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Malaria, the Politics of Public Health and the International Crisis

Harry Cleaver

ABSTRACT: After more than a decade of increasing control, malaria has been making a dramatic resurgence in the 1970s — a resurgence which has been allowed to continue unchecked for several years. This article seeks an understanding of this de-control in the history of the class politics of public health and in an analysis of the current international capitalist crisis. These past and present experiences are analysed within a new Marxist perspective which emphasizes the autonomy of working class struggle within and against capital and the central role of the wageless in capital's division of the class. To analyse the role of unwaged labor in the accumulation process and the investment or disinvestment in public health the concept of the "circuit of the reproduction of labor power" is developed. In each of the historical periods the development or underdevelopment of public health programs are seen as the outcome of the particular characteristics of the working class struggles and of capital's strategies of these periods. On the basis of these analyses the author suggests that the current de-control of malaria is part of that underdevelopment approach to some areas which forms part of capital's strategies of repression and global restructuring in the present crisis.

Although it has been little noticed in this country where malaria is not a problem, some parts of the Third World are currently experiencing a dramatic rise in the incidence of that disease. Carried from person to person by anopheles mosquitoes, malaria is caused by a red-cell destroying blood parasite. It produces incapacitating chills and fever, debilitating anemia and, when left untreated, is often fatal. The current epidemic spread of the disease is bringing certain suffering and sometimes death to literally millions of persons in Asia and to hundreds of thousands in Latin America.

When I became aware of this tragic development my first reaction was to ask just how serious is the current upsurge and second to ask whether, in the light of the long history of expanding public health services, this outbreak was only an unfortunate setback which was being rapidly brought under control by local governments and international agencies. When I looked

for the answers to these questions in the publications and data of the World Health Organization and of other international health agencies, I discovered not only that the upsurge is widespread and severe but that from all I could see the measures being taken to stem this rise have been grossly inadequate. Moreover I have found the arguments of administrative mismanagement and limited resources which have been put forward in apology for this inadequacy to be entirely unconvincing. It seems to me that what has occurred is a widespread, defacto, and sometimes even intentional, de-control of malaria with all the implications for human suffering such a policy implies.

The inevitable next question is why? At this point I can offer only a tentative response, one based more on the analysis of the history of public health and of the general character of the current capitalist crisis than on direct information concerning the hidden motivations of the gov-

ernments and foreign aid donors who have so far refused to make sufficient resources available. An examination of the history of medicine shows that in the 19th and 20th centuries the support of capitalist business and government, which has been necessary for the development of public health programs, including malaria control, has been an integral part of their strategies and struggles with workers over the rate and structure of accumulation. An examination of the current crisis suggests that it is a long term repressive strategy of capital to control and restructure the international working class whose struggles in the 1960s ruptured its development plans and threw its very survival into jeopardy.

Putting these two pieces of political history together I am led to answer the question of "why?" with the provisional hypothesis that the willingness of the representatives of both international and local capital to allow malaria to spread in some areas of the world is part of the repressive underdevelopment of those areas which is integral to the global restructuring now going on. The implications of this perspective are disturbing to say the least, because they would seem to include not only the possibility that the malaria situation may be allowed to get much worse in some areas — depending on the degree of repression required — but also that ultimately the only adequate working class response may be at the level of the crisis itself, i.e. international in scope.

In what follows I sketch the statistical, historical and analytical basis for the foregoing conclusions. In Part I, I outline first the statistics on the rise of malaria to demonstrate the seriousness of the problem, and why the response has been inadequate, and second, the data and arguments why the reasons given for this inadequacy are unconvincing. In Part II, I give an incomplete but I think nevertheless instructive sketch of some of the historical class politics of public health through the 1960s. In Part III, I draw some general conclusions from this historical material and suggest a theoretical perspective within which the experience examined can be usefully grasped and in terms of which we can examine the current crisis and begin to study the place of malaria within it. In Part IV, I sketch the analysis of that crisis which suggests that underdevelopment strategies are integral to it — the basis for hypothesizing that malaria de-control is perhaps

not a blunder but a policy against the working class.

I

The major areas of recent upsurge of malaria have been in South and Southeast Asia. By far the most dramatic cases have been India and Pakistan. In India the incidence of the disease rose steadily but slowly between 1962 and 1969. But after 1969 it expanded explosively from 349,000 cases to a dismaying 4,200,000 in 1975 and the number is predicted to rise to 10 million by 1978.¹ In neighboring Pakistan the number had already risen to 10 million by 1974 from only 9,500 in 1968 and 108,000 in 1971.² There have also been serious increases of malaria in the 1970s in Afghanistan, Sri Lanka, Nepal, Bangladesh, Burma, Thailand and Indonesia.³ Several countries in Central America (Honduras, El Salvador, Costa Rica, Haiti) have also experienced serious increases of the disease.⁴ In the most malarious area of the world — Africa south of the Sahara — the incidence has been rising more slowly but was already at a very high level in the 1960s.⁵ In other areas, however, such as the Mideast and South America many countries either remained free of the disease or made progress in its eradication. From this we can see not only that the upsurge is serious but that it is concentrated in certain areas.⁶

As I suggested above, when we look at these developments historically we see that they constitute not a continuance but a reversal of earlier trends established by the success of the control and eradication programs of the 1950s and 1960s. Those programs were based on the use of new chemicals (e.g., DDT) developed during World War II and their basic approach was the treatment of the sick with anti-malarial drugs and the spraying of DDT on the inside walls of houses to kill the mosquitoes which carry the malaria parasite and thus interrupt the transmission of the disease. By 1955, with enthusiasm for the programs at a high point, the international public health community including the WHO, declared that the total eradication of malaria was perfectly feasible technically and should replace the more limited objective of malaria control. By the mid-1960s complete eradication had been extended from the US and Western Europe to most of the Soviet Union, the countries of Eastern Europe and some Third World countries. Comprehensive

control had been instituted in many more, including India and Pakistan.⁷ The global incidence over this period was reduced from about 300 million cases before 1946 to about 120 million in the late 1960s in a population which had doubled in size. Only the countries of sub-Saharan black Africa continued to have at best very limited control programs and often none at all. This is the background against which the current massive outbreak of malaria must be judged as a shocking resurgence from levels which had been low and declining for years.

This resurgence has not gone unnoticed. It has received considerable publicity in the countries where it has occurred and in the international health community.⁸ The World Health Organization, which constantly monitors the health situation throughout the world, has pointed repeatedly over the last few years to the recrudescence of the disease. By 1975 the WHO Director General Halldan Malher was writing of a "generally worsening situation" in the world incidence of malaria of which the "hard core of deterioration" was in Asia.⁹

The first response by both the WHO and local governments was to finance studies into the reasons for the rising tide and the means necessary to check it. The factors cited by the WHO studies as responsible were multiple but included most prominently: increasing resistance of mosquitoes and parasites to chemicals and drugs, inadequate administration of programs, inadequate research, inadequate training, inadequate supplies of chemicals and drugs, inadequate health services infrastructure, the lack of malaria control components in hydraulic development projects and underdeveloped socio-economic conditions generally.¹⁰ While complex and interacting with one another, all of these factors can be seen to be the result of inadequate financing. Chemicals, drugs, clinics and vehicles, training, good administration, research, development and health expertise on hydraulic projects can all be had with sufficient funding. Only mosquito and parasite resistance appears to be a "purely technical" problem. But even in this case the problem is the outgrowth of prolonged control or inadequate (because underfunded) eradication efforts. And it can be overcome by the expansion of research and other aspects of the program. The point is that the upsurge emerges as traceable not just to inadequate programs but to programs which are inadequate largely because they are

underfunded. These WHO studies naturally pointed out the key role of such underfinancing and called for renewed efforts. The results of studies in particular countries were similar both with respect to causes and cure.¹¹

What were the results of those studies and recommendations? They varied of course from country to country, but overall we can say that while there was some increased expenditure and some expansion of control the bulk of the recommendations of the various studies remained unimplemented and what was done was inadequate to bring the incidence of malaria back down to earlier levels and in some cases failed even to check the increase. In India for example this last was very much the case. At first government expenditures rose from \$13 million in 1968 to \$22 million in 1971. This slowed the rate of increase. But new cutbacks reduced funding to \$14 million in 1973 despite the renewed acceleration of the spread.¹² In 1974-75 the planned allocation was to be increased to only 29 million dollars despite conservative committee recommendations of a minimum of 81 million.¹³ In Nepal, Bangladesh, Burma and Indonesia among others we find similar histories of inadequate response.¹⁴

It should be noted at this point that the resources available from such international agencies as the United States Agency for International Development (USAID), the United Nations Children's Fund (UNICEF), and the Pan American Health Organization (PAHO) have been drying up along with those of national governments over the last few years. Only the WHO continues to provide substantial advisory services on an international scale. All of this in the face of almost continually rising global incidence of the disease.¹⁵

The overall pattern seems clear enough. Not only has the widespread resurgence of malaria not been met with sufficient expenditures to bring it under control but there seems to have been a general reduction in the resources being made available relative to the need on both national and international levels. Already by 1969-70 it was obvious that increasing numbers of Third World governments were backing out of their commitments to malaria eradication and reducing their stated aims to some vague level of control. In 1972 this movement gave birth to a WHO conference with the politically as well as linguistically awkward title of "WHO Interregional Conference on Malaria Control in Coun-

tries where Time-Limited Malaria Eradication is Impracticable at Present.”¹⁶ This is the polite and obfuscating way of saying that in the current conjuncture the resources necessary for the people of those countries to be freed of malaria will not be forthcoming either locally or internationally in the foreseeable future.

In these circumstances surely there must be clear reasons for these developments. Surely the agencies concerned with malaria can offer reasons why, after more than a decade of generally successful eradication efforts, the programs are now being abandoned or underfunded? One of the frequent explanations one hears advanced by some is that the low funding has been the result of the overoptimistic lessening of attention in the face of the program successes and of the demands of other programs.¹⁷ This argument may have a certain appeal as an explanation for the initial upturn. It is always attractive to be able to blame bureaucratic ineptitude or naiveté. However, we must observe first that the dangers of not maintaining the programs were well known to all responsible parties — naiveté is unbelievable — and second, bureaucratic ineptitude could explain only the initial period when relaxed programs might have facilitated a resurgence. But once the resurgence had begun the question remains why, despite widespread publicity and criticism of the programs, have subsequent resources been so inadequate.

A second reason advanced by the governments involved is overall budget limitations. They claim that the programs are too expensive and are becoming more so under the impact of global inflation. Besides the fact that one would expect that even if the programs were expensive, the governments concerned would shift resources out of other less pressing projects to deal with this huge problem of human suffering, we can also ask if in fact malaria eradication is really so expensive. An examination of WHO reports suggests that it is not. Even where cost per capita of protected population has been rising the absolute level generally remains very low: ranging from less than ten cents to about fifty cents.¹⁸ Even if expenditures in these countries were doubled or in some cases tripled, the per capita costs would still be less than one dollar. What about total funding levels? In India, the biggest program in the world, total costs stood at only \$25 million in 1962, before the program's decline. And \$25 million today is a drop in the proverbial

bucket, even in terms of foreign aid.¹⁹ No, the cost of the programs, like administrative mismanagement, is an inadequate and unconvincing explanation.

The simple fact is that the resources required have been well within the capability of the local and international aid donors and they have simply been “unwilling” to make these resources available. For those who still have doubts let me quote no less an entity than the USAID itself. In an internal study completed in 1976 it summarizes the situation succinctly:

The causes of malaria resurgence have been very largely related to the *unwillingness of national governments to make the requisite resources available when in fact such resources existed*. Malaria has not often cost more than 5% of the health budget at a time when the health budget was rarely more than 5% of the total national budget.

Even where malaria costs as much as 50% of the health budget, however, these health budgets remained a relatively small proportion of available national resources. (my emphasis)²⁰

The same point could be made with infinitely more force concerning the resources of international capital as a whole.

Let us now turn to some of the historical evidence that the development of public health programs in the 19th and 20th centuries has occurred within and as a moment of capital's struggles with workers — evidence which suggests that neither the expansion nor the contraction of public health programs can be adequately explained without reference to these struggles.

II

The experiences that I want to examine in this section are drawn from three different historical moments but each is directly relevant to an evaluation of the reasons for the current malaria situation. The first concerns the role of the Rockefeller Sanitary Commission in the development of rural public health programs in the American South in the early Twentieth century. The second concerns the role of medical care and public health in the colonial experiences and in the new international programs of the Rockefeller Foundation which grew out of the

Commission's work in the South and out of the rise of anti-colonial struggles abroad. The third set of experiences concerns the role of public health in the post World War II period when American influence and approaches dominated.

*Health and Development in the American South*²¹

In the long run the programs of the Rockefeller Sanitary Commission proved to be one of the most important efforts to develop public health services in a backward agrarian region. This was because those efforts were part of a much larger "development" strategy — the overall pattern of which formed the basis for subsequent American strategies in China in the 1930s and 1940s and in much of the Third World after World War II. That attempt at development was promoted by Northern business leaders to speed the "New South" out of the pattern of underdevelopment and agrarian conflict which had dominated it since the Civil War.

This business concern with transforming the South grew largely in response to the experience of the massive upheavals of the Populist Revolt in the 1880s and 1890s. It can also be seen partly as a response to the expanding needs of Northern business for both markets and new sources of labor in the face of rising struggles by the Northern industrial working class at the turn of the century. The Populist Revolt had seen large numbers of family farmers and sharecroppers in the South rise up against what they felt was their systematic exploitation by Eastern and Northern merchants, banks, railroads and input suppliers. Despite the collapse of the Revolt after 1898, disparate groups of banking, manufacturing and railroad leaders, led by the Rockefeller philanthropies, undertook the development of Southern agriculture, the restructuring of Southern education and the transformation of Southern government with the aim of forestalling any recurrence of populist-type unrest.²²

The activities of the Rockefeller Sanitary Commission were devoted to propagating a public health campaign. At that time public health organizations were weak or non-existent in many Southern areas and worktime lost to illnesses like malaria and hookworm were major factors limiting the productivity of the workforce in both fields and milltowns.²³ In the rural areas the most important early part of the health work was the Commission's anti-hookworm efforts. An anem-

ia-producing, debilitating disease, hookworm was widespread throughout the South, especially in rural areas where, unlike malaria which is carried by mosquitoes, its parasite was picked up by the bare feet of children and farm workers. The launching of an anti-hookworm campaign by the Commission was based on evidence from the plantations of Puerto Rico that hookworm was directly responsible for low productivity and that a new cheap method of treatment could give rapid results and a high rate of return on the initial investment.

The anti-hookworm campaign was linked to the educational campaigns as much of its propaganda activity was aimed at the schools. The campaign was also carried on in close cooperation with local governments. The goal was for private business initiative and finance to lead to government funding and takeover of the program.²⁴ Because the program was initiated, designed and set up by the Commission, and because future staff would be trained in the schools of public health being financed by the foundations, this effort represented a private determination of the priorities and direction of these new, ostensibly public programs. The shift from private to government financing also represented a socialization of the private costs of production and a strengthening of the interventionist role of Southern government on the side of modernizing private business interests.

Another important aspect of the Commission's health work was its direct appeal for the cooperation of farm organizations — the very institutions through which much agrarian unrest was expressed. For the Rockefellers and other businessmen to gain leadership in a cause which not only helped business by increasing productivity but helped farmers by improving health was seen by the capitalist sponsors of the campaign as a significant step in breaking down farmer antipathy toward big business which had sparked the Populist Revolt.

The hookworm campaign was followed by an anti-malaria effort in the South during and after World War I. This effort was carried out through the complementary programs of a strengthened U.S. Public Health Service and the Rockefeller Foundation. The anti-malaria effort aimed at maintaining the productivity of both the personnel on military bases and the civilian workforce more generally. Like the hookworm campaign these programs also contributed to re-

shaping the character of Southern state governments.²⁵

It is interesting to note that although the campaigns were integral to broader objectives in the South, they were narrow in the way they focused only on battling the particular parasites or vectors of the disease at hand. Even though an analysis of the costs and benefits of alternative approaches to malaria eradication is beyond the scope of this article, it is important to ponder the widely observed phenomenon that the regression of malaria in the United States and Northern Europe began *before* there were anti-malaria programs based on knowledge of transmission. Discussions of this fact by malariologists usually suggest that the reasons lay in the general rise in the standard of living and in improved land use which eliminated mosquito breeding places. The methods used in the South, as well as later contemporary methods based on powerful insecticides like DDT, were not aimed at such a general improvement of nutrition, clothing (shoes), or housing (toilets, insulation, screens). But then the aim was improved productivity and a better workforce at "reasonably low" cost, not a massive redistribution of wealth from Rockefeller and other capitalists to the workers.²⁶

We can see that the explanation for the decision to foster public health in the American South was not based on the existence of poverty or disease — both had been endemic for years — but on larger socio-political factors which involved the needs of both the rural population and of the business community and their conflicts with one another.

Health, Imperialism and the Rockefeller Foundation

To begin with we must remember that the initial impact of colonialism on the health of the indigenous population in the Third World was usually devastating. All of the gifts of capitalist civilization: wars of conquest, slavery, the burning of villages and the destruction of food supplies, the importation of new diseases like syphilis or opium addiction, forced labor and especially the takeover of the richest and most productive lands for export crops rather than local food production, not only brought vast suffering and death but often lasted for many years. This rapid and prolonged primitive accumulation paralleled that which accompanied the rise of capitalism in Western Europe and constituted a vast

underdevelopment of rural society designed to destroy the traditional social structures and force peasants and primitives off their land. By monopolizing productive land and destroying local handicrafts (and sometimes nascent industrial production), capital, at home and abroad, used poverty, hunger and ill-health to force the indigenous population to work, whether in the factories of Manchester or the plantations of South America and Asia.²⁷

But the excessive use of such underdevelopment — of poverty and overwork — in both early capitalism and colonialism led to such production of illness that the ability of the working class to work productively enough to produce profits was often impaired. Capitalist response to this difficulty was for a long time to import more workers from healthier rural labor pools. But the spread of epidemic illness and the rise of working class struggle against overwork (struggles in Europe to reduce the working day, struggles in the colonies to escape the plantations and forced labor) eventually forced business to adopt measures designed to improve the health of at least its immediate employees. In other words, over time the development of medical care and public health measures came to be spurred by something like the economic and political factors which existed in the American South: a desire by private business and business-oriented government to increase productivity and to gain the cooperation of the local population through improved health.

Although it seems that European colonialists often dismissed the feasibility of extensive public health campaigns among the "primitive" indigenous population,²⁸ they came to be deeply concerned with the economic impact of diseases like malaria. Some of the earliest and most important scientific work on malaria was done by Europeans working in the colonies (Laveran in Algeria, Manson in China, Ross in India) where endemic disease and recurrent epidemics severely hampered colonial exploitation.²⁹ For example, during the colonial period in India the impact of malaria ranged from the continual loss of productivity and workdays to high infant and adult mortality and the total collapse and depopulation of whole towns and areas during epidemics. As a result the colonial administration undertook anti-malaria efforts. These however appear to have been sporadic and limited primarily to periods of epidemics and to areas of special interest to the British, e.g. areas of agricultural or other

production for export and areas of concentrated British population.²⁰ Broad, colony-wide public health programs designed to increase the health and productivity of the entire population on and off the plantations (mines, etc) seem to have been non-existent. Given the history of using poverty and illness to weaken and control the colonial reserve army as a whole, and given the limited number of workers employed in the colonial export industries, the differential development of health programs — better services for immediate employees and surrounding populations, worse or nonexistent services for immediate employees and surrounding populations, worse or nonexistent services for the untapped hinterland — might be judged a reasonable procedure from the point of view of a colonial administration desirous of keeping the whole population under control.

Disease and the resulting low output of workers presented the same kind of problem for American corporations trying to set up production operations abroad. Where sickness was widespread the simple availability of workers was no guarantee of a usable labor force. The United Fruit Company, for example, was forced to set up hospitals for the workers in its Central American banana plantations as early as 1899 in order to reduce excessive costs associated with illness.³¹ Years later a vice-president of United Fruit clearly stated the reasons for his company's concern with its workers' health:

The work that has been done was done for a very practical hard-headed reason — that of self interest... sick people cannot work... It may have been an enlightened self-interest but it was largely done because they (American companies) could not get out the ore, or raise the bananas or pump the oil unless these fundamentals were taken care of.³²

As with the European colonialists, much of the earliest foreign public health work by Americans, including scientific research, was directly related not only to business, but also to the military needs of imperialism. It was the extremely high death rates of American soldiers in Cuba during the Spanish-American War which pushed the military doctor Walter Reed to find a way to control yellow fever. It was the imperial acquisition of Panama to build a canal which brought Major William C. Gorgas from Cuba to that country in 1904 to fight yellow fever and malaria.³³

Work in public health has also played an important role in capital's public relations. If eco-

nomie exploitation and military occupation were the most blatant and odious aspects of the expansion of European and then American business to subject peoples, health care and public health measures were portrayed and sometimes accepted as the kindly and humanitarian side of foreign intervention.³⁴

The Rockefeller foreign health program, which included anti-malaria operations for over thirty years, was centered in the International Health Board. The Board was a direct outgrowth of the Sanitary Commission and it was operated first independently and then as a division of the Foundation. For the Rockefeller Foundation the work of medical men, "for whom there were few political constraints," was often the gentle opening wedge to be followed by interventionists in other areas. In a recent book a vice-president of the Foundation has written: "...medical and public health men paved the way for agriculturists in South America and Asia. The work of the agriculturalists in turn gives credit to populationists, social scientists and others who follow them."³⁵

Unlike the colonial governments and business investors in export industries whose vision of public health often extended little further than their plantations, mines and port cities, the Rockefeller Foundation brought to its international health work its experience in the American South and a recognition that generalized capitalist expansion into Third World countries could only be based on creating a generally healthy labor force and at the same time winning enough popular support to undercut growing agrarian unrest. Their public health approach was also influenced by a growing understanding of the means by which disease was transmitted and the impossibility of controlling disease in one area if it was not also controlled in others. These had been some of the insights of the Sanitary Commission in the American South and they affected the policies the Foundation followed in its pre-World War II efforts in the Third World, especially those designed to help "save" China.

In China public health work was frankly undertaken as part of the effort to stem peasant revolution. Rockefeller support for public health ranged from building the well known Peking Union Medical College to cooperating with the Peking police department to establish a municipal public health station, to supporting Jimmy Yen's anti-communist community development programs which included a public health component. These health programs, like those in the South, were complemented by other programs in

agriculture, education and elite building.³⁶ Although these efforts to save China ultimately failed, they helped build the approach which dominated US foreign aid and development policy in much of the post-World War II period.

Besides this kind of private bilateral effort, the Rockefeller Foundation's world-wide support for medical research, public health and medical education was pursued *internationally* through institution building, fellowships, conferences, professional journals and cooperation with the League of Nations and other international organizations. This support helped create, gradually but surely, a world system of cooperative interpersonal and interorganizational relationships which were based on common ways of dealing with health problems and went beyond the more narrowly defined interests of the colonial powers. By creating a common approach to health problems and a system which facilitated the rapid distribution of new knowledge and techniques that fell within those methods, the Foundation helped internationalize the approach developed earlier at home: one aimed at widespread public measures, one focused on the clinical symptoms and causes of particular diseases rather than on poverty itself, cooperation with established government and a focus on a few elite institutions and individuals who then dealt with the larger population.³⁷

This second set of examples suggest that the development of modern public health around the world has been both stimulated and limited by the needs of an expanding private enterprise economy. Control of diseases, many spread by the imperialists themselves, turned out to be necessary for the success of their investment projects both for technical reasons of labor availability and for reasons of propaganda to counter nationalist and peasant revolt. While the approach of United Fruit and that of British or French investors differed little, the Rockefeller Foundation, standing outside and above the interests of individual capitals, could better grasp the emergence of the class struggle at the level of anti-colonial independence movements and anti-capitalist revolution. From this position it could encourage all who understood these trends, including those within the colonial countries, to build an international movement. This multinational approach to public health would never completely replace bilateral national programs but the vision of investing in the general level of health and productivity as a basis of political stability and capital

accumulation did come to influence strongly the character of post World War II programs of both multilateral and bilateral aid. Among these programs were the anti-malaria campaigns that are described in part I above.

Human Capital and Counter-Revolution in the Post World War II Period

We have seen that in the period before World War II one of the primary objectives of business in developing public health services, whether in the U.S. or in the Third World, was in guaranteeing itself a more productive labor force. In the post World War II period, this approach became institutionalized in the developed world first as an integral part of the Keynesian productivity deal and then in both the developed and under-developed world as a "human capital" investment component of capitalist development strategies. At the same time public health programs were used for more openly political ends of counterinsurgency against rural and urban workers.

In response to the rise of working class organization and power in the West, especially in the United States in the 1930s and 1940s, Western business was faced with a situation in which it could no longer force wages down through periodical economic cycles. So with this possibility blocked and future wage increases a certainty, economists sought ways of incorporating this trend into a strategy for growth. The solution was found in the union contract and in a productivity deal that would tie wage increases to productivity increases. Now it is obvious that the relative surplus value strategy of raising productivity has long been used by capital in response to rising real wages (which include better food and health). What was new during this period was the incorporation of this relationship into the periodic union contract and the use of Keynesian macro policy to try to enforce an average growth of wages which did not exceed the average growth of productivity (fine tuning through cyclical recession). This acted to institutionalize the relationship at both the micro level of the firm and industry and at the macro level in the role of the government. To the degree that the long term growth of productivity rose at least proportionately to and in reaction to the rise in wages, the wage struggle would become a motor of capitalist growth, driving business to modernize and innovate and insuring stable profit margins.³⁸

With the development of productivity the key to combining growth and social stability through higher wages, it was only one step to seeing investment in education or public health or medical care as a productivity raising investment in "human capital". This concept, taken at the aggregate level, became the theoretical expression of the kind of strategy initiated by the Rockefeller Foundation years before, but developed more fully at the national and international level in the 1950s and 1960s. The more limited health investments of the colonial period could also, in retrospect, be seen as investments in human capital, but as we have seen, they were primarily investments at the level of the firm and were not on the same level as the national and international programs of the type supported by the Foundation and the international agencies. This last kind of campaign (e.g., national or global malaria eradication) could clearly be theorized in bourgeois terms at the level of aggregate production functions involving changes in the "quality" of labor as a fundamental input into the accumulation process. The development of this kind of effort in the Third World was as integral to some development plans as was the similar massive investment in American education and health in the early 1960s integral to Kennedy's plans to spur growth at home.³⁹

While this strategy for controlling and harnessing the working class struggle for increased wages (or more income generally) partially explains the expansion of public health campaigns in the postwar period, there is also the other, less subtle motivation and strategy: the use of public health as an ideological weapon in the fight against industrial and peasant revolt. The aim here was not simply to increase the physical *ability* to work per se, but to increase the *willingness* to work — the two being closely related. We have already seen this use of public health in countering farmer unrest in the South and peasant revolt in China. Those experiences simply became the basis for a generalization of the strategy in Asia and other parts of the Third World.

Perhaps the most spectacular and best known use of health care to fight revolution and to win friends for the capitalist world in the 1950s was the dramatic and highly publicized work of Dr. Tom Dooley with refugees in Vietnam and Laos. While serving as a U.S. Navy doctor in Hai-phong in 1954, Dooley helped administer the migration of North Vietnamese Catholics into the South — a migration which was later discovered

to have been planned and propagated by the Central Intelligence Agency. Later in Laos Dooley carried the campaign to save the people from Communism right up to the border of China where the people "had no allegiance to the central government" and were "just right for the Commie treatment."⁴⁰ This kind of work in isolated areas served no immediate role in providing a healthy labor force. It was rather a first step in persuading the people to identify more with the government than with the guerrillas.

Considerably less spectacular than this work with the isolated and homeless, but no less dedicated, were the continuing efforts of international businessmen. These included both concern for the health of Third World employees and a broader interest in encouraging local governments to develop general public health services in order to gain broader protection and to legitimize the existing order. One of the expressions of business interest was a conference on "health problems of industries operating in tropical countries," held in 1950 at the Harvard School of Public Health. The representatives of some twenty-three multinational corporations were brought together with public health experts to discuss the danger of Communism and to exchange information on how health work could be brought to bear in the fight against it. In his welcoming address, Dean James Simmons made the focus of the conference clear to all

Powerful Communist forces are at work in this country and throughout the world, taking advantage of sick and impoverished people, exploiting their discontent and hopelessness to undermine their political beliefs.

Health is one of the safeguards against this propaganda. Health is not charity, it is not missionary work, it is not merely good business — it is sheer self-preservation for us and for the way of life which we regard as decent.

Through health we can... prove, to ourselves and to the world, the wholesomeness and rightness of Democracy. Through health we can defeat the evil threat of Communism.⁴¹

While private business girded its loins for fighting workers and peasants under the banner of anti-Communism, the Rockefeller Foundation was in the process of limiting the operational aspects of its health programs. This reduction

stemmed not from a reluctance to continue the good fight, but because major new resources had entered the international public health field and the Foundation's interests are more diverse. Accordingly, the Foundation program could be limited to a few research projects and to the provision of expert advice to other groups.

Besides the new World Health Organization and its associated agencies (e.g. the revitalized Pan American Sanitary Bureau) the most important of these new resources to enter the field of international public health were those of the United States bilateral aid programs.

Before the Second World War the United States had been signatory to a number of international sanitary conventions and the U.S. Public Health Service (USPHS) had cooperated with the League of Nations' Health Committee, including the Malaria Commission. The USPHS had also had a number of scattered international projects largely in the Western Hemisphere where it supported the Pan American Sanitary Bureau. During the war the U.S. government was led to take an enlarged interest in malaria control for several reasons. In the war in the Pacific malaria was often a greater source of "casualties" than the Japanese. As a result of this and a shortage of quinine the U.S. launched an urgent research program to develop synthetic anti-malaria drugs. Also, at home the USPHS had once more to push a vigorous anti-malaria program in cooperation with the US military in and around training camps and cantonments in the Southern US where malaria was still a problem. Finally, the war led to a reorganization of the various American international projects. Those in the Western Hemisphere were brought together and coordinated within a more centralized program under Nelson Rockefeller's Institute of InterAmerican Affairs (IIAA). The IIAA public health program was part of the overall wartime economic and psychological operations approach to Latin America. The resultant joint projects with other hemispheric governments included malaria control which was given top priority.⁴²

After the war this kind of work was continued under the auspices of the IIAA as part of Point Four. But at that point, rather than being used as a weapon against fascism, the government public health programs were intended to play an important role in fighting social unrest and agrarian revolution. In Europe, the public health activities of the American Economic Cooperation Administration (ECA) under the Marshall Plan and of the United Nations' Relief and

Rehabilitation Administration were partly aimed at quelling leftist popular fronts. As for the Third World outside of Latin America, a 1952 report from the public health division of the ECA's mission to Cambodia, Laos and Vietnam nicely summed up the aims of those programs:

Today, American public health specialists of all kinds — health officers, sanitary engineers, nurses, laboratory technicians, and health educators — are participating in technical assistance programs being conducted... in many parts of the world. These programs are not only contributing to the welfare of the countries in which they operate, but, through their effect in bolstering the economic and health standards of the participating nations, are aiding in the establishment of stable governments.⁴³

The report, which was primarily concerned with describing a trachoma control project in North Vietnam, went on to make clear that the public health programs were launched primarily for their propaganda efforts in hope of countering France's deteriorating situation in Indochina.⁴⁴

Other public health projects in Vietnam included an anti-malaria DDT team which, under the cover of "political neutrality" could penetrate Vietminh zones and demonstrate the government's "interest" in the peasants. Later on when American military intervention in Vietnam escalated, the control of widespread malaria was sought for other reasons. In 1965, it was the war in the Pacific all over again as "the number of (US) soldiers evacuated from Vietnam because of wounds and the number evacuated because of malaria were equal."⁴⁵ Among the many other countries in which public health financed by US foreign aid played an obvious political role in the 1950s were: Iran during the 1953 overthrow of Mossadegh,⁴⁶ Thailand during counterinsurgency campaigns of the early fifties,⁴⁷ and the Philippines during the fight against the Hukbalahap guerrillas in the late 1940s and early 1950s⁴⁸.

The Politics of a Secret Report

The year 1956 was a turning point in American support for the fight against malaria because in that year President Eisenhower decided to throw U.S. financial support behind the WHO world-wide malaria eradication campaign which had been announced the previous year.⁴⁹ The official presentation of this decision naturally held it up as another sterling example of the

humanitarianism of the U.S. government. The real reasons behind this move were much less altruistic. Eisenhower's decision was based on the results of a secret study undertaken by the State Department in response to a request to come up with new American foreign aid programs which could help counter the then recent expansion of Soviet aid efforts in the Third World. The request was made to the International Development Advisory Board (IDAB). This special policy committee of businessmen, labor leaders and educators had been established by Truman to formulate Point Four policies and was originally headed by Nelson Rockefeller. The IDAB, whose importance has been little recognized by scholars, played a vital role not only in formulating general foreign aid policy in this period, but also in specific areas of policy such as the use of public health discussed here.

In the fall of 1955 when the request for new ideas came down, IDAB member Dr. Wilton L. Halverston, associate Dean of the School of Public Health at UCLA, submitted a memorandum to the Board suggesting a new program of support for malaria eradication and urban sanitation. Such programs he opined, would "have a deep significance in economic development, as well as resounding propaganda effects." He argued that because American support for such programs

...could be received throughout the world only as a humanitarian action on the part of the people of the United States and their government toward their fellow human beings. This would do much to counteract the anti-United States sentiments which have been aroused by subversive methods in these countries. If properly carried out, programs like these will challenge the Russian approach."⁵⁰

As a result of this suggestion a subcommittee was formed and a report was written. It was soon approved and sent to Eisenhower.

Along with the usual analysis of the costs of malaria to capitalist accumulation the report also included an examination of the past political usefulness of malaria control in several Third World countries:

The present governments of India, Thailand, the Philippines, and Indonesia, among others, have undertaken malaria programs as a major element of their efforts to build political strength and combat Communist infiltration."⁵¹

These countries, the report noted, were recipients of "outstanding assistance" by the ICA. In India, for example, the report quotes an Indian malarialogist on the usefulness of the program in increasing government-peasant contacts: "No service establishes contact with every individual home at least twice a year as the DDT service does unless it be the collection of taxes."⁵²

The Board also heard testimony from its special consultant, Rockefeller Foundation malaria expert Dr. Paul Russell. Dr. Russell brought to the IDAB views developed during his many years of work in this field with the Foundation:

Dr. Russell pointed out that although malaria is no longer a problem in the US it is of tremendous importance to the American businessman, as 60 per cent of our imports come from and 40 per cent of our exports go to countries in which it is a problem... In concluding Dr. Russell pointed out that a malaria eradication program was a dramatic undertaking that would penetrate into the homes of people and would benefit the US politically and financially. The sort of aid that comes from the heart and would thereby prove to people of these underdeveloped countries that we were really interested in their well-being."⁵³

Profits and counterinsurgency packaged in a humanitarian wrapping — an argument at least as old as the earlier effort to transform the American South.

Later, after he had announced the new anti-malaria program, Eisenhower put it to its originally planned cold-war use by citing the program as another example of American humanitarianism and by magnanimously inviting "the Soviets to join with us in this great work of humanity."⁵⁴

Part of the new monies were to be used through the ICA and part through the WHO and the Pan American Sanitary Organization. The decision to support malaria eradication through such *international* bodies was perfectly consistent with the IDAB report. It had explicitly pointed out that the same political benefits from US aid could be obtained indirectly, by channeling funds through multilateral programs in those "areas and nations with which the United States is not directly working through the ICA."⁵⁵ Moreover, since the multilateral agencies, especially the WHO, were closely interrelated with American private and government programs, increased

funding for the former could only benefit the latter. These examples from the postwar history of public health and malaria control provide ample evidence that, as in earlier periods, decisions on whether or not to expand support for malaria control have been shaped as much and perhaps more by a consideration of political factors as they have by any consideration of welfare or humanitarian concerns.

III

An adequate theoretical-political analysis of the foregoing history entails two fundamental observations. First, in each of the above cases it is obvious that the development and underdevelopment of public health has been intimately bound up with class conflicts. Second, and perhaps less obviously, while all may concur that public health institutions are tools of one side of these conflicts, namely capital, it is also true that the classes on the other side are not merely victimized but are also frequently aggressive and sometimes take the initiative in the struggle. In fact, we have seen how capital's programs were often a reaction to the struggles of the various groups of workers concerned. As a result, the public health programs that were put together by capital emerged out of the conflicting initiatives of both sides. Industrial workers, peasants, and others wanted and fought for a better standard of living, which certainly included better health. At the same time capital fought to maintain or extend its control. We can see how the capitalist programs appear partly as attempts to turn the demands for better health against the demanders by shaping the provision of those services in ways conducive to capitalist control, e.g. higher productivity, differential services to divide and stabilize the class, etc. But at the same time the improved public health that flowed from these conflicts has strengthened the industrial and other workers and thus increased their ability to continue to fight.

These struggles have shown that health cannot be defined in abstraction but is defined in practice by each of the classes. For the workers health is defined in terms of their own autonomous aims. For capital the "health" of a worker has consistently been defined functionally by his or her ability and willingness to work. A worker who *can* not work is sick and requires medical treatment. A worker who *will* not work is also

sick and requires psychiatric treatment, prison or worse.

These workers appear to constitute a great many different classes: industrial and agricultural proletariat, peasants, housewives, etc. Because of this diversity many of the theoretical tools traditionally used to analyze relations between capital and wage labor may appear as inappropriate in the case of the other classes. And yet the very diversity shows that capital has struggled not only with waged laborers but also with many kinds of unwaged laborers. The question is how do we grasp this relation theoretically and politically.

One traditional way to grapple with this problem is to use the concepts of historical materialism. In that approach the "relations of production" of capitalism are limited to those between capitalists and wage labor alone. All other forms of labor are located in other "modes of production". For various reasons discussed more fully elsewhere⁵⁶, I have found this approach to be theoretically misleading and politically obfuscating and have abandoned it. Instead I propose to analyse these struggles within a radically different Marxist perspective, one that brings the politics of class conflicts to the fore and allows us to apply certain powerful analytical tools in the elucidation of the dynamics of those conflicts.

This perspective sees the struggle by capitalist business for stability and profits and by the various kinds of workers for higher incomes, better health and less work as being a struggle between only two classes: that of capitalists who achieve wealth and social control through their ability to make others work, and that of workers who must sell their labor power in order to live. But here the sale of labor power is not confused with the wage relation and is conceived more broadly so that the working class contains both waged and unwaged. Capitalist society is the social totality encompassing these two classes.

What is the justification for including such unwaged workers as peasants, housewives or sharecroppers within the working class when even Marx himself explicitly excluded them? Simply this, in the period when Marx wrote he saw these groups of workers as disappearing species being rapidly absorbed into the wage-labor force. Housewives and children were being absorbed into the factory.⁵⁷ Peasants were, on the whole, being reduced to an agricultural proletariat.⁵⁸ In these circumstances, he could easily exclude them from his theoretical analysis of fully

developed capital. So he focused on the exploitation of waged-labor within the factory, relegated peasants or primitives to pre-capitalist modes of production, and simply neglected housework as being taken care of by the working class.⁵⁹ If these historical trends which Marx observed had continued uninterrupted, then perhaps we too would be justified in continuing to use his analysis with no revision. But when we examine the historical period since Marx wrote we are forced to recognize two things. First the reemergence of the family and housework, which capital has sought systematically to structure and plan, as a fundamental tool for the control of the working class. Second, the recurrent use of land reform to stabilize peasants on the land — to keep them working but working at their own reproduction as reserve army, and to the extent that they produce an agricultural surplus, contributing to the expansion of capitalist circulation.

The importance of these phenomena, as Selma James has pointed out, is that the work performed by houseworkers and peasants is not outside of capital but is integral to its development.⁶⁰ These unwaged workers, because they *work* for capital maintaining and reproducing its labor force constitute a “reserve” army only with respect to the waged. The wage can no longer be taken as defining capitalist exploitation but must be seen to hide it. It hides both the unpaid labor in the factory (as Marx showed) and the unpaid labor outside the factory (which he mostly neglected). In other words capital has been forced to attempt to extend its control into what I will call the “community” as well as in the factory. It is within this historical phase of capitalist development that it makes sense to see sharecroppers, peasants, housewives, etc. as parts of the working class.

This way of grasping the nature of capitalist society is one political outcome of the international cycle of working class struggles of the late 1960s. It was the circulation of struggle and hence the growing unity between the peasants in Vietnam and the unwaged students of Berkeley, between the unwaged ghetto youths and the groups of black auto factory workers, between the waged workers at Fiat and the unwaged Italian housewives, which forced the recognition that capitalist society had evolved into one great global *social factory* in which capital tries to structure the work of both waged and unwaged so that both contribute to its own control and expansion.⁶¹

The implications of this perspective for the analysis of public health are fundamental. In political terms the perspective focuses our attention on the key issue: the class struggle itself and not on abstract structural models. In theoretical terms we are given a framework within which we can use much of Marx’s *Capital* to analyse the character of the class relations we observed above. The impasse of past Marxist analysis of public health is due to the lack of a theoretical way to deal with either investment in variable capital to raise its efficiency or the existence of such activity outside the factory — which is just where most public health programs occur.

Clearly in terms of this perspective public health is the socialization of a particular form of the work of reproducing the labor force (“housework”): the work of preventing and curing illness. It is an aspect of housework that capital has planned not only within each household but at the level of the social factory as a whole. When it mobilizes an anti-malaria campaign aimed at raising productivity, for example, the productivity raised is not only in the factory but in the whole society. To grasp that the society outside the factory has been shaped for the production and reproduction of labor power is to move in the direction of a solution to the impasse of past approaches. If we see that the reproduction of labor power, as a work process in capital, is analogous to the reproduction of industrial capital and intertwined with it, then we can analyse the reproduction of labor power in value terms. That makes it possible to establish not only qualitatively but also quantitatively the relations between public health investment in variable capital, the resultant increase in the capacity to work, the fall in the value of labor power, and the change in surplus value. (For the theoretical explanation of these relationships see the Appendix).

This framework allows us to see how corporate investment in “human capital” may raise profits in at least three different ways. First, productivity may rise due to increased efficiency which would reduce per unit costs of output and lead to a resultant increase in profits when sold at market prices. Second, the decline of malaria or other diseases may also result in an increase in the intensity of labor as better health is followed by company planned speed-up. Third, the increased ability to work may reduce the value of other variable capital outlays more than the anti-malaria expenditures so that the total value of

variable capital can actually fall with the necessary positive impact on surplus value. At the aggregate level of national and international public health campaigns where expenditures by capital are not direct from business but are financed through government, the aim is a general drop in the incidence of disease accompanied by a general rise in the productivity and intensity of work throughout the social factory.

So far I have only analysed the cases of *development* of public health programs which lead to increased work and profits for capital. I have not yet dealt with the other side of the coin, those cases where public health has been *underdeveloped* with the aim of ultimately creating the conditions of capitalist profitability. Three points need to be emphasized here. First, development and underdevelopment are understood here neither as the outcome of historical processes (as bourgeois economists recount) nor as the processes themselves (as many Marxists use the term). They are rather two different *strategies* by which capital seeks to control the working class. Second, they are always coexistent because hierarchy is the key to capital's control and development for some is always accompanied by relative or absolute underdevelopment for others in order to maintain that hierarchy. Third, they are not simply converses but represent structurally different approaches.

By development I mean a strategy in which working class income (including health) is raised in exchange for more work. For example, various "development" models, e.g. those of Lewis or Ranis and Fei, allow for an income differential which will draw workers into industrial accumulation. The alternate strategy, in which income is reduced in order to impose the availability for work, I call a strategy of *underdevelopment*. The models referred to include the relative underdevelopment of agriculture to stimulate outmigration to developing industry. More dramatic has been the vast primitive accumulation of labor power through absolute deprivation and poverty described in section II above. In the case of development strategies like those concerning "human capital" increased investment in variable capital is designed to provoke increased output as we have seen. Where such a strategy either fails or is prejudged to be useless because improved income would result in less rather than more work (a situation such as that depicted by the backward bending supply of labor for instance) then re-

pression (e.g., forced labor or the hut tax) and the destruction of alternative sources of income (e.g. monopolizing land) have been used to force more labor out of the working class.

We can see that the underdevelopment of health would constitute a "dis-investment", a reduction in working class income — a destruction rather than an expansion of human (variable) capital. But the self-destruction of capital, although it might at first seem irrational, should upon closer examination hardly seem unusual. It is rather one of the essential characteristics of capitalist crisis whereby the conditions of profitability are restored. The fact that this has traditionally been seen mainly in the case of monetary or commodity capital should not deter us from seeing both that the self-destruction of capital must always be most fundamentally the destruction of working class power and that one means to such destruction is reduced health. In the historical experience examined above there have been examples of both development and underdevelopment. In the South we saw mainly a development approach. In the colonial period the early devastations underdeveloped health as one aspect of primitive accumulation. Later a mixture of development and underdevelopment was used in the differential investment in improved health for some and none for others. Etc. Etc. We can see then that not only is disinvestment in health a theoretical possibility for capital but it has often been just that in practice. And if it has been so in the past, then we must be open to the possibility that that is exactly the character of the developments in public health and malaria control in many areas of the world today.

IV

I want here to sketch very briefly an analysis of the current international crisis which provides a framework within which the current decontrol of malaria finds a place as an underdevelopment strategy in many areas of the world. That analysis, developed in *Zerowork*, which takes a working class point of view and breaks decisively with all existing leftist interpretations, argues that the current crisis is internal to capitalism only in the sense that it is a crisis of power between the working class and capital. More specifically "the" crisis really consists of two moments of crisis: one imposed on capital by the cycle of

working class struggles of the 1960s, referred to above, which undermined its control over labor, and in response, another which capital has imposed on the working class to regain its control.

The working class struggles which imposed the crisis on capital internationally are understood as combining the *wage struggles* of the waged and the unwaged together with an increasing *refusal of work and development* that achieved a "political recomposition of the working class and ruptured the link between productivity and income throughout the global social factory."⁶² As a result, capital's post-war attempts to plan accumulation by carefully managing the international hierarchy of waged and unwaged began to crumble. Where development strategies dominated, wage struggles outstripped productivity increases and wage differentials between the U.S., Europe and Japan began to close. Where underdevelopment strategies dominated in the "Third World" (metropolitan ghettos or tropical countries) the income demands of the unwaged produced both development plans and the refusal of development which repeatedly erupted into revolutionary violence. All of these struggles constituted not a cyclical but a profound structural crisis of global accumulation for capital.

Capital's counterattack, as the authors of *Zerowork* have brought out, has taken the form of both long term austerity and long term restructuring. The second moment of crisis is in fact a massive attack on the international working class through the "multinational management of shortages" and the devaluation of money (global inflation). In other words in the crisis capital tries to undercut the wage struggles which it failed to contain nationally by the production of international inflation through shortages, especially in energy and food. The aim is to reestablish hierarchy and hence control through a new fragmentation of the class. At the same time capital has speeded up its historical attempt to escape from labor by investing massively in the development of capital intensive sectors like energy. The object of capital is then a new structure of development and underdevelopment which will break the power the working class gained during the last cycle of struggles. "The question now," as Montano writes, "is how to multinationally re-impose the contradiction between development and underdevelopment within the working class."⁶³

For my purpose here the most immediately relevant aspect of this analysis is the part which deals with the imposition of austerity and the

new structure of underdevelopment. The articles in *Zerowork* bring out two particularly relevant examples of how, in areas where increasing underdevelopment is imposed, decreased income is wielded against the working class. The first is that of food where "letting nature take its toll" has created absolute starvation in Bangladesh and the Sahel and where multinational trade manipulations have produced rising food prices and lowered standards of living in the metropolis. The second is education in the U.S. (although the same analysis can be applied with equal usefulness to many other parts of the world). There the development strategies of the 1960s based on "human capital" which were defeated by the campus upheavals of the late sixties, have now been replaced by underdevelopment in the form of fiscal crisis, budget cuts, accountability and restructuring.⁶⁴

The recent deterioration in government support for public health and medical care appears to be one more aspect of this new period of increasing underdevelopment for some parts of the world. In once developed areas like New York and England, this has taken the same form as with education: "fiscal crisis," cutbacks in government expenditures for medical care and the closing of hospitals. In the Third World data presented in section I above shows that it has also included decreased priority for malaria control. We saw in considerable detail how funding for malaria control was reduced allowing the disease to spread, and-or not increased sufficiently to restore previous levels of control, or even, at times to check its spread. We also saw how this condition was allowed to persist over a period of years in several countries most notably in India and Pakistan.

In India the situation continues today. I have argued elsewhere that India has apparently been among those countries where development efforts have been replaced by underdevelopment.⁶⁵ Certainly the repressive shift of the Indian government from its policies of expanding malaria eradication to underdevelopment through increased illness is consistent with other policies of the Ghandian Emergency such as the smashing of industrial struggles, forced sterilization, and the squeezing of the peasants through manipulation of the terms of trade between agriculture and industry.

Just recently the Philippines has provided a striking example of a rapid shift from the expansion of malaria control to the intentional *with-*

drawal of control for overtly political reasons. In response to the failure of an offered development program to buy off the recent struggles of the Moslem insurgents in Mindanao and the Sulu Archipelago, the government decided in 1973 to stop malaria control spraying on at least one important island in order to help that sickness spread among the insurgent population. "There is lots of malaria down there," the Filipino military commander for the region is reported to have said, "so we have stopped spraying. Sooner or later the rebels will be too weak to fight."⁶⁶

In Pakistan a new program of the Pakistani government and the USAID may check the explosive spread of malaria and increased control.⁶⁷ But even if this is achieved it remains true that public health was allowed to deteriorate unchecked for several years and malaria to reach over ten million persons. Regardless of the precise motivations of the authorities concerned in this and other countries where malaria has been allowed to spread, "nature" has clearly been allowed to "take its toll" in the case of malaria just as it has in the case of drought in the Sahel and flood in Bangladesh.

At this point we should note that in other countries of the Third World, especially in those becoming major new centers of capitalist accumulation (like Brazil, Iran, Saudi Arabia, etc.) malaria control or eradication programs are being pushed ahead rapidly, helping to accentuate the emerging new pattern of development and underdevelopment.

In a period of underdevelopment the demand for public health services becomes primarily a working class demand, especially since the danger of diseases like malaria is so closely tied to the more general question of working class income and standard of living. In such a period where limited government resources are seen to be part of an international strategy of scarcity for the working class, then there is no reason to

accept the "fiscal crisis" arguments that improved health care for some must come at the expense of neglected care for others — that is an argument designed to pit one group of workers against another. Nor need we accept the argument increasingly popular in international capitalist circles that since business is unable to provide the resources necessary for adequate health care, then the only solution is for the poor to emulate the Chinese "barefoot doctors" and provide their own services with minimal government support. Whatever its virtue in improving health in China, such an approach in India or New York not only ignores the contrived nature of current "scarcities" but would mean the exhausting work of self-managing one's own poverty — a job which frees capital's resources for investment elsewhere and drains the energies of the working class which would otherwise be available for struggle to end that poverty.

The demand must be instead for a transfer of wealth and income from capital to the working class sufficient to finance the eradication of malaria. We must be frank and state that in our time *malaria is a political disease*. The working class struggles of the 1960s and 1970s have already pointed the way to the rejection of capital's definition of health as ability to work and to the end of illness producing work itself. The struggle against malaria de-control today is only one phase of those larger struggles but it is one which points to the need to reject both development and underdevelopment while fighting for the appropriation of the wealth we have already produced.

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APPENDIX

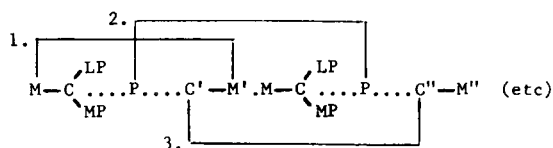
The theoretical-political shift from a factory to a social factory perspective, which is fundamental to the analysis of public health in this paper, requires an analysis of the reproduction of labor power and its integration into Marx's anal-

ysis of the self reproduction of the total social capital. We can do this by using the concept of circuits in *Capital*, Vol. II. With this approach we can specify the qualitative and quantitative relations between capitalist profit and unwaged

labor, between factory and social factory and between investments in public health and surplus value.

One systematic representation of the continuous, self-reproducing, expansion of industrial capital which Marx analyses is:

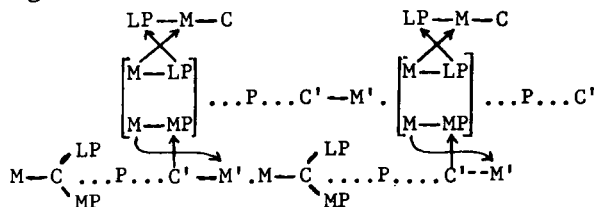
Figure 1



where: M=money, C=commodity, P=production, LP=labor power, MP=means of production. The usefulness of this representation is that it shows 1. the unending, continuous flow of capital through its various stages, 2. that in ...P...C' the source of expanded value is located in unpaid work, 3. through the breakdown into three circuits an identification of the self-reproducing, circular character of capital which is necessary for its continuity is demonstrated, and 4. we can identify the points at which the circuit may be ruptured. An examination of each of the three circuits allows the location and study of the processes which must occur if M, P, and C are to be reproduced. At this point, we note that the reproduction of MP and LP are not accounted for in the circuits. But that is explained by Marx simply enough. First, the circuit here is the circuit of a single individual capital so it must purchase its MP from a different capital (for which MP is C') with which it "interwines." Second, labor power is similarly obtained from outside the circuit of the individual capital. But here we note a lack of parallelism. For while MP is the output of another capital which interacts with the first, and which is part of the total social capital (defined at this point in Volume II as $\sum k_j$ - the sum of the individual capitals), in the case of labor power its reproduction falls outside of capital entirely and, as in Volume I, it is assumed to be taken care of by the working class. The circuit of labor power's sale from the workers' point of view is treated by Marx as simply L-M-C, a deadend process of ac-

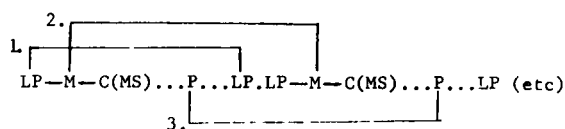
quiring wages to be able to consume.⁶⁶ These relations can be pictured as:

Figure 2



But if, according to the arguments in section III above capital does *not* "leave the reproduction of labor power up to the working class" but rather organizes it, then how are we to analyse that reproduction as integral to capital? I would suggest that as with Marx's treatment of all other commodities, this calls for at least two moments of analysis: that of the "production" of the commodity and that of its "reproduction", i.e., the cycle of its reproduction. Since we began with the circuits let me first propose a formulation of the circuit of the reproduction of labor power and then go "inside" to specify some of the aspects of the moment of production. If we begin with the case closest to Marx - that of the reproduction of the labor power of waged workers (and their households) - then we may write the *circuit of the reproduction of labor power* as:

Figure 3



where the symbols are the same plus MS= means of subsistence.

The change from Marx's formulation is clear enough. Instead of LP-M-C where C stands for "individual consumption" which is sharply differentiated from productive consumption of the means of production in the cycle of industrial capital, here the consumption of the means of subsistence C(MS) is represented as a case of just such "productive consumption" (productive because productive of capital) with the symbols ...P...LP where the commodity output is labor power itself. As in the circuit of industrial capital we have here the systematic representation of capital's ideal: an unending and continuous process

of reproduction. Also as with industrial capital this flow can be analysed into three circuits: 1. the circuit of the reproduction of labor power proper, 2. the circuit of the money (or other resources) invested in the reproduction of labor power, and 3. the circuit of the reproduction of the process of production of labor power.

If we analyse some of the stages of these circuits we can see again the parallelism with the industrial circuit, not only in form but in content in so far as both are today shaped by capitalist social engineering. In LP—M we have the sale of labor power for income — the worker's counterpart of M—LP which is capital's point of departure. What does capital pay and the worker receive? It pays the value of the labor power which it sets to work in home and factory. That value is the value of the means of subsistence — purchased in the market in this case — required for the reproduction of both the waged worker in the factory and the unwaged houseworkers in the home. The M in other words is a wage for the factory worker and a source of income for the houseworkers. But because these last are not paid directly by capital that income is *not* a wage for them; it is simply income. This is the danger of the concept of the "family wage". It hides the fact that the houseworkers only receive their money or means of subsistence from the waged worker who mediates their relation to capital. They are in fact *unwaged*.

M—waged worker—houseworkers
M—LP1—LP2

This waged-unwaged distinction is of great importance because the different relation to capital results in a different power relation. Just as the higher waged have more power than the lower waged, so too does the waged husband through his control over the wage have more power than the unwaged houseworkers, *ceteris paribus* — a point housewives have made time and again. In fact, these same housewives have pointed out that the waged factory or office workers in the case of a family is usually the man while the houseworkers are usually the women and children. In the case of single persons men are still basically defined as wage-earners even though they must also do their own housework while single waged women suffer the consequences of the fact that most unwaged houseworkers are women through lower wages etc.⁶⁹

In M—C(MS) we have the employment of that income to buy the means of subsistence (shopping). This function is usually carried out by the unwaged housewife so that the real value of the wage, determined through exchange for means of subsistence, is either hidden from the wage earner or appears as a responsibility of the unwaged wife who is pressured to get the best deal through exhausting comparative shopping.

With ...P...LP we have just that production process called "housework" by which labor power is in fact produced and reproduced. Here is where that part of the household's labor power not put to work in the factory is employed. While the actual exchange of M for MS is an act of circulation and excluded from the sphere of production, the process of shopping itself which includes transporting self and purchased commodities to and from the point of sale is included in this sphere.⁷⁰ Similarly, at the other end of the relationship the work of producing labor power also includes the work of finding a job, of making oneself available to capital (work which everyone on unemployment insurance is supposed to perform) — although the actual sale is an act of circulation. As for the other aspects of the process of producing labor power women have written a great deal: the long hours unlimited by any union contract or proportionate cost to capital, the frequently oppressive working conditions, etc. The main point here, however, is simply that this work reproduces labor power — defined as the capacity to work for capital — and capital tries to plan and control each of these relations: the labor market, sources of means of subsistence, marriage and family law, home economics, birth control, etc. This circuit of the reproduction of labor power is, like that of industrial capital, specified here at the level of the individual unit, which in this case I will call the "household" — the "community" being the sum of the households: $\sum h_i$.

Now these terms (LP, M, C(MS), P) are all value terms so the next obvious question is what happens to the quantity of value as it passes through the circuit. In the circuit of industrial capital when everything functions according to capital's plan and more work is performed than is paid for, the *production* process results in an increase in the quantity of value $C' > C$. What about the circuit of the reproduction of labor power, does the production process here *increase* the value of labor power? The answer is no. On the contrary, although the *capacity* to work may increase, the more work is performed in the repro-

duction of labor power, the less the *value* of labor power, i.e., the less means of subsistence capital must lay out as variable capital. Or conversely, if there is a reduction in the amount of work done in the home the amount of variable capital must rise to compensate if the same level of the capacity to work is to be maintained. Suppose, for example, that housework consists of handwashing clothes in a creek, preparing farm bought food, sewing clothes from cloth, etc. If this work ceased to be performed by unwaged houseworkers then capital would either have to provide for the higher variable capital costs of laundry, or washing machines, prepared foods, store-bought clothes, etc., or see a reduction in the intensity and-or productivity of work done in the factory as the waged workers were forced to divert energy from factory to self-reproduction — a common phenomenon observed during divorces or separations.

Because of this relationship between work in the household and work in the factory the *quantitative* relation between the two can be determined, at least theoretically. If beyond some point the reduction of unwaged work in the household will result in the reduction of work in the factory, then in value terms it will result in a reduction of surplus value. This is the basis for saying that not only is housework unwaged but also that much of it is unpaid. In theory we could determine in the aggregate the total rise in variable capital which would have to occur consequent to the withdrawal of the work of all unwaged houseworkers and as a result the total reduction of surplus value — or, the total surplus value attributable to the existence of unpaid housework. Such a procedure would reveal not only the surplus value attributable to the unpaid work in each household taken one by one, but would also reveal the effects of the unwaged-waged hierarchy which weakens the working class as a whole and hence causes it to collectively receive less variable capital than it otherwise would.

We have now seen how we can use the concept of circuit to represent the unwaged work performed in the reproduction of labor power and thus picture and analyse both the way labor power is put to work in the factory and the way it is put to work in the household. Marx's formulation in Figure 2 above can be modified to represent this approach simply by filling in (MS) ...P ...LP. so as to link the two circuits LP—M—C. We can thus give a new approximation of the total social capital as the sum of the individual circuits

of industrial capital plus the sum of the household circuits:

$$\text{social capital} = \sum k_i + \sum h_i$$

Before turning to the specific application of these tools to the case of public health programs like malaria control, I want to point out the applicability of the analysis to other forms of unwaged labor, e.g., the peasantry. Here the case of part-time wage-labor drawn from peasant villages forms an intermediary step between the factory-household situation I have just examined and a completely unwaged peasant one. It should not be hard to see that the village to which such semi-waged workers return during part of the year are the equivalent of the household discussed above. It is the domestic and agricultural work done in these villages to produce part of the worker's subsistence which permits capital to pay the low wages such workers earn. As in the household, if such work were eliminated not only would wages have to rise to cover the needs of reproduction (thus lowering surplus value) but new structures of social control (the urban slum, etc.) would have to be substituted.

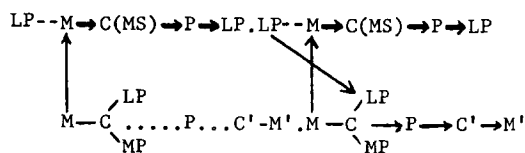
From here it should be only one step to seeing that the peasants who survive on the land with no wage at all differ mainly from the semi-waged or the factory-household by the higher proportion of work time spent on self-reproduction as "reserve" army. Now if there is a marketed "surplus" traditional Marxist analysis sees only the work which produces it and classifies the peasant as a petty commodity producer or even as petty bourgeois. The fact that such peasants produce primarily for subsistence is taken only as a signal of their inefficiency (thus the qualifier petty) but not as a signal of their self-reproduction. If the surplus is exchanged for consumption goods at value then there is no production of surplus value for any one, peasant or capital. If on the other hand the peasant household is cheated by capital, as often occurs, through the manipulation of the terms of trade so that the peasants receive less value than they supply, then there is a surplus value extracted from them.⁷¹ Such exchanges between capital and the peasant are more like those between a piece worker and his or her boss (payment by unit of output) than like that between independent capitalists. Today when peasants' purchased inputs (when there are any) are supplied by multinational corporations and their output is marketed by the same or by national government Food Companies, then that peasantry can be seen to have been effectively

annexed by national and international capital in a vast modern day putting out system. In this case the family's labor has been put to work for capital not only to reproduce themselves in preparation for some future exploitation but also in the present production of surplus value. Moreover, as in the case of the housework done by and for the waged worker, the percentage of total produced value which goes to capital as surplus value is a direct function of the amount of unpaid labor performed for the reproduction of labor power. If the latter (or its productivity) falls (through say illness or drought) then either the amount of surplus value capital can exact must fall (by allowing the peasants to keep more or all of their output, or even by giving them ore in the form of food relief) or the reproduction of labor power is impaired. Over time capital tries to manipulate the two key variables: the quantity of land, which determines the total output,⁷² and the terms of trade, which determines the rate of surplus value, in order to keep this landed part of the working class stabilized on the land or to push it below subsistence and drive it off the land into groups of landless waged or unwaged workers.

This terminates the analysis which situates unwaged workers within the working class and justifies the use of Marx's value theory in examining them. We now need to use the notions to see how public health investments can be understood within this framework.

We have seen that when capital plows resources into public health efforts, one way of defining this policy in bourgeois terms is as an investment in "human capital". We now have the tools to define and explicate this policy in Marxist terms. Let us take the example of some pre-World War II individual corporation which is forced by high costs and absenteeism to initiate an anti-malaria program for its workers and the surrounding area. It invests in a public health campaign to raise the productivity of its workers in order to raise profits. We can picture this in the following way:

Figure 4



Here the dark arrows have been substituted for the usual symbols to trace the process by which the investment in malaria control leads to greater profits for the company. Suppose there is no immediate effect on the current production (first turnover cycle of $M-M'$) but that there is in the subsequent period.⁷³ The expenditure of M , let's say, goes to buy screens and quinine, both of which are provided free to the workers in their communities outside the plantation. This amounts to an increase in total income in the form of physical means of subsistence, supposing other aspects of income are held constant.⁷⁴ These improved anti-malaria efforts result in better health and a consequent increase in the capacity to work of the employees.

In the value terms of the forgoing analysis we can explain the three ways in which such public health investments may raise profits. In the case of increased efficiency and hence increased productivity we have a case of a relative surplus value strategy at the level of the firm. But here the productivity raising investment is in variable rather than constant capital. This process makes sense only because we have seen how the reproduction of labor power is integral to the production of surplus value. For there to be an increase in surplus value there must be an increase in productivity which raises revenues more than the rise in variable capital. In the case of speed-up and increased intensity consequent to improved health we can again see that a net positive impact on surplus value depends on value production being raised more than the increase in variable capital. Finally and least obviously because we have seen how housework can be substituted for elements of variable capital we can also see how increased housework which results from improved health may allow a reduction in the value of other variable capital outlays to such an extent that the public health expenditures are offset and the value of labor power can actually fall. In such a case there is a necessary positive impact of surplus value. In the case of peasants, this kind of campaign appears as a rise in income as a result of government actions with the same kinds of effects: better reproduction of the labor force and its capacity to work. This increased capacity will be realized by capital in either an increased surplus value or in a generally more usable reserve army.

NOTES

1. Government data for 1962 to 1975 are cited in N.P. Sinha, "Malaria Eradication: What Went Wrong?", *Economic and Political Weekly*, June 26, 1976. The 10 million estimate is from an internal AID document, USAID, "Malaria Eradication Programs," USAID Audit Report No. 76-348, May 7, 1976, p. 40.
2. Malaria Makes a Comeback," *War on Hunger*, October 1975, p. 27.
3. The sources of data on the spread of malaria are principally WHO, "Development of the Anti-Malaria Program," Executive Board, 55th Session, Provisional Agenda Item 2.9, 13 December 1974; M.A. Farid, "The World Malaria Situation," Draft Agenda Item 2, UNEP-WHO Meeting on the Bio-Environmental Methods of Control of Malaria, Document MAL-WP-75.2, Lima, 10-15 December 1975; and A.W.A. Brown, J. Haworth and A.R. Zahar, "Malaria Eradication and Control From a Global Standpoint: A Review Article," *Journal of Medical Entomology*, 29 May 1976.
4. *Ibid.*
5. Of the estimated 120 million global cases of malaria in 1974 about 96 million were in tropical Africa out of a total population of 201 million. An estimated 1 million African children die of malaria each year. A.W.A. Brown, et. al, *op. cit.* pp. 14-15.
6. See references in footnote 3.
7. At the beginning of the period India had the largest number of cases outside of Africa. The incidence was reduced from a devastating 75 million cases and 750,000 deaths in 1952 to 60,000 cases and very few deaths in 1962. M.A. Farid, *op. cit.* p. 10.
8. Besides the dozens of WHO documents the *New York Times* has carried numerous articles on the spread of malaria and the inadequacies of efforts to combat it. See the *Times* annual index for the years 1969 to 1975.
9. WHO, *The Work of WHO, 1975*, (Annual Report) WHO Official Records, No. 229, Geneva 1976.
10. Among the WHO reports which give country by country analyses and data are WHO, "Development..." *op. cit.* and M.A. Farid, *op. cit.*
11. These included the very thorough "Report of the Evaluation In-Depth of the National Malaria Eradication Programme of India" November 1970, mimeo, which recommended structural changes and expanded funding. More recent Indian studies have apparently been both less extensive and less far reaching in their recommendations. They have increasingly accepted the government's inadequate funding and the expected continued spread of malaria as given. These include the Report of the National Committee 1973, those of the two Committees of Experts in March and September 1974, and the results of the Consultative meeting in New Delhi in August 1974. This last meeting was especially submissive to government refusals to expand support. According to WHO reports it declared the reports of the 1970 In-Depth team and of the 1973 National Committee "unrealistic" and that "an important resurgence of malaria was unavoidable." It proceeded to "stratify" the country according to endemic levels and to study "which activities might be discontinued, or reduced, with the least damage and what mechanisms should be set up in order to limit mortality and morbidity in case of epidemics which could be expected in large areas." WHO, "Development..." *op. cit.* p. 36.
12. See "Report of the Evaluation In-Depth..." *op. cit.* p. 9 and WHO, "Development..." *op. cit.*
13. "Review of Malaria Situation in India," (Paper submitted by the Government of India) WHO, SEA-RC28-8, July 1, 1975, pp. 2-3.
14. See references in footnote 3.
15. The USAID which once funded programs in over thirty countries had, by 1972, reduced its support to only five despite protests by its public health experts that such action could be disastrous. UNICEF had practically phased out its commodity support to malaria programs by 1973 and the PAHO has also greatly reduced assistance to anti-malaria programs for lack of funding. USAID, *op. cit.* p. 12-14.
16. WHO, "Malaria Control in Countries Where Time-Limited Eradication is Impracticable at Present: Report of a WHO Interregional Conference," WHO Technical Report Series, No. 537, Geneva 1974.
17. See most of the studies including USAID, *op. cit.* and N.P. Sinha, *op. cit.* Sinha points out that the decline in public health expenditures (death control) accompanied the new emphasis on birth control in the late 1960s. But he fails to explain why the latter tended to replace the former rather than complement it.
18. Examples of per capita costs: India, 6 cents in 1962 down to 2 cents in 1973; Pakistan, 4 cents in 1972 and 8 cents in 1973; Thailand, 26 cents in 1970 and 43 cents in 1971. For others see: "Report of the Evaluation In-Depth..." *op. cit.* p. 19 and WHO, "Development..." *op. cit.*
19. USAID, "Report on the Audit of the Malaria Eradication Program," Audit Report No. 74-003, August 31, 1973, p. 13.
20. USAID, "Malaria Eradication Program," *op. cit.* p. 9.
21. Much of the historical material which follows in this article is adapted from the author's doctoral thesis: *The Origins of the Green Revolution*, Ph.D. Stanford University, 1975 (unpublished).
22. For more discussion of these diverse but interlocked efforts in social engineering, see Cleaver, *Ibid.*, Chapter III.
23. M. Boccaccio, "Ground Itch and Dew Poison, the Rockefeller Sanitary Commission, 1909-14," *Journal of the History of Medicine and Allied Sciences*, January 1972.
24. *Ibid.*, pp. 29, 45; Rockefeller Foundation, *Annual Report*, 1923, p. 88.
25. R. Fosdick, *The Story of the Rockefeller Foundation*, pp. 47-50; ICA Expert Panel on Malaria, "Report and Recommendations on Malaria: A Summary," *Amer. J. of Trop. Med. and Hyg.*, July 1961.
26. The aim of the Rockefeller malaria programs, according to Director Wickliffe Rose, was "the highest degree of malaria control consistent with a reasonably low per capita cost." Cited in Paul Russell, *Man's Mastery of Malaria*, N.Y., 1955, p. 232. On the phenomenon of malaria regression also see Russell, Chapter 13.
27. For a quick look at the net negative impact of French colonial medicine in Morocco and at the seamier side of medicine — the use of doctors as political and even military spies, differential provision of services, etc. — see James Paul, "Medicine and Imperialism," *Health Politics*, NYU, 1975, 5, 4, pp. 3-11.
28. Victor Heiser, who worked first with the U.S. Army and

then with the Rockefeller Foundations noted this European attitude in his early work in Asia. Victor Heiser, *An American Doctor's Odyssey*, (New York, Norton, 1936).

29. P. Russell, *op. cit.* and United Kingdom, *The Fight Against Malaria in U. K. Dependencies*, 1960.

30. A detailed study which summarizes and synthesizes dozens of earlier studies concerning the impact and costs of malaria on India is that by Lieut.-Col. J.A. Sinton, *What Malaria Costs India*, Health Bulletin No. 26, Government of India, 1956, which is a compilation and condensation of articles written in the 1930s and published in the Records of the Malaria Survey of India (Vol. V., Nos. 3,4, 1935 and Vol. VI, No. 1, 1936). Especially interesting is Chapter 4 on "The Financial and Economic Losses" which contains much information on the motivations and extent of anti-malaria work in 20th Century colonial India.

31. Heiser describes many situations where disease was causing high, sometimes prohibitive, costs to businessmen, pp. 37-8, 269, 292, 295-7, 300-1, 449, 455, 456-7. Among the costs of sickness incurred by United Fruit and other companies were: low productivity due to illness, time lost due to hospital visits, excessive housing costs caused by the necessity of keeping more workers than would otherwise be necessary. Edward I. Salisbury (United Fruit medical director), "Costs and Returns of Industrial Health Services," *Industry and Tropical Health*, Vol. 1, 1950, pp. 172-3.

32. John C. McClintock, "Responsibilities of Industry for Health of local Populations Abroad," *Industry and Tropical Health*, Vol. II, 4-20-22, 1954, pp. 39-42. On the early need for plantation medicine in labor scarce Hawaii, see Dr. William B. Patterson "Plantation Medicine in Hawaii," *Industrial Medicine and Surgery*, October 1949.

33. In 1916 Gorgas headed an International Health Board commission to South and Central America to study the possibilities of a yellow fever control campaign. When he retired from his job of Surgeon General in 1918, he joined the IHB to head their yellow fever work, Rockefeller Foundation, *Annual Report*, 1920.

34. A well-known Catholic curate in Latin America, once publically commented on the program of the Rockefeller Foundation: "You all know we never cared for or trusted the Yankee, but since this institution has come and worked here, and is showing us that they (the Yankees) have some heart in them, we feel like giving them the embrace of brotherhood and making them feel more welcome hereafter. I should love to shake Mr. Rockefeller's hand and say, 'You are one of us.'" Quoted in Catherine Leweth's "Sourcebook for a History of the Rockefeller Foundation," Vol. 5, p. 1272, Rockefeller Foundation Archives, New York. Another reason for developing public health abroad was also dictated by self-interest: that of eliminating foreign sources of disease which could contaminate areas, including the United States itself, which had been cleared of dangerous illnesses. The danger to the continental U.S. of the yellow fever in Cuba was "one of the principal reasons for our going to war with Spain" according to Dr. Victor Heiser, *op. cit.* p. 34. While this unquestionably overrates the importance of the factor to the men responsible for the decision to go to war, it does reflect a point of view apparently common in the Rockefeller Foundation. Frederick Gates, Rockefeller's business partner and almoner, for example, approved the health work of the League of Nations because, he said "...it relieves America, and particularly the International Health Board in part from extensive operations

among decadent peoples justified in the past perhaps mainly as a protection against international infection." "Philanthropy and Civilization", Memo to the Foundation board of directors; Gates Papers, (1923), p. 19, Rockefeller Foundation Archives, New York.

35. Kenneth W. Thompson, *Foreign Assistance: A View from the Private Sector*, (Notre Dame: University of Notre Dame Press, 1972) pp. 11-12.

36. See Cleaver, *op. cit.* Chapter IV on the private efforts to save China, especially pp. 194-6, 222-5 on Rockefeller support for public health and Jimmy Yen.

37. For the history of the Foundation's role in building international approaches see Fosdick's history of the Foundation, *op. cit.* and Paul Russell's history of malaria control, *op. cit.*

38. On the Keynesian effort to harness class struggle for capitalist development see Guido Baldi, "Theses on the Mass Worker and Social Capital," *Radical America*, May-June, 1972 and Mario Tronti, "Workers and Capital," *Telos*, No. 14.

39. The major studies which founded this concept as strategy included those of economists Theodore Schultz, Gary Becker and Robert Solow, e.g. G. Becker, *Human Capital* (N.Y., NBER, 1965) or R. Solow, "A Contribution to the Theory of Economic Growth," *Quarterly Journal of Economics*, February 1965. On the Kennedy era investments in "human capital" as a strategy in the class struggle see George Caffentzis, "Throwing Away the Ladder: The Universities in Crisis," *Zerowork*, No. 1, 1975.

40. The story and importance of Dooley's use of medical care and role in the Vietnam Lobby, have been analysed in R. Scheer, "Hand Down Your Head Tom Dooley," *Ramparts* Jan.-Feb. 1965, and more recently in S. Weissman, "Tom Dooley-CIA," *Pacific Research and World Empire Telegram*, June 1972, which was able to draw upon the CIA material in the *Pentagon Papers*.

41. James S. Simmon, "Welcoming Address," *Industry and Tropical Health*, Vol. 1, 1950, p. 13.

42. J.B. Bingham, *Shirt-Sleeve Diplomacy: Point 4 in Action*, (New York: John Day, 1953). On the IIAA see pp. 19-23. On Point 4 public health programs see pp. 82-103.

43. E. Braff and W. Winklestein, "Field Treatment of Trachoma in North Vietnam," *Public Health Reports*, Vol. 67, No. 12, December 1952, p. 1233.

44. *Ibid.* p. 1234.

45. W.D. Tigertt, "Present and Potential Malaria Problems," in E.H. Sadun (ed) "Research in Malaria," *Military Medicine*, the official journal of the Association of Military Surgeons of the U.S., Vol. 131, Supplement No. 9, Sept. 1966.

46. David Wise and T.B. Ross, *The Invisible Government*, pp. 110-14. Also Jerrold L. Walden "Restraining the CIA" in Richard Blum (ed) *Surveillance and Espionage in a Free Society*, (NY: Praeger, 1972), p. 225 and IDAB, "Malaria Eradication" Special Report to the President, April 13, 1965, pp. 8-9.

47. Mutual Security Agency, *Southeast Asia*, 1952, p. 51.

48. IDAB, "Malaria Eradication," *op. cit.*

49. "US Gives \$7 million to Malaria Eradication Campaign," U.S. Department of State Bulletin, December 23, 1957. Also Charles H. Bell to Harry A. Bullis, 8-18-58, p. 1, Bullis Papers, Minnesota Historical Society Archives.

50. Dr. Wildon L. Halverston, IDAB Memorandum to Eric Johnson, "Proposal Concerning Malaria Eradication and Urban Sanitation," December 20, 1955. W.I. Myers Papers, Cornell University Archives, Box 6, 21-2-466.

51. IDAB, "Malaria Eradication", *op. cit.*, p. 8. I obtained a

copy of this report through a Freedom of Information Act request to the State Department.

52. This quote comes from a discussion between D.K. Viswanathan and a vice president of the Rockefeller Foundation, see Viswanathan's *The Conquest of Malaria in India: An Indo-American Cooperative Effort*, Bombay, 1958.

53. IDAB "Summary Minutes," April 13, 1956, Myers Papers, Box 6, 21-2-466, Cornell University Archives.

54. For Eisenhower's announcement see Department of State Bulletin, June 10, 1957. For his later invitation to the Russians see "Annual Message to Congress on the State of the Union," January 9, 1958, in *Public Papers of the Presidents*, D.D. Eisenhower, 1958, p. 13. Typically, when the *New York Times* carried a long article on the new program, with quotes from the IDAB report which was not publically available, it was careful to omit any reference to the political considerations discussed therein. It thus helped maintain the facade of humanitarianism by withholding information which would have cast a very different light on the whole issue. *NYT*, May 22, 1957.

55. "Malaria Eradication," *op. cit.*, p. 10.

56. H. Cleaver, "The Internationalization of Capital and the Mode of Production in Agriculture," *Economic and Political Weekly*, March 27, 1976.

57. K. Marx, *Capital*, Volume I, eg. Chap. XV, section 3a.

58. K. Marx, *The Civil War in France*, first version.

59. K. Marx, *Capital* (NY: International Publishers) Vol. I, Chap. XXIII. Marx is somewhat ambiguous on this point since he recognizes that the production of labor power "is productive to the capitalist and to the State, since it is the production of the power that creates their wealth." (p. 573, my emphasis) But generally he holds to the view that while "The maintenance and reproduction of the working class is, and must ever be, a necessary condition to the reproduction of capital," nevertheless capital "may safely leave its fulfillment to the laborer's instincts of self preservation and of propagation." (p. 572) Also see Volume II, pp. 57-8.

60. Selma James' two seminal articles on the peasant as unwaged worker for capital are: *Sex, Race and Class* (Bristol, Falling Wall Press, 1975) and "Wageless of the World" in Wendy Edmond and Suzie Fleming, *All Work and No Pay* (Bristol, Falling Wall Press, 1975).

61. The two major groups working within this perspective in the United States today are Wages for Housework and *Zero-work*. The Wages for Housework movement of unwaged women was able, through a series of political struggles to break with the limited factory focus of the Left, to begin to develop an analysis of other sectors of the unwaged, and to launch an autonomous movement that challenges capital both right and left. See, Selma James *op. cit.* and Mariarosa Dalla Costa's "Women and the Subversion of the Community," in *The Power of Women and the Subversion of the Community* (Bristol, Falling Wall Press, 1972). *Zero-work*, a journal published in New York by American, Canadian and Italian men, has set out a detailed analysis of the cycle of struggles of the 1960s which is outlined briefly in part IV of this paper. *Zero-work* (292 Warren St. Brookline, N.Y. December 1975).

62. "By 'political recomposition' we mean the level of unity and homogeneity that the working class reaches during a cycle of struggle in the process of going from one composition to another. Essentially, it involves the overthrow of capitalist divisions, the creation of new unities between different sectors of the class, and an expansion of the boundaries of what the "working class" comes to include." *Zero-work*, *op. cit.* p. 4.

63. Mario Montano, "Notes on the International Crisis," *Zero-work*, No. 1, Dec. 1975, p. 51.

64. *Ibid.*, pp. 52-53, and Caffentzis, *op. cit.* pp. 130-139.

65. H. Cleaver, "Internationalization of Capital..." *op. cit.*

66. On the development offer see Tillman Durdin, "Drive to Pacify Southern Philippine Moslems is Begun," *New York Times*, December 11, 1972. On the use of malaria de-control see: James P. Sterba, "Manila is Using Malaria Mosquitos to Fight Rebels," *New York Times*, March 29, 1973.

67. "Malaria Makes a Comeback," *op. cit.* This new program launched in late 1975 which is expected to cost some \$96 million dollars (\$60 million from USAID) appears to be the first serious effort to limit the current ravages of malaria. What the outcome will be is impossible to tell. But considering the number of cases had been predicted to rise to 23 million in 1979 out of a population of only 80 million, it would seem that the danger of uncontrollable epidemic outweighed whatever specific political factors had pushed the Pakistani government to go so long without major response.

68. K. Marx, *Capital*, Vol. II, p. 57.

69. See Dalla Costa, *op. cit.*

70. This is in keeping with Marx's analysis of transportation in *Capital*, Vol. II, Chapter VI, section III.

71. This "unequal exchange" is neither the variety which Marx discusses in Volume I, Chapter 3, nor the variety which emerges from the analysis of the formation of the general rate of profit in Volume III. It is rather the kind which is managed by capital in order to exploit the working class or a part of the working class, e.g. the peasantry, through the manipulation of relative prices. Perhaps the most striking example was that of the use of the "scissors" against the Russian peasants. It has often been an integral part of capitalist development schemes.

72. This analysis of the role of landownership must be contrasted with Marx's of ground-rent in the last part of Volume III. This is not a denial that Marx's analysis is valid for landowners who do not work, but only collect rent, but rather an affirmation that a different analysis is required for large numbers of small peasant landholders under contemporary circumstances.

73. If there is a direct effect, say through on-the-job distribution of quinine then the quinine can be looked at as an added means of production (like safety glasses or machine guards) which directly improve productivity within the industrial circuit.

74. Capital, of course, often tries to shift the cost of such investment onto the working class, e.g., by raising taxes, so that there is not even an initial rise in variable capital.