

# A MARXIST VIEW OF MEDICAL CARE

howard waitzkin

*Marxist studies of medical care emphasise political power and economic dominance in capitalist society. Although historically the marxist paradigm went into eclipse during the early twentieth century, the field has developed rapidly during recent years. The health system mirrors the society's class structure through control over health institutions, stratification of health workers, and limited occupational mobility into health professions. Monopoly capital is manifest in the growth of medical centres, financial penetration by large corporations, and the "medical-industrial complex." Health policy recommendations reflect different interest groups' political and economic goals. The state's intervention in health care generally protects the capitalist economic system and the private sector. Medical ideology helps maintain class structure and patterns of domination. Comparative international research analyses the effects of imperialism, changes under socialism, and contradictions of health reform in capitalist societies. Historical materialist epidemiology focuses on economic cycles, social stress, illness-generating conditions of work, and sexism. Health praxis, the disciplined uniting of study and action, involves advocacy of "nonreformist reforms" and concrete types of political struggle.*

**T**his review surveys the rapidly growing marxist literature in medical care. The marxist viewpoint questions whether major improvements in the health system can occur without fundamental changes in the broad social order. One thrust of the field, an assumption also accepted by many non-marxists, is that the problems of the health system reflect the problems of our larger society and cannot be separated from those problems.

Marxist analyses of health care have burgeoned in the United States during the past decade. However, it is not a new field. Its early history and the reasons for its slow growth until recently deserve attention.

## Historical Development of the Field

The first major marxist study of health care was Engel's *The Condition of the Working Class in England* (1), originally published in 1945, three years before Engels coauthored with Marx *The Communist Manifesto* (2). This book described the dangerous working and housing conditions that create ill health. In particular, Engels traced such diseases as tuberculosis, typhoid and typhus to malnutrition, inadequate housing, contaminated water supplies and overcrowding. Engels' analysis of health care was part of a broader study of working class conditions under capitalist industrialisation. But this treatment of health problems was to have a profound effect on the emergence of social medicine in Western Europe, particularly the work of Rudolf Virchow.

Virchow's pioneering studies in infectious disease, epidemiology, and "social medicine" (a term Virchow popularised in Western Europe) appeared with great rapidity after the publication of Engels' book on the English working class. Virchow himself acknowledged Engels' influence on his thought. In 1847,

at the request of the Prussian government, Virchow investigated a severe typhus epidemic in a rural area of the country. Based on this study, Virchow recommended a series of profound economic, political, and social changes that included increased employment, better wages, local autonomy in government, agricultural cooperatives, and a more progressive taxation structure. Virchow advocated no strictly medical solutions, such as more clinics or hospitals. Instead, he saw the origins of ill health in social problems. The reasonable approach to the problem of epidemics, then, was to change the conditions that permitted them to occur. (4,5.)

During this period Virchow was committed to combining his medical work with political activities. In 1848 he joined the first major working-class revolt in Berlin. During the same year he strongly supported the short-lived revolutionary efforts of the Paris Commune (6-8). In his scientific investigations and in his political practice, Virchow expressed two overriding themes. First, the origin of disease is multifactorial. Among the most important factors in causation are the material conditions of people's everyday lives. Second, an effective health-care system cannot limit itself to treating the pathophysiologic disturbances of individual patients. Instead, to be successful, improvements in the health care system must coincide with fundamental economic, political and social changes. The latter changes often impinge on the privileges of wealth and power enjoyed by the dominant classes of society and thus, encounter resistance. Therefore, in Virchow's view, the responsibilities of the medical scientist frequently extend to direct political action.

After the revolutionary struggles of the late 1840s suffered defeat, Western European governments heightened their conservative and often

repressive social policies. Marxist analysis of health-care entered a long period of eclipse. With the onset of political reaction, Virchow and his colleagues turned to relatively uncontroversial research in laboratories and to private practice.

During the late nineteenth century, with the work of Ehrlich, Koch, Pasteur, and other prominent bacteriologists, germ theory gained ascendancy and created a profound change in medicine's diagnostic and therapeutic assumptions. A unifactorial model of disease emerged. Medical scientists searched for organisms that cause infections and single lesions in non-infectious disorders. The discoveries of this period undeniably improved medical practice. Still, as numerous investigators have shown, the historical importance of these discoveries has been over-rated. For example, the major declines in mortality and morbidity from most infectious diseases preceded rather than followed the isolation of specific etiologic agents and the use of antimicrobial therapy. In Western Europe and the United States, improved outcomes in infections occurred after the introduction of better sanitation, regular source of nutrition, and other broad environmental changes. In most cases, improvements in disease patterns antedated the advances of modern bacteriology (9-17).

Why did the unifactorial perspective of germ theory achieve such prominence? And why have the investigational techniques that assume specific etiology and therapy retained a nearly mythic character in medical science and practice to the present day? A serious historical reexamination of early twentieth century medical science, which attempts to answer these questions, has begun only in the past few years. Some preliminary explanations have emerged; they focus on events that led to and followed publication of the Flexner Report (18).

The Flexner Report has been held in high esteem as the document that helped change modern medicine from quackery to responsible practice. One underlying assumption of the report was the laboratory based scientific medicine, oriented especially to the concepts and methods of European bacteriology, produced higher quality and more effective medical practice. Although the comparative effectiveness of various medical traditions (including homoeopathy, traditional folk healing, chiropractic, and so forth) had never been subjected to systematic test, the report argued that medical schools not oriented to scientific medicine fostered mistreatment of the public. The report called for the closure or restructuring of schools that were not equipped to teach laboratory-based medicine. The report's repercussions were swift and dramatic. Scientific,

laboratory-based medicine became the norm for medical education, practice, research and analysis.

Recent historical studies cast doubt on assumptions in the Flexner Report that have comprised the widely accepted dogma of the past half century. They also document the uncritical support that the report's recommendations received from parts of the medical profession and the large private philanthropies (19-27). At least partly because of these events, the marxist orientation in medical care remained in eclipse.

Although some of Virchow's works gained recognition as classics, the multifactorial and politically oriented model that guided his efforts has remained largely buried. Without doubt, marxist perspectives had important impacts on health care outside Western Europe and the United States. For example, Lenin applied these perspectives to the early construction of the Soviet health system (28). Salvador Allende's treatise on the political economy of health care, written while Allende was working as a public health physician, exerted a major influence on health programmes in Latin America (29). The Canadian surgeon, Norman Bethune, contributed analyses of tuberculosis and other diseases, as well as direct political involvement, that affected the course of post-revolutionary Chinese medicine (30-32). Che Guevara's analysis of the relations among politics, economics and health care — emerging partially from his experience as a physician — helped shape the Cuban medical system (33,34).

Perhaps reflecting the political ferment of the late 1960s and widespread dissatisfaction with various aspects of modern health systems (35), serious marxist scholarship of health care has grown rapidly. Recent work began in Western Europe (36,37) and spread to the United States with the publication of Kelman's path-breaking article in 1971 (38). The following sections of this review focus on current areas of research and analysis.

### Class Structure

Marx's definitions of social class emphasised the social relations of economic production. He noted that one group of people, the capitalist class or bourgeoisie, own or control (or both) the means of production: the machines, factories, land, and raw materials necessary to make products for the market. The working class or proletariat, who do not own or control the means of production, must sell their labor for a wage. But the value of the product that workers



repressive social policies. Marxist analysis of health-care entered a long period of eclipse. With the onset of political reaction, Virchow and his colleagues turned to relatively uncontroversial research in laboratories and to private practice.

During the late nineteenth century, with the work of Ehrlich, Koch, Pasteur, and other prominent bacteriologists, germ theory gained ascendancy and created a profound change in medicine's diagnostic and therapeutic assumptions. A unifactorial model of disease emerged. Medical scientists searched for organisms that cause infections and single lesions in non-infectious disorders. The discoveries of this period undeniably improved medical practice. Still, as numerous investigators have shown, the historical importance of these discoveries has been overrated. For example, the major declines in mortality and morbidity from most infectious diseases preceded rather than followed the isolation of specific etiologic agents and the use of antimicrobial therapy. In Western Europe and the United States, improved outcomes in infections occurred after the introduction of better sanitation, regular source of nutrition, and other broad environmental changes. In most cases, improvements in disease patterns antedated the advances of modern bacteriology (9-17).

Why did the unifactorial perspective of germ theory achieve such prominence? And why have the investigational techniques that assume specific etiology and therapy retained a nearly mythic character in medical science and practice to the present day? A serious historical reexamination of early twentieth century medical science, which attempts to answer these questions, has begun only in the past few years. Some preliminary explanations have emerged; they focus on events that led to and followed publication of the Flexner Report (18).

The Flexner Report has been held in high esteem as the document that helped change modern medicine from quackery to responsible practice. One underlying assumption of the report was the laboratory based scientific medicine, oriented especially to the concepts and methods of European bacteriology, produced higher quality and more effective medical practice. Although the comparative effectiveness of various medical traditions (including homoeopathy, traditional folk healing, chiropractic, and so forth) had never been subjected to systematic test, the report argued that medical schools not oriented to scientific medicine fostered mistreatment of the public. The report called for the closure or restructuring of schools that were not equipped to teach laboratory-based medicine. The report's repercussions were swift and dramatic. Scientific,

laboratory-based medicine became the norm for medical education, practice, research and analysis.

Recent historical studies cast doubt on assumptions in the Flexner Report that have comprised the widely accepted dogma of the past half century. They also document the uncritical support that the report's recommendations received from parts of the medical profession and the large private philanthropies (19-27). At least partly because of these events, the marxist orientation in medical care remained in eclipse.

Although some of Virchow's works gained recognition as classics, the multifactorial and politically oriented model that guided his efforts has remained largely buried. Without doubt, marxist perspectives had important impacts on health care outside Western Europe and the United States. For example, Lenin applied these perspectives to the early construction of the Soviet health system (28). Salvador Allende's treatise on the political economy of health care, written while Allende was working as a public health physician, exerted a major influence on health programmes in Latin America (29). The Canadian surgeon, Norman Bethune, contributed analyses of tuberculosis and other diseases, as well as direct political involvement, that affected the course of post-revolutionary Chinese medicine (30-32). Che Guevara's analysis of the relations among politics, economics and health care — emerging partially from his experience as a physician — helped shape the Cuban medical system (33,34).

Perhaps reflecting the political ferment of the late 1960s and widespread dissatisfaction with various aspects of modern health systems (35), serious marxist scholarship of health care has grown rapidly. Recent work began in Western Europe (36,37) and spread to the United States with the publication of Kelman's path-breaking article in 1971 (38). The following sections of this review focus on current areas of research and analysis.

### Class Structure

Marx's definitions of social class emphasised the social relations of economic production. He noted that one group of people, the capitalist class or bourgeoisie, own or control (or both) the means of production: the machines, factories, land, and raw materials necessary to make products for the market. The working class or proletariat, who do not own or control the means of production, must sell their labor for a wage. But the value of the product that workers

produce is always greater than their wage (39). Workers must give up their product to the capitalist; by losing control of their own productive process, workers become subjectively "alienated" from their labor (40). "Surplus value", the difference between the wage paid to workers and the value of the product they create, is the objective basis of the capitalist's profit. Surplus value also is the structural source of "exploitation"; it motivates the capitalist to keep wages low, to change the work process (by automation and new technologies, close supervision, lengthened work day or overtime, speed-ups and dangerous working conditions), and to resist workers' organized attempts to gain higher wages or more control in the workplace (41).

Although they acknowledge the historical changes that have occurred since Marx's time (52-51), recent marxist studies have reaffirmed the presence of highly stratified class structures in advanced capitalist societies and Third World nations (52-54). Another topic of great interest is the persistence or reappearance of class structure, usually based on expertise and professionalism, in countries where socialist revolutions have taken place (55,56); a later section of this review focuses on that problem. These theoretical and empirical analyses show that relations of economic production remain a primary basis of class structure and a reasonable focus of strategies for change (57-59).

Milliband's (59) definitions of social class have provided a framework for marxist research on class structure in the health system. This research has shown that the health system mirrors the class structure of the broader society (60-63).

The "corporate class" includes the major owners and controllers of wealth. They comprise 1% of the population and own 80% of all corporate stocks

and state and local government bonds; their median annual income (1975 estimates) is 114000 dollars to 142000 dollars. The "working class", at the opposite end of the scale, makes up 49% of the population. It is composed of annual laborers, service workers, and farm workers, who generally earn 8500 dollars per year or less. Between these polar classes are the "upper middle class" (professionals like doctors, lawyers, and so forth, comprising 14% of the population and earning about 25600 dollars; and middle-level business executives, 6% of the population and earning about 22700 dollars; and the "lower middle class" (shopkeepers, self-employed people, craftsmen, artisans, comprising 7% of the population, earning about 12000 dollars and clerical and sales workers, 23% of the population, earning about 9200 dollars per year). Although these definitions provide summary descriptions of a very complex social reality, they are useful in analysing manifestations of class structure in the health system.

### Control over Health Institutions

Navarro (60-62) has documented the pervasive control that members of the corporate and upper middle classes exert within the policy-making bodies of American health institutions (Table 1). These classes predominate on the governing boards of private foundations in the health system, private and state medical teaching institutions, and local voluntary hospitals. Only on the boards of state teaching institutions and voluntary hospitals do members of the lower middle class or working class gain any appreciable representation; even there, the participation from these classes falls far below their proportion in the general population. Local research has documented corporate control of health institutions in many parts of the United States. Navarro has argued, based partly on these observations

Table 1 : Social Class Composition of U.S. Labor Force and Boards of U.S. health institutions

	Class* .. (%)			
	Corporate	Upper middle	Lower middle	Working
U.S. labor force	1	20	30	49
Board members	70	30	—	—
Foundations	45	55	—	—
Private medical teaching institutions	20	70	10	—
State medical teaching institutions	5	80	10	5
Voluntary hospitals				

\* See text for definitions: source, Navarro V; Social policy issues: an explanation of the composition, nature, and functions of the present health sector of the United States. Bull NY Acad Med 51:199-234, 1975 (Reference 60).



produce is always greater than their wage (39). Workers must give up their product to the capitalist; by losing control of their own productive process, workers become subjectively "alienated" from their labor (40). "Surplus value", the difference between the wage paid to workers and the value of the product they create, is the objective basis of the capitalist's profit. Surplus value also is the structural source of "exploitation"; it motivates the capitalist to keep wages low, to change the work process (by automation and new technologies, close supervision, lengthened work day or overtime, speed-ups and dangerous working conditions), and to resist workers' organized attempts to gain higher wages or more control in the workplace (41).

Although they acknowledge the historical changes that have occurred since Marx's time (52-51), recent marxist studies have reaffirmed the presence of highly stratified class structures in advanced capitalist societies and Third World nations (52-54). Another topic of great interest is the persistence or reappearance of class structure, usually based on expertise and professionalism, in countries where socialist revolutions have taken place (55,56); a later section of this review focuses on that problem. These theoretical and empirical analyses show that relations of economic production remain a primary basis of class structure and a reasonable focus of strategies for change (57-59).

Miliband's (59) definitions of social class have provided a framework for marxist research on class structure in the health system. This research has shown that the health system mirrors the class structure of the broader society (60-63).

The "corporate class" includes the major owners and controllers of wealth. They comprise 1% of the population and own 80% of all corporate stocks

and state and local government bonds; their median annual income (1975 estimates) is 114000 dollars to 142000 dollars. The "working class", at the opposite end of the scale, makes up 49% of the population: It is composed of annual laborers, service workers, and farm workers, who generally earn 8500 dollars per year or less. Between these polar classes are the "upper middle class" (professionals like doctors, lawyers, and so forth, comprising 14% of the population and earning about 25600 dollars; and middle-level business executives, 6% of the population and earning about 22700 (dollars; and the "lower middle class" (shopkeepers, self-employed people, craftsmen, artisans, comprising 7% of the population, earning about 12000 dollars and clerical and sales workers, 23% of the population, earning about 9200 dollars per year). Although these definitions provide summary descriptions of a very complex social reality, they are useful in analysing manifestations of class structure in the health system.

#### Control over Health Institutions

Navarro (60-62) has documented the pervasive control that members of the corporate and upper middle classes exert within the policy-making bodies of American health institutions (Table 1). These classes predominate on the governing boards of private foundations in the health system, private and state medical teaching institutions, and local voluntary hospitals. Only on the boards of state teaching institutions and voluntary hospitals do members of the lower middle class or working class gain any appreciable representation; even there, the participation from these classes falls far below their proportion in the general population. Local research has documented corporate control of health institutions in many parts of the United States. Navarro has argued, based partly on these observations,

Table 1 : Social Class Composition of U.S. Labor Force and Boards of U.S. health institutions

	Class* .. (%)			
	Corporate	Upper middle	Lower middle	Working
U.S. labor force	1	20	30	49
Board members				
Foundations	70	30	—	—
Private medical teaching institutions	45	55	—	—
State medical teaching institutions	20	70	10	—
Voluntary hospitals	5	80	10	5

\* See text for definitions: source, Navarro V; Social policy issues: an explanation of the composition, nature, and functions of the present health sector of the United States. Bull NY Acad Med 51:199-234, 1975 (Reference 60).

that control over health institutions reflects the same patterns of class dominance that have arisen in other areas of American economic and political life.

### Stratification within Health Institutions

As members of the upper middle class, physicians occupy the highest stratum among workers in health institutions. Composing 7% of the health labor force, physicians receive median net income (approximately 53900 dollars in 1975) that places them in the upper 5% of the income distribution of the United States. Under physicians and professional administrators are members of the lower middle class: nurses, physical and occupational therapists, and technicians. They make up 29% of the health labor force, are mostly women, and earn about 3500 dollars. At the bottom of institutional hierarchies are clerical workers, aides, orderlies, and kitchen and janitorial personnel, who are the working class of the health system. They have an income of about 700 dollars per year, represent 54% of the health labor force, and are 84% female and 30% black (60,63).

Recent studies have analysed the forces of professionalism, elitism, and specialisation that divide health workers from each other and prevent them from realising common interests. These patterns affect physicians (64), nurses (65, 66), and technical and service workers who comprise the fastest growing segment of the health labor force (67-72). Bureaucratisation, unionisation, state intervention, and the potential "proletarianisation" of professional health workers may alter future patterns of stratification (73).

### Occupational Mobility

Class mobility into professional positions is quite limited. Investigations of physicians' class background in both Britain and the United States have shown a consistently small representation of the lower middle and working classes among medical students and practising doctors (23, 24, 74, 75). In the United States, historical documentation is available to trace changes in class mobility during the twentieth century. As Ziem (23, 24) has found despite some recent improvements for other disadvantaged groups like blacks and women, recruitment of working class medical students has been very limited since shortly after publication of the Flexner Report. In 1920, 12% of medical students came from working class families, and this percentage has stayed almost exactly the same until the present time.

## Emergence of Monopoly Capital in the Health Sector

During the past century, economic capital has become more concentrated in a smaller number of companies, the monopolies. Monopoly capital has emerged in essentially all advanced capitalist nations, where the process of monopolisation has reinforced private corporate profit (70, 76, 78) (In a much different form monopolisation also occurs within socialist countries, where the state owns major capital assets and strongly limits private profitability). Monopoly capital has become a prominent feature of most capitalist health systems and is manifest in several ways.

### Medical Centers

Since about 1910, a continuing growth of medical centers has occurred, usually in affiliation with universities. Capital is highly concentrated in these medical centres, which are heavily oriented to advanced technology. Practitioners have received training where technology is available and specialisation is highly valued. Partly as a result, health workers are often reluctant to practise in areas without easy access to medical centers. The nearly unrestricted growth of medical centers, coupled with their key role in medical education and the "technologic imperative" they encourage, has contributed to the maldistribution of health workers and facilities throughout the United States and within regions (38, 64).

### Finance Capital

Monopoly capital also has been apparent in the position of banks, trusts and insurance companies, the largest profit making corporations under capitalism. For example, in 1973, the flow of health-insurance dollars through private insurance companies was 29 billion, about half of the total insurance sold. Among commercial insurance companies, capital is highly concentrated; about 60% of the health-insurance industry is controlled by the 10 largest insurers. Metropolitan Life and Prudential each control more than 30 billion dollars in assets, more than General Motors, Standard Oil of New Jersey, or International Telephone and Telegraph (60).

Finance capital figures prominently in current health reform proposals. Most plans for national health insurance would permit a continuing role for the insurance industry (79,80). Moreover, corporate investment in health maintenance organisations is increasing, under the assumption that national



health insurance, when enacted, will assure the profitability of these ventures (81.)

### **The "Medical-Industrial Complex"**

The "military-industry complex" has provided a model of industrial penetration in the health system popularised by the term, "medical-industrial complex." Investigations by the Health Policy Advisory Center (82,83) and others have emphasised that the exploitation of illness for private profit is a primary feature of the health systems in advanced capitalist societies (64). Recent reports have criticised the pharmaceutical and medical equipment industries for advertising and marketing practices (82-86), price and patent collusion (87), marketing of drugs in the third world before their safety is tested (88-89), and promotion of expensive diagnostic and therapeutic innovations without controlled trials showing their effectiveness (13,90-93).

In this context, "cost-effectiveness" analysis has yielded useful appraisals of several medical practices and clinical decision-making, based in part on analysis of cost relative to effectiveness (94-100). Although recognising its contributions, marxist researchers have criticised the cost-effectiveness approach for asking some questions at the wrong level of analysis. This approach usually does not help clarify the overall dynamics of the health system that encourages the adoption of costly and ineffective technologic innovations. The practice evaluated by cost-effectiveness research generally emerges with the growth of monopoly capital in the health system. Costly innovations often are linked to the expansion of medical centers in the health system, and the promotion of new drugs, the penetration of finance capital and instrumentation by medical industries. Cost-effectiveness research and clinical decision analysis remain incomplete unless they consider broader political and economic trends that propel apparent irrationalities in the health system (90).

### **Interest Group Politics**

Marx argued that class position and economic resources usually determine political power. He noted that the dominant economic class is composed of various groups with sometimes different interests. Although these groups unite when they face basic threats from the working class, their varying interests generate contradictions that can provide a focus for political strategy (101-105). In studies of health care, the analysis of interest group politics has focussed mainly on the United States and Great Britain (106-110). This approach demystifies

the policy recommendations of many groups advocating health reforms. From this perspective, these groups' viewpoints and proposals reflect largely their own political and economic interests, rather than simple concern for improving the health system.

Alford's (106,107) research delineates three major interest groups vying for power and finances. The professional monopolists include physicians, specialists, and health research workers in medical schools, universities, or private practice. The main consequence of their activity is a "continuous proliferation of programs and projects" that "provide a symbolic screen of legitimacy while maintaining power relationships" in the health system. 'Corporate rationalisers' are persons in top positions within health organisations: hospital administrators, medical school deans, and public health officials. The corporate rationalisers' overall effect, according to Alford, is to complicate and elaborate the bureaucratic structures of the health system. As third interest group is the diverse community population actually needing and affected by health services. Generally, Alford observes, this interest group's efforts are likely to fail. A high probability of cooptation means that leaders may assume symbolic positions on advisory boards or planning agencies, without real change in power structures.

The analysis of interest group politics has proved helpful in understanding local controversies such as attempts at community control of health institutions (111); conflicts among the governing boards, administrators, and professional staffs of hospitals (112); failures in comprehensive health planning and regulation (113-116); and the expansion of medical institutions into urban residential areas (117-120). A similar perspective has led to a clearer picture of national health policy decisions, for example, those pertaining to cancer research and occupational health legislation (83-123).

These studies' implications for reform within the present system tend to be pessimistic. Because an "institutional and class structure creates and sustains the power of the professional monopolists and corporate rationalisers". Alford writes, "change is not likely without the presence of a social and political movement which rejects the legitimacy of the economic and social base of pluralist politics." (106).

### **The State and State Intervention**

Because the state encompasses the major institutions of political power, its strategic importance is obvious. The state acts generally to repress

revolutionary social change or political action that threatens the present system in any fundamental way after socialist revolutions, the state apparatus must persist for a long time, but with greatly modified functions. Before focussing on health care, a brief overview and definition of the state are necessary.

Marx and Engels emphasised government's crucial role is protecting the capitalist economic system and the interests of the capitalist class. The famous homily of *The Communist Manifesto*, was "the state is the executive committee of the bourgeoisie" (2). Lenin (124) concluded that the capitalist class would intervene forcibly to block any electoral victory that seriously threatened the private enterprise system. More recent analysts have studied the structural patterns that preserve the dominance of the capitalist class over state policies (53, 59), the mechanisms by which the state eases the recurrent economic crises of the capitalist system (125-127); and ideologic techniques by which the state reinforces popular acquiescence (128, 129).

In this context the following definition, though limited by the subject's complexity, is appropriate. The state comprises the interconnected public institutions that act to preserve the capitalist economic system and the interests of the capitalist class. This definition includes the executive, legislative, and judicial branches of government, the military; and the criminal justice system all of which hold varying degrees of coercive power. It also encompasses relatively noncoercive institutions within the educational, public welfare, and health-care systems. Through such noncoercive institutions, the state offers services or conveys ideologic messages that legitimate the capitalist system. Especially in periods of economic crisis, the state can use these same institutions to provide public subsidisation of private enterprise.

### **The Private-Public Contradiction**

Within the health system, the "public sector," as part of the state, operates through public expenditures and employs health workers in public institutions. The "private sector" is based in private practice and companies that manufacture medical products or control finance capital. Nations vary greatly in the private-public duality. In the United States, a dominant private sector coexists with an increasingly large public sector. The public sector is even larger in Great Britain and Scandinavia. In Cuba and China, the private sector essentially has been eliminated (64).

A general theme of Marxist analysis is that the private sector drains public resources and health workers' time, on behalf of private profit and to the detriment of patients using the public sector. This framework has helped to explain some of the problems that have arisen in such countries as Great Britain (75) and Chile (130, 131), where private sectors persisted after the enactment of national health services. In these countries, practitioners have faced financial incentives to increase the scope of private, practice, which they often have conducted within public hospitals or clinics. In the United States, the expansion of public payment programs such as Medicare and Medicaid has led to increased public subsidisation of private practice and private hospitals, as well as abuses of these programs by individual practitioners (64).

Similar problems have undermined other public health programs. These programs frequently have obtained finances through regressive taxation, placing low-income taxpayers at a relative disadvantage (79). Likewise, the deficiencies of the Blue Cross and Blue Shield insurance plans have derived largely from the failure of public regulatory agencies to control payments to practitioners and hospitals in the private sector (132). When enacted, national health insurance also would use public funds to reinforce and strengthen the private sector, by assuring payment for hospitals and individual physicians and possibly by permitting a continued role for commercial insurance companies (64, 80).

Throughout the United States the problems of the private-public contradiction are becoming more acute. In most large cities, public hospitals are facing cutbacks, closure, or conversion to private ownership and control. This trend heightens low-income patients' difficulties in finding adequate health care (133). It also reinforces private hospitals' tendency to "dump" low-income patients to public institutions (134).

### **General Functions of the State within the Health System.**

The state's functions in the health system have increased in scope and complexity. In the first place, through the health system, the state acts to legitimate the capitalist economic system based in private enterprise (135, 136). The history of public health and welfare programs shows that state expenditures usually increase during periods of social protest and decrease as unrest becomes less widespread (137, 138). Recently a Congressional committee summarised public opinion surveys that uncovered a profound level of dissatisfaction with



government and particularly with the role of business interests in government policies: "... citizens who thought something was 'deeply wrong' with their country had become a national majority ... And, for the first time in the ten years of opinion sampling by the Horris Survey, the growing trend of public opinion towards disenchantment with government swept more than half of all Americans with it" (139). Under such circumstances, the state's predictable response is to expand health and other welfare programs. These incremental reforms, at least in part, reduce the legitimacy crisis of the capitalist system by restoring confidence that the system can meet the people's basic needs. The cycles of political attention devoted to national health insurance in the United States appear to parallel cycles of popular discontent (135). Recent cutbacks in public health services to low-income patients follow the decline of social protest by low-income groups since the 1960s.

The second major function of the state in the health system is to protect and reinforce the private sector more directly. As previously noted, most plans for national health insurance would permit a prominent role and continued profits for the private insurance industry, particularly in the administration of payments, record keeping, and data collection (64, 80, 140). Corporate participation in new health initiatives sponsored by the state — including health maintenance organisations, preventive screening programs, computerised components of professional standards review organisations, algorithm and audiovisual aids for patient education programs — is providing major sources of expanded profit (81, 141).

A third (and subtler) function of the state is the reinforcement of dominant frameworks in scientific and clinical medicine that are consistent with the capitalist economic system and the suppression of alternative frameworks that might threaten the system. The United States government has provided generous funding for research on the pathophysiology and treatment of specific disease entities. As critics even within government have recognised, the disease-centered approach has reduced the level of analysis to the individual organism and, often inappropriately, has stimulated the search for unifactorial rather than multifactorial origin (142). More recently, analyses emphasising the importance in individual "life-style" as a cause of disease (14, 143, 144) have received prominent attention from state agencies in the United States and Canada (145, 146). Clearly individual differences in personal habits do affect health in all societies. On the other hand, the lifestyle argument,

perhaps even more than the earlier emphasis on specific cause, obscures important sources of illness and disability in the capitalist work process and industrial environment; it also puts the burden of the health squarely on the individual, rather than seeking collective solutions to health problems (147, 148).

The issues that the state has downplayed in its research and development programs are worth noting. For example, based on available data, it is estimated that in Western industrialised societies environmental factors are involved in the etiology of approximately 80% of all cancer (149). In its session on "health and work in America," the American Public Health Association in 1975 produced an exhaustive documentation of common occupational carcinogens (150). A task force for the Department of Health, Education, and Welfare on *Work in America*, published by a nongovernment press in 1973, reported "In an impressive 15-year study of aging, the strongest predictor of longevity was work satisfaction. The second best predictor was overall 'happiness'... Other factors are undoubtedly important — diet, exercise, medical care, and genetic inheritance. But research findings suggest that these factors may account for only about 25 per cent of the risk factors in heart disease, the major cause of death... "(151). Such findings are threatening to the current organisation of capitalist production. They have received little attention or support from state agencies. A framework for clinical investigation that links disease directly to the structure of capitalism is likely to face indifference and active discouragement from the state.

### Limits and Mechanisms of State Intervention

State intervention faces certain structural limits. Simply summarised, these limits restrict state intervention to policies and programs that will not conflict in fundamental ways with capitalist economic processes based on private profit, or with the concrete interests of the capitalist class during specific historical periods.

"Negative selection mechanisms" are forms of state intervention that exclude innovations or activities that challenge the capitalist system (125, 126). For example, agencies of the state may enact occupational health legislation and enforcement regulations. However, such reforms will never reach a level strict enough to interfere with profitability in specific industries. Nor will state ownership of industries responsible for occupational or

environmental diseases occur to any major degree (135).

Negative selection also applies to the potentialisation of the health system as a whole. In most capitalist societies, the state generally has opposed structural changes that infringe on private medical practice; private control of most hospitals; and the profitability of the pharmaceutical, medical equipment, insurance, and other industries operating in the health system. While excluding nationalisation through negative selection, the state sponsors incremental reforms that control excesses in each of these spheres, thus maintaining the legitimacy of the whole. As an example of negative selection congressional deliberations in the United States systematically exclude serious consideration of health service (as opposed to national health insurance) that might question the appropriateness of private medical practice or the nationalisation of hospitals (152). Another example is governmental regulation of the drug and insurance industries; aside from its erratic effects, state regulation rules out public ownership of these industries.

The state also can use "positive selection mechanisms" that promote and sponsor policies strengthening the private enterprise system and the interests of capital (125, 126). The positive selection of financial reforms like health insurance, for instance, contrasts sharply with the exclusion of organisational reforms that might change the broader political and economic structures of the present system (135).

### Medical Ideology

Ideology is an interlocking set of ideas and doctrines that form the distinctive perspective of a social group. Marx introduced a distinction between two levels of social structures. The "infrastructure", or "economic base," comprises the concrete relations of economic production; social class, as determined by ownership or control of the means of production, or both, is the primary feature of the infrastructure. On the other hand, the "superstructure" includes governmental and legal institutions, as well as the dominant ideologies of a specific historical period (39). The events of history, in the Marxist perspective emerge mainly from economic forces; this "economic determinancy" gives causal primacy to the sphere of production and class conflict. Thus, the economic infrastructure generally determines features of the superstructure. Ideology and other parts of the superstructure, however, help sustain and reproduce the social relations of production and, especially, patterns

of domination (153, 154). Marxist analysis emphasises the subtle "ideologic hegemony" by which institutions of civil society (schools, church, family, and so forth) promulgate ideas and beliefs, that support the established order (129, 155); the "ideologic apparatuses" that the capitalist class uses to pressurise state power (128); and the ideologic features of modern science that legitimate social policy decisions made by "experts" in the interests of the dominant class (156).

Along with other institutions such as the educational system, family, mass media, and organised religion, medicine promulgates an ideology that helps maintain and reproduce class structure and patterns of domination. Medicine's ideologic feature in no way diminish the efforts of individuals who use currently accepted methods in their clinical work and research. Nevertheless, medical ideology, when analysed as part of the broad social superstructure, has major social ramifications beyond medicine itself (157). Recent studies have identified several components of modern medical ideology.

### Disturbances of Biological Homeostasis are Equivalent to Breakdowns of Machines

Modern medical science views the human organism mechanistically. The health professional's advanced training permits the recognition of specific causes and treatments for physical disorders. The mechanistic view of the human body deflects attention from multifactorial origin, especially causes of diseases that derive from the environment, work processes, or social stress. It also reinforces a general ideology that attaches positive evaluation to industrial technology under specialised control (5, 135, 158, 159).

### Disease is a Problem of the Individual Human Being

The unifactorial model of disease contains reductionist assumptions, because it focusses on the individual rather than the illness-generating conditions of society. More recently, a similar reductionist approach has discovered sources of illness in lifestyle. In both cases, the responsibility for disease and cure rests at the individual rather than the collective level. In this sense medical science offers no basic critical approach of class structure and relations of production, even in the implications for health and illness (135, 159).

### Science Permits the Rational Control of Human Beings

The natural sciences have led to a greater control over nature. Similarly, it is often assumed that



modern medicine, by correcting defects of individuals, can enhance their controllability. The quest for a reliable work force has been one motivation for the support of modern medicine by capitalist economic interests (19, 26). Physicians' certification of illness historically has expanded or contracted to meet industry's need for labor (160, 161). Thus, medicine is seen as contributing to the rational governance of society, and managerial principles increasingly are applied to the organization of the health system (113-115).

### **Many Spheres of Life are Appropriate for Medical Management**

This ideologic assumption has led to an expansion of medicine's social control function. Many behaviours that do not adhere to society's norms have become appropriate for management by health professionals. The "medicalisation of deviance" and health workers' role as agents of social control have received critical attention (14, 64, 162-166). The medical management of behavioral difficulties, such as hyperkinesis and aggression, often coincides with attempts to find specific biologic lesions associated with these behaviours (167-171). Historically, medicine's social control function has expanded in periods of intense social protest or rapid social change (172).

### **Medical Science is Both Esoteric and Excellent**

According to this ideologic principle, medical science involves a body of advanced knowledge and standards of excellence in both research and practice. Because scientific knowledge is esoteric, a group of professionals tend to hold elite positions. Lacking this knowledge, ordinary people are dependent on professionals for interpretation of medical data. The health system therefore reproduces patterns of domination by "expert" decision-makers in the workplace, government, and many other areas of social life (173, 174). The ideology of excellence helps justify these patterns, although the quality of much medical research and practice is far from excellent, this contradiction recently has been characterised as "the excellence deception" in medicine (175). Ironically, a similar ideology of excellence has justified the emergence of new class hierarchies based on expertise in some countries, such as the Soviet Union, that have undergone socialist revolutions. Other countries, such as the People's Republic of China, have tried to overcome these ideologic assumptions and develop a less esoteric "people's medicine" (176).

Studies of medical ideology have focused on public statements by leaders of the profession (in

professional journals or the mass media), as well as state and corporate officials whose organisations regulate or sponsor medical activities (177). However, health professionals also express ideologic messages in their face to face interaction with patients (160, 163). The transmission of ideologic messages within doctor-patient interaction currently is the subject of empirical research (178-180)

### **Comparative International Health Systems**

Marxist studies have focussed on three topics in this area: imperialism, the transition to socialism, and contradictions of capitalist reform.

#### **Health Care and Imperialism**

Imperialism may be defined as capital's expansion beyond national boundaries, as well as the social, political and economic effects of this expansion. Imperialism has achieved many advantages for economically dominant nations. Marxist critiques have dealt with imperialists of both advanced capitalist countries and socialist superpowers (especially the "social imperialism" of the USSR). (28, 181, 182). Health care has played an important role in several phases of imperialism.

One basic feature of imperialism is the extraction of raw materials and human capital, which move from third world nations to economically dominant countries. Navarro (183) has analysed how the "underdevelopment of health" in the third world follows inevitably from this depletion of natural and human resources. The extraction of wealth limits underdeveloped countries' ability to construct effective health systems. Many Third World countries face a net loss of health workers who migrate to economically dominant nations after expensive training at home. Workers abroad who are employed by multinational corporations also face high risks of occupational disease (184).

By imperialism, corporations seek a cheap labor force. Workers' efficiency was one important goal of public health programs sponsored abroad, especially in Latin America and Asia, by philanthropies closely tied to expanding industries in the United States (27,27.). Moreover, population-control programs initiated by the United States and other dominant countries have sought a more reliable participation by women in the labor force (185, 186).

One thrust of imperialism is the creation of new markets for products manufactured in dominant nations and sold in the third world. This process, enhancing the accumulation of capital by multinational corporations, is nowhere clearer than in the

pharmaceutical and medical equipment industries (88,89). The monopolistic character of these industries as well as the stultifying impact that imported technology has exerted on local research and development, has led to the advocacy of nationalised drug and equipment formularies in several countries (187,188).

Imperialism reinforces international class relations, and medicine contributes to this phenomenon (54,189). As in the U.S., medical professionals in the third world most often come from higher income families. Even when they do not, they frequently view medicine as a route of upward mobility. As a result, medical professionals tend to ally themselves with the capitalist class, the "national bourgeoisie", of third world countries. They also frequently support cooperative links between the local capitalist class and business interests in economically dominant countries. The class position of health professionals has led them to resist social change that would threaten current class structure, either nationally or internationally. Similar patterns have emerged in some post-revolutionary societies. In the USSR, professionals' new class position, based on expertise, has caused them to act as a relatively conservative group in periods of social change (28). Elitist tendencies in the post-revolutionary Cuban profession also have received criticism from Marxist analysts (190,191). Studies of several countries have analysed the relation among class, imperialism, and professional resistance to change (130,131,190-195).

Frequently imperialism has involved direct military conquest; recently health workers have assumed military or paramilitary roles in Indochina and Northern Africa (196-198). Health institutions also have taken part as bases for counter-insurgency and intelligence operations in Latin America and Asia (199).

### Health Care and the Transition to Socialism

The number of nations undergoing socialist revolutions has increased dramatically in recent years, particularly in Asia and Africa but also in parts of Latin America, the Caribbean and Southern Europe. Socialism is no panacea. Numerous problems have arisen in all countries that have experienced socialist revolutions. The contradictions that have emerged in most post-revolutionary countries are deeply troubling to Marxists; these contradictions have been the subject of intensive analysis and debate.

On the other hand, socialism can produce major modifications in health-system organisation,

nutrition, sanitation, housing and other services. These changes can lead, through a sometimes complex chain of events, to remarkable improvements in health. The morbidity and mortality trends that followed socialist revolutions in such countries as Cuba and China now are well known (190,191, 200-207). The transition to socialism in every case has resulted in reorganisation of the health system, emphasising better distribution of health care facilities and personnel. Local political groups in the commune, neighbourhood, or workplace have assumed responsibility for health education and preventive medicine programs. Class struggle continues throughout the transition to socialism. During Chile's brief period of socialist government, many professionals resisted democratisation of health institutions and supported the capitalist class that previously and subsequently ruled the country (130,131,192-195). Countries such as China and Cuba eliminated the major source of social class: the private ownership of the means of production. However, as mentioned previously, new class relations began to emerge that were based on differential expertise. Health professionals received larger salaries and maintained higher levels of prestige and authority. One focus of the Chinese Cultural Revolution was the struggle against the new class of experts that had gained power in the health system and elsewhere in society (56,202). Other countries, including Cuba, have not confronted these new class relations as explicitly (191).

Improved health care remains linked to the general level of economic development. In some African nations, for instance, severe poverty hampers organisational and programmatic changes. Countries like Tanzania and Mozambique have undertaken health planning that ties general economic development to innovations in health care (208-211).

### Contradictions of Capitalist Reform

Although they retain the essential features of their capitalist economic systems, several nations in Europe and North America have instituted major reforms in their health systems. Some reforms have produced beneficial effects that policy makers view as possible models for the United States. Recent Marxist studies, although acknowledging many improvements, have revealed troublesome contradictions that seem inherent in reforms attempted within capitalist systems. These studies' conclusions are not optimistic about the success of proposed reforms in the United States.

Great Britain's national health service has attracted great interest. Serious problems have



balanced many of the undeniable benefits that the British health service has achieved. Chief among these problems is the professional and corporate dominance that has persisted since the service's inception. Decision-making bodies contain large proportions of professionals, specialists, bankers and corporate executives, many of whom have direct or indirect links with pharmaceutical and medical equipment industries (75, 110).

The private-public contradiction, discussed earlier, has remained a source of conflict in several countries that have established national health services or universal insurance programs. Use of public facilities for private practice has generated criticism focusing on public subsidisation of the private sector. In Britain, for example, this concern (along with more general organisational problems that impeded comprehensive care) was a primary motivation for the recent reorganisation of the national health service (110). In Chile, the attempt to reduce the use of public facilities for private practice led to crippling opposition from the organised medical profession (130, 131, 194). The private-public contradiction will continue to create conflict and limit progress when countries institute national health services while preserving a strong private sector.

The limits of state intervention also have become clearer from the examples of Quebec and Sweden. Both have tried to establish far-reaching programs of health insurance, while preserving private practice and corporate dealings in pharmaceuticals and medical equipment. Recent studies have shown the inevitable constraints of such reforms. Maldistribution of facilities and personnel have persisted, and costs have remained high. The accomplishments of Quebec's and Sweden's reforms cannot pass beyond the state's responsibility for protecting private enterprise (136, 242). This observation leads to skepticism about health reforms in the United States that rely on private market mechanisms and that do not challenge the broader structure within which the health system is situated. (64, 213).

### **Historical Materialist Epidemiology**

Historical materialist epidemiology is a rapidly growing field in Marxist studies of health care. Its antecedents derive from the classic research of Engels (1), Virchow (3, 4) and the nineteenth-century school of social medicine in Europe. Simply defined, historical materialist epidemiology relates patterns of death and disease to the political, economic, and social structures of society (214-216). The field emphasises changing historical patterns of disease and the specific material circumstances under which

people live and work. These studies try to transcend the individual level of analysis to find how historical social forces, at least in part, determine health and disease.

### **Social Class and Economic Cycles**

Considerable evidence indicates that the incidence and prevalence of mental illness closely follows periods of economic growth or recession. The relations are complex and differ by social class (217). Recent studies also have linked economic cycles, particularly those that involve expanding or contracting employment, to general mortality and morbidity trends among various social classes and age groups (218, 219).

### **Stress and Social Organisation**

Previous interest in stress usually has focused on the individual life cycle or family unit. Historical materialist epidemiology shifts the level of analysis to stressful forms of social organisation connected to capitalist production and industrialisation (220). Hypertension rates, for example, consistently have increased with the disruption of stable social communities and organization of work that is hierarchically controlled and time pressured. These observations apply to countries that have followed capitalist lines of development and socialist countries that have industrialised rapidly (221, 222). Similar investigations of coronary heart disease (223, 224), cancer (225), suicide (226) and anxiety (227) currently are in progress.

### **Work and Profit**

Marxist studies in occupational health emphasise the contradictions between profitability and improved health conditions in capitalist industries (184, 228). Specific research has clarified the illness-generating conditions of the work place and profit system with reference to disease entities such as asbestos and mesothelioma (83), complications of vinyl chloride (123), drug abuse (229, 230), and accidents (231). On the other hand, observation of occupational health practices in socialist countries have shown that rapid improvements are possible when private profit is removed as a disincentive to change (176, 232).

Studies in this area focus on the interplay among sex, class structure, and work processes. The varying experiences of women and men are related to their mortality rates and life expectancy (233, 234). Historically, women's use of health facilities and the attitudes of medical practitioners towards women's health problems have depended largely on women's

class positions (161). This conclusion is especially evident from the history of the birth control movement (235), psychiatric diagnosis (236), and gynecologic surgery (237). The unique health hazards and difficulties that women face as housewives (238) and paid workers (239, 240), currently are attracting greater attention.

One unifying theme in the field is modern medicine's limitations (15). Traditional epidemiology has searched for causes of morbidity and mortality that are amenable to medical intervention. Although it acknowledges the importance of traditional techniques, historical materialist epidemiology has found causes of disease and death that derive from broad social structures beyond the reach of health care alone.

### Health Praxis

Marxist research conveys another basic message: that research is not enough. "Praxis," as proposed throughout the history of marxist scholarship, is the disciplined uniting of thought and practice, study and action (129). It is important to consider political strategy, especially as it concerns the health system of the United States.

### Contradictions of Patching

Health workers concerned about progressive social change face difficult dilemmas in their day-to-day work. Clients' problems often have roots in the social system. Examples abound: drug addicts and alcoholics who prefer numbness to the pain of unemployment and inadequate housing; persons with occupational diseases that require treatment but will worsen upon return to illness-generating work conditions; people with stress-related cardiovascular disease; elderly or disabled people who need periodic medical certification to obtain welfare benefits that are barely adequate; prisoners who develop illness because of prison conditions (64, 241). Health workers usually feel obliged to respond to the expressed needs of these and many similar clients.

In doing so, however, health workers engage in "patching". On the individual level, patching usually permits clients to keep functioning in a social system that is often the source of the problem. At the societal level, the cumulative effect of these interchanges is the patching of a social system whose patterns of oppression frequently cause disease and personal unhappiness. The medical model that teaches health workers to serve individual patients deflects attention from this difficult and frightening dilemma (64).

The contradictions of patching have no simple resolution. Clearly health workers cannot deny services to clients, even when these services permit clients' continued participation in illness-generating social structures. On the other hand, it is important to draw this connection between social issues and personal troubles (242). Health praxis should link clinical activities to efforts aimed directly at basic socio-political change. Marxist analysis has clarified some fruitful directions of political strategy.

### Reformist Versus Non-reformist Reform

When oppressive social conditions exist, reforms to improve them seem reasonable. However, the history of reform in capitalist countries has shown that reforms most often follow social protest, make incremental improvements that do not change overall patterns of oppression, and face cutbacks when protest recedes. Health praxis includes a careful study of reform proposals and the advocacy of reforms that will have progressive impact.

A distinction developed by Gorz (243) clarifies this problem. "Reformist reforms" provide small material improvements while leaving intact current political and economic structures. These reforms may reduce discontent for periods of time, while helping to preserve the system in its present forms: "A reformist reform is one which subordinates objectives to the criteria of rationality and practicability of a given system and policy.. (It) rejects those objectives and demands — however deep the need for them — which are incompatible with the preservation of the system." "Nonreformist reforms" achieve true and lasting changes in the present system's structures of power and finance. Rather than obscuring sources of exploitation by small incremental improvements, nonreformist reforms expose and highlight structural inequities. Such reforms ultimately increase frustration and political tension in a society; they do not seek to reduce these sources of political energy. As Gorz (243) puts it: "... although we should not reject intermediary reforms... it is with strict proviso that they are to be regarded as a means and not an end, as dynamic phases in a progressive struggle, not as stopping places." From this viewpoint, health workers can try to discern which current health reform proposals are reformist and which are non-reformist. They also can take active advocacy roles, supporting the latter and opposing the former. Although the distinction is seldom easy, it has received detailed analysis with reference to specific proposals (64, 83, 107, 213, 244).



Reformist reforms would not change the overall structure of the health system in any basic way. For example, national health insurance chiefly would create changes in financing, rather than in the organisation of health system. This reform may reduce the organisation of the health system. This reform may reduce the financial crises of some patients; it would help assure payment for health professionals and hospitals. On the other hand, national health insurance will do very little to control profit for medical industries or to correct problems of maldistributed health facilities and personnel. Its incremental approach and reliance on private market processes would protect the same economic and professional interests that currently dominate the health system (64,83,213).

Other examples of reformist reforms are health maintenance organisations, prepaid group practice, medical foundations, and professional standards review organisations (64,213). With rare exceptions that are organised as consumer cooperatives, these innovations preserve professional dominance in health care (245). There have been incentives to improve existing patterns of maldistributed services. Moreover, large private corporations have entered this field rapidly, sponsoring profit-making health maintenance organisations and marketing technologic aids for peer review (81).

Until recently, support for a national health service in the United States has been rare. For several years, however, marxist analysts have worked with members of Congress in drafting preliminary proposals for a national health service (152). These proposals, if enacted, would be progressive in several ways. They promise to place stringent limitations on private profit in the health sector. Most large health institutions gradually would come under state ownership. Centralised health planning would combine with policy input from local councils to foster responsiveness and limit professional dominance. Financing by progressive taxation is designed explicitly to benefit low-income patients. Periods of required practice in underserved areas would address the problem of maldistribution. The eventual development of a national drug and medical equipment formulary promises to curtail monopoly capital in the health sector.

Although these proposals face dim political prospects, support is growing. For instance, the Governing Council of the American Public Health Association has passed two resolutions supporting the concept of a national health service that would be community based and financed by progressive taxation (246, 247). This reform contains contradictions that probably would generate frustration and

pressure for change. In particular, these proposals would permit the continuation of private practice and, therefore, the inequities of the private-public dichotomy. Yet, because a national health service provides a model for a more responsively organised system, advocacy of this reform seems a key part of health praxis (207).

### Health Care and Political Struggle

Fundamental social change, however, comes not from legislation but from direct political action. Currently, coalitions of community residents and health workers are trying to gain control over the governing bodies of health institutions that affect them (111, 117-120). Unionisation activity and minority group organising in health institutions are exerting pressure to modify previous patterns of stratification (248-252).

Gaining control of the state through a revolutionary party remains a central strategic problem for activists struggling for the advent of socialism (124). Party building now is taking place throughout the United States. Advocates of "vanguard party" believe that historically all successful revolutions have resulted from the efforts of a small vanguard who hold consistent ideology and attract mass support during periods of political and economic upheaval. Activists adopting the vanguard approach frequently take jobs as lower-echelon health workers; they recruit members during unionisation efforts and oppose cutbacks in jobs and health services. Supporters of a "mass party" argue that mass organising must precede rather than follow the development of a coherent ideology; therefore, political energies should go toward building alliances that embrace a spectrum of anticapitalist views. Mass party organisers work toward community-worker control over local health programs, occupational health and safety, women's health issues, minority recruitment into medicine, and electoral campaigns for improved health services (254).

Recognising the impact of medical ideology has motivated attempts to demystify current ideological patterns and develop alternatives. This "counter-hegemonic" work often involves opposition to the social control function of medicine in such areas as drug addiction, genetic screening, contraception and sterilisation abuse, psychosurgery, and women's health care. A network of alternative health programs has emerged that tries to develop self-care and nonhierarchical, anticapitalist forms of practice; these ventures then would provide models of progressive health work when future political change permits their wider acceptance (255-259).

In anti-imperialist organising, several groups have assisted persecuted health workers and have spoken out against medical complicity in torture ( 130, 131, 260 ). Health and science workers also have used historical materialist epidemiology in occupational health projects and unionisation struggles.

A common criticism of the Marxist perspective is that it presents many problems with few solutions. Recent advances in this field, however, have clarified some useful directions of political strategy. This struggle will be a protracted one and will involve action on many fronts. The present holds little room for complaisance or misguided optimism. Our future health system, as well as the social order of which it will be a part, depends largely on the praxis we choose now.

#### Acknowledgements

The author thanks Betty Boujoukos, Deborah Helvarg, Alexander Leaf, Vicente Navarro, John Stoeckle, Barbara Waterman, and referees of Annals of Internal Medicine for their assistance, criticism, and encouragement.

Grant support: in part by grants from the National Center for Health Services Research (HS-02100) and the Medical Clinics Complex Education Fund of the Massachusetts General Hospital.

#### References

- Engels F : *The Condition of the Working Class in England in 1844*, Stanford University Press, 1968 (1845).
- Marx K, Engels F : *The Communist Manifesto*. New York, International, 1948 (1848).
- Virchow R : *Gesammelte Abhandlungen aus dem Gebiet der öffentlichen Medizin und der Seuchenlehre*, Vol. I. Berlin Hirschwald, 1879, pp. 305, 321, 334.
- Virchow R : *Über den Hungertyphus und einige verwandte Krankheitsformen*, Berlin, Hirschwald, 1868.
- Berliner H : *Notes on the historical precursors of materialist epidemiology*. Health Movement Organization. 1 : 5-7, 1976.
- Ackerknecht EH : *Rudolf Virchow*. Madison, University of Wisconsin Press, 1953, pp. 159-181.
- Rosen G : *From Medical Police to Social Medicine : Essays on the History of Health Care*, New York, Science History Publications, 1974.
- Virchow R : *Briefe an seine Eltern*. Leipzig, Engelmann, 1906. pp. 121-164.
- Dubos R : *The Mirage of Health*, New York, Anchor, 1959.
- Kass EH : Infectious disease and social change. *J Infect Dis* 123 : 110-114, 1971.
- McKeown T : *An historical appraisal of the medical task, in Medical History and Medical Care*, edited by T. McLachlan G. New York, Oxford University Press, 1971.
- McKeown T. : *The Modern Rise of Population*. New York, Academic Press, 1977.
- Cochrane AL : *Efficiency and Effectiveness: Random Reflections on Health Services*, London, Nuffield Hospitals Trust, 1972.
- Illich : *Medical Nemesis*. New York, Pantheon, 1976.
- Powles J : *On the limitations of modern medicine*. *Sci Man* 1 : 1-30, 1973.
- Haggerty RJ : *The boundaries of health care*. *Pharos* 35 : 106-111, 1972.
- Carlson R : *The End of Medicine*. New York, Wiley, 1975.
- Flexner A : *Medical Education in the United States and Canada*. New York, Carnegie Foundation, 1910.
- Brown ER : *Rockefeller Medicine Men: Medicine and Capitalism in the Progressive Era*. Berkeley, University of California Press, 1979; in press.
- Berliner H : *A larger perspective on the Flexner Report*. *Int J Health Serv* 5:573-592, 1975.
- Kunitz SJ : *Professionalism and social control in the progressive era : the case of the Flexner Report*. *Soc Problems* 22: 16-27, 1974.
- Ehrenreich B, English D : *Witches, Midwives, and Nurses : A History of Women Healers*. Old Westbury, New York, Feminist Press, 1973.
- Kleinbach (Ziem,) G : Social structure and the education of health personnel *Int J Health Serv* 4 : 297-317, 1974.
- Ziem G : *Medical education since Flexner*. *Health/PAC Bull* 76 : 8-14, 23, 1977.
- Nielsen WA : *The Big Foundations*. New York, Columbia University Press, 1972.
- Brown ER : Public health in imperialism: early Rockefeller programs at home and abroad. *Am J Public Health* 66:897-903, 1976.
- Donaldson PJ : Foreign intervention in medical education. *Int J Health Serv* 6: 251-270, 1976.
- Navarro V : *Social Security and Medicine in the USSR : A Marxist Critique* Lexington, Massachusetts, Health, 1977.
- Allende S : *La Realidad Medico-Social Chilena*. Santiago, Ministerio de Salubridad, Prevision y Asistencia Social.
- Bethune N : A plea for early decompression in pulmonary tuberculosis. *Can Med Assoc J* 27: 36-42, 1932.



31. Bethune N: Wounds, in "Away with All Pests..." An English Surgeon in People's China, edited by Horn JS. New York, Monthly Review Press, 1969.
32. Allan T. Gordon S: *The Scalpel, The Sword: The Story of Doctor Norman Bethune*. New York, Monthly Review Press, 1974.
33. Guevara E: *On revolutionary medicine*, in *Vencemos*, edited by Gerassi J. New York, Simon & Schuster, 1969.
34. Harper G: Ernesto Guevara, M.D.: Physician-revolutionary physician-revolutionary. *N. Engl J Med* 28: 1285-1289, 1969.
35. Ginzberg E: The political economy of health. *Bull NY Acad Med* 41: 1015-1036, 1965.
36. Rossdale M: Health in a sick society. *New Left Rev* 34: 82-90, Nov-Dec 1965.
37. Polack JC: *La Medecine du Capital* Paris, Maspero, 1970.
38. Kelman S: Towards a political economy of health care. *Inquiry* 8: 30-38, 1971.
39. Marx K: *A contribution to the Critique of Political Economy*. New York, International 1971 (1859).
40. Marx K: *The Economic and Philosophic Manuscripts of 1844*. New York, International 1964.
41. Marx K: *Capital*, Vol. 1. Moscow, Progress Publishers, 1963; (1890).
42. Weber M: *Class, status, party*, in *Max Weber: Essays in Sociology*, edited by Gerth HH, Mills CW, New York, Galaxy, 1958.
43. Berle AA: *Power Without Property*. New York: Harcourt, Brace, Javanovich, 1962.
44. Galbaith JK: *The New Industrial State*. Boston, Houghton Mifflin, 1972.
45. Bell D: *The Coming Postindustrial Society*. New York, Basic Books, 1973.
46. Bendix R, Lipset SM (eds.): *Class, Status, and Power*, New York, Free Press, 1966.
47. Lipset SM, Bendix R: *Social Mobility in Industrial Society*. Berkeley, University of California Press, 1964.
48. Daharendorf R: *Class and Class Conflict in Industrial Society*. Stanford, Stanford University Press, 1959.
49. Jencks C: *Inequality*. New York. Harper, 1972.
50. Miller SM, ROBY P. *The Future of Inequality*, New York, Basic Books, 1970.
51. Rawls J: *A Theory of Justice*. Cambridge, Harvard University Press, 1971.
52. Anderson CH: *The Political Economy of Social Class*. Englewood Cliffs, New Jersey Prentice-Hall, 1974.
53. Populanzas N: *Political Power and Social Classes*. London, New Left Books, 1973.
54. Populanzas N: *Classes in Contemporary Capitalism*. London. New Left Books, 1975.
55. Bettelheim C: *Class Struggles in the USSR*. New York, Monthly Review Press, 1976.
56. Ehrenreich J: The dictatorship of the proletariat in China *Monthly Rev* 27: 16-28, Oct 1975.
57. Hill J: *Class Analysis: United States in the 1970's*. Everyville, California, League for Proletarian Socialism.
58. Giddens A: *The Class Structure of the Advanced Societies*. New York, Barnes and Noble, 1973.
59. Miliband R: *The State in Capitalist Society*. New York, Basic Books, 1969.
60. Navarro V: Social policy issues: an explanation, of the composition, nature and functions of the present health sector of the United States *Bull NY Acad Med* 51: 199-234, 1975.
61. Navarro V: The underdevelopment of health in working America. *Am J. Public Health* 66: 538-547, 1976.
62. Navarro V: *Medicine Under Capitalism*. New York, Prodist. 1976.
63. U. S. Department of Commerce: *Statistical Abstracts of the United States*, 1976. Washington, D.C. Government Printing Office, 1976, p. 377.
64. Waitzkin H, Waterman B: *The Exploitation of illness in Capitalist Society*, Indianapolis, Bobbs-Merrill, 1974.
65. Bullough B: Barriers to the nurse practitioner movement. *Int J. Health Serv.* 5: 225-233, 1975.
66. Cannings K, Lazonick W: The development of the nursing labor force in the United States *Int J Health Serv* 5: 185-216, 1975.
67. Ehrenreich B, Ehrenreich J: Hospital workers: a case study of the new working class. *Monthly Rev* 24: 12-27. Jan 1973.
68. Twaddle AC, Stoeckle JD: Non-physician health workers: Some problems and prospects. *Soc Sci Med* 8: 71-76. 1974.
69. Twaddle AC, Hessler RM: *A Sociology of Health*. St. Louis, Mosby, 1977, pp. 202-216.
70. Braverman H: *Labor and Monopoly Capital*, New York, Monthly Review Press, 1974, pp. 293 - 449.
71. Stevenson G: Social relations of production and consumption in the human service occupations. *Monthly Rev* 28: 78-87, Jul-Aug 1976.
72. Brown CA: The division of labourers - allied health professions. *Int J Health Serv* 3: 335-444, 1973.
73. McKinlay JB: *The changing political and economic context of the patient-physician encounter, in the Doctor-Patient Relationship in the Changing Health Scene*, edited by Gallagher EB. DHEW Publication No. (NIH) 78-183. Washington, D C.,

- Government Printing Office, 1978.
74. Simpson MA : *Medical Education: A Critical Approach*. London, Butterworths, 1972.
  75. Robson J: The NHS Company, Inc. The social consequences of the professional dominance in the National Health Service. *Int J Health Serv* 3: 413-426, 1973.
  76. Baran PA, Sweezy PM : *Monopoly Capital*. New York, Monthly Review Press, 1966.
  77. Edwards RC, Reich M, Weisskopf TE (Eds) : *The Capitalist System*. Englewood Cliffs, New Jersey, Prentice-Hall, 1978.
  78. Hunt EK, Sherman HJ : *Economics : An Introduction to traditional and Radical Views*, New York, Harper & Row. 1975.
  79. Bodenheimer T : Health care in the United States: who pays? *Int J Health Serv* 3: 427-434, 1973.
  80. Lander L : *National Health Insurance*. New York, Health Policy Advisory Centre, 1975.
  81. Salmon JW : Health Maintenance organization strategy : a corporate takeover of health services. *Int J. Health Serv* 5 : 609-624, 1975.
  82. Ehrenreich B, Ehrenreich J (eds) : *The American Health Empire*. New York. Vintage, 1970.
  83. Kotelchuck D (ed) : *Prognosis Negative*, New York, Vintage, 1976.
  84. Concerned Rush Students : Turning prescriptions into profits. *Sci for the People* 8:6-9, 30-32, Nov-Dec 1976; 9 : 6-9, Jan-Feb 1977.
  85. Karner W : Zur Strategie der pharmazeutischen Industrie. *Fortschr Wissenschaft (Vinna)* 3/4 : 8-30, 1976.
  86. Silverman M, Lee RP : *Pills, Profits and Politics*. Berkeley, University of California Press, 1974.
  87. Lichtman R : *The Political economy of medical care*, in *The Social Organization of Health*. edited by Dreitzel HP. New York, Macmillan, 1971.
  88. Silverman M : *The Drugging of the Americas*. Berkeley, University of California Press, 1976.
  89. Lall S : Medicine and multinationals. *Monthly Rev* 28: 19-30 Mar 1977.
  90. Waitzkin H : *How capitalism cares for our coronaries*, in *The Doctor Patient Relationship in the Changing Health Scene*, edited by Gallagher EB DHEW Publication No. (NIH) 78-183. Washington D. C. Government Printing Office, 1978.
  91. Millman M : *The Unkindly Cut : Life in the Backrooms of Medicine*. New York, Morrow, 1977.
  169. Mather HG, Morgan DC, Pearson NG, Read KLO, Shaw DB, Steed GR, Thorne MG, Lawrence CJ, Riley IS : Myocardial infarction : a comparison between home and hospital care for patients. *Br Med J* : 1 : 925-929, 1976.
  3. Rodberg L, Stevenson G : The health care industry in advanced capitalism. *Rev Radical Polit Econ*. 8 : 104-115, Spring 1977.
  94. Bloom BS, Peterson OL: End results, cost and productivity of coronary-care units. *N Eng J Med* 288: 72-78, 1973.
  95. Martin SP, Donaldson MC, London CD, Peterson OL, Colton T : Inputs into coronary care during 30 years: a cost-effectiveness study. *Ann Intern Med* 81: 289-293, 1974.
  96. Stross JK, Willis PW III, Reynolds EW, Lewisre, Schatz IJ, Bellfy LC, Copp J: Effectiveness of coronary care units in small community hospitals. *Ann Intern Med* 85: 709-713, 1976.
  97. Cullen DJ, Ferrara LC, Briggs BA, Walker PF, Gilbertj: Survival, hospitalization charges and follow-up results in critically ill patients. *N Eng J Med* 294: 982-987, 1976.
  98. Olsen DM, Kane RL, Proctor PH: A controlled trial of multiphasic screening, *N. Engl J Med* 294: 925-930, 1976.
  99. McNeil BJ, Keeler E, Adelstein SJ: Primer on certain elements of medical decision making. *N Engl J Med* 293: 211-215, 1975.
  100. Schoenbaum SC, McNeil BJ, Kavet J: The swine-influenza decision. *N Engl J Med* 295 : 759-765, 1976.
  101. Marx K : *The Eighteenth Brumaire of Louis Bonaparte*, New York, International, 1973 (1852).
  102. Marx K : *Critique of the Gotha Programme*. New York, International 1966 (1875).
  103. Mills CW : *The Power Elite*, New York, Galaxy, 1959.
  104. Domhoff GW : *The Higher Circles*, New York, Vintage, 1970.
  105. San Francisco bay area kapitalistate collective : Watergate or the Eighteenth Brumaire of Richard Nixon. *Kapitalistate* 3 : 3-24, Spring 1975.
  106. Alford RR : The political economy of health care : dynamics without change. *Politics Soc.* 2:127-164, 1972.
  107. Alford RR : *Health Care Politics*. Chicago, University of Chicago Press, 1975.
  108. Marmor T : *The Politics of Medicare*, Chicago, Aldine, 1973.
  109. Willcocks J : *The Creation of the National Health Service : A Study of Pressure Groups and a Major Social Policy Decision* London, Routledge and Kegan Paul. 1967.
  110. Gill DG : The reorganization of the national health service. *Social Rev (Monogr)* 22: 9-22, 1976.
  111. Mullan F : *White Coat, Clenched Fist*. New York, Macmillan, 1976.
  112. Pfeffer J : Size, composition, and functions of



- hospital boards of directors : a study of organisation-environment linkage. *Admin Sci Q* 18 : 349-364, 1973.
113. Krause E : Health Planning as a managerial ideology. *Int J. Health Serv* 3 : 445-463, 1973.
  114. Krause E : The Political context of health service regulation. *Int J Health Serv* 5 : 593-607, 1975.
  115. Krause E : *Power and Illness : The Political Sociology of Health and Medical Care*, New York Elsevier, 1977.
  116. Komaroff AL : Regional medical programs in search of a mission. *N Engl J Med* 284: 758-764, 1971.
  117. Waitzkin H : Expansion of medical institutions into urban residential areas. *N Engl J Med* 282 : 1003-1007, 1970.
  118. Waitzkin H, Sharratt J : Controlling medical expansion. *Society* 14 : 30-35, Jan-Feb 1977.
  119. Waitzkin H. What to do when your local medical center tries to tear down your home. *Sci for the People* 9 : 22-23, 28-39, Mar-April 1977.
  120. Waitzkin H, Wallen J, Sharratt J : Homes or hospitals? a current urban dilemma. *Int J Health Serv*, 1979, in press.
  121. Bazell R : Behind the cancer campaign. *Ramparts* 10 : 29-34, Dec 1971.
  122. Greenberg DS : "Progress" in cancer research don't say it isn't so. *N Engl J Med* 292 : 707-708, 1975.
  123. Wegman DH, Peters JM, Jaeger RJ, Burgess WA, Boden LI : Vinyl chloride : can the worker be protected? *N Engl J Med* 294 : 653-657, 1976.
  124. Lenin VI : *The State and Revolution*. Peking, Foreign Languages Press, 1973 (1917).
  125. Offe C : Advanced capitalism and the welfare state. *Politics Soc* 2 : 479-488, 1972.
  126. Offe C : The theory of the capitalist state and the problem of policy formation, in *Stress and Contradiction in Modern Capitalism*, edited by Lindberg LN, Alford R, Crouch C, Offe C. Lexington, Massachusetts, Lexington Books, 1975.
  127. O'Connor J : *The Fiscal Crisis of the State*, New York, St. Martin's, 1973.
  128. Althusser L : *Lenin and Philosophy and other Essays*, New York, Monthly Review Press, 1971.
  129. Gramsci, A : *Selections from the Prison Notebooks*. New York. International, 1971.
  130. Waitzkin H, Modell H : Medicine, socialism, and totalitarianism : lessons from Chile, *N Eng J Med* 291 : 171-177, 1974.
  131. Modell H, Waitzkin H : Medicine and socialism in Chile. *Berkeley J Social* 19 : 1-35, 1974.
  132. Law S. *Blue Cross : What Went Wrong*. New Haven, Yale University Press, 1976.
  133. Blake E, Bodenheimer T : *Closing the Doors to the Poor*. San Francisco, Health Policy Advisory Center, 1975.
  134. Roemer MI, Mera JA: "Patient dumping" and other voluntary agency contributions to public agency problems. *Med Care* 11: 30-39, 1973.
  135. Navarro V: Social class, political power and the state and their implications in medicine. *Soc Sci Med* 10: 437-457, 1976.
  136. Renaud M: On the structural constraints to state intervention in health. *Int J Health Serv* 5: 559-571, 1975
  137. Piven FF, Cloward RA: *Regulating the Poor*, New York. Vintage, 1971.
  138. Sigerist HE *Landmarks in the History of Hygiene*, Oxford University Press, 1956.
  139. Committee on Government Operations, United States Senate: *Confidence and concern: Citizens View American Government: A Survey of Public Attitudes*. Washington, D.C., Government Printing Office, 1973.
  140. Fein R: The new national health spending policy. *N Engl J Med* 290: 137-140, 1974.
  141. Salmon JW: Monopoly capital and its reorganization of the health sector. *Rev Radical Polit Econ* 8: 125-133, April 1977.
  142. Greenberg DS: Report of the President's Biomedical Panel and the old days at FDA. *N. Engl J Med* 294: 1245-1246, 1976.
  143. Fuchs VR. *Who Shall Live? Health, Economics, and Social Choice*, New York, Basic Books, 1974.
  144. White LS: How to improve the nation's health. *N Engl J* 293: 773-774, 1975.
  145. Ford G: *State of the Union Message*. Washington, D.C., Government Printing office, 1976.
  146. Lalonde M: *A New Perspective on the Health of Canadian* Ottawa, Information Canada, 1974.
  147. Navaro V: The Industrialization of fetishism or the fetishism of industrialization : a critique of Ivan Illich. *Soc Sci Med* 9: 351-363, 1975.
  148. Waitzkin H: Recent studies in medical sociology: the new reductionism. *Contemp Socio* 5: 401-405, 1976.
  149. Higginson J: Developments in cancer prevention through environmental control, in *Cancer Detection and Prevention* Vol. 2, edited by Maltoni C. New York, American Elsevier, 1974, pp. 3-18.
  150. American Public Health Association: *Charh Book. Health and Work in America*. Washington, D.C., the Association, 1975.

151. Special Task Force To The Secretary of Health, Education, And Welfare: *Work in America*. Cambridge, MIT. Press, 1973, pp. 73-79.
152. Community Health Alternatives Project: *Model Legislation for a National Community Health Service*. Washington, D.C., Institute for Policy Studies, 1975.
153. Engels F: The Origin of the Family Private Property and. State the New York, *International*, 1942 (1891).
154. Marx K: *Capital*, Vol. 3, Moscow. Progress Publishers, 1971. (1894).
155. Boggs C: *Gramsci's Marxism*. New York, Urizen, 1976, pp. 36-54.
156. Habermas J: *Toward a Rational Society*. Boston, Beacon, 1970, pp. 81-122.
157. Young RM: Evolutionary biology and ideology : then and now, in *The Biological Revolution*, edited by Fuller W. Garden City, New York, Anchor, 1971.
158. Gorz A: Technical intelligence and the capitalist division of labor. *Telos* 12: 27-41, Summer, 1972.
159. Beriner H: Emerging ideologies in medicine. *Rev Radical Polit Econ*: 8 116-124, April, 1977.
160. Ehrenreich B, Ehrenreich J; Health care and social control *Soc Policy* 5: 26-40, May-June 1974.
161. Ehrenreich B, English D: *Complaints and Disorders: The Sexual Politics of Sickness*. Old Westbury, New York, Feminist Press, 1973.
162. Zola IK: Medicine as an institution of social control. *Social Rev* 20: 487-504, 1972.
163. Zola IK: In the name of health and illness: on some sociopolitical consequences of medical influence. *Soc Sci Med* 9: 83-87, 1975.
164. McKinlay JB; On the professional regulation of change. *Social Rev (Monogr)* 20: 61-84, 1973.
165. Fox RC: The medicalization and demedicalization of American society. *Daedalus* 106: 9-22, 1977.
166. Pfohl SJ: The "discovery" of child abuse. *Soc Problems* 24: 310-323, 1977.
167. Divoky D, Schraj P: *The Myth of the Hyperactive Child*. New York, Pantheon, 1976.
168. Conrad P: The discovery of hyperkinesis: notes on the medicalization of deviant behavior. *Soc Problems* 23: 12-21, 1975.
169. Conrad P: *Identifying Hyperactive Children: The Medicalization of Deviant Behavior*. Lexington, Massachusetts, Health, 1976.
170. Miller L: Genetic disease and social pathology. *Ethics Sci Med* 4: 29-50, 1970.
171. Beckwith J, Miller L: Behind the mask of objective science. *The Sciences* (New York) 16-19, 29, -31, Nov-Dec 1976.
172. Waitzkin H: Latent functions of the sick role in various institutional settings. *Soc Sci Med* 5: 45-75, 1971.
173. Markowitz G: Doctors in crisis: a study of the use of medical education reform to establish modern professional elitism in medicine. *Am Q* 25: 83-107, 1973.
174. Freidson E: *Professional Dominance*. New York, Atherton.
175. Holman HR: The "excellence" deception in medicine. *Hosp Pract* 11: 11-21, Apr 1976.
176. Science For The People: *Science Walks on Two-Legs*. New York, Avon 1974.
177. Harrington C: Medical ideologies in conflict. *Med Care* 13: 905-914, 1975.
178. Waitzkin H, Storeckle JD: *The communication of information about illness: clinical, sociological, and methodological considerations*.
179. Waitzkin H, Stoeckle JD: Information control and the micropolitics of health care: summary of an ongoing research project. *Soc Sci Med* 10: 263-276, 1976.
180. Waterman B, Waitzkin H: Ideology and social control in the doctor-patient relationship. *Health Movement Organization* 4, 1978, in press.
181. Lenin VI: *Imperialism: The Highest Stage of Capitalism*. New York, International, 1939.
182. Magdoff H: *The Age of Imperialism: The Economics of U. S. Foreign Policy*, New York, Monthly Review Press, 1969.
183. Navarro V: The underdevelopment of health or the health of underdevelopment: an analysis of the distribution of human health resources in Latin America. *Politics Soc* 4: 267-293, 1974.
184. Elling RH: industrialization and occupational health in underdeveloped countries. *Int J Health Serv* 7: 209-235, 1977.
185. Mass B: Population Target: The Political Economy of population control. *Int J Health Serv* 4: 691-700, 1974.
186. Park RM: Not better lives, just fewer people: the ideology of population control. *Int J Health Serv* 4: 691-700, 1974.
187. Katz J: *Oligopolio, Firmas Nacionales y Empresas Multinacionales*. Buenos Aires, Siglo Veintiuno, 1974.
188. Rios: *El Escandalo de las Medicinas*. Mexico City, EM, 1977.
189. Rosenberg SJ, Bamat T: Imperialism and the state. *Insurgent Sociologist* 7: 3-8, Spring 1977.



190. Navarro V : Health services in Cuba : an initial appraisal *N Eng Health Med* 287 : 954-959, 1972.
191. Navarro V : Health, health services and health planning in Cuba. *Int J Health Serv* 2 : 397-432, 1972.
192. Navarro V : What does Chile mean ? An analysis of events in the health sector before, during and after Allende's administration. *Milbank Men Fund Q* 52 : 93-130, 1974.
193. Modell H, Waitzkin H : Socialism and health care in Chile. *Monthly Rev* 27 : 29-40, May, 1975.
194. Belmar R, Sidel VW : An international perspective on strikes and strike threats by physicians : the case of Chile. *Int J Health Serv* 5 : 53-64, 1975.
195. Alpha Task Force On Chile : History of the health care system in Chile. *Am J Public Health* 67 : 31-36, 1977.
196. Liberman R, Gold W, Sidel VW : Medical ethics and the military. *New Physician* 11 : 299-309, 1968.
197. Levy H: Bringing the war back home. *Health PAC Bull* 1-8, April, 1970.
198. Fanon F : *A Dying Colonialism*, New York, Grove, 1967.
199. Rack C : U. S. Medical research abroad. *Sci for the people* 9 : 20-26, Jan-Feb 1977.
200. Guttmacher S, Danielson R: Changes in Cuban health care : an argument against technological pessimism. *Int J Health Serv* 7 : 383-400, 1977.
201. Danielson R : *Cuban Medicine*. New Brunswick, New Jersey, Transaction Books, 1978, in press.
202. Horn JS : "Away With All Pests ...": *An English Surgeon in People's China*. New York, Monthly Review Press, 1969.
203. Sidel VW, Sidel R : *Serve the People : Observations of Medicine in the People's Republic of China*. Boston, Beacon, 1973.
204. Powers JS, Purcell EF (eds) : *Medicine and Society in China*. New York, Macy, 1974.
205. Wen CP, Hays CW : Medical education in China in the Postcultural Revolution era. *N Eng J Med* 292 : 998-1006, 1975.
206. Cheng To, Axelrod L, Leaf A : Medical education and practice in People's Republic of China. *Ann Intern Med* 83 : 716-724, 1975.
207. Sidel VW, Sidel R : *A Healthy State*. New York, Pantheon, 1977.
208. Segall M : The politics of health in Tanzania, in *Toward Socialist Planning*. Dar es Salaam, Tanzania Publishing House, 1972.
209. Turshen M : The impact of colonialism on health and health services in Tanzania. *Int J Health Serv* 7 : 7-35, 1977.
210. Gish O : *Planning the Health Sector: The Tanzanian Experience*, New York, Holmes and Meier, 1976.
211. Segall M : Health and national liberation in the People's Republic of Mozambique. *Int J Health Serv* 7 : 319-325, 1977.
212. Navarro V : *National and Regional Health Planning in Sweden*. DHEW Publication No. (NIH) 74-240. Washington D. C. Government Printing Office, 1974.
213. Navarro V: A critique of the present and proposed strategies for redistributing resources in the health sector and a discussion of alternatives. *Med Care* 12: 721-742, 1974.
214. Schnall P. An introduction to historical materialist epidemiology. *Health Movement Organization* 2: 19-, 1977.
215. Ziem G: Toward a historical materialist epidemiologic practice. *Health Movement Organization* 2: 10-13, 1977.
216. Turshen M: The political ecology of disease. *Rev Radical Polit Econ* 8: 45-60, Spring 1977.
217. Brenner H : *Mental Illness and the Economy*. Cambridge, Harvard University Press, 1973.
218. Waldron I, Eyer J: Socioeconomic causes of the recent rise in death rates for 15-24 year olds. *Soc Sci Med* 9: 382-396, 1975.
219. Eyer J: Prosperity as a cause of death. *Int J Health Serv* 7: 125-150, 1977.
220. Eyer J: Sterling P: Stress-related mortality and social organization. *Rev Radical Polit Econ* 8: 1-44, Spring 1977.
221. Eyer J: Hypertension as a disease of modern society. *Int J Health Serv* 5: 530-558, 1975.
222. Sherer H: Hypertension. *Health Movement Organization* 2: 83-90, 1977.
223. Schnall P: An analysis of coronary heart disease using historical materialist epidemiology. *Health Movement Organization* 2: 73- 2, 1977.
224. MicKinlay JB: *A case for refocussing upstream - the political economy of illness. Applying Behavioral Science to Cardiovascular Risk Scattle*. American Heart Association Conference Proceedings, 1974.
225. Schnall P: Economic and social cause of cancer. *Health Movement Organization* 2: 61-71, 1977.
226. Hopper K: Guttmacher S: Suicide. *Health Movement Organization* 2: 32-56, 1977.
227. Embree S: Anxiety: the problem of change in capitalist society. *Health Movement Organization* 2: 14-22, 1977.
228. Gaynor D: Materialist epidemiology applied to occupational health and safety. *Health Movement Organization* 2: 23-28, 1977.
229. McCoy AW: *The Politics of Heroin in Southeast Asia*. New York. Harper & Row, 1972.

230. Goldmacher D: Toward a material epidemiology of dope. *Health Movement Organization* 2: 91-104 1977.
231. Stevenson G: Accidents- toward a material analysis. *Health Movement Organization* 2: 14-22, 1977.
232. Nee V, Peck J (eds): *China's Uninterrupted Revolution*, New York, Harper & Row, 1972.
233. Waldron I: Why do women live longer than men? I. *J. Hum Strees* 2: 2-13, Mar 1976.
234. Waldron I, Johnson S: Why do women live longer than men? II. *J. Hum Strees* 2: 19-31, Jun 1976.
235. Gordon L. *Woman's Body, Woman's Right: A Social History of Birth Control in America*. New York, Viking, 1976.
236. Lennane KJ, Lennane RJ: Alleged psychogenic disorders in women—a possible manifestation of sexual prejudice. *N Eng J Med* 288: 288-292, 1973.
237. Barker-Benfield GJ: *The Horrors of the Half-Known Life: Male Attitudes Toward Women and Sexuality in Nineteenth Century America*, New York, Harper Row, 1976.
238. Lopate C: Notes toward a study of housewives' diseases. *Health Movement Organization* 2: 57-60 1977.
239. Navarro V: Women in health care. *N. Engl J Med* 292: 398-402, 1975.
240. Hricko A, Brunt M: *Working for your life: A woman's Guide to Job Health Hazards*. Berkely, University of California, Labour Occupational Health Program, 1976.
241. Twaddle AC: Utilization of medical services by a captive population: an analysis of sick call in a state prison. *J. Health Soc Behav* 17: 236-248, 1976.
242. Mills CW: *The Sociological Imagination*, New York, Grove, 1959.
243. Gorz A: *Socialism and Revolution* Garden City, New York, Anchor. 1973.
244. Lewis CE, Mechanic D, Fein R: *A Right to Health*. New York, Wiley, 1976.
245. Freidson E: *Doctoring Together: A Study of Professional Social Control*, New York, Elsevier, 1976.
246. Governing Council, American Public Health Association: Resolutions and Policy statements: Committee for a National Health service. *Am J Public Health* 67: 84-87, 1977.
247. Roemer MI, Axelrod SJ: A national health service and social security. *Am J. Public Health* 67: 462-465, 1977.
248. Badgley RF, Wolfe S: *Doctors' Strike*. Toronto, Macmillan, 1971.
249. Wolfe S: Worker conflicts in the health field. *Int J Health Serv* 5: 5-8, 1975.
250. Bridges KR: Third World students. *Harvard Med Alum Bull* 49: 23-25, Sept-Oct 1974.
251. Rudd P: The United Farm Workers Clinic in Delano, Calif: a study of the rural poor. *Public Health Rep* 90: 331-339, 1975.
252. Chamberlin RW, Raderbaugh JF: Delivery of primary care — union style. *N Engl J Med* 294: 641-645, 1976.
253. Landau D: Trustee. *Health/PAC Bull* 74: 1-5, 11-23, 1977.
254. Source Collective: *Organizing for Health Care*. Boston, Beacon, 1974.
255. Marieskind HI, Ehrenreich B: Toward socialist medicine: the women's health movement. *Soc Policy* 6: 34-42, Sept-Oct 1975.
256. Levin LS: Self-care: an international perspective. *Soc Policy* 7: 70-75, 1976.
257. Douglas C, Scott J: Toward an alternative health care system. *Win Magazine* 11: 14-19, Aug 7, 1975.
258. Resnick JL: The emerging physician: from Political activist to professional vanguard, in *Professions for the people*, edited by Gerstl J, Jacobs G. Cambridge, Schenkman, 1976.
259. Sweezy PM, Magdoff H: More on the new reformism. *Monthly Rev* 28: 5-13, Nov 1976.
260. Sagan LA, Jonsen A: Medical ethics and torture. *N Engl J Med* 294: 1427-1430, 1976.

(Source: *Annals of Internal Medicine*, August, 1978)