ECONOMIC CRISIS AND ITS HISTORICAL ANTECEDENTS

The first part of this article explores the scope and impact of the global recession on a cross-section of major mineral-producing countries. The suggestion that economic recovery is imminent was challenged even though the language and logic of these directives are widely accepted. In the second part of the article, a broad cross-section of historical data are reviewed in order to illustrate that economic recessions are not static. The consequences of commodity recessions from the earliest years of the capitalist world system has always led to a fundamental realignment within the nascent international division of labour.

### Pre Eighteenth century developments

One of the most important considerations in discussing the rise of the modern capitalist world system is the failure of China in the fifteenth century to maintain its domination among the important state actors in the world. The debate over why China did not 'advance' into an industrial state remains a bit of an unsolved mystery. The role of mineral technology and economics seems part of the problem and part of a plausible reasoning. From the 13th to the 16th centuries both China and Europe had equal population bases and China shared with Portugal the earliest long distance navigation in the period from 1405-1433. While some debate remains on the question of scientific and technological parity, the overwhelming evidence points to relative parity and in some cases, as in metallurgy, obvious Chinese domination through to the middle of the 15th century.

China was familiar with cast iron and coal firing as early as the 5th century B C and probably attained a working knowledge of smelting ore with coke in the 13th century. Europe on the other hand

was not familiar with casting molten iron before the 14th century and smelting with coke until 1780. This seeming disjuncture between technological capability and the dearth of industrial expansion in China from the end of the 13th century, has left scholars perplexed.

Thus in the very epoch of transition China and not Europe was poised to become the centre of all human interaction, business, culture and the like. In fact, as we know, China failed to industrialize or become engaged in the burgeoning world economy. China's failure resulted less from a paucity of means than of motivation. As Europe was expanding beyond its frontier borders, China was engaged in extremely intensive colonization within its own boundaries. While China was expanding internally, Europe's 'lateral growth' resulted in " a violent, almost exponential...curve of science and technology...overtaking the level of the Asian societies.<sup>3</sup>

The introduction of the water wheel into metallurgical processes in the 14th century was a decisive factor in the introduction of farm implements and instruments of war. While China's coal continued to be based on forestry, Europe moved its iron-works from forests to river sides. Water power worked enormous bellows, pounding devices that broke up ore and hammer that beat the iron after being fired. Such innovation is to be contrasted with the labour intensive efforts undertaken by hand in China, Africa and Latin America as well as other parts of Europe.

The important thing was that smelting was achieved for the first time with the installation of enormous water powered leather bellows and tunnels in the blast furnaces. Iron or steel could, from the 14th century on, be obtained as required from cast iron, their common starting point, by extensive carbonization (iron) or incomplete decarbonization. Metal guns came into use first in Western Europe and in Scandinavia early in the 14th century and by the end of that century the

cannon had spread to the Balkans and reached the Ottoman Turks, Hand guns became widespread in the early 15th century, and by the middle of the 15th century cannon and arquebus had wrought a revolution in warfare.

Whilst China failed to be incorporated into the folds of the world economy, North Africa, as a critical link in the conveyor of gold to Europe became very important in the early period of the burgeoning world economy. Western Africa produced two-third of the gold supply in the international economy. The nexus of trade in precious metals brought Christian Europe, the Arab world, West Africa and the Indian sub-continent together. Europe minted silver, trading it to Egypt, who through the caravan routes imported from Ghana via Sudan gold which was exported to Europe. Europe used gold as a monetary element with India which produced no gold or silver or copper.

The first contraction of the embryonic capitalist world system began suddenly in the middle of the 15th century when the North African role in providing gold to Europe diminished greatly. The collapse of the North African position decimated the local prosperity of North Africa. The shortage of bullion had severe implication on Spain's overextended treasury. Growing military and courts expenses and the financial crisis led to a sharp devaluation of the national currency. With the decline of North Africa from the centre of trade, the pursuit of alternatives led to extensive maritime travel which on the eve of the 16th century eventually led to the discovery of the Americas and the rounding of the cape. The incorporation of the Americas into the world economy are best expressed by Marx and Engels. Writing nearly four centuries after the discovery of America, they note the incorporation of the Americas from the periphery to the centre of the trading nexus was all important to the rising bourgeoisie of Europe.



The Colonization of America, trade with the colonies, the increase in the means of exchange and in commodities in general, gave to commerce, to navigation, to industry, an impulse never before known, and thereby to the revolutionary element in the tottering feudal society...

The rise of France, as a major contending force against the domination of the Spanish Empire led to a long military struggle through the 16th century. Sixteenth century warfare needed, on the one hand military hardware and at the same time a battle over the financing of a long drawn out war. The development of placer mining and silver amalgam techniques allowed the Spaniards to do both. The introduction of these techniques in the Americas furthered the integration of the Americas and brought abundant sources of revenue at a critical moment.

The confluence of spiralling inflation and the increasing cost of mining led to a rapid recession between 1590 and 1630. In Chile, the gold mines were closed down. In Venezuela, German mining explorations proved unexceptional. Because the most accessible mines had been exhausted and more and more investment was needed to dig deeper pits and provide the water pumps to keep them dry, Mexico quickly moved from the apex of the silver empire to latifundian based colonies supplying food to the Spanish empire until the 18th century. For the Spanish enterpriser, Mexican mining became increasingly less profitable compared to large scale agriculture, so that capital shifted from mining to agriculture.

The global depression of the 17th century illustrates the extent to which ascent and decline within the world-economy can in fact take place. Those states which ascended during the cyclical expansion of the 16th century including Spain and her American colonial suppliers quickly descended from the centre of activity in

the world economy. England, on the other hand began the 17th century as a second rate power and emerged at its end as a first rate economic and political power. Although the 17th century depression weakened Britain, as it did its European rivals, the British economy, more than any other, made the technological and economic adjustments that would permit expanded reproduction and capital accumulation in the 18th century and beyond.

### **Eighteenth century expansion and metallurgical development**

Innovation, in the Schumpeterian sense of the term occurs naturally during expansive upswings in the cyclical process of capital accumulation. Scientific and technological inventions, Schumpeter argues are concentrated in the periods of predominant economic decline and incipient revival. In fact the long 17th century depression produced bountiful contributions in the domains of science and technology. There were the inventions of Kepler (1571-1630), Galileo (1564-1642), Bacon (1562-1626), Descartes (1596-1650), Harvey (1578-1627), Boyle (1627-1691), Leibnitz (1646-1716) and Newton (1642-1727).

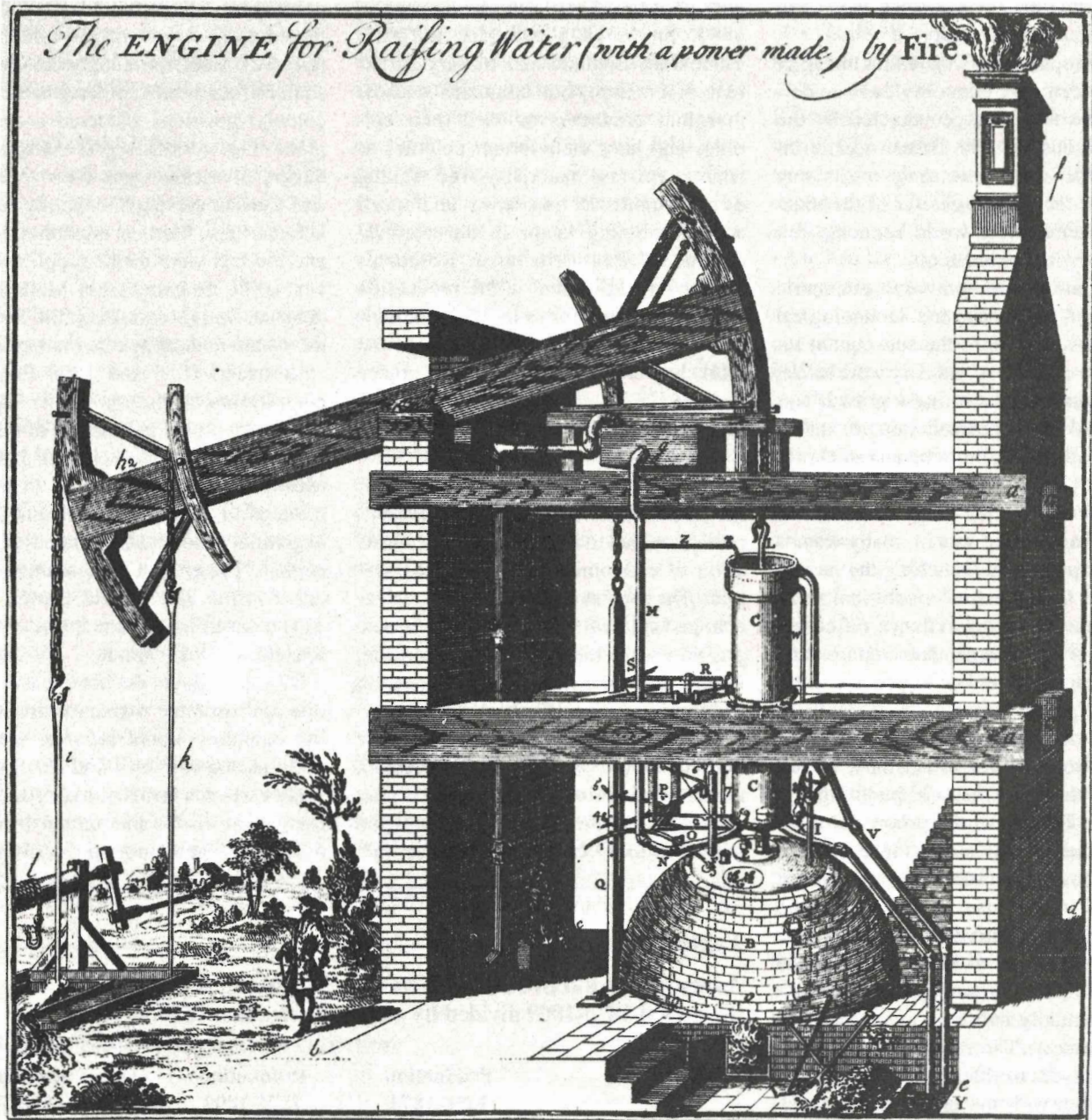
The aggregated scientific and technological knowledge throughout the 17th century, coupled with the intensification of military and trading competition with the Dutch (Cyclical Wars (1689-1763)), lay the foundation for many of the processes undertaken to isolate key non ferrous metals in the 18th and 19th century. These metals in turn were the bases upon which industrial society and Pax Britannica (1770-1870) were built. Successful isolation of more than half-a-dozen key industrial metals was accomplished between 1721 and 1809. Nevertheless, it would take on average another century before these same metals would be sufficiently refined and the technology made accessible for general industrial use.

Capital expansion in the resurgent 18th century came from multiple source 'lubricated' by a renewed flow of silver production in old Spanish America and gold from Brazil. The fall of sugar prices in 1670 had led to a decline of the old sugar-producing region of the Brazilian Northeast. With the increased price of monetary gold, the search for and subsequent mining of gold in the region farther south and inland, later to be known as Minas Gerais, was first exploited. Gold was discovered at the very end of the seventeenth century. Serious production began in the first decade of the eighteenth century at an annual average of 2 t a year, approximately 24 percent of total global production. By 1740 Brazilian gold production had increased four fold and accounted for nearly 50 percent of all world production. Two decades later, at its peak, Brazil produced nearly 15 t of gold. The ascendance of Brazil as a major supplier to the core of the world-economy came at the direct expense of Africa. From the 11th century to the 17th century, Africa provided up to three-quarters of the gold in circulation in the world economy. Although the origins of the "golden" era of Brazil are reasonably well documented, including important details of the role of African labour in the mines of Brazil, the impact of the shift from Africa remains largely unexplained. Africa remained an important link in the world economy, not for its supply of gold but for a different commodity, human labour.

The production of silver in the eighteenth century, the other major monetary metal was also concentrated in Latin America and in particular in Mexico. In the last two decades of the seventeenth century, Mexican silver production accounted for nearly one-third of all global production. A century later Mexico was responsible for nearly two-thirds of all silver being produced.

Beginning in the mid-eighteenth century many of the "ancient" metals became critical in the new industrial mine-

*The aggregated scientific and technological knowledge throughout the 17th century lay the foundation for many of the processes to isolate key non ferrous metals in the 18th and 19th century. These metals were the bases upon which industrial society was built and which permitted expanded reproduction and capital accumulation in the 18th century and beyond.*



erals used to built the transforming industrial revolution. A number of well respected scholars attribute the rise of the industrial revolution in Britain and Europe to the unique historical conjuncture of technology with raw materials. The use of copper in electrical wire, tin, lead and zinc in steel for plating, anti-corrosion and preserving of perishables were all critical technologies applied to raw

materials which were, for a limited period of time, most readily available in Europe. From 1720 to 1850, England mined over 50 percent of the world's lead, up to forty-five percent of the world's copper, approximately thirty percent of tin production and a small, yet significant amount of zinc.

For the world-economy, the nineteenth century began with a crisis which

had far reaching implications for the development and shape of European development, the underdevelopment of the Third world and the extraction of minerals. In 1807 slave trading became illegal for British subjects. The abolition followed thereafter in France, Brazil, Cuba and the US. The suspension of slave trading brought on an immediate crisis in the world economy with slash-

ing reductions in revenues generated from international trade.

In Europe, a massive restructuring of the mercantilist economy was undertaken the new bourgeoisie, led by the textile industry. The British textile industry had seemed securely on its way when, in the second quarter of the nineteenth century, the world economy fell into a very deep recession.

Just as in the previous economic downturn, scientific and technological inventions critical to the subsequent innovation of railroad industry were made. The major impetus for new growth was generated by the railroad industry and its twin satellites, coal mining and steel production. The first railroad linked the Durham coal fields with the coast in 1825. Railroading was in many ways a great leap forward launching the second phase of the industrial revolution, shifting production from reliance on cotton textiles to one of dependence on iron and steel. Short of timber to provide charcoal, England turned to coal for fuel. Moreover, English ores were low grade and required power to rid them of impurities through smelting, puddling and rolling. To furnish the power for these operations, innovators adapted the pumps used to clear flooded mines. Thereafter, the use of coal and iron turned England into the workshop of the world. But, as with Spain before it, the price of success brought with it demands that eventually led to an over extension of resources. The tremendous creative genius used to harness metallurgical knowledge with the entrepreneurial rising capitalist class had two opposite effects. First, continued technological experimentation led to a capacity to produce new metals at an economic price. The use of manganese, nickel, tungsten, bauxite, chromium and molybdenum led to a qualitative improvement in the strength, endurance and weight of the critical elements in use in the industrial revolution. On the other hand, England reached her peak of pro-

duction of lead in 1856, for copper in 1863, tin in 1871 and zinc in 1882. Thereafter, England and to varying extent other European countries became marginal producers or used their colonies and later their former colonies as sources for raw materials. The waning of basic industrial metals was an important contributing factor in the eventual decline of Pax Britannica. Resources were being exhausted in the production of iron and steel for railroads. The new non-ferrous metals did not favor the workshop of the world. The UK, France and the USA were all dependent on imports of critical non-ferrous metals from a very early day.

Britain's hegemonic domination over the world-economy during Pax Britannica did not lead to an eruption of incorporation of economies into the world system. The market crash of 1873 however changed all that. Britain's hegemonic position was challenged by its old foe, France, Europe's rising new political and economic power, Germany, and Britain's erstwhile junior partner, the United States. During the recession, nickel production increased more than six-fold over the previous twenty-five years, while silver, tin, copper, and zinc

production, all experienced production increases of over two-and-a-half times (table 2). Correspondingly, the primary sources for all these minerals were in key colonial positions scattered around the globe. The world's largest emerging producers of nickel were New Caledonia and Canada serving France, Britain and U S markets. Mexico, Australia, Bolivia and the U S were major suppliers of silver, while tin came from Malaysia, Indonesia, Bolivia and Australia. The same trends are evident in other minerals.

Between 1870 and 1900 England's contribution as a top producer and contributor to global production of minerals drops in every case without exception (See Table 3). The decline in mineral production mirrors the crisis in British hegemony and the associated flight of capital. The growth in production in metals in Africa and in India, Burma, Canada and Australia become the new sources for international capital.

It was no doubt the hope that exploration and resource extraction from satellite countries would reap the same returns as the railways had one hundred years earlier in terms of reasserting British posture in the international division of labour. The support and collaboration

**Table 2**

**Average annual production increases in mineral production: the period 1875-1899 divided by annual production 1850-1874.**

Mineral	Production 1850-1874	Production 1875-1899	Times increase 1875-1899/1850-1874
Nickel	0.4	2.6	6.5
Copper	85.3	254.9	2.9
Zinc	111.0	320.0	2.9
Lead	227.7	524.2	2.3
Tin	23.7	62.9	2.7
Silver	1.2	3.6	3.0

**Note:**

All data represent average annual production in kt.

of the state with international capital was particularly obvious in the mining concessions granted in South Africa, Southern and Northern Rhodesia and Belgian Congo.

Thus while British hegemony waned, order was maintained in the world political economy by way of the institutional network which were created by the collaboration of the British state and financial capital. The legacy of liberation struggles in Africa and elsewhere were borne themselves within the cracks of the institutions which had been developed to keep them subordinated.

The British empire survived on its death bed for as long as it did because of its capacity to preserve these and other markets for their economies. The price the colonial master paid was dear but no where as expensive as the newly independent peripheral social formations. By the time most of the colonies were liberated, the best, most accessible ore bodies had been exhausted. This condition prevailed not only in Africa and not only among British former colonies. In Zambia production levels of copper fell from a pre-independence annual average annual increase (1946-1963) of 6.82 percent to only 1.48 percent in the period from independence in 1964 until onset of the recent recession in 1974-75. In the

former Belgium colony of Zaire, the pre-independence production level of copper increased steadily from 1946 until 1959 at an average annual change of 4.51 percent. Since independence the level of output has decreased to only 2.89 percent. In Malaysia, tin production was increasing at average rate of change of 11.25 percent from 1947-1956. Levels of output slowed down to a near crawl of .81 percent (from 1957-1976). While the plundering of these natural resources cannot be attributed exclusively to the lust for profit, the substantial discrepancies between pre and post independence in these and other mineral-producing countries supports the assertion that the much of the best and most easily accessible ore bodies were tapped and exhausted before the colonial powers departed.

For reasons which are not entirely clear, the great liberation struggles of the 1950s, 1960s and 1970s led to an incongruous symmetry in the understanding of the power relations between these newly independent mineral producing countries and the former colonial powers. While it became clear that these burgeoning societies were highly dependent on the export of these materials for critical foreign exchange, the assumed parallel development was that the

core states of the world-economy had all of a sudden become vulnerable for their supplies of many important minerals. This tactical move advanced by the United States government and in particular the CIA contributed to the uneasiness which prevailed within the US public during the Cold War. The building of strategic stock piles by the US government had the important side effect of denying producer countries commodity agreements as the largest producer and consumer of these resources was the United States. The logic of the continuing dependence of core economies to the flow of minerals from the third world has rationalized continued intrusion by the United States on the sovereignty and liberation struggles of many peripheral countries.

Core-economy dependence on the flow of metals is no where near as great as the CIA figures suggest (see Table 4). Comparative data from the 1950s and 1960s suggest that in some instances dependence has even decreased. As of 1984 only 4.7 per cent of all non-ferrous exports to core-economies comes from developing Africa, 6.7 percent from Latin America and 4.7 percent from state socialist economies. The remaining 76.8 percent of trade is essentially intra-core. (See Table 5)

The rise of American hegemony in the post WWII period was in large part consolidated by the capacity of the United States government to develop and maintain mineral markets in a handful of American countries and to a lesser extent in Australia in order to fuel the continuation of the post-war military economy. As European power became less relevant in the configuration of the world political economy, former suppliers to the British and other European metropolises also became marginalized. The diminishing role of African suppliers of raw materials highlights this trend. From 1948 to 1978, the contribution of African producers to the total production and consumption of metals de-

**Table 3**  
**British contribution to global production**  
**(percent)**

	1870	1880	1890	1900
Lead	26.1	15.6	5.8	2.8
Tin	37.2	18.7	14.6	4.9
Zinc	2.2	3.1	2.5	1.9
Manganese		8.2	5.0	0.1
Tungsten		~50.0		4.7

**Source:**

Gonick Mineral Database 1985

clined. United Nations data shows that in 1948 African countries contributed 19.9 percent of the total world production of chromium; in 1978 its contribution fell to 9.9 percent. In 1948 African countries supplied 15.0 percent of global tin production, 18 percent of copper, 19.3 percent of manganese, 6.8 percent of lead and 5.1 percent of zinc. By 1978 the contribution of African producers as a percentage of total world production fell in every case. In 1978 Africa's contribution to tin was 5.3 percent, 15 of copper, 15.6 of manganese, 3.9 percent and 4.9 percent for zinc and lead respectively. Thus the linkages of African economies to the production and consumption centres of Europe resulted in negative returns as Europe took a secondary role in the world economy in the years after WWII. The legacy of colonialism, including the plundering of natural resources, the creation of export-oriented economies and the involuntary proletarianization of African peasants to serve European capital continues to take its toll in the post-independence period.

Canada and Australia, on the other hand moved from the periphery of the post world war economy to become a central supplier in the rise of the United States (and later Japan) to the centre of the world-economy. Currently Canada exports over 80 percent of total mining production of which 60 percent is exported to the United States. While Australia's export portfolio is somewhat more diversified, this form of "tied-development", wherein a substantial portion of the economy is vulnerable to the collapse of foreign markets, plagues both economies. The commodity crisis of the mid-seventies and eighties has brought on severe and possibly irreversible hardship to these large resource producing economies.

Unemployment, currency devaluation, closures, bankruptcies are all symptomatic of the general malaise which is no longer the exclusive domain of third world states. On the other hand,

the suggestion that mineral-producers from the third world are flooding the market to the detriment of the mining industry in the advanced capitalist world is only partially true. The acute dependence of mineral producers in the periph-

ery like Zambia - but also Zaire, Chile, Papua New Guinea, Peru, Philippines, Guinea, Guyana, Surinam, Jamaica, Bolivia, Malaysia, Rwanda, Thailand and Gabon, to name only some of the more obvious cases - has forced them to

**Table 4**

**Import dependency of core economies  
Imports of metals as a percentage of total consumption 1982**

Metal	EEC	USA	Japan
Bauxite	75	97	100
Copper	82	7	100
Chromium	97	88	95
Nickel	80	75	90
Zinc	58	53	56
Manganese	100	99	95
Tin	100	72	99
Average	85	70	90

**Source:**

Central Intelligence Agency, *Handbook of Economic Statistics*, 1983

**Table 5**

**True vulnerability of core economies**

Metal	Core-economies total consumption 1982 (kt)	% of commodity produced by core economies	% of commodity produced by safe non-core economies	True dependence %
Aluminum	10 842	129		0
Copper	6 759	32	11	57
Zinc	4 065	74	6	20
Lead	3 715	35	4	61
Nickel	434	44	0	56
Tin	154	13	34	53

**Sources:**

US Department of Interior, *Minerals Yearbook* 1982 and World Bureau of Metal Statistics

**Note:**

Core economies include USA, UK, West Germany, Norway, France, Spain, Japan, Italy, Netherlands, South Africa, Canada and Australia. Safe non-core economies are defined as peripheral states having long-term (post WWII) forms of uncontested alliance with the core and include Mexico, Malaysia and Zambia.

"dump" metals on the world market in order to generate precious international liquidity needed to finance IMF loans. Many of these mineral-producing economies borrowed heavily to build up their single commodity based economies following the directives of Washington and World Bank. The policy of mono-commodity economy, takes to the very extreme the logic of comparative advantage. The increasing cost of borrowing coupled with the shift of the structure of loans towards commercial sources contributed to the worsening balance of payments that many countries face. In many cases the average interest rate more than doubled between 1973 and 1981, maturity loans have shortened by 50 percent, the grace period shortened by 30 percent and finally the share of the grant element has also shrunk by nearly 30 percent (from 46.3 percent to 16.7 percent).

The few major mineral-producing states which have attempted to forge a self-reliant road to development have been drawn into the folds of the world-economy over the past decades. An insatiable appetite for high technology has led these countries to compromise market insulation in order to receive new technologies. The struggle for relative self-reliance continues and appears to follow cyclical patterns ranging from unremittingly derogatory to uncritically laudatory as witnessed recently in China and India. Currently, both regimes have staked their political futures and the future of their economies on a warmer relationship with the United States and through that relationship, access to and development of a technological society. The costs, as suggested earlier have been costly; the benefits far from conclusive.

Rich-dependent mineral-producing states like Canada, Australia South Africa and to a lesser degree Brazil have employed stringent fiscal policies in broaching the current commodity crisis. To varying degree, these countries' economic basis have, over the years,

been diversified away from single commodity dependence. Yet the fortunes of the resource sector remains tied to the cyclical trends within the world economy and as a consequence the economy as a whole does remain sensitive to such developments. Canada, more so than other rich-dependent economies remains vulnerable because of the enormous dependence the industry has on a single export market. The combination of protectionist sentiment and saturated and diminishing markets in the United States has exposed the weakness of the "tied-dependence" economic configuration. Both US and Canadian owned mines operating in Canada have closed or reduced operations at unprecedented levels. Until rich-dependent economies can absorb greater proportions of their production into the economic life of their own countries they will remain hostages to an economic arrangement over which they have little if any control.

### Conclusion

In many respects the impact of the global commodity recession upon major mineral-producing economies remains predictable. The collapse of prices effects all mineral-producing economies although the consequences may vary depending on the degree of dependence. What is more confounding is the near uniformity of the response of government, industry and labour to the condition. State and capital appear unanimous in their commitment to policies which are largely the creation of major international financial institutions. Retrenchment, rollbacks, and budget reductions, it seems, are assumed to be the means towards revival, recovery and economic renaissance. In many instances trade unions have acceded and deferred to the 'superior' knowledge of their industry counterparts conceding to reductions in hard earned benefits in order to secure minimal job security. Economic recession has brought with it forms of political

crisis. American economic domination of the world political economy has waned and with it much of its political credibility. Yet, the financial institutions which were created by the United States while it had unbridled hegemony have maintained the sanctity of the political economic interests which it was meant to advance and protect. There are those who have concluded that the burden of continued pressure on the international system will result in its eventual demise. Radical critics who surmise as much, often fail to concede that the human intervention needed to bring about fundamental changes in the world political economy are more likely to be retrogressive than progressive. Thus, it becomes appropriate to sketch the requisites for the conditions which will produce a counter-hegemonic force within the world political-economy as it exists at the close of the twentieth century.

The foregoing historical sketch illustrates the significant movement which occurs within the hierarchy of the international division of labour during secular downturns in the world-economy. As before, the current commodity crisis is bound to produce new raw materials suppliers and at the same time, many of the former important producers will become marginal. Moreover, it is plausible that new political alliances will arise or be consolidated as new positions within the hierarchy are cemented. In short, dynamic historical processes are currently evolving which effect and will continue to impact upon mineral-producing states. While it would be inaccurate to argue that the World Bank and IMF programmes of "recovery" originate at the behest of the United States, it would be correct to say that the policy package directed by the IMF and World Bank serves the direct interests of those seeking to maintain the current hierarchy within the international division of labour. To confront this programme an alternative strategy embedded in a new language and logic must be developed. The cur-

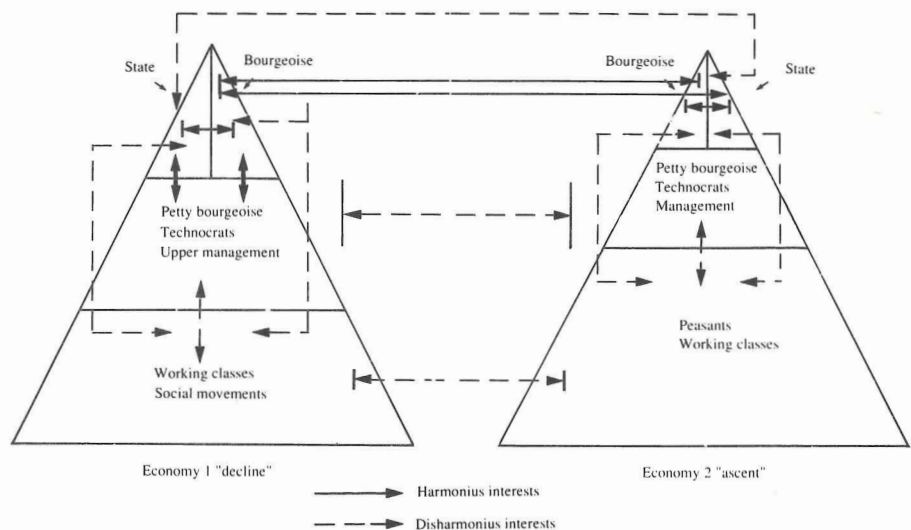
rent system driven by a technical rationality must ultimately be rejected in favour of a true rational utilization of collective resources. The distance between the current state and the desired end remains great. At this juncture, one must begin with an understanding of the most basic contradictions which the system of technical rationality has generated.

Diagram 1 below illustrates two mineral-producing political economies; one economy on the rise the other on the decline. In this simplified example, the social hierarchy within each economy is divided into four with the state and bourgeoisie sharing some unspecified proportion of the ruling strata. The middle strata includes the petty bourgeoisie, technocrats and higher management. The bottom strata in these societies are mineworkers and other individuals who sell their labour power in order to provide the means for sustenance (working classes) as well as social or popular movements. While Table 6 clarifies the definition of class locations according to sociological theory, Diagram 1 illustrates the evolving harmony and disharmony of interest between the various socio-economic strata within these two mineral-producing economies. Forms of disharmony (indicated with broken solid line) manifest domination and antagonism at a particular moment in the ascent and decline of these two states. While the unambiguous class location, derived from radical social science argues one set of relations, Diagram 1 suggests otherwise. First, while economy number one dominates economy number two, it is country number two which is on the ascent. Class antagonisms in economy number 2 will often be suspended (indicated by solid line) by appeals to nationalism and the corporatist commitment for the betterment of the 'nation'. Nevertheless, in this condition, a large degree of domination and exploitation exists within the ascending economy between the dominant ruling strata (be it state collectivist, military, or liberal forms of

government) and the working class. A more harmonious relationship exists between the middle and upper stratum as both social strata are relatively small and interdependent. In economy number one, the divisions are closer to the conceptual framework in Table 6 with one major exception. While antagonisms, domination and exploitation characterize relations between the ruling stratum and the mineworkers, an even greater antagonism exists between the mineworkers

in the two economies. In fact, mineworkers in country one, or more likely their trade unions, will appeal to corporatist sentiments in order to protect jobs by appealing to the state apparatus to design protectionist legislation or what ever other means exist to advance their position. Similarly, while some antagonism may exist between the two state apparatuses, a similar disjuncture does not exist between their respective bourgeoisie; in this simplified case, the owners of the

**Figure 1**  
**Contradictory locations of class interests.**



**Table 6**  
**Power relations embedded in class society**

	Control over others labour power	Control over means of production	Control over the accumulation process
Mine owners	+	+	+
Mineworkers	-	-	-
Shop keepers, technicians and low level management	-	+	+

mining industry. These apparently contradictory locations of class positions makes developing a counter hegemonic strategy infinitely more difficult if somewhat more realistic.

If on the one hand, the system of technical rationality has generated these contradictory class locations within the threefold arenas of production, circulation and consumption, a strategy to build a counter-hegemonic consciousness must confront this configuration of class relations. It is at each one of these critical interstices that new power relations must be introduced in an attempt to break patterns of domination and exploitation. The New International Economic Order sought to confront this configuration by addressing the issues of circulation and consumption. Given that the primary negotiators, seeking to reach some understanding with the advanced capitalist world were themselves state actors, it was highly improbable that such a forum could successfully deal with the primary issue of production and patterns of production relations. As difficult as the project may appear, the critical incision can not take place effectively at the level of consumption or circulation. Attempts to affect fundamental change in domestic affairs, or even more basic, in the production relations within an economy, can not be effectively pursued by demanding a new international economic order or by devising intricate commodity agreements to the exclusion of a strategy to alter exploitative production relations. While such a strategy places emphasis on struggles and the realignment of power relations within producing economies, this is not to argue that one can neglect the domain of trade. Substantively what this means is, that as long as miners - in what ever mineral-producing economy, be it the USSR, Canada, India or Zambia - are distanced from the decision making which determines working conditions, production levels, domestic and international consumption and circulation patterns of the

ore bodies they extract, then, irrespective of the type of political regime, the contradictions in diagram one will persist. Practically, this means calling for a strategy based on the decentralizing planning, decision making, greater socialization of the means of production, less on -the-job alienation, representation in the decision-making process, rotation of job assignments, and regular and institutionalized mechanisms for bringing management at all levels into the production process itself. The end result of these strategies would be the development of a non-exploitative work environment. A lessening of the pattern of domination at the point of production not only leads to a diminishing of the alienation a mine workers feels towards his or her work, but also contributes to the reduction of alienation between the miner and his or her colleagues (between humans) and finally a lessening of the sense of anomie (between person and self).

The focus on democratization of production relations and greater control over patterns of consumption (of all material and nonmaterial goods and services) is a radical proposition. In order to protect the diminishing natural endowments which faces the human race collectively, a new common logic and language has to be introduced. The logic of true rationality geared towards breaking down the system of technical rationality must prevail if there is to be a future for tomorrow's generation. At the same time, true rationality, a strategy committed to the rational and democratic use of the world's natural endowments can not be developed in isolation. True-rationality in-one-state, in a sea of technical rationality, will be unviable. Consequently some strategy for dealing with patterns of distribution must be developed in order to breakdown the domination of superordinant economies over that of the subordinant economies. Democratization of power relations and decision making advances this develop-

ment a long way. In order to rid the world of these unequal relationship more cooperation over the allocation of these limited resources must be taken seriously. One such proposal would be the transformation of the major international financial institutions and the international forum for resolving political disputes, the United Nations, to form a single enterprise empowered with the task of developing, implementing and monitoring the processing of resource allocation and distribution. The principle aim of such an enterprise would be the effective redistribution of resources between producers and consumers not based on profit motive but rather to advance non-violent, non-exploitative relations between economies.

The viability of any of these strategies, is contingent on the commitment to deal with all three elements (production, consumption and distribution) as part of the whole. The human costs involved in the massive structural transformations wrought by periodic crises in the world-economy is too high a price to pay. Technology, in and of itself is no evil. The rational application of new and old technology in an integrated plan geared to the democratization of domestic and world political-economies represents a substitute logic to the current conventional wisdom. If the human race is to learn from historical precedent, the lesson must be that collective human agency has and must prevail in the construction of the world political economy but this time the construction of one based on new values, norms and ideals.

#### Notes:

<sup>1</sup> IMF, *World Economic Outlook, Statistical Appendix*, p 1.

<sup>2</sup> Rohatyn F, *On the brink, New York Review of Books*, 1987-06-11.

<sup>3</sup> Needham J, *Poverties and triumphs of Chinese scientific tradition*, In Crombie (ed), *Scientific Change*, New York, Basic 1963 ■