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IN THIS ISSUE

We have disregarded our usual practice as to length of articles in order to print in full what we believe is an excellent article on the nuclear power issue. The article is by Alan Roberts, a physicist at Monash University, already well-known for his writings on ecology and other matters from a socialist point of view. Roberts' article provides an in-depth analysis of the various considerations surrounding the nuclear power issue and establishes the case against nuclear power stations from environmental and social points of view. The article is good background reading for all those wishing to understand the case against nuclear power and especially for union and movement activists engaged in the present struggle to prevent the mining and export of uranium in Australia.

June 4 was the twentieth anniversary of the publication of Krushchev's Secret Speech to the Twentieth Congress of the CPSU. We publish an interesting piece by Zhores and Roy Medvedev on the circumstances and impact of the speech in the Soviet Union itself.

Pierina Pirisi, a young woman Italian migrant active in the Italian migrant workers' organisation FILEF, subjects the recent Jackson Report on manufacturing industry to scrutiny. She warns of its threat to working class interests.

The changing situation in East Timor and the basis of Fretilin's popular strength and ability to resist the Indonesian invasion is examined by Denis Freney, activist in the Campaign for Independent East Timor.

Further on international affairs, our International Notes this issue is a reprint of an article by Wilfred Burchett on China's foreign policy. To our knowledge, this is one of the first critical appraisals, by a long-time friend of China, on those recent policies and actions of China in the international arena which have caused great concern to all socialists who would like to see unity in action, based on principle, against imperialism.

Pete Beilharz reviews Ernest Mandel's recent major work 'Late Capitalism', a significant addition to Marxist Political Economy. Further reviews and comments will be welcome.

In order to print the Roberts article, we have omitted our regular features 'Comment' and 'Economic Notes' from this issue.

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The Politics of Nuclear Power

by ALAN ROBERTS

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1. The Political Importance of Nuclear Power

Modern capitalism has turned increasingly towards technological 'advances' that are suspect in the extreme. They are marked by their dubious or plainly negative contribution to human welfare, and by their destructive effects on the environment. There are some whose harmfulness is now widely recognised - as, for example, the replacement of efficient mass transit by a commitment to the private automobile, the switch to detergents, the massive use of pesticides, the waste of energy in packaging (particularly the non-returnable bottle and the aluminium can). (1)

It is now clear, however, that one particular development - the nuclear power industry - looms above all others, in its ominous implications for the future of humanity, and in its significance as an issue on which mass action against the system's irrationality is likely.

Its predominance derives, firstly, from the sheer magnitude of the economic commitment involved. The leading capitalist countries intend to generate most of their electrical power by nuclear means before the turn of the century, necessitating an unprecedented speed of construction. Over the next decade alone, the US government hopes to see nuclear capacity increased eightfold; France and Japan aim at roughly fifteen-fold growth. These programs imply that the USA for instance, is to spend well over a trillion dollars (that is a million million) on the nuclear industry in the next two and a half decades. (2) It has been estimated that, if the 1985 target is achieved, the nuclear power industry will absorb over fifty per cent of gross US capital formation over the next decade.

Next in importance is the transparency of the irrationality involved. It is not a matter of waiting till consequences difficult to foresee have come to pass - as, for example, it was necessary for the polluting effect of detergents actually to show themselves, or for the cities to
become congested, polluted and deformed by the automobile. The damage inherent in the nuclear development can be clearly foreseen at this very moment.

The third feature is one of special significance for social change: it concerns the response of the populations in the advanced capitalist countries when they are reached by the arguments over nuclear power. Outstanding here is the example of Sweden, the only country where the issue has been made the subject of more or less formal nation-wide discussion. These discussions, carried on in the course of the year 1974, saw the population swing from approval of the nuclear program to better than two-to-one opposition. As a result, the government cut its ten-year nuclear target to one-seventh of its former size (from fourteen reactors to two). (3)

Similar responses on a more local scale have been evident in the USA where the nuclear industry openly expresses its fear that nuclear moratoria (federal or state) will be imposed as a result of public opposition. (4)

Thus it is not simply a question of a valid issue, implying a struggle for all concerned with humanity's future. The campaign against the nuclear commitment also has the character of a transitional demand, striking at the very assumptions of consumerist society, and yet understandable to and acceptable by the people affected.

In countries of the Third World, the political context of the nuclear issue is different but the validity of the struggle is no less clear. It is necessary to emphasise this point, particularly since the proponents of nuclear power often advance arguments allegedly based on the interests of a power-starved Third World. *

II. Why the Nuclear Programs are Unacceptable

The dangers associated with nuclear power have been adequately explained in a number of publications, and here we will simply refer the reader to them. (5) They fall under the following main headings:

1. Unscheduled discharges of radiation to the environment, in amounts exceeding the low levels prescribed in normal operation.

2. Catastrophic releases of fuel or waste materials, following on a 'melt-down' of the fuel after an accident.

3. Deliberate release, or the threat of it, of radioactive materials, by criminal extortionists or the insane ('nuclear malevolence').

4. Environmental damage arising from nuclear wastes (whose disposal remains an unsolved problem).

5. Undesirable political and social measures adopted to cope with these hazards.

The possible magnitude of some of these dangers can be judged from the simple facts concerning the highly toxic element plutonium. The maximum permissible annual intake of plutonium is at present one millionth of a gram, a quantity known to be capable of causing cancer (and considered too high a risk by many authorities, including Britain's Medical Research Council. (6) But the most common type of nuclear reactor, in normal operation, over one year, produces about 200 kilograms of plutonium.

Of course, stringent precautions are taken to ensure that this and other radioactive poisons are contained and never reach the atmosphere. But no system of containment can be perfect, nor verified with absolute accuracy. (Today, for example, the inventory of plutonium in a reactor cannot be checked to better than one per cent).

Suppose then that, by the end of the century, when upwards of 2,000 reactors are envisaged, a small fraction of the plutonium generated in a year 'leaks' to the atmosphere - whether by accident or malevolent design. If the leak is as small as one hundredth of one per cent of the total, this still constitutes a maximum permissible dose for every person in the world, ten times over.

The nuclear program thus embodies a proposal to organise power production around stocks of highly poisonous substances in quantities almost unimaginably vast in relation to their toxicity. To accept such a program, one would need to be supremely confident of the social system in which it is to be implemented - confident both of its ability to maintain unprecedentedly high standards of technical skill with absolutely infallible rigor, and of its political and social stability over many generations. The reader can be presumed to lack such confidence.
Despite the quite extraordinary and often ingenious safety routines implemented by the nuclear technologists, whose efforts to achieve the impossible must compel admiration, the safety of the US nuclear industry has already been the target of damaging criticisms. These concern the workings of about fifty reactors in the world's most industrially advanced country; what can be expected when perhaps 2,000 reactors are operating in dozens of countries throughout the world?

Some indications of an answer to this question were given by Jean-Claude Leny, managing director of Framatome, in March this year. It took the form of a broad hint to investors, that the profitability of nuclear power in France would not be allowed to suffer - like the American industry's - from an exaggerated concern for safety .... (7). As for the possibility of malevolent activity, the infant nuclear industry of the USA can already record, amongst other incidents, a threat to crash a highjacked plane into a reactor, a series of apparent sabotage attempts in a re-processing plant, and the selection of nuclear plants for terrorist blackmail attacks by followers of Charles Manson. (8)

It should be remembered that the possible damage arising from nuclear catastrophes is not confined to the existing population in the country of occurrence. The very nature of the radioactive threat lends itself to dispersal in space over national and even continental boundaries, and to persistence in time so that generations remote from the present suffer illness and death (the genetic effects of radiation). The lesson from the USA in particular is that the industry's safety standards will tend to be proportional to public concern over the issue; in this light, the struggle against nuclear power can be seen also as a simple struggle for human survival on the planet.

The disposal of waste materials from reactors - and of the worn-out reactors themselves - remains an unsolved problem. Its magnitude can be gauged from one figure alone: the annual wastes from an average reactor today contain 1,000 times the radioactivity of the Hiroshima bomb. While research proceeds on possible methods of permanent disposal, the industry contents itself with 'waste management' - that is, retrievable and (it is hoped) secure methods of storage. Here it should be noted that the cost of this 'temporary' storage (which is by no means at a satisfactory level of security) will rise in the next two and a half decades to some seven billion dollars in the United States alone. It is easy, then, to understand the fear expressed by US Environmental Protection Agency experts, of "the possibility that an interim engineered storage system may become permanent solely due to economic costs". (9)

To understand the ominous implications here, one should first note that the interim methods make the poisonous waste 'retrievable' - or in other words, accessible. Thus they continually invite malevolently-inspired acquisition or atmospheric release. Also, the time scale of the 'permanent' storage required is not in dispute: the long-lasting component of the wastes (particularly plutonium) must be kept rigorously clear of the environment for hundreds of thousands of years - half a million, for safety. This poses the unprecedented problem of finding a storage which will not be disturbed by the geological processes that occur over such a time span. Research has not yet proved that such storage exists.

Here, once again, an issue of sheer survival is involved, in the struggle to prevent such irresponsibility towards future generations.

The nuclear industry has generally treated critics with disdain, making concessions to them reluctantly and only after public opinion has been roused. But in recent years, some of the more far-sighted proponents of nuclear power have started to recognise the strength of the opposition's case, particularly in the area of 'nuclear malevolence'. Their proposals for coping with nuclear hazards constitute in themselves an equally ominous political and social threat.

Thus the US Atomic Energy Commission has proposed a special federal police force devoted to the security of plutonium plants and shipments. It has complained of recent court rulings protecting individual privacy, and requested legislation which would facilitate security checks on nuclear industry personnel. (10)

With the projected growth of the industry, the number of workers affected by such restrictions of civil rights could run into the
millions. Already, according to the *New York Times* Texas state police keep dossiers on opponents of nuclear plants. (11)

The dangers involved here should not be underestimated. A few kilograms of plutonium make an ideal weapon for blackmailing a whole city, since it effectively disperses itself in small particles once exposed to the air.

Even graver is the real possibility of constructing a nuclear bomb from plutonium in a reactor's waste; impurities would make it inefficient but, as an experiment has convincingly shown, little skill would be needed to achieve a weapon with the destructive force of about 100 tons of TNT. (12) This would be within the capacity of 'amateurs'; any government with nuclear power plants would have the facilities to manufacture weapons 100 times more deadly. After an extortion threat, whether successful or not, an atmosphere of hysteria could well be envisaged, in which authoritarian 'law and order' proposals would be difficult to combat. They would even have a certain rationality, inside a globally irrational context.

III. The Many Levels of Irrationality

The risks just outlined justify the verdict that a major development of nuclear power is irrational, if our criterion is the welfare of humanity. But this is far from the only sense in which we can just apply the epithet 'irrational' to capitalism's nuclear perspectives.

It should first be appreciated that the current nuclear program is not a long-term solution to the problems of power generation, even in the opinion of capitalism's own analysts. It is projected as merely bridging the gap between the present period marked by diminishing stocks of oil, and the situation in perhaps three decades or so, when alternative sources of energy will be commercially viable. The tapping of the sun's energy is one important such alternative, to which capitalism is now belatedly starting to devote increased research and development funds. The primary aim here is to find ways of reducing the capital costs of large-scale solar power plants.

For reasons discussed below, solar power is still seen as less attractive than fusion power - a variety of nuclear plant working on a different principle from the current models. Existing 'fission' reactors rely on a controlled version of the nuclear reaction - the 'splitting' of a heavy atom such as uranium or plutonium - which in its convulsive release produced the explosion of the Hiroshima bomb. A 'fusion' reactor would be based on taming the nuclear reaction underlying the hydrogen bomb, in which light elements 'fuse' together to form a heavier element. Steady progress is being made in the research on controlled fusion, particularly since a Soviet break-through in this field some years ago - the 'Tokomak' development. It is generally believed however, that several decades will elapse before commercial fusion reactors enter into service, even after a basic design has proved itself in the laboratory.

Thus, present nuclear programs are supposed to justify themselves by their contribution to power needs in the next few decades. But it is precisely in this short term that there arise the most serious doubts of the program's utility.

In the first place, the cost of a unit of nuclear-generated electricity is claimed to be now competitive with, and (in the USA at least) even cheaper than, the cost when oil or coal is used as in conventional power stations. But it is well known that this competitiveness is based on comparatively cheap fuel costs, using uranium extracted economically from high-grade ore; and the estimated world supplies of this ore fall far short of the fuel needs over the lifetimes of the reactors now planned. (13)

Once the reserves of this ore are exhausted, uranium must be mined from the low-grade reserves - containing perhaps 30 or 40 times less metal per ton. This could double the cost of nuclear-generated electricity, and destroy its commercial viability.

The remedies hoped for by the industry are all either ineffective or highly speculative. Plutonium could be extracted from reactor wastes and used as fresh fuel; but this would 'stretch' the supply only by a matter of 15 per cent or so, while multiplying enormously the dangers associated with plutonium handling. (14) Improvement in extraction methods might lower the cost of treating the low-grade ore; but the improvements would need to be qualitative. Escalating oil prices might keep level with increased uranium price; but no such rise can be anticipated for coal.

The industry's major hope here lies in the breeder reactor, whose operating core is
THE POLITICS OF NUCLEAR POWER

wrapped in a 'blanket' of natural uranium. Such a reactor will convert the bulk of this uranium into a suitable fuel (normally, less than one per cent of it is available), thus producing (or 'breeding') more fuel than it uses up. The world supplies of 'burnable' uranium could thus be effectively increased perhaps seventy times over.

Before agreeing with the US administration that breeder reactors thus represent the solution to the nuclear fuel shortage, some facts should be noted. The inherent dangers of the breeder reactor vastly exceed those of the current models, and justify the greater concern and opposition of aware scientists. (15) A whole series of technical difficulties have resulted in repeated postponements of the expected date of operation of a commercial breeder, the latest estimate (probably optimistic) now landing in the 1990s. The significantly higher capital costs, as compared to today's power stations, are likely to result in yet more delays before the buying reluctance of electrical utilities is overcome. And even then, a breeder will take somewhere between 20 to 40 years to produce enough fuel for one reactor.

Thus, reliance on the advent of breeders to 'stretch' fuel supplies represents a dubious gamble. Yet what the industry is thereby gambling on, is the whole cost-competitiveness of nuclear power.

It is irrationality of another sort which emerges here: the nuclear program is not even rational on capitalism's own criterion of cost efficiency. Reactors already planned are not assured of a fuel supply which can keep them competitive. Thousands of billions of dollars are to be invested in the hope that something will turn up ....

Even with the cheap uranium supply available today, the industry can establish the competitiveness of new plants only by ignoring well-established trends, that would send the price of nuclear-generated electricity skyrocketing. The most important of these trends are, firstly, the staggering escalation in the capital cost of nuclear plants, and secondly, the severe drop in efficiency of nuclear plants after about five years' running.

In May 1975, the Friends of the Earth showed how woefully the relevant utility had underestimated costs, when they testified against the proposed Rancho Seco 2 reactor near Sacramento (California). Adopting realistic figures for capital cost, interest rates and capacity factor (i.e. efficiency), and for operation, maintenance and decommissioning, the FOE calculation showed that the true costs of a unit of power was nearly four times the figure submitted by the utility. (16)

A study by the Grenoble Institute has shown that, in France, nuclear-generated electricity cannot compete with oil at today's prices. In the heating of a household, for example, we can deduce from the study that oil will be cheaper so long as its price remains below $45 a barrel (price in mid-1975: $11). (17)

The escalation in capital cost (we consider its explanation later) shows no sign of abating. Of course, that of coal-fired plants also shows an increasing trend, but nothing like as severe - a 1975 study estimated that the difference in price between a coal and a nuclear plant was itself increasing by $19 per kilowatt per year. (18) In other words: every year the price of a 1000-megawatt nuclear plant leaps another $19 million above that of its coal-burning rival ....

The curves of capacity factor against reactor age also show a dismal trend: that the efficiency is low and becoming even lower. (19) All this may make the nuclear commitment seem extraordinary enough; but we have not yet mentioned the most astonishing irrationality of all. Some preliminary remarks are needed:

The power output of a generator of any sort can never represent pure gain, since some power is inevitably consumed in building and running it. In the case of a nuclear reactor, a great deal of power is required merely to set up business - to build the station, mine and mill the initial fuel supply, etcetera. A most important part of this power input occurs at the stage where natural uranium is treated so as to increase the fraction of it which can be 'burnt' as fuel - the 'enrichment' process.

All this means that the station will be running for some time before it has 'paid back' the power used to set it into operation. Calculations of the 'break-even' time have been carried out for various reactor designs; they indicate that about two years of normal operation will be needed to repay the power input for construction.
Now consider the effect of a rapid nuclear program, with the number of reactors doubling every few years. To see this effect, let us adopt some definite, (though fictitious) figures: suppose a reactor's 'pay-back' time is one year (this is unrealistically low), and that the number of reactors is doubling every year (this is unrealistically fast). Suppose also that a reactor takes a year to build (instead of the actual six to nine years).

In year one, no reactors are operating but one is being built: so no power is produced, but one year's output is consumed. In year two, one reactor is operating, but two are under construction; so one year's output is produced but two are consumed. In year three three reactors are operating but four are being built; so three years' output is produced, but four are consumed ....

If the calculation is continued, it will be found that the program uses up more power than it produces in every year of its operation. Of course, in the real world such a program must come to a halt at some stage; the number of reactors cannot go on doubling each year indefinitely. It is at this point that the nuclear industry will become a nett power producer, but until then, it will actually be a nett consumer of power.

In the real world, also, the figures are not as they are given in the example. But the effect still persists, in a modified form, even after we insert the correct data for power input during construction, power output in operation and building time. We still find that the program will not 'break even', in the sense of producing more power than it consumes, for a certain number of years.

Just how many years will depend on a number of factors: the type of reactor, its operating efficiency, the grade of ore mined, the power consumed in regular operation. But the most detailed calculations available, (20) suggest that, inserting the figures appropriate to current programs, this 'break-even' time can easily be upwards of fifteen years, or even twenty.

But this is precisely the period in which the nuclear program is supposed to compensate for the exhaustion of oil supplies, while the world awaits the arrival of fresh power sources .... In other words, the nuclear program will quite possibly consume more power than it produces, in the very period when it is supposed to be the key factor in power generation!
It should be pointed out that a program with oil- and coal-burning stations substituted for nuclear, but expanding just as quickly, would make an even worse showing. It is the sheer speed of the projected construction programs which determines their short-term energy inefficiency. But of course, no one plans to build conventional power stations at such a breakneck pace - since no one has the illusion that such a program would solve any 'energy crisis'. This illusion attaches only to plans for nuclear power stations, when one 'forgets' the energy needed to build them; to puncture the illusion, the sort of energy analysis sketched above is required.

Before arriving at an overall judgment on capitalism's nuclear project, we should appreciate the element of uncertainty which runs through the above analyses. Some of the needed data - what fresh reserves of uranium will be discovered for instance, or what long-term efficiency (capacity factor) will be achieved by nuclear stations - can only be estimated. Some of the relevant calculations require time and manpower that have not yet been devoted to them, so that only suggestive approximations are available.

However, this very absence of reliable information is itself highly revealing. Let us adopt some of the criteria advanced, within a framework of capitalist assumption, for implementing a new technology and consider how they are met in the case of nuclear power. Let us see what preconditions should be fulfilled to justify the investment of capital involved:

First, the safety of the new industry should be sufficiently guaranteed, as to obviate the risk of the whole development being aborted at some future date. (This would occur, for example, as a sequel to the catastrophic release of radioactive material, by a plant accident or malevolent design. The public reaction could well make it politically impossible to continue operation of the existing plants, and force the abandonment of the large amounts of capital they represented.)

Secondly, the programs adopted should actually achieve their declared goals: that is, to produce significantly more power than they consume, in the vital period of the next few decades.

Thirdly, the electricity produced should be competitive in cost with that generated by 'conventional' (oil- or coal-fired) stations.

Fourthly, plants should not be projected unless they are guaranteed a suitable supply of fuel over their working lifetime.

Fifthly, the financial mechanisms should exist that will enable the 'consumer' (i.e. the electrified utilities) to obtain the capital needed to buy the reactors concerned.

It is when we review these reasonable criteria that there emerges the full irrationality of capitalism's nuclear plans: it has not been demonstrated that they satisfy a single one of these basic requirements.

At best, the nuclear industrialists can be regarded as undertaking a colossal gamble. They are gambling that no catastrophic accident will occur in the short term, despite the narrow squeaks already in the record. They are gambling that fresh high-grade ore reserves, or a technically and commercially viable breeder reactor, will be available in time. They are gambling that the trend to ever-higher capital costs, and the decline with age in the efficiency of the functioning reactors, will be reversed, or economically compensated for by increased cost of conventional fuels....

In the USA, they are even gambling that 'something will turn up' in the way of finance, to permit the purchase of reactors by the electrical utilities. (Early in 1975, some 60 per cent of reactor orders in the USA had been cancelled or postponed mainly because of the refusal of finance houses to lend the purchase money. (21)

It is true that capitalist enterprises have been known to 'gamble' before this - to spend on research and development, or to launch on the production of a new commodity whose market was not assured. But we remind the reader of the sums involved in this particular gamble: a thousand billion dollars, or thereabouts, in the remainder of this century, in the United States alone.

It would be easy to conclude that the gods of history, with the destruction of capitalism high on their agenda, are staging their proverbial prologue of induced lunacy. But a pat verdict of 'guilty but insane', even if supported by the evidence, hardly goes far enough; it is also necessary to understand. The attempt to
reach even a partial understanding is mandatory, and not only because of the importance of the nuclear program in itself, both economically and politically. There is another issue involved: that of the dynamic of the capitalist economy in the present period. It may be that the nuclear industry can serve as a paradigm, showing in not-so-small-miniature - the emergence of new trends or changes in the relative weight of ones already known.

IV. The Energy Company’s Gamble

There are few industries, even today, as heavily monopolised as the nuclear industry. When one says ‘pressurised-water reactor’, one says Westinghouse; and ‘boiling-water reactor’ likewise means General Electric. And these two types, built by two giants directly or through subsidiaries and licensing agents throughout the capitalist world, account for over 80 per cent of the reactors already built, under construction or on order. (41)

The powerful pressure of these multinational corporations exerts itself even on those countries possessing their own proven reactor designs. Thus Francis Perrin, formerly the French high commissioner for atomic energy, has recently complained of the ‘monolithism’ of the French nuclear program (even while rubbishing the anti-nuclear campaign as “based on totally false assertions” and on declarations “devoid of all objective value”). He recalls General de Gaulle’s decision (December 12, 1967) to proceed with the construction of two large reactors of a French design (graphite-moderated, gas-cooled, fuelled by natural uranium) that has elsewhere proved itself. The blocking of this decision he lays to the account only of some unnamed highly-placed civil servants, also responsible for the present plan to instal ‘almost exclusively’ the pressurised-water reactors of .... Westinghouse.

He calls, but without much apparent faith in the likelihood of success, for the French program to include more ‘diversification’, a feature not sufficiently provided by the present inclusion of some boiling-water reactors from .... General Electric. (22)

The weight of the multinationals has been felt even in Britain, the country whose own design of gas-cooled reactor pioneered the commercial generation of nuclear electricity. Hot debate raged in the last year, after the Central Electricity Generating Board and the National Nuclear Corporation both recommended a switch to the American light-water reactor. But under intensive questioning before a House of Commons Select Committee, they were unable to justify their recommendations, and the government decided not to switch - for the time being, at least.

The revelations from Lockheed and other firms have made notorious one of the processes by which the multinationals ‘conquer’ foreign markets: old-fashioned bribery of influential natives. It should not be assumed, however, that this is always the predominant factor. Sheer size counts for a great deal - as illustrated in the unhappy case of the design of an international computing language. The world’s experts agreed on a suitable language, and devoted much effort to its elaboration. But their eugenic offspring, Algol, runs a very poor second in its breadth of social acceptance to the inferior language, Fortran - which was born with a silver spoon in its mouth, sired by the market-dominating IBM ....

In another direction, a still vaster oligopolistic structure is shaping up, as the leading oil companies complete their transformation into what has been accurately described as ‘energy companies’. Already in 1971, the oil giants were responsible for the milling of some 40 per cent of US uranium; their coal production amounted to 20 per cent of the US total, and their acquisition of coal reserves guaranteed their future dominance in the industry (one oil company alone - Humble - was the nation’s second largest coal owner). In the nuclear field, Gulf Oil (with the third largest assets - about $9 billion - of any oil company) had set up Gulf General Atomic. (23)

This latter company threatens Britain’s lead in gas-cooled reactors, and already in 1972 there was “consternation in the nuclear industry” as a consequence, according to one writer. (24) Gulf promises delivery of high-temperature gas reactors (an advanced design) around 1980.

But if this represents competition with the dominant light-water American reactors, is similar consternation apparent among the ruling giants? Hardly; the chairman of Gulf General Atomic, E. Prockett, happens to sit on the Board of Westinghouse also.
A thrust towards monopolisation is built into the nuclear project. A single plant of today's typical size - a thousand megawatts of electrical power - costs upwards of half a billion dollars, and smaller units are neither readily available nor called for in quantity. Companies with assets not running into the billions can hardly hope for a sizeable share of such a market, nor risk the investments needed to establish themselves.

The dynamic of capitalism's nuclear project has been spelled out - with some naive admiration - by Simon Rippon, the editor of a technical journal noted for its fervent, not to say fanatical, nuclear partisanship:

.... The big industrial concerns have not entered the business for quick profits - indeed, most of the companies that have entered the nuclear business around the world have been shaken to their foundations by losses on early projects and few can see dramatic profits in the future. For the supply is going to be increasingly in the direction of nuclear power and therefore for the wellbeing of their company they must establish a foothold in this sector of the business in spite of the heavy initial costs. (25)

It may be doubted whether the 'foothold' is being seized as reluctantly as Rippon makes it sound. For the larger giants, nuclear power spells centralisation, size, growth. The prospect before them is an intoxicating one: the power industry swollen to a size unheard of, its relative weight in the economy enhanced several times over, and all of it within the grasp of one or two amicably-coexisting combines ....

The power industry as a whole can of course anticipate an increase in its relative share of the gross national product, since the power needs of industrial capitalist society grow faster than the GNP itself. In Japan, for instance, official projections are for a growth of four per cent in the GNP, compared to 6.2 per cent for the electrical output. (26) Using this data, a simple calculation shows that the proportion of the GNP represented by electricity output (i.e. its relative weight in the economy) will be double what it is now, in a little over 30 years.

It is only this perspective which can explain the gambles they are taking, and pressuring governments to take. They are not really gambling that no catastrophes will occur, that no hitches will hold up the breeder reactor when it is needed, that the nuclear project will remain cost-competitive.

What they are really gambling on - and from their viewpoint, it is a 'rational' risk to take - is that their economic and especially their political weight in society will be so massive, that society has no option but to make their bets come home.

It is the next decade which is crucial for this outcome. By 1985, the nuclear share in electricity production is designed to reach, in the leading capitalist countries, the 10 per cent level or close to it (the USA, 13 per cent; the EEC, 17 per cent; France, 30 per cent).

Within the present structure of industrial capitalism, it is hard to envisage a situation in which such proportions of the power supply could simply be switched off, no matter how powerful the arguments in terms of human welfare or even of economic efficiency.

Perhaps a catastrophic 'melt-down', releasing millions of curies of radioactivity, killing tens of thousands of people, damaging property to the extent of billions of dollars? Studies by the American Atomic Energy Commission have shown that accidents could well have such a scope. (27) But if society really depends on the nuclear branch of its power industry in order to continue along its accustomed path, and if this path can still claim an overall acceptance, then an alternative to a shut-down would be the adoption of 'firm measures', allegedly ensuring that such disasters could not recur.

Such measures, whose shape was sketched in the AEC report mentioned earlier, would be repressive and authoritarian in the extreme; and there can be little doubt that among the movements heavily repressed would be any spreading panic or mobilising action in connection with nuclear power ....

But if nuclear power reveals itself as unarguably wasteful? Suppose the tendencies for nuclear plants to decline in efficiency with age, and to require more and more capital for their construction, become so pronounced that, on economic grounds, they should simply be replaced by non-nuclear methods of power generation. Would not this be a situation disastrous to the nuclear industry, one in which their gamble had definitively failed?
Possibly - if they allowed such a situation to arise. But as a Harvard-MIT study pointed out in the Technology Review:

The price of usable energy from oil, coal or uranium now has little to do with the marginal production cost of any of these resources. Instead the price of energy from alternative technologies is the result of a complicated process of assigning relative values to a variety of energy-producing resources and technologies by those who either control or require these resources and technologies. This process is both intensely and inherently political. (28)

In assessing the degree of control over energy prices, it is vital to realise that we are not dealing with an isolated handful of reactor manufacturers - more and more, the Energy Company becomes a powerful reality, and the relative pricing of the various methods of electricity generation falls increasingly under its control. 'Free competition' between the various primary fuels started to lose its reality many years ago, as the oil companies moved over into the mining of coal, of uranium, into the processing of uranium and - through subsidiaries and affiliates - into the building of reactors. Their influence will be exerted to fix prices that reflect, not the resultant of competitive forces, and not the realities of cost-effectiveness, but simply the interests of their own needs for expansion, investment and profit.

Thus, if the nuclear industry is gambling, it knows in advance that the dice will be loaded in its favor. And even if its luck turns unexpectedly bad, and the table runs against it incessantly, there remains a further and decisive recourse: it can have a word with the management....

Consumerist capitalism needs the power industry; it even needs its continuous and sizeable expansion. The state which administers that system never runs on the basis of one-capitalist-one-vote, or even one-million-dollars-one-vote; always some animals in that particular jungle play the role of the king of beasts. The Energy Company, more than half nuclearised by the turn of the century, will certainly supply a king or two, perhaps even a king of kings. Such personages do not need to fear bankruptcy, or even a missed dividend. If even the smaller predators like Lockheed, Boeing or Grumann can depend on sympathetic intervention by the state in their hour of need, what will be beyond the power of the Energy Company?

Indeed, nuclear power has already benefited crucially from state support, and not only in the billions lavished on research and development, whose results the corporations simply take over. Another important parcel of 'aid' has been delivered by the US government plants enriching uranium. The Westinghouse and GE reactors require fuel that has passed through this expensive process, and their success in penetrating the market is due in no small measure to the artificially low price assured by what amounts to a concealed state subsidy; an advantage which has not gone unnoticed by their competitors:

Ned Franklin, chairman and managing director of Britain's Nuclear Power Company .... maintains that the price of uranium enrichment is now fixed by essentially political considerations. Enrichment is dominated by the US which supplies most of the enrichment requirements of the western world. According to people working in the US's nuclear industry, the prevailing price of enrichment is about half what it would be if the industry had to build new facilities and operate them at a profit. The problem is that enrichment is subsidised by the use of old plant that was paid for as part of the weapons programme; enrichment plants are supplied with subsidised electricity; and there is no charge for research and development. (29)

With such marks of favor already acquired, there seems little that the Energy Company needs to fear - unless, of course, it confronts an enemy whom even the state must treat with caution. As we will later see, such an enemy indeed exists....

V. Creating the 'Objective Facts'

The socialist movement has suffered for many generations from the illusion that technology is value-free. Adopting a misleading schema in which an essentially non-political 'base' (the forces of production) is simply to be taken over and endowed with a different 'superstructure' (socialist relations of production), it has failed to appreciate the political content of that technological base.

Even Lenin is on record as succumbing to this error, when he went so far as to laud the Taylor system (time and motion study) and urge its adoption in the Soviet Union. It should be noted that a question mark must now be put over the 'technological rationality' of the assembly-line method itself; can it really be justified even on the narrow criterion of 'stepping up production'? This most alienating
of all technological practices needs re-examination in the light of recent industrial experiments (particularly in Sweden) based on a self-managed working team, rather than a single worker permanently assigned to one stultifying operation on the line.

That technology, and the line of development of technology, are alike political, is nowhere more evident today than in capitalism’s nuclear project. It is illuminating to consider the non-nuclear alternatives for power supply, their undesirability from monopoly capital’s viewpoint, and the way that an apparently inevitable technological progress along nuclear lines is actually the result of highly political decisions.

A source of nuclear power has supplied mankind with the overwhelming bulk of its energy throughout history; it is the sun, a giant reactor successfully employing the fusion process without pollution and without wasting non-renewable fuel reserves (over a time scale of several billions of years, at any rate). Serious studies of the world’s energy problems almost invariably urge the priority of research and development in the field of solar power as the most attractive prospect for mankind.

But it might be asked: how real is this prospect of solar power? What are the technological data on its practicability as a large-scale resource? How does its level of development compare with other energy resources, and what is its promise in the short term?

Questions such as these are posed at the wrong level; they seek as answers a recital of ‘bare’ technological data, not themselves embodying politico-economic decisions, but supplying the value-free facts on which such decisions can be based. It is true that there are circumstances (very restricted, and usually of little social interest) in which such a dichotomy of fact and value has a relative validity; but the present questions are not located in a context even remotely appropriate to such a division.

Large-scale nuclear reactors actually exist; nuclear power moved out of the laboratory many decades ago, into the province of the architect and the engineer. Large-scale solar plants, on the contrary, remain in the anteroom of research and development. Is this a ‘bare’ technological fact? Only in the most abstract sense; in the real world, the genesis, understanding and future implications of this ‘fact’ must be sought in the sphere of political economy.

For there is no autonomous, independently-evolving sphere of ‘technological progress’ which thus made nuclear plants arrive before solar. Nuclear technology was developed in response to conscious decisions on the allocation of manpower and funds, inspired originally by the search for more destructive weapons, and later by the attractiveness for monopoly capitalism of the peculiar qualities of nuclear power.

The failure to allocate corresponding resources to solar power research was the complementary decision that helped to create the ‘technological facts’ as they now exist. And of course, similar remarks can be made about projects to tap the earth’s subterranean heat (geothermal power) or to utilise the tides.

Thus the facts are purely technological only in abstraction, inside a conceptual schema that isolates from its social context an abstract history of ‘technological progress’. In the concrete world of things as they have been and as they are, these facts are born already ‘dressed’ in a political-economic penumbra that accompanies them always, determines their significance and points to their future possibilities.

This can be seen very clearly, when we consider the prospects of solar power vis-a-vis nuclear, over the next couple of decades. The ‘facts’ involved here are being created right now, and a glance at US budgetary allocations will show us what facts the Energy Company hopes to bring about: for every dollar spent this year on solar research, more than eight dollars will be spent on one nuclear project alone - the breeder reactor. (30)

It is not hard to understand why monopoly capital is so lukewarm towards solar power. The latter lends itself admirably to decentralisation, small installations, a minimum investment of capital; these are fatal flaws from the viewpoint of the giant corporation. The ‘technical’ advantages - inexhaustible energy supply, absence of pollution, longevity of the installation, low maintenance expenses - cannot compensate for these inbuilt deficiencies .... It has been well said that solar power would fare very differently if only General Electric could buy the sun!
The sad fact is, however, that solar leases are not yet open to takeover bids; and so the corporations are doing the next best thing: planning to build their own sun.... For there is some corporation interest in solar power, provided the inbuilt vices just mentioned can be eliminated, and the project made capital-intensive, large-scale, highly centralised. These are precisely the qualities of the Satellite Solar Power Station, emanating from Arthur D. Little Inc., Grumman, Raytheon and Textron. A giant satellite a kilometre across will absorb sunlight, convert it to microwave radiation and beam it down to a seven-kilometre receiver on the Earth's surface, generating from three to fifteen times the output of a single large nuclear plant.... (31)

In principle, the solar power source can be a highly flexible device, adaptable in size to meet a wide range of demand and providing access to power for the most isolated community. A minimum of capital investment can provide a self-sufficient source for an indefinite period, and one uniquely compatible with ecological requirements.

These features can hardly be recognised in the satellite project, which achieves the near-impossible: a solar power source demanding an enormous capital investment, suitable for insertion into only the very largest national electricity grids, taking no advantage of solar radiation's great suitability for direct heating of homes and workplaces, and delivering, with its giant receiving antennae, an insult to the environment on a new and monstrous scale.

We do monopoly capital an injustice then, if we evaluate its nuclear program as nothing more than a technological project. Quite apart from its inherent hazards to humanity, its adoption would then become incomprehensible in view of the serious doubts as to nett energy production, security of investment, reliability of fuel supply and cost-competitiveness. But actually it must be seen as a project in a much wider sense: namely, as a social project, predicated upon a definite social structure and aiming to develop that structure in a definite direction.

The social structure concerned is that of capitalism in its consumerist phase, where a
widening gap between a potential of self-managed fulfilment, and a reality of hierarchical repression - is papered over with a policy of consumerist concessions. Destruction of the environment is implicit in such a society; this connection has been analysed in some detail elsewhere, and will not be further discussed here. (32)

The power needs of such a society are vast and ever increasing, and it indeed faces a 'crisis' in the prospect of exhaustion of oil reserves, combined with a severe pollution problem from coal-burning power sources. But, for reasons which will be clear from the discussion above, the giant corporations which dominate its technical development can hardly be enthusiastic about the rational lines of solution advocated even by its own experts: elimination of wasteful energy consumption, reduction in the growth of the electrical power industry, development of alternative sources such as solar, geothermal and tidal power.

It is true that nuclear power, too, has its disadvantages - it may, for example, weaken the fabric of social control by the destructive or blackmailing opportunities it creates for dissident groups. But in lending itself to centralisation, expansion and domination by a few industrial giants, it accords well with the dynamic of consumerist capitalism - which would be hard put to accommodate policies of energy conservation and the strangling of growth.

Of course, the system will have to adjust itself to the peculiarities of this new power source. The Energy Company may have to distort market and pricing mechanisms more grotesquely still, to nudge along the consumption of nuclear-generated electricity and the purchase of nuclear reactors. Massive and direct state intervention may be required to ensure the industry's future, with the perhaps grudging consent, or even against the opposition, of industrialists in other sectors. And measures of social discipline will almost certainly be called for, restricting civil rights and limiting the activities of protest movements, to provide the safeguards needed once society depends for its life-blood - electrical power - on one or two thousand incredibly poisonous sources. Such expectations may well appear repugnant, but they cannot be dubbed fantastic; they are solidly based on existing values and assumptions, those which demand the constant expansion of the commodity market and, to an even greater extent, of electricity output.

But these values and assumptions do not go unchallenged, and there is nothing fatalistically inevitable about the scenario sketched above. We have been looking at the political economy of capitalism today; but a different political economy is also shaping itself, already in conflict with its older rival and by no means invariably vanquished. We must now look at the forces behind this alternative view, take note of their accomplishments up to the present and estimate their possibilities in the future.

VI. The Political Economy of Contestation

After seeing how powerful is its support both corporative and State, we might expect the nuclear industry to glow with health and optimism. But the facts are, surprisingly, quite otherwise.

'Things can't get worse, or can they?' was the gloomy title of an editorial in Nuclear News (April 1975). The New York Times (Nov. 16, 1975) summed up the major troubles in a story headlined: 'Hope for cheap power from atom is fading'. The annual conference of the nuclear industry in November 1975 convened with over 100 nuclear plant orders cancelled or delayed during the year; with Gulf Oil's subsidiary, General Atomic, announcing its close-down; and in a state described by one writer as 'on the verge of panic'. (33)

Have some 'bare' economic facts thrust their way through the corporations' screen of figure juggling and misrepresentation? Is nuclear power just too costly? .... Actually, the truth is far more complex - and more interesting - when one probes a little deeper.

Nuclear plants must be sited well away from the densely-populated areas that use their electricity. As Hohenemser points out (34), this entails a two-fold economic penalty: no consumers are nearby for the (significant) waste heat, and distribution costs are heavily increased. Furthermore, conservative (and costly) operating procedures are adopted to prevent possible accidents.

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It is not hard to see that these 'economic' penalties derive from sources that can rightly be termed 'political': public suspicion of nuclear power, and the consequent support of
activist intervention (to relocate plants, to raise standards of radiation exposure, to enforce higher and more costly safety criteria). Nor is this all:

Perhaps the most important single factor telling against the economic future of nuclear power is the continuing escalation in capital cost of the nuclear plants, as compared to coal-burning plants. The reasons for this escalation have been carefully analysed in Technology Review (February 1975) by Bupp (Harvard) and Derian, Donsimoni and Treitel (M.I.T.).

They find that total cost is strongly correlated with the length of the licensing period, i.e. the time elapsed before the plant is licensed by the Atomic Energy Commission (AEC) to enter into operation. Under US law, citizens can "intervene", on safety, environmental and other grounds, to oppose the granting of the licence or secure its postponement.

It is this intervention process, they show, which carries the responsibility for prolongation of the licensing period and the correlated rise in capital costs:

"The American administrative and judicial processes afford .... critics ample opportunity to impede the rate of reactor commercialisation. The principal consequence has been dramatic cost increases. The extreme critics of nuclear power have been at least partially successful in their efforts to force a downward re-evaluation of the social value of reactor technology.

".... The issue here is not merely technical or economical, but is inherently political: Present trends in nuclear reactor costs can be interpreted as the economic result of a fundamental debate on nuclear power within the US community. Beyond its economic effects, the real issue of this debate is the social acceptability of nuclear power .... "

(It should perhaps be recalled that critics of nuclear power are not free to hold up construction at will; they must show that the particular project fails to satisfy environmental requirements, existing radiation-release standards, AEC regulations .... And it is precisely this kind of deficiency that they have been able to establish, time and again.)

Perhaps the second most ominous trend for nuclear-power competitiveness, is that of declining capacity factor (efficiency) as plants grow older. A detailed study of the reasons for this decline is still in progress, but some contributing factors are already apparent, which are associated with the radioactive dangers in a nuclear plant and the public consciousness of them. For instance, the discovery in September 1974 of cracks in the cooling pipes of a US reactor resulted in the shutting down (for inspection) of all reactors of the same type; this would hardly have been done in the case of conventional power stations. Nor would it have been done, in all probability, if the public were less inclined to associate danger with the word "nuclear".

Unprecedented maintenance difficulties can arise in nuclear reactors; the simple welding of a crack becomes a large-scale operation in which hundreds of workers have to be deployed, when the crack occurs in a region of such high radioactivity that each worker can remain there for no longer than a few minutes .... Here again, the long campaign which forced the AEC to tighten up its radiation standards, and the heightened public awareness which resulted, should not be overlooked as a relevant factor.

We see, then, that the Energy Company has not got the field to itself; there are other political choices and actions which are significantly affecting the "bare economic facts" of nuclear power production. And of course, their effect on the political decisions in this field is even more noticeable - as shown, for example, by the severe reduction in the Swedish nuclear program for the next decade (from fourteen reactors to two already mentioned above).

We will not go on to list the successes of the anti-nuclear campaign in such other countries as Japan; the above is enough to show that significant effects can be achieved. This is all the more remarkable, being given that most of the radical left, in most of these struggles, have followed a policy of more-or-less benevolent abstention ....

It would be premature, however, to celebrate the end of the nuclear nightmare. For 1975 was the year of the great backlash, when the nuclear forces mobilised their counter-offensive on an international scale.

An unprecedented pro-nuclear rally was scheduled for May in Washington (37); a report of the European Nuclear Society
meeting in Paris in April stressed its propagandist aspect (38); in distant Australia, the Atomic Energy Commission ran an internal study course to justify nuclear power; Westinghouse assigned a team of propagandists in Pittsburgh to the job of ‘rebutting’ the environmentalists. (39).

In launching this propaganda offensive on a global scale, the corporations tacitly acknowledge how important to them are the nuclear programs, and how threatening is the level of mass suspicion. It is vital that the left equally appreciate these factors, participate wholeheartedly in the anti-nuclear campaign, and strengthen its connection with the overall struggle against an irrational social system.

But the left is hampered in fulfilling this role by the misleading theory (among others discussed further on) that the technological sphere evolves autonomously, independent of political action. The philosophical defects in this view have been surveyed above; after considering the particular case of the nuclear power industry, we can see how woefully it fails to explain the facts and the dynamic of this major component of capitalist planning in the decades to come.

Of course, the traditional marxist view was rarely a pure ‘technological determinism’; but it was usually content with a mere mention of the existence of ‘reciprocal interaction’, or of the ‘mutual interdependence’ of the various sectors of the social ‘totality’. The analysis itself, however, usually proceeded in a strictly one-way direction, with the political exercising little if any direct influence on the technological or economic.

It would be wrong to claim that this method has now lost all validity; but it is apparent that, in the case of nuclear power, it does not give even a good first approximation to the truth. It is hard to believe that this industry is just one special and exceptional case, when it looms so large in terms of economic significance and investment allocation. May we not rather be looking at a paradigm of capitalism’s development in this present phase, with deep lessons for the left and its program of radical reconstruction?

Marxism separates itself decisively from all varieties of technological determinism by its standpoint of class analysis - it sees the technological sphere as effectual only after mediation through the prevailing class interests. Now, the interests of the capitalist class cannot be summed up as simply the making of a fast buck. They include also the preservation of a structure of industry which will enable the capitalist system to continue; and it is precisely this continuance of the centralised, large-scale, ever-expanding economy, based on a market of ‘created demand’, which the environmental crises today put in serious doubt.

In this situation, the larger investment decisions must be seen as political decisions, in which the longer-term interests of the system take precedence over narrowly-conceived ‘economic’ interests. But as political acts they become vulnerable to the attacks of political opponents - a vulnerability which the outstandingly irrational nuclear industry knows only too well, as it nurses its wounds and lashes back ....

Thus, when intervening in struggles over the shape of the economy, the left should not be hampered by any lingering compunctions, perhaps based on alleged lessons from the ‘Luddite’ period, from the ‘utopian machine-wreckers’ (lessons which are revealed as obsolete by the facts above, and which were often historically dubious anyway). Otherwise, they will be leaving unchallenged some of the most significant political decisions of the giant corporations, carrying immediate threats to the world of today and even sowing the seeds of disaster for humanity’s whole future.

VII. The USSR and the Third World

The analysis above is focused on the advanced capitalist countries, and should not be extrapolated beyond them. The other major sectors of the world merit a separate if briefer discussion.

With a total list of only 25 plants, including those under construction or on order, the nuclear program of the USSR is insignificant in comparison to that of the USA, which is some 15 times greater in power output. Indeed, France’s alone outstrips the Soviet’s in capacity (by about 50 per cent). (41)

This lesser level of development is not to be explained by an initial technological lag - the first Soviet nuclear station opened in 1958, ahead of every other country in the world save one (Britain).
Nor does it stem from any ideological aversion to nuclear power. Official Soviet doctrine sees no problem in the inherent centralised nature of nuclear power; no problem in the superhuman standards demanded for safe operation in the long term; no problem in the disposal of radioactive wastes ....

Indeed, the absence of genuine public discussion on the issues involved in nuclear power has allowed the Soviet nuclear industry to "solve" its disposal problems with a breathtaking lightmindedness: high-level radioactive wastes are simply pumped under pressure into deep permeable zones. Thus they are irretrievable; and moreover, in insecure liquid form; and (because of the high pressure of the injection), a threat to the stability of the whole region; disposal methods with these objectionable features would never be permitted in the USA or Europe. (42)

In explaining the Soviet tardiness in nuclear development, one cannot overlook the abundance of its coal, oil and hydropower resources. But the absence of private ownership also seems relevant here, saving the USSR from some of the more spectacularly irrational features of capitalism's technological policies. At least, its power supply will not be shaped by the imperial adventures of an Energy Company ....

The situation of nuclear power in the Third World is of direct relevance to the controversy in the industrially advanced capitalist countries. For defenders of nuclear power there often rest their case on the needs of Third World countries; short of coal, faced with rising oil prices, and yet starved of energy for their economic take-off, their only hope, allegedly, is the power of the atom ....

This argument is either cynical or simply ignorant. A United Nations analysis has revealed the true situation, referring first to the Third World's -

".... very poor infrastructure of technology and non-availability of trained manpower to handle the reactors and other nuclear plants. The probability of nuclear accidents and consequently of dangers to human environment are bound to be far greater in these countries. Further it is doubtful whether those countries can afford to spend an additional $3-4 billion towards the foreign exchange cost of nuclear facilities during the next 25 years which will be the years of financial stress in these countries arising from pressure of population and scarcity of food. Moreover, the small size of the national electric power grids can integrate only small nuclear power plants which are at present not being manufactured ...." (43)

This last point is at present vital: the leading corporations are simply not interested in building reactors small enough to fit Third World needs. And they appear to remain adamant despite pleas by nuclear protagonists in the specialist literature, and even by leading figures at the September 1974 conference of the International Atomic Energy Authority. (44)

Evidently, they prefer to fight one battle at a time. Once the developed "heartland" has been conquered for nuclear power, it may be time to think of the outskirts.

The people of the Third World have no interest in speeding up the process of their "nuclearisation": the UN comments above show this clearly enough. Financially, the higher capital cost of nuclear plants would deepen their dependence on the imperialist countries, who are skilled in exacting a political price for "development loans". Technologically, an important part of their industry would be in the hands of metropolitan experts for several decades. Economically, even a medium-sized plant would usually constitute, by itself, a high degree of concentration of power supply; and favor a centralisation of industry and a grandiosity of construction squarely opposed to the real needs of the bulk of the population. (When the majority of the population have no access to a power point, the arrival of a nuclear plant can hardly do otherwise than distort the economy further. What benefits have flowed through to the mass of people in those underdeveloped countries already boasting nuclear stations - Pakistan, India, Spain?)

VIII. The Role of the Left

In the campaign against nuclear power - as in most of the campaigns on environmental issues - it has been exceptional to find the political vanguards actually in the van. Those with a pro-Moscow orientation have usually endorsed nuclear power as whole-heartedly and irresponsibly as the Soviet bureaucracy
itself. Others have remained on the sidelines, or grudgingly joined in at the rear, because of ideological suspicions about the movement's purity in general, and its compatibility with their program in particular.

In its most extreme form, this suspicion leads to a dismissal of the anti-nuclear struggle - indeed of environmentalist issues in general - as a trendy middle-class phenomenon that does not interest the working class, and hence is no concern of the true revolutionary, who will concentrate on the real issues: those at the point of production and in the realm of state power.

Such a class characterisation of the environmentalist movement has greater difficulty reconciling itself with the facts now, than it might have had a few years ago; a weakness more serious still, is the implied judgment of an issue, not on its merits as a valid transitional demand, but on its present level of working class penetration.

It might be worth pointing out how neatly this attitude reverses the approach to social problems that was typical of Karl Marx. Absorbed above all else by humanity's need for the overthrow of capitalism, Marx had an eagle eye - whether as journalist or theoretician - for movements which contained the seed of revolution. Seeing the revolutionary potential of the working class, he thereafter focused his theoretical and practical activity on the needs and development of the working class movement.

The attitude we are examining turns this upside down. An attachment to the role of the working class - or rather, to a particular selection from Marx's writings about it in his day - serves as a reason for ignoring what was Marx's first concern: evidence of revolutionary potential in any movements or strata in the contemporary world. If such schools of thought turn a blind eye to the environmental movement, their vision is not much keener
when it comes to the liberation movements of women, blacks or gays. Eventually, after the passage of time, some Galileo may be able to persuade them to look through his telescope. But they will need first to be convinced that the sights they will see can somehow (perhaps tortuously) be reconciled with the true reality - which for them (as it never was for Marx) is constituted by their doctrine.

To appreciate the damage inherent in such an attitude, it is only necessary to consider its effect on a talented and perceptive analyst such as Hans-Magnus Enzensberger.

In his article "A Critique of Political Ecology" (40) Enzensberger dissects and exposes some of the best-publicised analyses of the ecological crises, from such spokesmen as Ehrlich - characterised by political puerility when they are not blatantly pro-imperialist in their recommendations. These comments alone give the article a high value. A fair exposition of its merits should not, indeed, stop with that comment; but it is cited here not to give a balanced appreciation, but precisely to examine a serious defect it contains.

For Enzensberger fails on the most important question of all: what should we do about it?

"The Left .... functions chiefly as an instrument of clarification, as a tribunal which attempts to dispel the innumerable mystifications which dominate ecological thinking ...." Thus Enzensberger: and we could expect a blast to follow, pointing out just how sectarian and elitist (and ineffective) it is, to observe a real movement and simply stand to one side and clarify it. Would it be valid for the Left, to see its relation to the trade union movement as that of an instructor in the art of ideologically correct thinking?

But no such blast is delivered. In the quotation above, it might be thought that the word "chiefly" gives him an escape route; but it has no significance, since he does not describe any other role for the Left - and nor does he express his disagreement with the sectarian role he has described.

But perhaps he sees no revolutionary potential in the ecological movement that would justify the Left going beyond the distribution of "clarifying" analyses and actually participating in it? Perhaps it is all just trendy stuff, with no possibility of involving broad masses?

No, this is not his opinion. His analysis of the crises is far from implying this naive dismissive view, and his perspective of their possible development rules it out entirely. He actually canvasses the possibility of "ecological rebellions" and of "uncontrollable riots"! A disconcerting picture emerges: there are the major cities of the capitalist world racked by rebellions and riots as the crises deepen, and standing apart on the sidelines are the theoretically advanced Left, busily clarifying, clarifying ....

One cannot help believing, as one reads the article, that Enzensberger knows better, that he would like to say what he carefully never does say, that the Left has a duty to participate in these movements, and to do any clarifying from within. Why, then, does he so conspicuously refrain from saying it?

Perhaps because of a political environment dominated by the naive dismissive view sketched above, and the consequent fear of being labelled a "revisionist". Indeed, his article abounds with evasive formulations that could betoken such a fear.

"It is after all easy to understand that the working class cares little about general environmental problems ...." Yes, indeed; and now that we have understood it, what do we say about it? Is it right or wrong - progressive, like their lack of interest on phony "participation" schemes, or backward, like male workers' lack of interest in women's liberation? Enzensberger is silent.

"In these circumstances it is not surprising that the European Left holds aloof from the ecological movement .... " Very true - we record our lack of surprise; and now, is the Left right or wrong in doing this? Again, a deafening silence.

At one point he squares his shoulders and bravely asserts, straight out: "By no means all ecological movements based on private initiative put themselves at the service of the interests of capital with such servility (as those dominated by monopoly - A.R.). That is demonstrated by the fact that their emergence has often led to confrontations with the police".

Now, surely now he will come right out and say what the Left should do about these movements at least! But no - the denouncers of revisionism are always on the prowl, and with his very next sentence he saves himself just in
time: “The danger of being used is, however, always present.”

(Should the women workers of Petrograd really have taken to the streets on International Women’s Day in February 1917? After all, there was always the danger of being “used” by bourgeois feminism - even if in fact what resulted was the Russian Revolution.)

Uneasily brooding on the “danger”, he falls back in the sentence after next on a safe and familiar remedy for all political ills: “A long process of clarification will be necessary .... ” And we are once more home safe, back in the sheltered world of non-participatory analysis.

By confining itself to the study and to a role of instruction from afar, the left will indeed avoid the risk of being ‘used’ - just as an army is in no danger of being tricked and outmanoeuvred if it keeps clear of the battlefield. But, specialising from environmental issues in general to the nuclear question in particular, it must be asked whether the ground should really be surrendered to the enemy so easily.

The historical import of the nuclear power program derives from the current plight of modern capitalism: based firmly on consumerist values and concessions, it sees the development of that consumerism heading inexorably towards the destruction of the environment. The coming exhaustion of oil reserves is one harbinger of the crisis, and has promoted a reckless acceleration of the nuclear programs, in an attempt to censure, at whatever cost, that consumerist capitalism will have available the centralised sources of power it needs.

The struggle over nuclear power thus poses questions about the very shape of society itself - as any intervention in this struggle quickly reveals. For it is impossible to adopt a purely negative stance, attacking nuclear power by proposing no alternative energy policy. Many of the reformist critics understand this well, and offer programs which envisage the attainment of social energy goals without the use of nuclear power, but which usually involve sizeable reductions in energy consumption by various methods of conservation.

But such a conservation policy would represent an extraordinary historical ‘turn’ by a consumerist capitalist society, wedded as it is to continual expansion; a society, moreover, in which the relative weight of the ‘Energy Company’ grows day by day. Can such a society significantly restrict its energy consumption over a whole business cycle - for example, in a time of recession, will it throttle down on vitally needed expansion plans, simply because they are energy-expensive? And what would be the social and political reverberations of such energy-conserving policies as were adopted?

These important questions usually get scant consideration from moderate advocates of conservation. In contrast, those already convinced of the need for radical social change are less inhibited, and will not play down the severe strains which an energy crisis imples for capitalism today. But their own social project will not escape a similar critique, unless it has at least the basic outline of a solution to the problem - unless it can point to the satisfactions it envisages as replacing the dubious rewards of the commodity culture.

One project which sketches such a solution is that of self-managed socialism. The substitution of the principle of self-management for the present dominant principle of hierarchy, in every walk of life - a substitution possible only if the power of the capitalist is overthrown, and that of the bureaucrat severely limited at least - implies, on the level of the individual, the possibility of changing the values one lives by. If new channels of self-expression and autonomous action can be opened up in every social sphere, beginning with the factory floor, it will not be so crushing a catastrophe if beer must be bought in bottles rather than in energy-expensive aluminium cans.

This point has been made in greater detail elsewhere (32). It illustrates how the campaign against nuclear power must be finally unconvincing, unless it is prepared to delineate an alternative social path that does not lead to a poisoned world. A receptive atmosphere for such an exposition is created by the striking irrationality of the nuclear program which must condemn by association the system that gives rise to it, and encourage the consideration of rational alternatives.
FOOTNOTES

3 Nuclear News, April 1975, p. 80.
5 The best source here is “Non-nuclear Futures”, by Amory B. Levins and John H. Price (Ballinger Publishing Company, Cambridge Mass.), October 1975, which contains an encyclopaedic list of references.
7 Investir, March 24, 1975. Quoted in Basquet, Le Nouvel Observateur, April 21, 1975, p. 46.
8 For the latter two incidents, see respectively Environment, 16 October 1974, p. 21, and Time, September 22, 1975 (“Fromme: There is a Gun Pointed”).
11 Ibid, p.20.
12 New Scientist, March 27, 1975, p. 799.
13 A 1000 Megawatt (electrical) reactor requires about 4,500 tons of uranium over its lifetime. Thus a world total of 2,000 reactors (one of the lower estimates) by 2000 A.D. would need some 9 million tons; but the estimated world inventory extractable at less than $39 a kilogram is not much over 4 million tons. (See e.g. World Uranium Resources,” by L.G. Poole, Nuclear Engineering International, February 1975.)
14 See the discussion in Speth et al (ref. 10 above).
15 See e.g. “The Failsafe Risk”, Kurt H. Hohenemser.
17 “Alternatives au nucleaire”, Presses universitaires de Grenoble, February 1975. The figure cited follows from Annexe 3, p. 89, on utilising the findings on capital cost from ref. 18 below, and those on capacity factor from ref. 19 below.
21 Nuclear Engineering International, February 1975, p. 73.
22 Le Nouvel Observateur, April 28, 1975, p. 86.
24 New Scientist, August 17, 1972, p. 334.
29 New Scientist, June 26, 1975, p. 710.
30 “A Poor Buy” (ref. 15 above), p. 12.
37 Nuclear Engineering International, April 1975, p. 301.
44 Nuclear Engineering International, “Market considerations of medium/small nuclear power reactors” by J. Greason (p. 37), and “The case for developing small power reactors,” by G. Webb (p. 39), both January 1974; “IAEA General Conference asks why no small reactors for developing countries?”
Guerrilla War in East Timor

by DENIS FRENEY

On May 20, 1974 the Timorese Social Democratic Association (ASDT) was founded in East Timor. Four months later, the ASDT changed its name to FRETILIN - the Revolutionary Front of Independent East Timor. May 20, 1975 was celebrated in East Timor as the "Day of Revolution". A huge rally of over 20,000 in the capital, Dili, concluded the celebrations.

On May 20 this year, the Day of Revolution was celebrated throughout East Timor, arms in hand, in a ferocious guerrilla war against the Indonesian invaders, a war that will continue until the invaders are finally forced to withdraw.

In a short two years, Fretilin has become the uncontested leader of the East Timorese people. It has mobilised the 650,000 population into a people's army, able to hold at bay over 40,000 Indonesian troops, including about half their crack units, containing them to a dozen towns and villages, posing huge problems of supply, and putting paid to any hope the Jakarta generals had of ending this war with a quick decisive victory.

In the months that followed, Fretilin launched its anti-illiteracy campaign, its People's Health Centres, and its pilot co-operatives. It combatted the cultural colonialism which had repressed Timorese culture and language. The response it received from the people was to all observers amazing. It took full advantage of the political
freedoms available after April 25 to educate the whole population in anti-colonialism and the need to end exploitation in all its forms.

But Fretilin was also continually aware of the over-riding danger of Indonesian invasion. By October 1974, the danger was already very real. In January 1975, Fretilin formed a coalition with the reactionary UDT - the representative of local vested interest. Some left sects have found this tactic adopted by Fretilin as evidence of "betrayal". But anyone who spoke to Fretilin leaders then knew very well that it was a tactic aimed at first isolating the pro-Indonesian forces, and second, at providing a climate in which they could extend their base, without the active hostility of the UDT elite who were still influential in some areas. This tactic proved so successful that it was eventually the UDT, horrified by Fretilin's rapid growth into the dominant partner in the coalition, and encouraged by the anti-communist wave in Portugal, which broke the coalition in March 1975 and embarked on preparations for its abortive coup of August 1975.

Fretilin won its mass support through its direct concern and work with the people. In small ways, they showed in practice what independence and liberation would mean. After the failure of the UDT coup, Fretilin was able to show the masses, in three invaluable months, what independence meant. If historical parallels are in order, then it could be compared with the precious months the Viet Minh ruled Vietnam immediately after World War II, before the French invasion.

After five months of full-scale invasion, which followed three months of a border incursion, the Indonesian generals face rising discontent in the army, thousands of destitute soldiers' widows and families in Java, a high cost of waging such a war (an estimated $2 million a month) at a time when the country is bankrupt, and with the perspective of a war lasting years with a high level of guerrilla action.

The further the Indonesians push into the mountains, launching major attacks along treacherous roads with tanks and heavy artillery, to take a market village, the more they find their troops isolated, difficult to supply, and surrounded by hostile guerrillas, ready to knock out any group of troops heading off the roads, into the mountains where the vast majority of the population live.

The magnitude of the military disaster threatening the Indonesians can be seen in a brief survey of this war. In mid-September, 10,000 crack Indonesian troops, including the infamous Red Berets, began an attack along the border. Their plan was to sweep along the north coast and in from the centre-west to seize the capital Dili. After three months they had taken only four small villages on the northern coast, only one of which was more than 10 kilometres from the border.

The border war has been graphically described in articles sent by Australian journalist Roger East, part of which will be reprinted in the next issue of ALR.

On November 28, after a seaborne attack on the village of Atabae, Fretilin declared the Democratic Republic of East Timor, when it became clear that the Indonesian generals were determined on a full-scale invasion. The invasion began on December 7, when 15,000 crack troops made an airborne and marine attack on Dili, and later on the second main town of Baucau. Again, the plan was rapid seizure of the two towns, and a coastal link-up. But instead, the Indonesians found themselves hemmed into the downtown city area of Dili, while their troops failed to take Baucau, only three kilometres inland, or the key international airport eight kilometres from the town. It was necessary for the Indonesians to bring in a further 10,000 troops to break the grip Fretilin forces had around Dili, and to take Baucau and its airport, after the second offensive on December 25. They took the inland town of Aileu, but again found they could go no further.

The Indonesians sent a further 10,000 troops into East Timor to launch an offensive in early February in a desperate attempt to seize the airstrip and ports in Fretilin hands. In March and April, the total number of Indonesian troops was brought to over 40,000 in an effort to make a final offensive in mid-April to capture a few more key towns.

All these offensives resulted in the capture of a few more towns and villages, on the main roads. But it remains a fact that over 70 per cent of the country still remains firmly in East Timorese hands. Fretilin has adopted the classical guerrilla tactic of no longer fighting positional warfare (as it did between December 7 and 25) but of guerrilla attacks,
and on a substantial scale. Besides the small-scale attacks that make it impossible, for instance, for a vehicle to go from Dili to the city's airport ten kilometres away without a military escort, Fretilin forces mount substantial attacks on Indonesian garrisons or units of less than a hundred men, with great success both in casualties inflicted and in weapons captured. The Indonesians are thus finding great difficulty in garrisoning the main roads, making transport of supplies inland very difficult, without mounting a major military operation to get the supply trucks through. They have to rely on helicopters to do the job.

As a result, according to latest Fretilin reports, Indonesian troops are running short of food, even starving, and are driven to leave the sanctuary of the towns on the main roads, to hunt for food in the surrounding mountains, where they present easy targets for the waiting guerrillas. Morale is therefore very low, which with the high casualty rate (around 800 killed a month) has forced the Jakarta generals to begin replacing crack Javanese troops with ill-trained troops from other islands.

But perhaps the most significant disaster for the Indonesians has been their total failure to build a puppet army which they can use to do the fighting. It has been axiomatic among imperialist theorists on guerrilla war that such a war cannot be won militarily, but must be won politically, by building a substantial neo-colonial force with some real base in the population. "Divide and rule" is an old colonial axiom that has been applied with great success in guerrilla wars.

The Indonesians have totally neglected this aspect of any guerrilla war. When they invaded Dili on December 7, they blindly slaughtered all Timorese they found. When the UDT and APODETI prisoners that had been left behind by Fretilin came forward to welcome their Indonesian "liberators" they were machine-gunned down. The "neutral" Chinese population of Dili was similarly slaughtered, their shops pillaged. (With one exception: the wealthiest Chinese businessman in East Timor was able to offer the Indonesian commander a sufficiently high bribe in time to stop the sacking of his shop.)

The Japanese treated the reactionary UDT and APODETI leaders with contempt, offering them not even marginal power, and no great privileges. Money is short in Jakarta these days, and East Timor is seen as a source of plunder, rather than a place where bribes can be lavished on the local elite.

As a result, the Indonesians have been forced to disarm their few hundred puppet troops because they could not trust them. And they can rely only on the puppet "Governor" Arnaldo Araujo, with the remainder of the puppet government as unwilling prisoners, because their families are held as hostages.

The Indonesians have responded to the heroic resistance of the East Timorese by establishing concentration camps, and by systematic plunder of the country. That has not won them any "hearts and minds". Brutal intimidation does not work when there is a well-organised guerrilla operating close by and inflicting heavy casualties on the enemy - on the contrary, it only strengthens resistance.

The Indonesian army is not the American army in Vietnam. It lacks the massive resources poured by Washington into that war. The Indonesians have military resources vastly superior to Fretilin, but in comparison with the Americans in Vietnam, these resources are pitiful. If Fretilin had a sufficient quantity of heavy artillery, it could destroy the Indonesian forces relatively quickly. Instead, it has only the large supply of NATO-standard light weaponry left by the Portuguese when they fled in August.

In classic guerrilla style, they are now concentrating on capturing weapons, including heavy artillery, from the Indonesians.

The generals are aware of their weaknesses. They have attempted to make the war they are waging not only a "secret war" to the outside world, but also within their own country. It is significant that there has been very little attempt to whip up chauvinist patriotism, to glorify the soldiers dying there or to win popular support. Instead, the dead have been buried secretly, without military honors, the wounded are refused visits from their families, and no Indonesian journalists are permanently stationed in East Timor. The only news quoted is from the official news agency, Antara, or from ministerial sources.

The generals' attempt to hide the reality of the East Timor war however is failing. There are too many destitute families, too many wounded in the hospitals and too many new
troops leaving for the front for the press blackout to be effective.

The war coincides with an enormous economic and financial crisis for Indonesia, which concludes ten years of incredible corruption, venality and mismanagement among the generals who seized power in 1965. Moreover, a disastrous rice harvest means that in the coming months, the country will have to import 2 million tons of rice to avoid famine. Any further rise in the price of rice could spark off mass discontent rivaling the demonstrations in January 1974.

Moreover, the Jakarta generals face rising discontent among the national minorities in widely scattered parts of the country. In West Irian, in an indicative clash, an Indonesian offensive in early January failed to crush the poorly armed guerrillas in the impenetrable hideouts. Elsewhere, the large-scale military involvement in East Timor must present a tempting perspective for uprisings or guerrilla warfare to other separatist movements that have long laid dormant. Many such movements have been subsidised by reactionary forces at a relatively low level over many years, as an insurance against any future revolutionary or anti-imperialist regime coming to power in Indonesia itself. But any new upsurge of guerrilla activity, requiring the use of substantial forces to combat it, would be the last straw for the Indonesian army.

Only a massive infusion of American military and financial aid could give the generals hope of continuing a long, expensive war in East Timor. American aid is definitely flowing in, specifically for the war. But it is aid which is undercover, probably through the CIA, to finance the war at best at its present level. Massive aid, which would be needed to step up the war, would have to go through congressional channels and become open. That may happen, but would be another stage in the war itself, and the worldwide reaction to it. But even such a massive infusion of aid, plus advisers, would be too late to crush a guerrilla war which is just getting into full swing.

Finally, there is the isolation of Indonesia on the world stage. In the Third World, as will be seen this month at the preparatory meeting of the Non-Aligned Heads of States Conference in Colombo in August, Indonesia will face strong censure from that conference, and even condemnation in strongest terms from African nations. But it is in the Arab and Islamic world that Indonesia has suffered its most keenly felt rebuff. The largest Indonesian Embassy overseas is in Algeria, yet Algeria has emerged as one of Fretilin’s strongest supporters.

Fretilin has received strong support also from both Soviet and Chinese governments, from Vietnam and Cuba, and from all governments that claim to be progressive.

Suharto has always relied on stability at home and a low-key image abroad, avoiding too openly a pro-imperialist stance or giving cause for outrage overseas. All that has changed: the regime at home is shaken by a dual crisis, economically and militarily, while abroad it is now subject to strong attack from powerful or influential nations.

Could East Timor expect to receive the same help that other liberation movements have, from the socialist countries? Although it has sufficient light weapons for a lengthy guerrilla war, and can count on capturing enough to replace what they lose or use, a relatively small supply of heavy artillery, ground-to-air missiles and anti-tank weapons could dramatically shorten the war. The geographical and logistic difficulties of such supplies reaching Fretilin are great. But it is undoubtedly a constant nightmare for the generals that such supplies will eventually reach the liberation forces and bring a major power directly or indirectly into the conflict. While that does not seem likely at present, the continuing resistance of Fretilin and the decay becoming increasingly evident in Jakarta, along with a rapidly growing worldwide movement of solidarity and the isolation of Suharto, could conceivably make such aid reaching Fretilin more likely in the future.

Indonesia is a tinder-box in which the ruling clique faces increasingly difficult problems, which must tempt rival generals and liberation movements throughout the area.

May 20, 1977 will present a vastly different picture not only in East Timor, but throughout the whole of Indonesia. The East Timor crisis will by then be no longer a major issue only in Australia and Indonesia itself, but one of worldwide dimensions.

For the imperialists and their friends learn nothing from history.
The Jackson Report

by PIERINA PIRISI

The Jackson Report on “Policies of Development of Manufacturing Industry” published late last year, is compulsory (if somewhat dry) reading for anyone interested in social change in Australia. It is compulsory reading because it is a mirror of the present situation of social classes in Australia, of their relative weight, and of their power or powerlessness.

The great absent centre in the debate on manufacturing industry was, and is, the organised working class - notwithstanding Bob Hawke’s participation on the Jackson Committee and the submissions of some unions to it. These submissions were, in too many cases, strikingly similar to those of the employers, clearly indicating:

1. the absence of debate, at workplace level, among the workers; and
2. the absence of grassroots organisation of the workers on the job.

Some data on manufacturing industry puts this debate into perspective: “Manufacturing is the worklife of a quarter of our workforce. It occupies three-quarters of all the people who produce goods. (Introduction); “The workforce is multi-racial and multi-cultural. Four out of ten were born outside Australia. They most frequently do the dirtiest, least skilled, menial tasks; tasks for which, despite unemployment, young native-born Australians cannot be found.

“Women are a quarter of the workforce and in some sectors eight out of ten. Little attention is paid to their special needs, particularly of the two-thirds who are married. The married migrant woman in industry is trebly disadvantaged.” (Ch. 1.)

30,389 “enterprise groups” are engaged in manufacturing, but only 200 of them are responsible for 50 per cent of manufacturing value added: of these 200, 87 are foreign-controlled, 68 of them with more than 50 per cent of their shares held by foreign shareholders. Foreign control tends to be particularly significant in capital-intensive and high-technology industries, particularly non-ferrous metals, petroleum refining, chemicals and motor vehicles.

Assistance to manufacturers by federal and state governments has always been substantial. Apart from tariff and trade measures (import quotas, local content schemes, trade agreements, and so on), the main forms of assistance are direct budget outlays and taxation concessions: direct government outlays and taxation revenue foregone amounted to $226.8 million in 1974-75 for the manufacturing industry.

According to the Committee, this was a small amount compared with the taxation revenue which accrues to the government from manufacturing industry. This is a highly dubious comparison, since it is obvious that the resources to meet overall social needs must come from the productive sectors of the economy. The relevant questions to ask about government assistance are, rather: what economic direction, what investment policy does it express? Is it necessary to spend government money in order to achieve these objectives? However, the problem goes much deeper: it is a problem of power, and it encompasses an economic debate wider than the scope of this article.

From this very quick and schematic sketch, it is obvious, from the capitalists’ own point of
view, that Australian manufacturing industry needs restructuring: it needs to be more efficient, its capital needs to be less ancient, it needs to develop economies of scale in order to be competitive on foreign markets.

Additionally, it needs to adapt to the fact that the weight of public opinion in Australia today is against mass immigration. Even the Fraser government, although it represents the most conservative section of the ruling class, is unlikely to start mass immigration again. But, without immigrants, who is going to do the dirty work? Australians, by and large, are not likely to accept 19th century working conditions. Australian capital, therefore, according to its more enlightened section (which is what the Jackson Report represents) has to adapt to change. It also has to anticipate change in order to smooth its path, avoiding conflict and hence any questioning of the present economic and social order.

There are two attitudes within the industrial capitalist class. One is exemplified by the thousands of small businessmen who do not see any further than their small business. They think they can, and have the right to, continue as they are now, and with luck (and good government) become larger and larger. When a crisis comes, they have nothing left to blame but God or the government.

On the other hand, there are big firms with better-educated managers, who have studied "industrial relations" and who have wider contacts with government people and with academics. They know that capitalism is not a God-given system; they know that capitalism, its values, its economic and social foundations are increasingly under question in the whole capitalist world and that a wind of change, if rather weak, is also blowing in Australia. They recognise that, in order to survive, they have to adapt to change. Even more, they have to anticipate it in order to clear the path and, in the process, accommodate those demands which do not threaten their present or future survival.

This division among the industrial capitalists is reflected in the suggestions the Report makes on workers' participation. It is clear that the Committee favors some form of workers' participation at factory level in order to minimise the heightened conflict it foresees.

However, taking into account the large number of "backward" firms, and hence the difficulty of devising a general rule, the Committee suggests that every firm should look at its own ways of promoting workers' participation at shop floor level.

At industry level, however, the possibility of small firms not taking part can always be counteracted by the participation of large "progressive" firms which, in any case, dominate the market. Therefore, there is the proposition to form Industry Councils of unions, employers and government. These councils would secure agreement and commitment to change. The task may involve consideration of raising industry efficiency; of reducing conflict within the industry; of promoting rationalisations and mergers; of altering the size of firms; of improving quality of products; of altering the scale of operations; of raising the quality of the work life of employees; and whatever else may need changing. Participation in the work of a council by a government, firm, or union, would involve sharing of power, but the power of the council to effect desirable change would be greater than the sum of the power brought to it by its members. "..... Representation would be at the level of chief executives of firms, presidents of trade unions and high level rather than middle level government representatives." (Report, pp. 220-21).

It seems to be assumed that the unions have the same, or similar, power as do firms and governments. The firms, in their aggregate, decide what is to be produced and how it is to be produced; they decide when to employ and when to dismiss workers; they decide what prices to charge for their products; they decide income distribution and, by and large, working conditions. These are basic powers in any society. Governments may control the worst excesses of such private decision-making, but do so in the interests of preserving the social and economic structure which locates the basic decision-making in private hands.

The unions, on the other hand, can at best try to cut some slice of the power cake for the workers. They have not been successful in Australia in this regard. They have mostly chased after wages and conditions (with notable exceptions such as the NSW BLF which have not been allowed to survive for long). They have done this only to find that when they got better wages and conditions, the prices also went up. The relative distribution of real income remained intact.
and what is more, unions were blamed for the increases in prices and for inflation. It is obvious that the proposition to establish Industry Councils is aimed to further reduce the limited room for manoeuvre which the union movement now has and at making the workers pay for the restructuring of manufacturing industry.

The Report sees the need for a manufacturing industry where fewer and larger firms operate in order to develop economies of scale and hence be competitive in the international market; investment in efficient, export-oriented activities, particularly if they use Australian skills and talents, should be encouraged, the reverse being discouraged. Various incentives, particularly bounties and taxation concessions, should operate in order to encourage industry to develop certain characteristics which are considered desirable: a better physical environment in the workplaces, the employment of women, investment in research and development, better equipment, etc.

Let's now put the whole picture together: the Industry Councils on one side would seek to convince the unions that strikes are disruptive and not in the interests of social cohesiveness (we should all work together for the common good, avoid conflict, etc.). On the other hand, the government would pump money into industry in order to encourage its development - money which has to come from somewhere, and since it cannot come from the firms because it would affect their profitability (hence their ability to invest, hence the employment situation), it has to come from the workers: less wages, less social services; but, to compensate, a restructured industry.

So much for employing class strategy. What about the working class? The Report must not be seen from just an economic point of view. Few would disagree that it is important to have efficient and competitive firms, controlled by Australians, using equipment with high technological content. But not everyone would agree that these are the only elements that should be taken into consideration. The whole area of priorities based on social needs is disregarded. For instance: is it better to develop a highly efficient and competitive car manufacturing plant for the export market rather than develop a plant for the production of public transport equipment?

But as well there is the question of the method of achieving the priorities, once they are set. Here the Report clearly shows its class position. From the working class point of view, the priorities and methods of achieving them can only be developed by the working class itself. To do this, the working class must have the opportunity to organise independently, must achieve the right to speak without fear of being penalised, as it is today.

It is rather ironic that it should be the ruling class, or even its enlightened section, which urges the unions to develop more democratic structures. For the basic right even to meet on the job, and to organise independently, is denied in most places. Workers, and particularly migrant workers, do not want such paternalistic tears about union democracy. They know what they want better than anyone. They must have the right to organise at job level and speak out without any fear of being penalised. Nor should the bosses worry about language problems and about workers calling other workers "wogs": they have lived and become fat for too long on the divisions within the working class and it is time that they let the workers speak to each other without any interference. When the workers can organise independently on the jobs, the bosses will be forced to provide a decent working environment, and to restructure, with the government's generous helping hand, and according to what they, not some union officials, want.

There is food for thought in the Report for the unions and the workers' movement generally. No strong workers' movement can be built and no real social change can be achieved if the working class is not in the forefront of the struggle, if it is not strong and united, if it is not well-organised, particularly at the workplace, where the main source of power is. No idea, no demand and no movement, however exciting they may be, can change the balance of strength between the classes one iota, unless the working class - not an idealised working class, but the actual working men and women inside the factories - is in the forefront of the struggle for that particular idea, demand or movement.

The Report is a warning for the whole of the working class movement: build a strong, united, well-organised working class movement or be further weakened, absorbed, destroyed.
INTERNATIONAL NOTES

Early in May, 1975, the United States weekly The Guardian published a major and critical statement on China's foreign policy by Australian journalist, Wilfred Burchett. The article is reprinted here. Burchett is primarily concerned with China's response to Angola. The fact that he is a known friend of China and has recently spent much time covering events inside Angola adds weight to his views.

About the same time that Burchett's article was first published the Overseas Press Club of New York awarded its prize for the best book on foreign affairs to Phillip Knightly, another Australian. The book has a lengthy title - "The First Casualty, The War Correspondent as Hero, Propagandist and Myth Maker from the Crimea to Vietnam". As this indicates, the author examines the role of the war correspondent in the last 120 years and concludes that the "facts" most people read, and from which they understand history, are dubious indeed.

There are honorable exceptions among war correspondents and Knightly names as one of these Wilfred Burchett. Burchett was the first correspondent to describe the atomic bombing of Hiroshima. His report in the Daily Express of September 5, 1945 gave the first graphic descriptions of atomic destruction and made the first references to what is now known as radiation sickness. Not surprisingly, Burchett's story was immediately denied by various United States authorities and he was accused of falling victim to Japanese propaganda.

In later years he was not only accused of falling victim to Chinese, Russian, Korean and Vietnamese propaganda, but various inspired stories have charged him with being an "agent" of these communist governments. Burchett has been subjected to considerable vilification but Knightly's book adds one more piece of hard evidence that his reports from Korea and Vietnam were generally accurate and that his analysis has been borne out by history. Few war correspondents receive this judgment from Knightly.

This does not mean that Burchett's opinions on China's present foreign policy are correct but they should be assessed as coming from a friend of China and raising some very pertinent questions.

China's current foreign policy has been a subject of broad discussion throughout the world ever since the Angola crisis.

As a person who has written about and defended the Chinese revolution since its inception, I would like to make a few preliminary comments about the Peking government's present international line.

My starting point is that China has made and does make errors in its foreign policy. No government or policy is capable of being entirely correct all the time.

For instance, one of the severe casualties in the cultural revolution of the late 1960s was Chinese foreign policy. The career - and perhaps even the life - of Foreign Minister Chen Yi was saved by the vigorous defense waged on his behalf by the late Premier Chou En-lai. For a brief period, even Chou was virtually deposed and chaos resulted.

This was the ultra-"left" period now criticised by the Chinese themselves as "making revolution by breaking diplomatic relations" - and it contributed towards China's isolation. At the same time, the Democratic Republic of Vietnam was attacked for even considering peace negotiations with the US. President Ho Chi Minh was reviled at certain public meetings in China for "selling out the south". Some Vietnamese diplomats were actually physically attacked. Fraternal relations with the Democratic People's Republic of Korea and friendly relations with neighbouring, neutral Cambodia were seriously jeopardized during the short reign of these ultra-"leftists".

The proponents of this erroneous foreign line were afterwards severely punished - and after a long series of personal initiatives by Premier Chou, the damage was repaired.

One of the merits of this period of ultra-"left" domination of foreign policy was that the mistakes were quickly perceived, admitted and corrected. Today, in my view, China is making some serious mistakes and getting deeper and deeper into the mire by trying to defend them.

Many friends of China have been troubled

- M.R.
by what has appeared to them to be Peking's abstention from the international diplomatic and economic boycott of the fascist Pinochet regime in Chile.

This has now been followed by Angola, where China made an error of extreme dimensions. Lack of judgment in favoring the FNLA of Holden Roberto, long after it was recognised (in Peking as elsewhere) that Roberto was a creature of the CIA, has now been compounded by false versions as to what is happening in Angola today. The result is another very serious decline in China's prestige in the African sector of the third world and a general lack of confidence in China's version of what goes on in various parts of the world.

There is no evidence to suggest linking these errors to the current ideological struggles in China, but since one of the consequences of the present internal situation has been to set up a commission at the Communist Party central committee level to investigate rightest errors, many of China's closest supporters would breathe a sigh of relief if this included a review of such errors in the field of foreign policy.

For instance, making aid to national liberation movements or friendship to certain governments conditional on denunciation of "Soviet social-imperialism" is to run the risk of recruiting the opportunist riff-raff of the world. To make such demands would have been correctly qualified by the Chinese leadership a few years ago as inadmissible interference in the internal affairs of a country or organisation. But that such criteria have been offered is an open secret. The Chinese may well argue that their adversaries have done the same for years - but a policy of "only those who denounce our enemies are our friends" is a very poor basis for foreign policy.

Errors, otherwise inexplicable, have occurred as a result. In the summer of 1971, for instance, a top-level delegation of Angola's MPLA was very well received in Peking. It included MPLA president Agostinho Neto and secretary-general Lucio Lara. They explained the situation inside their country and the role of the three independence movements.

Premier Chou and some of his top aides listened attentively as it was explained that UNITA was little more than a Portuguese puppet organization; that the FNLA was a puppet of the CIA. Regarding UNITA, Chou En-lai showed some reserve, but told the MPLA leaders that if they could document their charges appropriate action would be taken. As for the FNLA, Chou En-lai stated: "We know Holden Roberto is a self-declared agent of US imperialism.

The MPLA leaders asked for some military aid, including transport. Military aid was immediately accorded, but - with China's commitment to Indochina - they were advised to seek transport elsewhere. On the last day of their visit, however, word came from Chou En-lai that some transport would also be included in the military aid. Everything seemed fine. But then came increased aid, including military instructors, for Holden Roberto's FNLA.

Absolute proof that UNITA was a tool of Portuguese neo-colonialism was sent to Peking shortly after the anti-fascist coup in Portugal two years ago this April. They came from the PIDE secret police files, directly from one of the leading personalities of the Armed Forces Movement who had good reasons to know of the confidential relations between UNITA leader Jonas Savimbi and the Portuguese High Command in Angola. (Correspondence between Savimbi and top Portuguese military officers proved what the MPLA leadership knew from bitter experience - direct Portuguese-UNITA military cooperation aimed at wiping out the MPLA's armed forces.)

In May 1975, there was another top level MPLA delegation in Peking. By this time Premier Chou En-lai was already hospitalized. The discussions took place with a deputy prime minister (not Teng Hsiao-ping) and a deputy foreign minister - both of whom were present at the meeting four years earlier. They were reminded of Chou En-lai's characterisation of Holden Roberto and asked how it was possible that aid had been intensified when it was public knowledge that this aid was being used in an attempt to exterminate the MPLA. Photographic and other documentary evidence was presented of FNLA atrocities against MPLA supporters in and around Luanda since the Alvor Agreement of January 10, 1975.

There was apparently a cold response to this and a standard reply that the MPLA should abide by the Alvor Agreement, which Portugal had signed with the three movements, providing for a transitional three-party coalition government until independence on Nov. 11, 1975. Patient explanations that the
MPLA had done everything possible to insure the strict implementation of the agreement but that the FNLA-UNITA forces - at the instigation of the US - were simply bent on exterminating them, fell on deaf ears. Through the military instructors China had at Holden Roberto's Kinkuzu base in Zaire, Peking was apparently well informed as to the real role of both President Mobutu and Holden Roberto.

**FNLA AID ENDED**

China stopped aiding the FNLA in 1975 and withdrew its military instructors on the commendable grounds that the aid had been supplied to help Angolans fight Portuguese colonialism but that once independence had been won, no more military aid was necessary and the three movements should get together on the basis of the Alvor Agreement and stop fighting each other. This was the position taken by Chinese diplomats abroad with whom one discussed the matter. In principle it was a just and defensible position. As in Mozambique and elsewhere - notably in Vietnam, Laos and Cambodia - Chinese aid had been given to help the peoples of Angola, Mozambique and Indochina in their anti-imperialist, national liberation struggles.

I attended the Alvor Conference and the agreement was a good one, just as was the Paris Agreement to end the war in Vietnam. But it depended on the goodwill and sincerity of all the signatories. The FNLA and UNITA supported to the hilt by the US, behaved exactly like the Thieu regime in South Vietnam and used the Alvor Agreement to step up their attempts to wipe out the MPLA and set themselves up as neo-colonialist puppets. China should have had all the necessary data and Peking's best friends at state and government level in Africa contributed to ensuring that it did have - to know that only the MPLA had a truly national, all-Angolan as well as a truly all-African and internationalist position.

China's own experience with the Kuomintang, and over the borders in Korea and the countries of Indochina, should have been sufficient for the leadership to know that agreement between patriots and traitors is impossible. One can try it, as the PRG of South Vietnam sincerely did with the Thieu regime in Saigon and as the MPLA did with the FNLA-UNITA in Angola, even if only to demonstrate to the public who is for national unity and true independence and who is against it. But such an unnatural alliance can never work for long. And the blunt truth is that Chinese arms in FNLA hands were not used against the Portuguese but against the MPLA.

One error leads to another and the Chinese version of events at the recent UN Security Council meeting called to examine the case of South African aggression against Angola is an outstanding example of this. First of all it ran counter to the truth and chronology of events as confirmed by all eyewitness accounts, plus official documentation. Secondly it put China in the unenviable position of at least partly letting racist South Africa off the hook for invading Angola by putting the principal blame on the USSR for "opening the door" to Pretoria's aggression.

Let's briefly review a factual timetable of events in Angola. First, MPLA had been fighting against Portuguese colonialism since the early 1960s. Since The Guardian has so often documented the struggle from this period until the anti-fascist coup in Portugal in 1974 there is no need to recapitulate this period. Suffice to say MPLA was recognised by virtually the entire world as the legitimate national liberation organisation in Angola and had close ties - which it still enjoys today - with the PAIGC in Guinea-Bissau, Frelimo in Mozambique and most of the world's liberation organisations and progressive countries. From the early 1960s on, MPLA received Soviet aid and help from the Cubans as well, among others.

Deeply distrustful, for good reason, of the FNLA and UNITA, MPLA agreed in good faith to at least experiment with unity proposals put forward by the Organisation of African Unity following the defeat of Portuguese fascism - leading toward the possibility of a unity government when Angola's independence was to be declared in November 1975.

**SECRET SHIPMENTS**

The ink, quite literally, was not even dry on the Alvor Agreement before the CIA began its secret shipments of arms and money to the FNLA-UNITA neocolonialists. The US government has admitted this. It is simply not true that the Soviet Union destroyed Alvor by immense shipments to one organization. The USSR did ship small quantities of materials to the MPLA as it had been doing for a decade, but the big deliveries didn't occur until quite a bit later in the year when it became
unmistakably evident the FNLA-UNITA were getting massive support from the US, Zaire and South Africa. Then:

**March 1975:** Troops of the regular Zairese army invaded Angola and established Holden Roberto in nominal power in Carmona (Uije) and other towns of northern Angola.

**August 1975:** South African troops crossed into Angola from their bases in illegally-occupied South-West Africa (Namibia), setting up bases in Cuangar and Calai.

**October 23, 1975:** Troops of the regular South African army, supported by one brigade of armored cars and one artillery brigade drive north 1000 miles before being halted by MPLA forces at the Queve river just south of Gabela.

**November 7 and 10:** Regular troops of the Zaire army, supported by Portuguese mercenaries and spearheaded by South African armored cars drive to within 15 miles of Luanda but were driven back each time - by MPLA troops.

**November 10 and 11:** The MPLA declares independence and the setting up of the People’s Republic of Angola. As an independent and sovereign state, the PRA requests Cuban and Soviet help, in driving back the South African and Zairese troops.

Even the United States has admitted that Soviet arms for the MPLA arrived after Washington was secretly supplying some $32 million worth of military supplies to the FNLA and UNITA forces. To defend the South African invasion as a reaction to Soviet-Cuban “aggression” is to turn facts upside down. And it is equally incorrect and unjust to characterize the Cuban troops - many of whom laid down their lives to prevent a South African-Zairese takeover of Angola - as “mercenaries”. It would be just as absurd to describe as “mercenaries” the Chinese People’s Volunteers in the Korean War; or the Chinese who fulfilled their international duty in helping the Vietnamese keep their supply lines open - and defended - during the Vietnam war.

It was the Chinese delegation to the 1957 Moscow meeting of world communist parties which correctly insisted on amending a passage in the draft resolution about “revolution not being for export” to insist that counterrevolution was also not for export and that it was the duty of communist parties which held state power to give every help “including that of their armed forces” to support a people which had taken to revolutionary struggle and were the object of counterrevolutionary intervention. People's China, to its credit, upheld this principle in Korea and Vietnam. Cuba, to its credit, upheld this principle of international solidarity in Angola. This is the way history will see it.

China's error in Angola stems from the nature of its struggle with the Soviet Union. It views the USSR as a fascist, capitalist imperialist power bent on world domination, at least equal to if not far worse than the US. Such an analysis can lead one into a policy-making cul-de-sac unless both regional as well as global political considerations are kept in mind and unless all the varying and often contradictory concrete conditions are objectively understood.

Peking's Angola mistake was based upon the assumption that the principal contradiction in the region was between the imperialist interests of both superpowers - with the USSR as the main danger - and to subordinate all else to preventing Moscow from gaining some kind of foothold in Angola through the MPLA. The real contradiction was between the forces of neocolonialism, backed by the US, South Africa and Zaire and the aspirations of the people of Angola - led by the MPLA and backed by virtually all the progressive governments and movements in Africa and throughout the world - for independence, liberation and social progress.

Fear of possible Soviet hegemony in southern Africa - a question I believe the African peoples are perfectly prepared to decide for themselves in their own interests - led China into the impossible position of objectively compromising its support for a liberation struggle and of jeopardizing its considerable prestige among progressive African nations. A logical corollary to seeing superpower contention as everywhere supreme or to view Moscow undialectically is to ultimately conclude that anyone who accepts Soviet aid is suspect and to insist that anything which the USSR does must automatically be condemned.

Fortunately, this criteria was not applied during the Vietnam war and the Vietnamese were able to benefit from both Chinese and Soviet aid and retain the friendship - as MPLA would very much like - of both countries.
Krushchev's

Secret Speech

by ROY and ZHORES MEDVEDEV

This short piece by the brothers Medvedev, prominent Marxist Soviet dissidents, examines the circumstances and impact of the Kruschev Secret Speech to the 20th Congress of the CPSU. It was especially commissioned by Spokesman Books (Bertrand Russell Peace Foundation) for their edition of the Kruschev Speech printed to commemorate the twentieth anniversary of the Speech. It is reprinted here from that edition, with the permission of the publishers.

The Twenty-fifth Congress of the Communist Party of the Soviet Union opened in Moscow on February 24, 1976. This was a significant date, an anniversary; but none of the participants of the Congress openly mentioned this fact, though many of them remembered in what circumstances, two decades before, on February 24, 1956, the Twentieth Congress, the first after Stalin's death, was officially declared closed. That Congress was in session for nearly ten days, February 14 to 24, and ended after the election of the new Plenum of the Central Committee of the CPSU.

Traditionally, the Plenum of the Central Committee begins by electing the First Secretary of the Party who then proposes for election the members of the new Presidium. On February 24, 1956, Nikita S. Khrushchev became the First Secretary. For a very short spell of a few hours, before the new Presidium is formed, the First Secretary has practically unlimited powers. The whole scenario for the election of the new Presidium as well as the list of its members has been decided earlier, before the beginning of the Congress. The First Secretary's duty is to wind up proceedings according to the previously prepared plan.

However, quite unexpectedly, Khrushchev announced that the Congress would continue in a fresh closed session, from which foreign
delegations and foreign guests were to be excluded. It was nearly midnight, but Khrushchev could not put off the session till the next day as this might have upset his plans: many delegates were to leave Moscow on the morning of February 25 and return to their respective regions. A special summons - to gather in the Kremlin for a closed night session of Congress - was issued to all delegates. Most of them were staying in hotels in the vicinity: so within 25 or 30 minutes the hall of the Congress was nearly full. Nikita S. Khrushchev stepped onto the podium greeted by applause and, without announcing any agenda for the closed session, began his four-hour long speech, which by now has entered history, about Stalin's crimes towards the Party and the whole nation.

We shall not repeat here the burden of Khrushchev's speech. The speech could not, of course, have been kept secret; and Khrushchev himself did not even try to keep it secret. A few days later, in accordance with the decision of the new Secretariat of the Central Committee dominated by Khrushchev's nominees, the text of the speech was printed and despatched to regional Party Committees so that the activists should become acquainted with it. Those responsible party workers, whose names were on the official register, were called into offices and handed a red booklet containing Khrushchev's speech, which was to be read on the spot. The booklet could not be taken out of the room, and there was always an instructor present to see that the readers did not make any excerpts. Two weeks later the booklets were also sent to district committees, to be read, again in confidence, by activists at the district level. After that all registered party members were called into the offices of the district committees and the text was distributed in the party cells of factories, of scientific institutes and other large party organisations. The process of the reading of the "secret" speech was acquiring the character of a chain reaction. At the end of March 1956, there followed a new directive: Khrushchev's speech was to be read at meetings in all establishments, in factories, in kolkhozes, at universities, in educational institutions, and even in the upper forms of schools to pupils over 14-15 years old. Everybody was to be acquainted with it, party members as well as non-party citizens. In a short time, the "secret" speech delivered at the "closed" session of the Congress, became known to tens of millions of people, to the majority of the adult population of the Soviet Union. Copies of the speech were sent to the leaderships of all Communist Parties abroad, and the foreign press soon got hold of the text. Although it was never actually published in the Soviet Union, beyond its frontiers the speech was translated into all the main languages including Russian.

When one analyses Khrushchev's speech now, it becomes obvious that it was prepared with a certain haste, without careful selection and analysis of the material. It was very far from containing all the grave truths about Stalin's offences; supplementary information given five years later, at the Twenty-second Congress in 1961, startled and shocked the listeners anew. But we cannot blame Khrushchev for what was missing from his first statement. Before 1956, before the Congress, he could not yet prepare his speech officially and openly, he could not yet tell the whole truth; even so he had exposed himself to very great personal risk: Malenkov, Kaganovich, Voroshilov, Molotov and Saburov, all people closely connected with the many acts of violence and repression committed by Stalin were still strongly entrenched in the Presidium of the Central Committee and they would have undoubtedly done everything possible to remove Khrushchev from the leadership of the party, even before he had a chance to step on the podium on the night of February 24, 1956. In the summer of 1957, they were capable of preparing a plot against Khrushchev, but that plot proved abortive. Dismissed after three days of discussions in the Presidium, Khrushchev nevertheless managed to carry out a counter-coup and, with the support of the majority of the Plenum and the leadership of the army and the KGB, to remove from the Central Committee the bulk of the members of the so-called "anti-party" group.

The unexpectedness of Khrushchev's speech created many problems which presently split the communist movement, provoking bewilderment in many foreign parties, especially in the countries of the Soviet bloc which, until then, had only been imitating the policies of the Communist Party of the Soviet Union. The leaders of these countries had for a long time instituted the cult of their own personalities using terror and mass repressions to silence all dissent. Khrushchev had no choice - he could make his
move either unexpectedly or he could not make it at all, continuing to conceal Stalin's misdeeds from the world, leaving to others, to bourgeois propagandists and historians the opportunity to "unmask" communism and socialism and to identify the internal policy of socialist countries with oppression and arbitrariness.

The reason for Khrushchev's decision to come forward with such determination at the Twentieth Congress were no doubt complex and contradictory. This was a considered political move, but there was also much in it that was impulsive and emotional. Placed at the head of the party after Stalin's death, Khrushchev had already in the first months to contend with the conspiracy of Beria who had been preparing to seize power in 1953. After Stalin died, Beria held in his hands the whole centralised machinery of repression: the Ministry of State Security combined with the Ministry of Interior. And this joint apparatus was already, in Stalin's time, autonomous: it was subject to the Party leadership neither at the centre nor in the provinces. Several divisions of the MVD (Ministry of the Interior) brought to Moscow to supervise Stalin's funeral, were left there on Beria's directive "to keep order". Beria was also responsible for the security of the Kremlin and all Governmental and Party establishments. At that same time Khrushchev was preparing a counter action, supported by the majority of the members of the Presidium who, just like him, realised what was in store for them in the event that Beria and the so-called "Mafia of the Caucasus" around him were able to seize power. The decisive role in the liquidation of Beria and his group was played by the leadership of the army (Marshals Zhukov, Koniev and others). On the day of Beria's arrest, army detachments speedily detained all the security guards of the Kremlin and occupied government buildings in Moscow. The central building of the MGB/MVD in Moscow was occupied by army units; many high officials who resisted arrest were shot in their own offices. Their bodies were later removed and buried in an unknown place.

All the establishments of state security in the Republics and in the provinces were dismantled, and in a day or two, the whole enormous machinery of repression had been liquidated. Only several months later the KGB came into existence, but this was an organisation which was completely subordinate to the party leadership.

The investigation and inquiry into the activities of Beria and his closest associates revealed before the whole leadership of the Party the enormity of the crimes not only of Beria but also of Stalin, the details of which many party leaders had perceived only very dimly. The investigation inevitably set in motion the process of rehabilitation of many party leaders who had been imprisoned or murdered by Stalin, in the first instance of those imprisoned in the last years of Stalin's life, whose innocence was obvious to all. (N. Voznessensky, A. Voznessensky, the leadership of the Leningrad region, the leaders of the Council of Ministers of the RSFSR and many others imprisoned in 1949-50 during the so-called "Leningrad affair"). A limited process of rehabilitation (in the majority of cases posthumously) affected also a number of the most prominent party members who perished in 1937-1938.

But this process was slow and at the time of the Twentieth Congress only a few thousand people, out of millions of innocents still languishing in prisons and camps, had been rehabilitated. The release of these people became possible only after February 1956. To speed up the process, on Khrushchev's directive over a hundred special commissions were set up, many headed by former inmates of the camps who had themselves been released between 1953 and 1955. These commissions, endowed with wide powers, left Moscow for the "islands" of the "Gulag Archipelago". Until the Twentieth Congress the cases of political prisoners could be reviewed only by the Supreme Court of the USSR or its Military Collegium. After the Congress, the commissions despatched to camps were given the authority to revise these cases and to grant rehabilitation on the spot. Very often it was enough to become quickly acquainted with the documents of the case, to have a talk with the prisoner, and to learn about his political and party past, to rehabilitate him. Already by the summer of 1956, over five million political prisoners had been released from camps. Also released were those few Social Revolutionaries and Mensheviks imprisoned between 1928 and 1930 who had survived 26 or 28 years in camps and jails. Only by a miracle could one survive
such long terms: even of those who were arrested and sentenced in 1936-38 there remained alive in 1956 only 100,000: which is to say, only 5 per cent of those who had been engulfed by the cruellest terror. The bulk of the camp population in 1956 consisted of the victims of the war years and of the post-war repression.

The return of millions of ex-prisoners and the posthumous rehabilitation of many millions more, were the most weighty consequences of the Twentieth Congress for the internal life of the USSR. More important even than the revelations of Stalin’s misdeeds. The direct indictment of Stalin in 1956 was not full enough and not consistent enough. In party histories he was still treated as a prominent leader and a classical marxist, guilty only of some abuse of power and of having introduced the “cult of personality” of which many became the innocent victims. Dozens of cities still bore Stalin’s name; his busts and monuments still decorated all towns and official buildings, his portraits still hung on the walls of party offices; his embalmed body was still on display next to Lenin’s in the Mausoleum near the Kremlin. The final demolition of the Stalin “cult” took place in 1961 during the Twentysecond Congress, when - again unexpectedly - Khrushchev came forward with a new and long indictment, this time not at a “closed” meeting but at an open session of the Congress. Then Khrushchev also openly and clearly posed the problem of Stalin’s accomplices.

This sharp turn in the proceedings of the Congress brought confusion into the ranks of the leaders; but it became impossible to avoid the examination of Stalin’s crimes any longer. Main speakers set out quickly to re-write their speeches, so that they should include details of Stalin’s detrimental acts towards the Party and the nation and also of the harmful activities of the “anti-party group”. At the open sessions of the Congress crimes on a mass scale were revealed which by far surpassed all that had been learned from Khrushchev’s own speeches of 1956 and 1961. This discredited Stalin and Stalinism finally and irrevocably. Before the end of the Congress on the night of October 31, 1961, Stalin’s body was removed from the Mausoleum. Not far away from the Kremlin an excavator dug out a deep pit and into it Stalin’s coffin was lowered. So that the body should not be dug up again, the pit was covered, not with earth but with concrete. On top a granite slab was placed on which, only later, the name was engraved: “J.V. Stalin”. A wave of destruction of Stalin’s monuments swept over towns and villages; streets, kolkhozes, plants, settlements and cities were all renamed.

Khrushchev committed many mistakes and misjudgments during the time of his political leadership. Nor was he innocent of violations of the law in Stalin’s time. He was not well equipped to run the economy and agriculture of the country competently; he was unable to create conditions for a genuine inner-party democracy, let alone a democratic way of life of the whole country. Yet all these mistakes and shortcomings of his leadership were only transitory. His main merit so far as the whole of mankind is concerned consists in the fact that he was able to overcome inertia and indecision, to mount the platform of the Twentieth Congress on the night of February 24, 1956 and to place before the whole communist movement the choice between a humanist and a totalitarian socialism. “Socialism with a human face” cannot come about too early; totalitarianism does not vanish after one speech: in changed forms it has continued for a long time. The ferment which Khrushchev engendered in 1956 still continues: it is a long historical process. And although Khrushchev’s name is consigned to oblivion in the USSR and is unceasingly slandered in China and other communist countries, the process which began with his “secret” speech in 1956 cannot fail to bring nearer the advent of a humanist and open socialism, in which the rights of every individual will be defended, respected and firmly guaranteed.
Ernest Mandel: Late Capitalism, New Left Books, $27.80.

Everyone knows Ernest Mandel, either as marxist scholar or as trotskyite activist. Those familiar with the former will know him through the mammoth *Marxist Economic Theory* (1962), *Europe Versus America* (1970) and *Formation of the Economic Thought of Karl Marx* (1971). Those who know Mandel in the latter form will associate him with the International Majority Tendency of the Fourth International, and remember him as skilful propagandist and persuasive orator.

Mandel’s latest work is a 600-page volume entitled *Late Capitalism*.

By all appearances, Mandel has taken on the task of writing the *Das Kapital* of the 1970s. In his introduction Mandel notes the structural similarity of *Late Capitalism* to Marx’s original plans for that work. Further, Mandel notes that he seeks to emulate Marx in his unique combination of theory and history, epitomised in *Das Kapital*. To his credit, and Althusser’s, Mandel provides advice on how to read the book. From this, it appears that those who do not wish to plunge headlong into the depth of his analysis – as I did – can minimise pain and maximise pleasure by reading the first four and the last five chapters, missing the nine in between.

Basically, *Late Capitalism* is a systematic attempt to combine the general theory of the ‘laws of motion’ of the capitalist mode of production with the concrete history of twentieth century capitalism. This centres on Mandel’s scheme of long-waves, of which more later. Mandel proceeds by the method he affirms is Marx’s: a six-fold process, which for purposes of simplification can be reduced to four stages, perhaps: factual/empirical; conceptual/analytical; synthetic (development of conceptual whole); and the ongoing resolution of the relation between the conceptual whole and the empirically based parts. In his procedure, therefore, Mandel refutes the ghost of ‘marxism as blinkers’, by displaying that this method is not one of forcing ‘facts’ into ‘abstractions’.

Late capitalism, Mandel argues, is the second stage of imperialism. On the world market this development is manifested by a tendency, since 1940: (1) for metropolitan nations to invest in other imperialist nations rather than in the third world, and (2) for capitalist priorities in the third world to change from raw material production to local production of finished goods. This change enables both (a) maximisation of surplus profit via exploitation of high productivity labor, and (b) the development of monopoly control of local neo-colonial markets.

Mandel discerns four technological cycles - long-waves - in the history of capitalism: 1800-47, characterised by hand-made steam engines; 1847-1890s, machine made steam engines; 1890s-1940, characterised by the application of electric and combustion engines; and 1940 on, the application of electronic devices and nuclear energy (the period of late capitalism). Each long wave has two periods - an accelerated period of growth followed by a decelerated period. In the fourth (present) wave, accelerated growth occurred from 1940-45, 1948-66, leaving us, today, in the period of recession, and a lengthy one at that, which to Mandel symbolises decline. Social decay, prompted by economic crisis, ushers in the period of revolutionary possibilities.

Mandel notes capital’s attempts at countering the tendency of profit to fall. The integration of women into the workforce is an example of an attempt to boost the reserve army of unemployed as a counter tendency. Further, capital attempts to undermine class solidarity between employed and unemployed workers (the dole-bludger spectre), which develops to such an extent as to impair the fighting strength of unions. A further, and more consequential measure, perhaps, is the application of automation. Automation serves the same purpose as the boosting of the unemployed, i.e. it enables the blocking of the tendency of profit to decline, and yet it simultaneously undermines it, by reducing the mass of surplus value. The replacement of living labor with dead labor through automation means, firstly, that surplus extracted through production is minimised and, secondly, that profit through sale falls, due to inadequate demand. Thus, automation, allegedly a savior, eventually causes more problems than it solves by complicating both the processes of commodity production and profit realisation. Automation, according to Mandel, is the absolute limit of capital’s expansion, the innermost contradiction of capitalism, the ultimate fetter.

Mandel proceeds to cover, among other things, the permanent arms economy. Here (Chapter 9), the reader is bombarded with a barrage of algebra and polemics with selected International Socialist and Ricardian ‘enemies’. ‘Ricardian eclectics’ also get bucketed in Chapter 11, on neo-colonialism and unequal exchange. Chapter 13 - permanent inflation - is overwhelming for those not economically inclined. In reading these chapters, it becomes clear that this is such a massive and diversified work that it is all too easy to become lost in the parts and lose sight of the whole. The documentation is a further
distraction from the central theme, particularly in the cases in which notes swallow up more page than the text does.

I had hoped for some fresh insights in the chapter on the state. It was a bit of a letdown, first time around at least. Mandel battles with Poulantzas, cites Miliband approvingly, covers the origins and development of the state and its function in late capitalism. The chapter following - that on ideology - shows the vitality I anticipated finding in the state chapter. The author deals with the ideology of the 'end of ideology', in the process of which the integrative factors popularised by Marcuse come under scrutiny. Mandel argues that when thinkers sincerely and profoundly hostile to capitalism claim the impotence of the proletariat in the imperialist countries to challenge the existing social order, they are, in fact, playing the role of unwitting cogs in the ideological machine of the ruling class. May '68 in France and later developments throughout Europe come in here.

Somehow, though, Mandel's line, valid enough in itself, doesn't ring entirely true. No doubt the proletariat still has revolutionary capabilities; presumably the working class always carries that potentiality. What it seems to lack is desire, motivation; it is not so much impotent as it is uninterested in radical social change. Capitalism relies far more heavily on the cultural embourgeoisement of the proletariat than it does on the influence of Marcuse's 'technological fetishism'. In a sense, this Mandel-Marcuse debate emerges as a falsely posed one: it's not a matter of whether capitalism is god-given or not but how long it will last.

In this connection, Mandel is a little reminiscent of Kropotkin. In The Conquest of Bread in particular, Kropotkin uses examples of practical developments of mutual aid - for example, co-operatives, public services (free use of bridges, libraries, parks) as 'proof' for what he perceives as the development of communist anarchism within, and undermining, the capitalist state. Mandel uses examples such as May 1968, Italy 1969 as 'revolutionary vocal practice', bourgeois publishers cashing in on marxist texts (thereby digging their own graves) and so on to document the case for the development of wider radicalisation prerequisite for the forthcoming revolution. Both Kropotkin and Mandel seem to think that 'history is on their side'. Neither case is entirely convincing, though their examples are valid enough in themselves. Mandel fits his projections neatly into his scheme of long-waves and his consequent analysis of revolutionary possibilities in the seventies. This move is logically correct; but in extrapolating from the model (ideal-type) to reality, from the logical 'should' to the empirical 'will', Mandel's theory gets a bit beaten about the edges.

By way of conclusion, Mandel lists three forms of proletarian struggle now emerging which characterise the new epoch of social revolution we are entering: firstly, critical attack on the contradiction between a growing abundance of consumer goods and the underdevelopment of collective (social) services; secondly, the frontal challenging of mechanisms which determine investments; and lastly, the popular denunciation of the contradiction between the dependence of large companies on state subvention and the preservation of business secrecy by these companies.

Mandel holds that we are approaching the limits of the adaptability of capitalism, with the traditional trotskyite implications: objective conditions are ripe but there is lacking a vanguard.

Mandel is worth reading. Like Hegel, Marx and their sophisticated heirs, he is a critic whom one neglects at one's peril, but whom one indulges in to one's own frustration. Mandel emerges more clearly than ever as a Marx fundamentalist. He is vehement in his defence of Marx throughout, refuting among other things, the age-old argument that Marx had a consistent theory of absolute immiseration. Mandel seems, however, to end up playing games with opponents (invisible) such as Edmund Wilson and Robert Conquest. 'Marx was right'. 'Was not'. 'Was so'. Mandel seems to almost disappear in this quagmire rather than gauging, instead, whether Marx is more or less useful.

Some of Marx's comments - those on the development of managerial capitalism in the third volume of Das Kapital, the development of a detached' middle class in volume two of Theories of Surplus Value, or automation in the Grundrisse are most prophetic and really interesting. But at times Mandel seems to be more concerned with documenting uncanny predictions than with developing his own argument.

This Marx fundamentalism seems to stretch into Trotsky fundamentalism at times. For example, on the matter of the integration of unions into the bourgeois state, Mandel suggests that Trotsky foresaw this tendency as early as 1940. Immediately Gramsci, who felt inklings of this tendency as early as 1919, pops into mind; but not into the footnote.

What I'm getting at is that perhaps the biggest thing I got from reading Late Capitalism was further insight into the way Mandel's mind works. As the foremost representative of trotskyism today, Mandel epitomises a rather intriguing school, which presents itself, and itself only, as revolutionary marxism in the twentieth century.

Late Capitalism will stand as a most substantial contribution to the critique of capitalist production a century after Marx when men still yearn for a fundamental improvement in the human condition, but the hope seems almost as far away as ever.

- Pete Beilharz.
Massive security

Nuclear power plant

Dangerous leak

Energy company

Pollution

Don't worry we'll run it at a profit

Warning! Trillion dollar investment developed with state aid

Dangerous crack

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