Original Article on Underdevelopment, Health, and Medicine

MALARIA AND THE POLITICAL ECONOMY OF PUBLIC HEALTH

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After more than a decade when the disease was under increasing control, malaria has been making a dramatic resurgence in the 1970s. Even more troubling has been the inadequacy of government response despite appeals by public health officials and despite the availability of adequate resources. This article seeks an understanding of this decontrol in the history of the political economy of public health and in an analysis of the current international economic crisis. An examination of several episodes in the history of malaria control and related public health programs shows how they have played a role in and been defined by a series of social and political conflicts. These conflicts have included agrarian unrest in the American South, colonial expansion in the Third World, peasant revolution in China, the Cold War, and a whole series of urban and rural upheavals for and against development in the post-World War II period. An examination of the current world crisis suggests that it is another such period of social conflict—one in which various sectors of business and various governments are trying to restore the conditions of growth and accumulation which were ruptured in the late 1960s by an international cycle of social instability. Allowing malaria to spread, like allowing drought and flood to turn into famine, thus appears as a de facto repressive use of "nature" to reestablish social control. Such circumstances raise hard questions both for the public at large and for public health workers as to the most effective means of reversing these trends.

The continuing epidemic resurgence of malaria in many areas of the world raises a number of difficult questions about the politics of public health and the position of public health workers. The current spread of this debilitating and sometimes fatal disease in Asia, Africa, and parts of Latin America is bringing certain suffering and sometimes death to literally millions of persons. When I became aware of this development, my reaction was first to ask just how serious was the 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 and commentators, I discovered not only that the upsurge was widespread and severe but also 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.

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What the evidence suggests is, rather, the ugly fact that in many countries governments have been responsible for a de facto, and sometimes even intentional, decontrol of malaria against both the interests of the public and the protests of malariologists and other public health workers.

The inevitable next question is why? At this point I can offer only a tentative response, one based more on the analysis of the historical political economy of public health and of the general character of the present international economic crisis than on direct information concerning the hidden motivations of the governments and foreign aid donors who have so far refused to make sufficient resources available. An examination of the history of public health, however, reveals much about such motivations, and shows how the development of public health programs has been closely linked to the interests of private business. As a result, public health programs have been integral parts of attempts to guarantee social order and reinvestible resources—sometimes against the struggles of people for better lives and higher income. An examination of the current world crisis suggests that it is an attempt by various sectors of business and by various governments to reach agreement over a new international economic structure reestablishing the conditions of growth and accumulation which were ruptured in the 1960s by an international cycle of social instability, explosive wage/income demands, and stagnant productivity.

Putting these two pieces of political economic history together, I am led to answer the question of "why?" with the provisional hypothesis that the willingness of both (local and multinational) business and government 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. These circumstances suggest, first, that if the reasons for malaria decontrol are political, then such policies (de facto or intentional) can only be fought by those who suffer the consequences at the political level. Also, if the context is one of global restructuring, then the level of political response must find expression internationally.

Second, these circumstances also raise, it seems to me, difficult questions both for those involved in malaria control work and for public health workers generally. If, on the one hand, their interests lie in the humanitarian aims of their programs and in the conditions of work and remuneration associated with those programs, and if, on the other hand, the availability or nonavailability of support for those programs is determined primarily by political factors, then in periods where programs are being cut or allowed to stagnate despite rising need, the possibility of recourse to "nonprofessional" political action in conjunction with others fighting for expanded programs must be considered.

In what follows I sketch the statistical, historical, and analytical basis for the foregoing conclusions. In the first part, I outline the resurgence of malaria, the inadequacy of the response, and the reasons why the arguments advanced to explain this inadequacy are unconvincing. An incomplete but nevertheless instructive sketch of some of the historical politics of public health through the 1960s is then given. In the following section, I draw some general conclusions from this historical material and suggest a perspective within which the experiences examined can be usefully grasped and in terms of which we can examine the current crisis and the place of malaria within it. Finally, I sketch the analysis of that crisis, which suggests that

underdevelopment strategies are integral to it—the basis for hypothesizing that malaria decontrol is not a blunder but perhaps a policy of repression.

THE PRESENT MALARIA SITUATION

The major areas of recent upsurge of malaria have been in South and Southeast Asia. By far, the most dramatic increases have occurred in India and Pakistan. In India the incidence of the disease rose steadily between 1962 (62,000 cases) and 1969 (349,000 cases), and thereafter expanded explosively to a dismaying 4,200,000 in 1975 (1). The number is predicted to rise to 10 million by 1978 (2, p. 40). In neighboring Pakistan, the United States Agency for International Development (USAID) reports that the number of malaria cases had already risen to 10 million by 1974 from only 9,500 in 1968 and 108,000 in 1971 (3, p. 27). The World Health Organization (4), Farid (5), and Brown et al. (6) also report serious increases of malaria in the 1970s in Afghanistan, Sri Lanka, Nepal, Bangladesh, Burma, Thailand, and Indonesia. Several countries in Central America (Honduras, El Salvador, Costa Rica) and one in the Caribbean (Haiti) have also experienced serious increases in the disease. 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. In other areas, however, such as the Middle East and South America, many countries either remained free of the disease or made progress in its eradication.

When we look at these developments historically, we see that they constitute a reversal of earlier trends established by the success of the control and eradication programs of the 1950s and 1960s. Those programs, whose story is summarized in Brown et al. (6) and told in Russell (7), were based on the use of new chemicals 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 mosquitos 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 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 U.S. 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. 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. For many malariologists and public health workers it is a spectacle of virtually their life's work going down the drain. And for the people of those areas in which the incidence of malaria has increased, it is a dramatic attack on their welfare.

This resurgence has not gone unnoticed. It has received considerable publicity in the countries where it has occurred and in the international health community. The

World Health Organization has pointed repeatedly over the last few years to the recrudescence of the disease. By 1975, WHO Director General Halfdan Mahler was writing of a "general worsening situation" in the world incidence of malaria, of which the "hard core of deterioration" was in Asia (8).

The first response by both 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 WHO studies (4, 5) as responsible were multiple but included most prominently: increasing resistance of mosquitos 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 socioeconomic conditions generally. According to malariologists I have consulted, these reports have done a fairly good job of isolating the relevant factors in the resurgence.

If we look closely, we can see that while complex and interacting with one another, all of these factors are the result of inadequate financing. Chemicals, drugs, clinics and vehicles, training, good administration, research, development, and health expertise on water 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 with respect to both causes and cure (9).

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 (9). In 1974-1975 the planned allocation was to be increased, but only to some $23-29 million despite appeals by officials like Dr. Coluthur Gopalan (10), head of the Indian Council of Medical Research, and despite conservative recommendations by a special committee of a needed minimum expenditure of $81 million (11). In Nepal, Bangladesh, Burma, and Indonesia, among other countries, we find similar histories of inadequate response.

It should be noted at this point that the resources available from such international agencies as the United States Agency for International Development, the United Nations Childrens Fund, and the Pan American Health Organization have been drying up along with those of national governments over the last few years. Only WHO

continues to provide substantial advisory services on an international scale.[1] All of this in the face of almost continually rising global incidence of the disease and against protests by the public health officials responsible for the programs.

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 1969-1970 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 and report (12) with the politically as well as linguistically awkward title of "WHO Interregional Conference on Malaria Control in Countries where Time-Limited Malaria Eradication is Impracticable at Present." 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 forseeable 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—especially population control programs. 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, and publicity had grown, and reports had been written, the question remains why subsequent resources have 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 the global inflation of the 1970s. 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 and other reports (9) 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. Even if

[1] 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 by 1973 and the Pan American Health Organization had also greatly reduced assistance to anti-malaria programs because of lack of funding (2).

expenditures in these countries were doubled or in some cases tripled, the per capita costs would still be less than one dollar.[2] No, the cost of the programs, like administrative mismanagement, is at best 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 (2) 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 [emphasis added].

The same point can obviously be made with infinitely more force concerning resources available at the international level.

Let us now turn to some of the historical evidence that the development of public health programs in the nineteenth and twentieth centuries has occurred within and as a moment of political conflicts—evidence which suggests that neither the expansion nor the contraction of public health programs, including malaria control, can be adequately explained without reference to those conflicts.

THE HISTORICAL RECORD

The experiences which I want to examine in this section are drawn from three different historical moments 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 American 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 where American influence and approaches dominated.

Health and Development in the American South[3]

In the long run the programs of the Rockefeller Sanitary Commission proved to be among 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 "develop-

[2]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 references 4 and 9.

[3]Part of the historical material which follows in this article is adapted from the author's doctoral thesis (13).

ment" 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 and of laying the basis for growth.

The activities of the Rockefeller Sanitary Commission were devoted to promoting a public health campaign. At the turn of the century public health organizations were weak or nonexistent in many southern areas and work time lost to illnesses like malaria and hookworm was a major factor limiting the productivity of the work force in both fields and mill towns (14). In the rural areas the most important early part of the health work was the Commission's anti-hookworm efforts. An anemia-producing, debilitating disease, hookworm was widespread throughout the South, especially in rural areas where, unlike malaria, which is carried by mosquitos, its parasite was picked up by the bare feet of children and farm workers. The launching of an anti-hookworm campaign in 1909 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 governmental funding and takeover of the program (15, p. 88). 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 the 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 was aimed at maintaining the productivity of both the personnel on military bases and the civilian work force more generally. Like the hookworm campaign, this program also contributed to reshaping the character of southern state governments (16, 17).

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 (7). The methods used in the South, as well as later contemporary methods based on powerful insecticides like DDT, were not aimed as such at a general improvement in nutrition, clothing (shoes), or housing (toilets, insulation, screens). But then the aims of the supporters of public health were improved productivity and a better work force at "reasonably low" cost, not a massive redistribution of wealth from Rockefeller and other capitalists to the workers. (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 reference 7, p. 232).)

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 sociopolitical factors which involved the needs of both the rural population and 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 populations of the Third World was usually devastating. All of the gifts of 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—brought vast suffering and death and often lasted for many years. This process 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), business, at home and abroad, used poverty, hunger, and ill-health to force the indigenous population to work for it, whether in the factories of Manchester or the plantations of South America and Asia.

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. Business 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 worker struggles 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: on the one hand, the demands by people for a better life, and on the other, 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 (18), 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 (7, 19). 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 nonexistent. Given the history of using poverty and illness to weaken and control the colonized population 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 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.

In these colonial circumstances medical practitioners, including public health workers, were forced either to work for the colonial powers—rationalizing their acts perhaps as softening the oppression by spreading health care as much as they were allowed—or to take sides with anti-colonial forces and struggle against the colonial order to open the way for more comprehensive programs. As Fanon (21) has pointed out, commenting on French colonialism, there was no middle road, no neutral ground,

and most played the game on colonial terms. Paul (22), who has also looked at French Morocco, has outlined some of the seamier aspects of colonial medicine—the use of doctors as political and even military spys—as well as the more common differential provision of services.

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 on its Central American banana plantations as early as 1899 in order to reduce excessive costs associated with illness (18, 23). Years later, a vice-president of United Fruit clearly stated the reasons for his company's concern with its workers' health (24):

> 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.

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.

Work in public health has also played an important role in public relations. If economic 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 (25, p. 1272).

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 public health workers like Ashford (26), Heiser (18), or Russell (7) who were employed by the Foundation, its worldwide program provided both a career and an opportunity to fight disease in many lands. For the Foundation, on the other hand, the work of these medical men, "for whom there were few political constraints," was often its gentle opening wedge to be followed by interventionists and social engineers in other areas. In a recent book, a vice-president of the Foundation has written: ". . . medical and public health men paved the way for agriculturalists in South America and Asia. The work of the agriculturalists in turn gives credit to populationists, social scientists and others who follow them" (27, pp. 11-12).

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 business

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 (28). Their public health approach was also influenced by the 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 (13). Although these efforts to save China ultimately failed, they helped build the approach which dominated U.S. 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 worldwide 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 (7, 29). In this way the international institutional framework, within which any who wished to pursue public health as a profession would have to work, was developed.

This second set of examples suggests 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 such particular interests, could better grasp the emergence of the social conflicts 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 strongly influence the character of post-World War II programs of both multilateral and bilateral aid. Among these programs were the anti-malaria campaigns which were described above.

Human Capital and Counterrevolution 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 underdeveloped world as a "human capital" investment component of 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 an attempt to tie wage increases to productivity increases. Now it is obvious that the strategy of raising productivity has long been used by business 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 fiscal and monetary 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 both at the level of the firm and industry and at the national 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 growth, driving business to modernize and innovate and insuring stable profit margins (30, 31).

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" (32). 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 levels 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. 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 to President Kennedy's plans to spur growth at home (33).

While this strategy for controlling and harnessing workers' struggles 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 "free" 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 Haiphong 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" (34, 35). 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 the 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 (36, p. 13):

> 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.

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, which included 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 to once more push a vigorous anti-malaria program in cooperation with the U.S. military in and around training camps and cantonments in the southern U.S., 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 (37, pp. 19-23, 82-103).

After the war this kind of work was continued under the auspices of the IIAA as part of Point Four. But at that time, 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 ECA's mission to Cambodia, Laos, and Vietnam nicely summed up the aims of those programs (38, p. 1233):

> 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.

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

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 [U.S.] soldiers evacuated from Vietnam because of wounds and the number evacuated because of malaria were equal" (39). Among the many other countries in which public health financed by U.S. foreign aid played a political role in the 1950s were: Iran during the 1953 overthrow of Mossadegh, Thailand during counterinsurgency campaigns, and the Philippines during the fight against the Hukbalahap guerrillas (40).

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 worldwide malaria eradication campaign which had been announced the previous year (41). 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 but are to be found in the story of a special "offical use only" report prepared for Eisenhower by the State Department.[4] The story of that report provides an important case study of the politics of malaria control and public health in three ways: first, the political history of the report; second, the motivations and aims of the public health officials who drafted the report; and third, the political nature of the arguments they advanced to achieve their ends.

The origins of the report lay in the Cold War. It was prepared in response to a State Department request to come up with new American foreign aid programs that could help counter the then recent expansion of Soviet aid efforts in the Third World. The request was made by John B. Hollister, then head of the International Cooperation Administration (ICA, a predecessor of USAID) 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. In the fall of 1955 when the request came down, it was headed by Eric Johnson and included among its members Dr. Wilton L. Halverston, Associate Dean of the School of Public Health at UCLA and formerly Director of Public Health for the State of California.

As a response to the request, Dr. Halverston presented to the Board a memorandum which proposed new U.S. support for malaria control and urban sanitation (42). That memorandum had been drawn up by Dr. Halverston in consultation with Dr. Henry Van Zile Hyde, Chief of the Division of International Health, U.S. Public Health Service. As a result of their proposal, the IDAB appointed a Special Committee headed by Halverston to draw up a detailed report on a possible malaria eradication program. The report, which was primarily prepared by Dr. Hyde and a USPHS colleague, Mr. Donald R. Johnson, was subsequently approved and sent to Eisenhower. Later, after he

[4] I obtained a copy of this report through a Freedom of Information Act request to the State Department.

had announced the new anti-malaria program, the president 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" (43, p. 13).

Now, what of the public health officials who had originally proposed and ultimately drafted this report? What were their concerns? According to Dr. Hyde and Mr. Johnson, they were quite simple. They supported the WHO resolution calling for a global malaria eradication program which they saw as primarily humanitarian and had seized the opportunity to use the IDAB as a way to mobilize U.S. financial support.[5]

But if these personal concerns were mainly humanitarian, the public health officials by no means limited the arguments they developed in their proposal and report to such benevolent considerations. Rather, they supplemented such appeals with hard economic and political arguments designed to convince the politicians that humanitarianism could also be a tool of American foreign policy. In the original proposal, Halverston (42) argued that American support for malaria control:

> ... 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.

During the preparation of the report, Rockefeller Foundation malaria expert Dr. Paul Russell was brought in as a Special Consultant and testified before the Board. He too brought to the IDAB economic and political arguments developed during his many years of work with the Foundation (44):

> Dr. Russell pointed out that although malaria is no longer a problem in the U.S. 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 U.S. 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.

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

In the final report, along with Russell's analysis of the costs of malaria to business and trade, the authors also included an examination of the past political usefulness of malaria control in several Third World countries (40, p. 8):

> 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.

These countries, the report noted, were recipients of "outstanding assistance" by the ICA. In India, for example, the report quoted Indian malariologist D. K. Visnawathan on the usefulness of the program in increasing government-peasant

[5] Based on personal communication with Dr. Hyde and Mr. Johnson, both of whom have been very cooperative in helping me reconstruct the history of this report and their relation to it.

contacts: "No service establishes contact with every individual home at least twice a year as the DDT service unless it be the collection of taxes."[6]

Part of the new monies were to be used through ICA and part through 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 U.S. 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" (40, p. 10). Moreover, since the multilateral agencies, especially WHO, were closely interrelated with American private and government programs, increased funding for the former could only benefit the latter.

To make a short story shorter, these four public health officials (Halverston, Hyde, Johnson, and Russell), by appealing to the motivations of counterinsurgency, anti-communism, and profits, had gained a public health program costing millions of dollars. For these men there was, at least in this period, a happy compatibility between their humanitarianism and U.S. foreign policy.

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.

SOME GENERAL OBSERVATIONS

In each of the historical cases I have examined we find the same phenomenon: public health programs have been intimately bound up with social conflicts. In the U.S. South, they appeared at the interface between eastern and northern business and farmers. In China they appeared during a conflict between peasant revolution and a combination of local government and foreign private philanthropy. In the post-World War II period they played a role in numerous struggles between a coalition of government and business on the one hand and rural revolutionaries on the other. In these conflicts we consistently find on one side the interests of national and international business, represented either directly through company policy or indirectly through business-financed philanthropy or business-oriented government. On the other, we find the interests of a variety of urban and agrarian workers, from the city workers, family farmers, and sharecroppers of the American South to the peasants and city dwellers of Asia.[7]

The concerns of agrarian and urban workers might well be defined in terms of a

[6] Mr. Johnson pointed out to me that this quote came from a discussion between D. K. Visnawathan and a vice-president of the Rockefeller Foundation recorded in reference 45.

[7] These kinds of struggles by urban and agrarian workers must be distinguished from Communist Party-inspired activities. To confuse them as U.S. foreign policy is prone to do is to not only give the Communists more credit than they deserve but also to hide the fact that the main concern of business is *any* social instability which threatens the basis of growth, accumulation, and profits.

struggle for a better standard of life, which includes improved health. Business, on the contrary, has been consistently concerned with the availability of a politically stable and productive work force. This preoccupation of business and government with public health comes across clearly as a concern with the conditions of labor supply. But as we have seen, the supply of labor is no simple quantitative variable. It is, rather, the conditions of the availability of a labor force willing and able to work in return for an income it finds temporarily feasible and business finds profitable.

This search by business and government for stability and profits and by various kinds of workers for higher standards of living is certainly a struggle between two classes of people: those who are forced to work in order to live and those who achieve wealth and social control through their ability to make others work. It is thus a class struggle—but one in which the "working class" is understood to contain both industrial and agricultural elements. As such, "health" cannot be defined in abstraction but is defined in practice by each of the classes. For the "working class" (factory or office worker, farmer or peasant) health is defined in terms of its members' own autonomous aims. For business and those who serve it, the "health" of workers has consistently been defined functionally by their 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.

Now we have seen that under circumstances where, from business' point of view, the poor health of workers has made them *unable* to work under cost conditions profitable for business investment, business groups have sometimes supported the development of medical and public health programs to improve the productivity of labor. Historically, this has generally been the case within the now developed countries and sometimes the case in the Third World. But we can also see that these measures must be grasped as a part of a particular kind of *strategy* for dealing with the problem of the availability of labor. This strategy, in which income (including health) is improved in exchange for more work, we may call a strategy of "development." The alternative strategy, in which income is reduced in order to impose the availability of work through deprivation and poverty (e.g. under early capitalism and colonialism), we may call a strategy of "underdevelopment." Development and underdevelopment as strategies must obviously be understood differently than either as the outcome of historical processes (as orthodox economists recount) or as the processes themselves (as many Marxists use the terms).

Now in these terms we can classify the historical experiences of public health programs in terms of development and underdevelopment. In the U.S. South and in China we saw mainly a development approach as public health programs like hookworm and malaria control were expanded to increase productivity and achieve social order. In the colonial period, as in that of early capitalism, the early devastations underdeveloped health as one aspect of restructuring society to obtain control over labor. Subsequently, a mixture of development and underdevelopment was used through differential provision of health services. In the postwar period the investment in public health was supported by governments and business as a development investment in "human capital" and as an instrument of political counterrevolution—both aimed at increasing availability for work and productivity. We can see then that in the past the underdevelopment of health as well as its development has been a strategy of

business and government, depending upon the circumstances. And if it has been so in the past, then we must be open to the possibility that this is exactly the character of the current situation in public health where malaria is being effectively decontrolled.

THE CURRENT WORLD CRISIS

I want now 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.[8] That analysis argues that the current international economic crisis is most basically a crisis of power between workers and business. More specifically, "the" crisis really consists of two moments of crisis: one imposed on business by a cycle of "working class" struggles in the 1960s (e.g. Vietnam, Berkeley, Watts, Naxalites, Lordstown, etc.) which undermined the development strategies of the period, and in response, another moment which business and government have imposed on workers to regain control.

The "working class" struggles which imposed the crisis on business internationally are understood as combining the *wage struggles* of both urban and agrarian workers together with an increasing *refusal of work and development* which ruptured the link between productivity and income throughout the global social factory.[9] As a result, business' postwar attempts to plan accumulation by carefully managing the international income hierarchy 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 blacks, women, peasants, students, etc. produced both development plans and the refusal of development, which repeatedly erupted into social turmoil and violence. All of these struggles constituted not a cyclical but a profound structural crisis of global accumulation for business.

Business' counterattack 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).[10] In other words, in the crisis, business and government try to undercut the wage struggles, which they had 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 international fragmentation of the class. At the same time, business has speeded up its historical attempt to *escape* from labor by investing massively in

[8] The analysis which follows is spelled out in much greater detail in reference 46.

[9] It should be noted that for a "cycle of struggles" to exist only the coexistence and the interconnections between a series of distinct struggles must be established, not a conspiracy, communist or otherwise.

[10] Similarly, what is at issue here is not the existence of conspiracy but whether a set of policy changes by various business interests and governments (oil price rise, Russian grain deals, dollar devaluation, etc.) constitutes a fairly consistent whole whose impact can be seen to be generally favorable to business and unfavorable to workers.

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 of workers 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" (47, p. 51).

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. Work which has already been done brings 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 (48). 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 collapsed in the campus upheavals of the late sixties, have now been replaced by underdevelopment in the form of fiscal crisis, budget cuts, accountability, and restructuring (33, 49).

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. The Third World data presented in the first section show that underdevelopment 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. 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 (50). Certainly the repressive shift of the Indian government from its policies of expanding malaria eradication to underdevelopment through increased illness was 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. The degree to which the new government will reverse these policies remains to be seen.

Not long ago, the Philippines provided a striking example of a rapid shift from the expansion of malaria control to the intentional *withdrawal* of control for overtly political reasons. In response to the failure of an offered development program to satisfy the demands of the Moslem insurgents in Mindinao and the Sulu Archipelago (51), 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" (52).

In Pakistan a new program of the Pakistani government and USAID may check the explosive spread of malaria and increase control (3). But even if this is achieved, it remains true that public health was allowed to deteriorate unchecked for several years and malaria reached 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 recall from the previous discussion that in other countries of the Third World, especially in those becoming major new centers of capital 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.

What are we to conclude from all this? First, regardless of whether one accepts the analysis of the last part of this paper (that malaria decontrol is perhaps part of an international business strategy to reestablish the conditions of growth), the evidence presented in the second part, concerning government inaction despite the growing need and despite the availability of resources, certainly calls for some effort to reverse the present trends. Second, the historical material examined suggests that any efforts to change the present situation must take account of the very substantial role played by politics in the past evolution of malaria control and eradication programs. We must be frank and recognize that in many ways *malaria is a political disease.* Long ago, when its causes and methods of prevention were unknown, a government might be excused for inaction. Today, as we have seen, not only is it a disease of the poor whose methods of prevention are well known but the costs of control are relatively low. Moreover, historical evidence also suggests that for a long time now, the key element in moving business and governments to invest in expanded public health has not been humanitarian appeals but rather public pressure—often in the form of social struggles.

For the victims of malaria, both actual and potential, in areas where it is spreading and in areas to which it might spread, this present situation would seem to call for a public campaign to bring political pressure to bear to obtain a government-enforced transfer of wealth and income from business to the public sufficient to finance the eradication of the disease.

For public health workers, as I mentioned at the outset, the present situation must raise difficult questions. In periods of development when the propagation of public health programs fits in with broader business or governmental policy aims, we have seen how the interests of public health workers may coincide with, or at any rate be at least partially compatible with, those aims.[11] But in periods of underdevelopment like the present, when government policy in some areas relegates public

[11] In cases such as those of medical men serving as intelligence agents for colonial powers, or Dr. Tom Dooley, who enthusiastically joined the anti-communist crusade using medicine as a weapon, I would say there was a *coincidence* of interests between health workers and government. In other cases where public health workers pursued humanitarian aims within programs whose larger political role they were willing to put up with or to ignore, I would say there was *compatibility.*

health programs to a low priority and allows them to stagnate or decline, then it would seem that public health workers must recognize that their concerns run counter to public policy and that they must consider alternatives to simply working "within" the very organizational structures that are being neglected. The kinds of alternatives which may be possible require an exploration which goes beyond the bounds of this article, whose purpose is simply to call attention to the question. But options clearly range from taking part in a broader single-issue campaign to mobilize public pressure, to the kind of participation in revolutionary political struggle of a Norman Bethune or a Franz Fanon. One thing is certain. Today as always there is no neutral ground.

There is no doubt that today many malariologists and other public health workers feel considerable anger and frustration as they watch the results of years of work being lost. Yet such feelings when they are kept private must remain impotent and only lead to more frustration. For health workers (as for others), it is only by acting publically as well as professionally, by publicizing the situation, and by protesting against these policies of underdevelopment, that they can most effectively speed up the reversal of those policies.

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