

# Capitalist Development and Educational Structure

SAMUEL BOWLES\*

*University of Massachusetts, Amherst*

**Summary.** – This essay presents a theoretical overview of the relationship between the accumulation process and educational change in the capitalist periphery. The author argues that the school system may serve the interests of the capitalist class by (a) regulating the labour flow between the capitalist and non-capitalist modes of production, (b) raising labour productivity in the capitalist mode, (c) thwarting the development of either a large and class-conscious proletariat or a peasant-worker alliance, and (d) undermining the ideological and political position of traditional elites. Data are introduced consistent with the proposition that where the state represents primarily the interests of the capitalist class, it is these objectives, not a commitment to equality or to maximizing the rate of economic growth, which dominate educational policy.

As recently as the mid-1960s educational policy-makers in the poor countries projected a mood of optimism concerning the continuing expansion of educational opportunity and the contribution of schooling to social and economic development. Hoping to replicate the educational histories of the advanced capitalist countries, the governments of many new nations adopted universal primary education as a medium-term or even short-term objective. Expanded schooling, it was widely thought, could break 'human resource bottlenecks' in the development process, and undercut entrenched privilege as well.

But by 1965 the rates of growth of enrolments had begun to fall. In the non-communist poor countries as a whole primary school enrolments failed to keep pace with population growth, contributing to an increase in the number of illiterates.<sup>1</sup> During the past decade evidence has begun to accumulate suggesting that the structure of schooling not only inhibits economic growth, but also contributes to economic inequality.<sup>2</sup> Ministries of education around the world, under severe financial constraints, facing growing unemployment among schooled workers, and pressed by unabated popular demands for expanded access to education are turning to non-formal basic education – a rural-based, vocationally oriented, terminal, and (most of all) inexpensive alternative universal primary education.<sup>3</sup>

Dashed hopes breed second thoughts. An era of retrenchment bids a re-examination of the conceptual bases of the now faded optimism of the international educational establishment. Economists and other social scientists who have studied schooling in the poor capitalist countries have shared with educators, virtually unanimously, the conviction that educational policy can be a major instrument in promoting economic growth and, more recently, in achieving a more just distribution of economic rewards. This putative egalitarian and growth-inducing efficacy of educational policy is based on two fundamental propositions: first, that educational policy has strong direct or indirect effects on the rate of economic growth and the distribution of economic rewards; and second, that educational policy is sufficiently independent of the main economic relations of society to be considered an 'exogenous policy instrument'.

The presumption that educational policy is both effective and exogenous reflects the joint ascendancy of the human capital school and the liberal theory of the state. An important

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consequence of the closely related success of these two approaches is that the issue of power in economic life has been banished to the abstract and arcane world of game theory (where, ironically, it is also unwelcome!), and to the even more distant reaches inhabited by political scientists, sociologists, and Galbraith.<sup>4</sup> If 'every economic actor is a price taker', or if, more pointedly, as Samuelson tells us it makes no difference whether the capitalist hires the worker or the other way around, we can safely forget about power in the competitive model.<sup>5</sup> The institutional structures which define the relations among the economic actors are not an object of economic analysis or of liberal policy.

Symptomatic of this approach is the presumption that egalitarian social and economic policy can operate primarily through a redistribution of productive resources, imposed, as it were, from 'on high' by 'democratically elected or at least enlightened government 'decision-makers'.<sup>6</sup> The 'outputs' of the school system are represented as 'skills' or other capacities embodied in individuals. Egalitarian educational reform, it is said, redistributes these skills, much as an agrarian reform redistributes titles to ownership of land.<sup>7</sup>

The importance of schooling in the economic growth process and in the distribution of its rewards seems indisputable, though, to be sure, for quite different reasons than those proposed by the human capital school. However, even the most cursory reading of the history of capitalist societies suggests that the liberal view of the state as independent and egalitarian, will not provide an adequate basis for investigating the relationship between economic growth, education, and inequality.<sup>8</sup> Nor will it shed much light on the dynamics of educational development in the context of capitalist growth.<sup>9</sup>

I present here an alternate view of the state and education in capitalist society.<sup>10</sup> In this interpretation, the state serves to reproduce the social relations which define the position of the capitalist class and other dominant groups of the society. State policies, and the structure of the state itself are severely limited by the prevailing economic structure and its class relations. The economic structure itself is influenced by the state, ordinarily in ways which increase the power and income of the politically powerful groups. The educational system, as an important influence on political life, ideology, and the development of labour power as an input into the production process, is one of the main instruments of the state. The 'output' of the school is the reproduction or

transformation of social relations; the distribution of 'skills' embodied in individuals represents but one aspect – and not even the most important – of this process. The impact of educational structures on the social relations of production – the configurations of property and power in the labour process – represents the critical connection between schooling and the economy, and at the same time points to the structural limits to egalitarian reforms in capitalist social formations.

Both educational inequality and inequality of income reflect the class structure of capitalist societies. I conclude that the contribution of educational policies to either growth or equality is severely circumscribed by the prevailing class relations and by the role imposed on schooling by the dominant class, namely the reproduction of the class structure of the dominant mode of production.

To understand the position of education in capitalist social formations, then, requires an analysis of the dynamics of class relations. In order to illuminate the link between the social organization of work and the school and to locate both in the dynamics of the capitalist economy as a whole, I use the Marxian concept, class, rather than other conceptual social aggregates based on status, income, or type of commodity produced. Two quite different types of class relation are presented: relations within a given labour process, for example, capitalist–worker, and relations which span distinct labour processes, for example, peasant–worker. In the former, direct relations of control and exploitation are defined within the labour process itself. Class relations connecting groups involved in distinct labour processes which are related primarily through markets or through the state are necessarily less well defined by the structure of production. To capture the open-endedness of class relations in a social formation characterized by a multiplicity of distinct modes of production, I will consider the problem of coalition formation among classes.

The rejection of the most abstract two-class model of capitalist society and recognition of the indeterminacy added by the concept of class alliances suggests a heightened importance of political and ideological aspects of social change. Equally important, a multi-class analysis invites a reconsideration of the state as 'a committee for managing the common affairs of the whole bourgeoisie'.<sup>11</sup> The state, in the formulation presented here, may also be an arena in which class alliances are formed and in which no single class can use the state solely as

its own political instruments. The multiplicity of class relations, the structural limits on state policy, and the attendant problematic nature of class power in the state also remind us not to assume that a given state policy reflects the conscious and successful implementation of the class interest of any single class.

If any doubt remains, let me confirm that this essay is primarily theoretical, later appearances of regression equations and rate of return estimates notwithstanding. My intent is to identify fundamental dynamic structural relationships which, if I have been successful, will provide a starting point for the concrete analysis of particular social formations. In any concrete application the definition of class boundaries and modes of production, the international aspects of the problem and the fact that the state can never be reduced totally to a simple (or even complex) expression of class relations would demand close attention.

### 1. THE DYNAMICS OF DISTRIBUTIONAL CONFLICT

The salient characteristics of the capitalist growth process can be captured in a simple analysis which focuses attention on the internal organization of a capitalist and a traditional mode of production and their interactions. While the economic actuality of different modes of production may differ — in the commodities produced, the technologies used, and other important respects — it is the social relations of production that make a form of economic activity a distinct mode. Thus the capitalist mode of production exhibits technological dynamism and a relatively rapid rate of expansion. But what distinguishes it as a mode of production is its social organization; the great majority of producers do not own what they need to secure their livelihood. Therefore, they do not sell their product; they sell their labour time for wages. This group, wage labour, has no claim on the product of its work; nor does it exercise any direct control over the choice of commodities to be produced, technologies to be used, or organization of work. The archetypal production unit in the capitalist mode of production is the factory, the large business office, or the modern plantation.<sup>12</sup>

In contrast, the traditional mode of production is characterized by the insignificance of wage labour. ('The traditional mode of production' is used here merely as a general expression for a variety of possible non-capitalist modes, whose more precise elaboration can be by-

passed for the purposes at hand.<sup>13</sup>) The traditional mode of production may produce cash crops for the world market. It may produce subsistence crops, or handicrafts. Although the social relations of production may vary, the family farm, communal production or the craft shop are archetypal production units. In this mode, the direct producers own or at least exercise significant control over the means of production. In addition, they exercise considerable discretion over their hours and methods of work, and often own a large part of the product of their labour. Property ownership in the traditional mode may support an exploiting class, often landowners who have little or no direct role in production, but expropriate the meager agricultural surplus through a system of sharecropping or rent tenancy. Where there is a landlord class, this group or a part of it may constitute what I call a traditional elite. It may have allies in other elites, such as the military, tribal chiefs or the established religion. For simplicity I will refer to the direct producers in the traditional mode as peasants, and the exploiting class as landlords. The subsequent analysis may readily be modified to include a land-owning independent peasantry, or independent petty commodity producers of non-agricultural goods.

Under the impact of modern health technology, and in the absence of effective state systems of redistribution and mutual support which might undermine the incentive for large families, rates of population increase are likely to be considerable in both modes, at least in the early stages of capitalist development.<sup>14</sup>

The expansion of the capitalist mode of production — the accumulation process — is accompanied by the recruitment of new wage workers from the traditional mode of production. The integration of new workers into the capitalist mode, as well as the technological dynamism and class relations of capitalist production, provide the impetus for educational expansion and the evolution of the structure of the school system. The associated process of accumulation and the resulting uneven development of the social formation as a whole — the counterpoint of dynamism in the capitalist mode and stagnation in the traditional — are the primary forces that generate economic inequality and pose the limits to egalitarian educational reform. My task is then to outline the relationship between the accumulation process, education, and economic inequality.

To explore this complex relationship I will develop a necessarily simplified interpretation of the interaction between the two modes of

production. The most important simplifying assumptions are motivated by the open international economic setting of most social formations which constitute the periphery of the capitalist world system. I abstract from problems of aggregate demand and assume that relative commodity prices are externally determined.<sup>15</sup> The modification of external prices through transportation costs, tariffs, and other state policies presents no problem in this model, but for the purposes at hand such an extension is an unnecessary complication.

The degree of economic inequality in the social formation as a whole may be represented by three components: the degree of inequality within the traditional and capitalist modes of production and the degree of inequality between modes.<sup>16</sup> We will consider each in turn.

The division of the total product of the traditional mode between the consumption of the direct producers and the rents paid to landlords is represented by a fractional rent share, determined by a history of conflict between the two classes. The small surplus of production over necessary subsistence in the traditional mode poses a relatively low limit to the degree of inequality in economic reward particularly as compared to the capitalist mode.<sup>17</sup> In the capitalist mode the division of the product between capital and labour depends upon the relative bargaining strength of workers and capitalists. This in turn depends on economic conditions in both modes of production and on political and ideological conditions in the social formation as a whole. I will concentrate here on the economic aspects. As long as wages in the capitalist mode exceed incomes of the direct producers in the traditional mode, wage workers will be in a relatively weak position. Their weakness is due to a 'reserve army' of potential wage workers in the traditional mode, who can be recruited to replace anyone unwilling to work for the going wage. The size distribution of income in the capitalist mode will therefore depend upon the outcome of this struggle over the product, and on the degree of concentration of wealth.

The class income distribution of the entire society will, of course, change over time in response to changes in the following: the distribution of labour between the two modes, the comparative productivity of the two modes, the bargaining power of capital and labour, and the rent share. The capitalist mode's technological dynamism and superior ability to reinvest output together with the ceiling imposed on wages by the reserve army, tends to

increase inequality in the capitalist mode and between the capitalist mode and the traditional mode. This is the uneven development characteristic of capitalist development, particularly in its early stages.<sup>18</sup>

Consider now the interests of each class in this distributional process. It is in the immediate interest of workers in the capitalist mode to promote labour scarcity, and thus to increase their bargaining power. This may be done by resisting labour-saving innovations and by imposing employment restrictions that limit the ability of the capitalist to substitute new labour from the traditional mode for those already employed in the capitalist mode. Competition from the reserve army based in the traditional mode will also be inhibited by productivity increases in the traditional sector and by a decline in the landlords' rent share, both of which increase the consumption levels of the peasants, and thus raise the minimum price at which capital can recruit labour. Rapid accumulation in the capitalist mode will likewise promote labour scarcity and enhance labour's position.

By contrast, the capitalist class will oppose restrictions on hiring in order to have free access to all potential workers, and thus to depress the wage more nearly to the low levels of consumption prevalent among the peasantry. Capital's economic interests are furthered by impoverishing the peasantry, either through increases in the rent share or a retardation of productivity increases in traditional production. The accumulation process will, of course, encroach on traditional production, bringing capitalist social relations to some forms of agricultural and other production. But as long as population growth and labour-saving technical change are sufficiently rapid to guarantee a labour reserve to the capitalist mode, there will be no need to increase productivity in the traditional mode (or to eliminate it) so as to release workers for employment in the capitalist mode of production. Further, in the open economy the relative price of food (or other wage goods) is determined independently of the conditions of domestic agricultural (or other) production, thus giving the capitalist class no interest in raising the productivity of non-capitalist agriculture.<sup>19</sup> These facts may represent a major difference between the early accumulation process in the currently advanced capitalist countries and that in the contemporary capitalist periphery.<sup>20</sup> We shall see that this contrast in the nature of the accumulation process is associated with a parallel contrast in the dynamics of the educational system.

The interests of the landlord class are generally opposed to those of the capitalist class; landlords, unlike capitalists, benefit from raising the productivity of traditional production. Conflict between these two classes may thus focus on the direction of research and development in new technologies as well as on the more conventional economic variables. Rapid accumulation in the capitalist mode gives the peasantry alternative sources of livelihood, and hence contributes to an enhanced bargaining power of the peasantry and a lowering of the rental share. Both capitalist and landlords, however, share a common interest in maintaining a high rental share.

While the educational implications of this analysis remain to be discussed, it should be clear that changes in the structure, content and availability of schooling at all levels may play a crucial role in the distribution of economic reward and in the distributional strategies of each class. Further, given the complex pattern of conflicting and congruent economic interests, educational policy may play a central political and ideological role in the formation or inhibition of class coalitions and in the development or retardation of class unity.

## 2. CONTRADICTIONARY DEVELOPMENT AND STATE POWER

The simple mechanics of this analysis reveal the process by which incomes are distributed, but only hint at the drastic institutional changes and social conflicts which accompany the integration of workers into the wage labour system. The expansion of the capitalist mode of production undermines the traditional mode, and thus tends to weaken the political and ideological forces which served to perpetuate the old order. The capitalist class is thus faced with difficult problems of reproduction as well as production. The expansion and survival of the capitalist mode depends critically on both the productivity and the politics of the growing working class. Achieving high levels of labour productivity and assuring the reproduction of a set of social relationships that allows a substantial portion of the product of labour to be appropriated as profits by the capitalist class are thus the requisites of successful capitalist development. But neither objective is easily achieved, and in many circumstances they may be contradictory.

Capitalist profits depend on (among other things) the average productivity of wage labour. Yet the social attitudes and technical skills

necessary for a productive capitalist labour force are generally scarce in the populations of the traditional mode of production.<sup>21</sup> The movement of labour out of the traditional mode increases the demand for skills not easily acquired through emulation of parental roles in production. Growing up in a traditional community is no preparation for the demands of factory life, since the capitalist enterprise is a vastly different social organization, with a set of social relations quite distinct from those of the family or the pre-capitalist community.<sup>22</sup> The wage worker, whether in the factory, plantation, or office, has to learn time consciousness, new forms of discipline, new sources of motivation, and respect for authority outside the kinship group. He or she has to adjust to detailed supervision in highly routine and fragmented tasks.<sup>23</sup>

Capitalist profits also depend on the power of capitalists over workers. But with the rapid expansion of the capitalist relations of production, it becomes difficult to thwart class consciousness and militant political activity among workers. While the existence of a reserve army in the declining traditional mode of production weakens the position of workers in the capitalist mode, the living and working conditions of these workers strengthen their capacity to undertake collective action against capitalists. Workers are thrown together in large factories, often in large urban areas. The social isolation of peasant production, which had helped to maintain quiescence in the traditional mode, is broken down. With an increasing number of families no longer owning or attached to the land, the workers' search for a living results in large-scale labour migrations. 'Transient' elements come to constitute a major segment of the population, and begin to pose seemingly insurmountable problems of assimilation, integration, and control. Inequality of wealth becomes more apparent, and is less easily justified and less readily accepted.

Integration of an increasing number of workers into the capitalist mode of production thus produces a potential antagonist to the capitalist class — the growing class of wage labourers. This class, unlike the peasantry and the landlord class, grows in number and becomes potentially more powerful with the expansion of the capitalist mode. Their demands and their entry into political life threaten to disrupt the profit-making process and to transform the class structure. This contradiction between accumulation and the reproduction of the class structure has appeared in militant class struggle and other forms of

political activity — in the growth of labour organization, mass strikes, nationalist movements, populist revolts, and the rise of socialist political parties.

It is in the interest of the preservation of the capitalist order and the expansion of capitalist profits that class conflict be confined to the isolated daily struggles of workers in the individual production unit. The ever present contradiction between accumulation and reproduction must be repressed, or channeled into demands easily contained within the structure of capitalist society. The contradiction may be temporarily managed in a variety of ways: through ameliorative social reform, through the coercive force of the state, through heightening the racial, ethnic, tribalist, linguistic, sexual, and other distinctions upon which the divide and rule strategy is based, and through an ideological perspective which fosters popular disunity and otherwise serves to reproduce the capitalist order.

### 3. THE SCHOOL SYSTEM AS RECRUITER AND GATEKEEPER

In the capitalist social formations, the school system has embodied or contributed to each of the above strategies for stable capitalist expansion, and has thus been an important complement to the armed force of the state in managing, at least temporarily, the contradiction between accumulation and reproduction. In most capitalist countries, the school system serves as both recruiter and gatekeeper for the capitalist sector. I will consider the gatekeeping role shortly. As a recruiter, the school system helps to produce a labour force able and resigned to work productively in the novel social setting of the capitalist firm. Schooling can help increase the productivity of workers in two closely related ways: first, by transmitting or reinforcing the values, expectations, beliefs, types of information, and modes of behaviour required both for the adequate performance on the job and for the smooth functioning of basic institutions such as the labour market, and second, by developing technical and scientific skills necessary to efficient production. Although few of the academic skills learned in school are directly transferable to the capitalist workplace, basic scientific knowledge, communication skills, and mathematical abilities are essential to competence in some occupations. More important, these capacities are a critical ingredient to effective on the job learning of many directly productive skills.

The contribution of schooling to the expansion of the forces of production cannot easily be separated from the second main aspect of schooling as labour recruiter for the capitalist mode: the reproduction of the social relations of production. The preparation of young people for integration into the capitalist mode is facilitated when the social relations of the school system take a particular form. Students and their parents are denied control of the educational process. Success is measured by an external standard, grades and exams, which become the main motivation for work. This structure subordinates any intrinsic interest in knowledge — the product of one's effort — or in learning — the process of production. Class, race, sexual, tribal, linguistic and other distinctions are reflected in differential access to schooling, drop out rates and promotion prospects. In short, the social relations of production are replicated in the schools. The central role of institutional structure — as opposed to formal content — is summarized in what Herbert Gintis and I term 'the correspondence principle': the capitalist class will attempt to structure the social organization of schooling so as to correspond to the social relations of production. What educators often call 'the hidden curriculum' is thus of paramount importance. Whether relationships among students are hierarchical and competitive or egalitarian and cooperative, whether relations among students, teachers and the larger community are democratic or authoritarian, are better indicators of what students actually learn in schools than texts or formal curricula. Of course human development, or more narrowly, the formation of the labour force, does not begin or end in the school. Family structure and child-rearing practices are an important part of the early socialization process. After school, the social relations of production on the job exert a continuing influence on personality development. Some types of behaviour are rewarded; others are penalized. The nature of the capitalist labour process itself limits the range of attitudes, values, and behaviour patterns which people can exhibit. But schooling does play a central role in the formation of the work-force, particularly in periods of rapid social change.

The correspondence between the social relations of schooling and the social relations of production does not mean that all children receive the same education. Capitalist production, characterized by a hierarchical division of labour, requires that a relatively small group of future technical and managerial personnel

develop the capacity to calculate, decide, and rule, while a much larger group 'learns' to follow instructions accurately. This stratification of the future labour force is partly accomplished by making different amounts and types of schooling available to different children. Thus, the school system incorporates a capitalist class structure. Though it will not concern us directly here, the correspondence principle has an international dimension: where the international division of labour results in a class structure dominated at the top by foreign management and technical personnel (often located in New York or Tokyo), a corresponding underdevelopment of the employment demand for indigenous college graduates may be anticipated.<sup>24</sup>

The capitalists' interest, I have argued, is to pattern the structure of schooling after the social relations of capitalist production. Analogously, it is in the interest of the capitalist class to regulate the quantitative growth of the school system according to the expansion of the capitalist mode of production. In part because of the widespread ideological emphasis on education as the road to success, popular demands for rapid educational expansion may often exceed the rate appropriate to the employment needs of the capitalist mode of production. This will be particularly true when the accumulation process embodies very labour-saving technology. Nonetheless, pressures for mass education, even for youth destined to work in the traditional mode, may be met if the ideological or political benefits of expansion are seen as particularly great, or if the capitalist class is unable to control the rate of educational expansion.

From the standpoint of the capitalist class, the risks of over-expansion are evident. First, education for all might facilitate productivity increases and technological progress in the traditional mode of production, a development which capitalists would oppose in the interests of maintaining a very ready supply of cheap labour.<sup>25</sup> Second, the fiscal costs of educational over-expansion represent a tax burden on capitalists and a diversion of state fiscal resources away from projects and subsidies which may be more beneficial to profits. Third, if the entire population of a specific age group were to receive a fairly high level of education, all might anticipate employment in the capitalist mode. The result might be urban migration, massive urban unemployment, and outrage at frustrated expectations on the part of the unsuccessful.

While the resulting downward pressure on

wages would be welcome to the capitalist class, there are less expensive and less dangerous methods of maintaining the reserve army. In any case, the possibility that universal education would facilitate the development of a common consciousness between peasants and wage workers may more than offset any short-term economic advantage. Thus, in addition to preparing some young people for wage work, the school system, if it is to contribute to the capitalist growth process, must also act as a gatekeeper. The use of school credentials as job requirements serve this purpose well, for they provide an apparently objective means for keeping a certain number of people out even when the 'learning' signified by the credentials has little bearing on the jobs in question.

#### 4. CLASS ALLIANCES AND EDUCATIONAL DUALISM

The long-term reproduction of the capitalist order thus often favours the use of educational and employment policy to restrict the pool of potential wage workers. A necessary cost of this strategy to capitalists is a significant wage premium to workers in the capitalist mode of production over incomes in the traditional mode. This wage premium gives the small working class a basis for commitment to the capitalist system, and sets them apart, by education and consciousness as well as material privilege, from those who work in the traditional mode.<sup>26</sup> In turn, wage workers, hoping to minimize the competition for jobs, will have little immediate interest in expanding access to schooling to others than themselves and their children.

Landlords and traditional elites have little economic interest in expanding education. Their main economic asset is the land, often farmed at a near subsistence level. Because of its limited technological development and its social relations based on the family or community, traditional production does not require that its workers receive the type of training or socialization that is ordinarily undertaken in schools. In fact, school is often the means by which children escape from the traditional economy. Because the preservation of the traditional economy is of paramount importance to the traditional elite and the landlord class, they tend to oppose educational expansion.

The political interests of the landlord class and the traditional elites reinforce their opposition to mass education. While the political

position of the traditional elite requires maintenance of traditional values and often the support of religious institutions, the capitalist economic life tends to weaken and circumscribe many of these values and institutions. Indeed, historically, capitalist support of the expansion of primary schooling in the advanced capitalist countries was at least partially due to its purported efficacy in developing a habit of respect for the liberal state and other forms of modern bureaucratic authority which would serve as a substitute for religion and obedience to traditional rulers. In the mid-19th century, Marx wrote, '... the modern and the traditional consciousness of the French peasantry contended for mastery. This process took the form of an incessant struggle between the schoolmasters and the priests'.<sup>27</sup>

While capitalists and workers share an interest in promoting education among wage workers, these two groups share with the landlord class and the traditional elites an opposition to universal education. These common interests provide a basis for a capitalist-landlord-labour alliance attempting to limit the spread of mass education. By contrast, in the capitalist centre the landlord class and the traditional elites tended to be isolated in their opposition to universal schooling, which in most countries proceeded apace throughout the late 19th and early 20th century. Thus the nature of the accumulation process in the capitalist periphery, and the resulting configuration of class alliances are likely to produce a pattern of educational expansion quite different from the experience of the capitalist centre.

However, popular pressure from poorer workers and peasants, as well as ideological considerations, may demand the extension of at least some schooling to all children. The result of these counter-pressures is often a dual educational system: a brief and second-rate education for many, and a relatively expensive education for just enough to promote productivity and prevent significant labour scarcity in the capitalist mode. 'Non-formal' education, currently popular among international aid-giving agencies, holds the possibility of further institutionalizing the dual educational structure by fostering inexpensive practical manual training for the many and more conventional classroom education for the few.<sup>28</sup>

Evidence of the dual educational structure is not lacking. The disparities in expenditures between rural and urban schools, or between elementary and secondary schools or universities (Table 1), bear witness to it: urban post

Table 1. *Resource inputs per student year at various levels of schooling: ratios of the direct social costs of secondary and higher education to the direct social costs of primary education*

Country	Educational Level	
	Secondary	Higher
Puerto Rico	1.5	11.6
Mexico	5.0	9.0
Venezuela	3.0	12.5
Colombia	2.7	17.9
Chile	1.5	8.0
Brazil	2.9	18.0
Israel	2.7	16.8
India	5.1	17.6
Malaysia	1.9	13.0
S. Korea	2.4	5.5
Nigeria	7.2	100.0
Ghana	6.2	118.7
Kenya	11.8	160.4
Uganda	14.5	117.6
Unweighted Average	4.9	44.8

Source: Computed from Psacharopoulos (1973), p. 179.

primary schools receive a share of the educational budget vastly in excess of their share of total enrolments.<sup>29</sup> So, too, does the evidence that according to the conventional economic analysis poor capitalist countries chronically 'under-invest' in elementary schooling relative to other forms of schooling. Estimates of the social rate of return to schooling exhibit the pattern displayed in Table 2: the rate of return

Table 2. *Relative 'under-investment' in primary schooling: average social profitability of various levels of schooling in poor and middle-income countries*

Level of schooling	Social internal rate of return (%) <sup>*</sup>	Social benefit/cost ratio <sup>†</sup>
Primary	26	9.50
Secondary	17	2.37
Higher	13	2.00

<sup>\*</sup>Calculated from Psacharopoulos (1973), p. 63. The countries in the sample are those in Table 1, plus Singapore, the Philippines, and Thailand.

<sup>†</sup>Hadley (1976). Calculated with a 10% discount rate. The sample to the same as above plus Zambia. The raw data for this series and that calculated by Psacharopoulos are similar, though not identical. The two authors adjusted the data in somewhat different ways, as well.

to primary schooling tends to be significantly higher than to higher education.<sup>30</sup> Of course these estimates may have little to say about the economic growth maximizing allocation of resources in education: the shortcomings of their conceptual and empirical bases are well-known.<sup>31</sup> But given the credence ostensibly afforded by policy-makers to the rate of return analysis, the fact that the recent tendency in capitalist countries is to reduce the share of educational resources allocated to primary schooling hardly supports the notion that schooling is being used as an instrument for either growth or equality. Between 1960 and 1973, higher education enrolments in poor and middle-income capitalist countries as a whole grew at twice the rate of growth of primary enrolments.<sup>32</sup> India presents a typical and important example: despite serious unemployment, a low rate of return among college graduates and a high estimated social rate of return to primary schooling (20%), planned expansion of primary school enrolments has been consistently less than that of other levels; and target shortfalls have been relatively larger for primary than for other levels of schooling.<sup>33</sup> Equally inexplicable from the perspective of promoting either growth or equality are the allocational preferences of 'foreign aid' donors. Typical in the World Bank, which between 1963 and 1974 allocated roughly four times as much funding to higher education as to primary education.<sup>34</sup> The World Bank's recent interest in primary education projects is almost entirely in the non-formal basic education category.<sup>35</sup>

Evidence concerning the relationship between economic structure, class interests, and educational dualism can also be found in

cross-country comparisons of the amount of resources allocated to primary education. I will use these data to show that the amount of primary education available in capitalist countries is related to both the extent of the capitalist mode of production and the power relations between the dominant classes in the two modes of production. To illustrate the restrictions placed on mass education by the capitalist class, I will show that after controlling for relevant differences in the structures of the economies, communist countries tend to provide considerably more primary schooling than do countries dominated by either capitalist or traditional elites.

I have used a sample of 55 poor and middle-income non-communist countries and six communist countries. Thirteen of the 55 non-communist countries were classified as dominated by a traditional elite.<sup>36</sup> While there are numerous borderline cases, and none which fits the ideal type exactly, it is hoped that this classification will capture some of the gross differences in the distribution of power and the interests of dominant groups on the countries of my sample. The non-traditional, and non-communist countries are all classified as capitalist.

I first have to predict the amount of resources allocated to primary education for the entire sample of 61 countries, using only two economic structure variables, representing the fraction of the labour force working in agriculture and in wage and salary employment. Equation (1) in Table 3 illustrates the strong relationship between the size of the capitalist mode and the amount of resources allocated to primary education. To identify the importance

Table 3. *Resource allocation to primary education: international comparisons*

Dependent variable	Coefficient of independent variables ( <i>t</i> -statistics in parentheses)				Percentage of variance explained: $R^2$
	LFRAG	LFRAWE	COM	TRAD	
(1) PTPCH	-0.0058 (2.7)	0.0035 (2.7)			0.38
(2) PTPCH	-0.0069 (-4.0)	0.0020 (2.0)	0.0157 (6.2)	-0.0035 (-1.9)	

Notes:

PTPCH = primary school teachers per child of school age in the population.

LFRAG = log of the fraction of the labour force working in agriculture.

LFRAWE = log of the fraction of the labour force working for wages and salaries.

COM = dummy variable set equal to 1 for communist countries, 0 otherwise.

TRAD = dummy variables set equal to 1 for countries dominated by traditional elites, 0 otherwise.

of the class nature of the state I have re-estimated the same equation using dummy variables to distinguish the traditional and communist countries (equation (2) in Table 3). The addition of these class power variables greatly increases the explanatory power of the equation, suggesting that the class with a predominant position in the state is an influence upon the educational resource allocation, above and beyond the direct influence exerted by the economic structure of the society. The signs of the class power variables are as expected, and the coefficients are both quantitatively large and statistically significant. Even taking account of differences in economic structure, the communist countries in the sample devote 91% more resources to primary education than the mean for the entire sample.<sup>37</sup> Likewise, dominance by a traditional elite is associated with fewer resources allocated to primary education: an estimated negative deviation from the allocation pattern in the sample as a whole amounting to 21% (in absolute value) of the mean for the entire sample.

The estimated coefficients of the political variables under-estimate the real impact of class power in the case of the traditional elites: because the preservation of a large agricultural sector and the limitation of the modern wage earning sector are presumably part of the economic strategy of these elites, some of their power is measured in the two economic structure variables held constant in these estimates. Thus, in a more adequate analysis, neither the political power variables nor the economic variables would be exogenous.

The evidence from this sample of 61 countries is consistent with my interpretation of the forces affecting the allocation of resources to education. Yet in the empirical analysis, important influences on educational resource allocation have been excluded. In particular, the adoption of a static analysis, the use of cross-sectional data, and the assumption that a single class or group is dominant at any one time, have diverted attention from the historical development of the educational system.

The demarcation of class boundaries can never be exact, even in a static analysis. Moreover class composition is constantly changing. In the above analysis, two competing modes of production, capitalist and traditional, give rise to competition between the dominant classes in each mode. Groups on the margin of power and wealth seek access to higher positions. Poor and excluded groups seek greater income and political influence. An econometric

analysis based on the assumed hegemony of a particular class fails to recognize some aspects of educational policy which result from the unresolved conflict between classes. Further, it omits elements of educational policy designed to co-opt recalcitrant groups and buy their acquiescence to the class in power. For example, the apparent 'over-investment' in higher education relative to primary education which is characteristic of many poor countries may not be the result of a conscious plan to maximize elite incomes. Rather, it may be that families of children who stand to benefit from the expansion of university facilities are often the most politically vocal and powerful groups outside the elite.<sup>38</sup> In this case, university expansion may well be a concession to them in the interests of stability. Similar pressures occur at all levels of the school system although the political influence of those families that are denied access to primary education is ordinarily minimal.

A static econometric analysis may also contribute to the impression that the educational strategies of the dominant groups are necessarily successful. But an example will illustrate that this need not be the case. The use of the educational system to buy off excluded groups may have unintended consequences if the expansion of a particular level of schooling proceeds without reference to the employers' demands for educated labour. With the continued expansion of enrolment it becomes increasingly costly to gain admission to the capitalist mode: first it requires literacy, then primary school graduation, then a secondary school diploma. In part, this credential inflation is due to the internal contradictions of the school system itself. Because popular demands for educational expansion cannot be resisted for ever, many school systems end up producing more graduates than there are jobs in the capitalist mode. This oversupply of schooled workers leads to an escalation in qualifications for a job. In turn, this leads to disappointed expectations and demands for access to the next educational level. And so on. Expansion of the next level takes these graduates off the labour market, and blunts their discontent, only to reproduce the problem at a higher level when they graduate. As long as the significant political power of the urban white-collar work-force is reflected in generous administered salary schedules and inflated credential requirements for job access which bear little relationship to job content and real scarcity of labour, the over-expansion of higher education will continue to be fueled by popular demand.

## 5. CONCLUSION: THE LIMITS OF EDUCATIONAL POLICY

I have argued that the school system plays an essential role in capitalist growth by: (a) regulating the labour flow between the capitalist and traditional modes of production, (b) raising productivity in the capitalist mode, (c) thwarting the development of either a large and class-conscious proletariat or a peasant-worker coalition, and (d) undermining the ideological and political hegemony of traditional elites. Where, as in most poor countries, the state represents primarily the interests of the capitalist class, it is these objectives – not a commitment to equality or to maximizing the rate of growth of *per capita* output – which dominate educational policy. Egalitarian or economic growth promoting education thus confronts its limits in the imperatives of the reproduction of the class structure, the logic of the accumulation process, and the capitalist

domination of the state. The primary obstacle to a more bountiful and broadly shared economic reward is the distribution of power, not the distribution of human capital.

As part of a popular movement to challenge the class structure and the uneven development of the capitalist social formation, educational programmes might be used to further social equality or to contribute to a more rational growth process. Paolo Freire's politicized literacy training in the Brazilian Northeast and Mao Tse-tung's Rectification Movement of 1942–44 come readily to mind. But to discuss these possible functions of education, in the absence of rebellion against the capitalist order, is worse than idle speculation. It is nothing more than an ideological palliative which buys time for capitalism by promising improvement where little can be secured, and obscuring the capitalist roots of inequality and economic irrationality.

### NOTES

1. World Bank (1974), pp. i, 13.
2. Growth maximizing models of educational resource allocation in the poor countries reveal, without exception to my knowledge, massive discrepancies between actual and growth-optimal educational plans. See, for example, Bowles (1969). The contribution of schooling to inequality is indicated by the World Bank's study of Tunisia (1974a) and Pakistan (1977) and Dasgupta's (1974) study of India and Colombia.
3. See Coombs (1968) and (1974).
4. Abba Lerner captured this aspect of conventional economics aptly: 'An economic transaction is a solved political problem. Economics has gained the title of queen of the social sciences by choosing solved political problems as its domain' (1972, p.259). See also Galbraith (1973).
5. Samuelson (1957), p. 894.
6. This optimistic stance is nowhere more prevalent than in the economic and social planning documents of international agencies such as the World Bank and the US Agency for International Development. See Chenery *et al.* (1974).
7. The theoretical underpinnings of his approach are presented in Becker (1967). Dasgupta's work (1974) represents the most fully developed empirical application. For a critique, see Bowles and Gintis (1975) and Thurow (1975).
8. Milliband (1969), Kolko (1963), and Weinstein (1968) are representative of the literature.
9. Specifically on schooling, see Bowles and Gintis (1976), Katz (1968), Simon (1960), Baudelot and Establet (1973), Quick (1975), Zimbalist (1973), Tyack (1974), Carnoy (1974).
10. Various themes of the Marxian theory of the state are developed in Lehn (1932), Althusser (1971), Poulantzas (1968), and Milliband (1969).
11. Marx and Engels (1972), p. 337.
12. The defining characteristics of the capitalist economy are characterized by Dobb (1947), Ch. 1.
13. On pre-capitalist modes of production, see Marx (1963), Terray (1972), and Hindness and Hirst (1975).
14. It may well be that the development of a wage labour system produces endogenous increases in fertility in so far as it effectively severs the family fertility decision process from the limitations of (and therefore diminishing returns to) its owned land and other resources. See Lazonick (1974), Folbre (1977).
15. For an alternative analysis based on a more fully developed treatment of the international aspects, see the insightful paper of de Janvry (1975). In effect I assume that all goods or their close substitutes are to some degree traded.
16. Kuznets (1963) and Swamy (1967). If  $V_T$  and  $V_C$  = the coefficients of variation of income in the traditional and capitalist mode of production respectively,  $h$  = the average income per recipient unit in the capitalist mode relative to that in the traditional mode, and  $W_T$  and  $W_C$  are the fraction of households,

respectively, working in the traditional and capitalist modes, then the coefficient of variation for the social formation  $V$  can be expressed

$$V = \frac{[W_T V_T^2 + W_C V_C^2 h^2 + W_T W_C (h-1)^2]^{1/2}}{W_T + W_C h}$$

17. The small surplus, of course, does not 'explain' the relatively equal income distribution. While I do not attempt this here, both may be understood as expressions of the underlying mode of production. The relatively equal distribution of real income in the traditional mode of production yields the positive correlation found in cross-section studies of poor and middle-income countries between the gini coefficient and the percentage of the labour force working for wages. Cromwell (1976).
18. See Amin (1976) for a full discussion. This interpretation of the distribution process provides, I think, a good explanation of the apparent tendency for income inequality first to increase (Kuznets' famous inverted U-shaped pattern) and then to decrease in the course of capitalist development, the eventual decrease being the result of the relative depletion of the reserve army with the declining relative size of the traditional mode of production.
19. The assumed open nature of the economy – all goods or their close substitutes are available through international trade – is critical here. Further, to the extent that different family members work in different modes of production and the family remains the relevant consumption unit, this analysis is incomplete. See Deere, (1976) Mbilinyi (1976), and Meillasoux (1975). When this Phenomenon is prevalent, increases in productivity in the traditional mode may contribute to pressure for lower wages, as more of the family's subsistence is procured through direct production in the traditional mode. In this case the direct relation of the two modes of production through the family unit complements or even supercedes the indirect relation through the markets, thus undermining the salience of the assumed external determination of prices.
20. This is suggested in Folbre's (1977) Mexican case study.
21. One can think of a number of exceptions to this rather widely accepted proposition. Values and skills based on the pre-capitalist economy have evidently been central to the success of the capitalist economy in Japan. See Smith (1959), Abegglen (1958) and Bellah (1957). Geertz makes a similar argument in his comparative study of development in Indonesia (1963).
22. The arguments in this and the next section are presented in greater detail and with empirical support in Bowles and Gintis (1976).
23. See Thompson (1967), Gutman (1973), and Moore (1960).
24. Hymer (1970).
25. See Schultz (1964).
26. The 'labour aristocracy' theme has been developed in Marxian literature since Lenin. See Arrighi (1973).
27. Marx (1963) p. 125. A similar struggle took place between the Church of England and the educational programme supported by capitalists and Dissenters. See Quick (1975).
28. See Simmons (1977).
29. For evidence on urban-rural differences in wastage rates see World Bank (1974). On urban-rural disparities in the percentage of elementary schools offering the complete number of grades, and primary-secondary differences in student-teacher ratios, see UNESCO (1972).
30. See also Bowles (1969). In Bowles (1971) I consider the likely biases in the rate of return estimates, and present alternative series of estimates, similar in overall pattern to the Psacharopoulos and Hadley estimates. It seems doubtful that the biases in these estimates can explain the systematic finding of higher rates of return to primary education. While the direction of bias cannot be confidently indicated, if anything the biases on balance would suggest an over-estimate of the social rate of return to higher education (due to administered civil service salaries for high level bureaucrats and non-competitive, politically 'necessary', high salaries for the indigenous management component of foreign firms) and an under-estimate of the rate of return to primary education (due to the use of income estimates that overvalue the social marginal productivity of unschooled workers in a labour surplus economy).
31. For a review, see Bowles (1969). Alternative interpretations of these data are offered in Carnoy (1971) and in Bhagwati (1973).
32. UNESCO (1976).
33. Blaug, *et al.* (1969).
34. World Bank (1974).
35. World Bank (1974), Annex 5.
36. The basic data on the labour force are primarily from International Labour Organization (1966). Those on schooling are from UNESCO (1966) and (1968). The classification of traditional elites is a slight modification of Adelman and Morris (1967). Classified as 'traditional' are 'countries in which traditional and land-owning and/or other traditional oriented national elites were politically dominant during the greater part of the period 1957-62'. A fuller description of the criteria used by Adelman and Morris is their statement that 'traditional elites . . . include both traditional

land-holding elites and bureaucratic, religious, or military elites who favoured the preservation of traditional political, social, and economic organization, institutions, and values'. My classification differs somewhat in laying greater stress on the economic base of the elite and in particular the relative absence of wage labour in its production, and the lack of integration into the world economy.

37. The importance of the communist variable is

suggested, also, by the educational histories of particular communist countries. See, for example, my analysis of Cuban education since 1959. Bowles (1971).

38. This may well be the explanation of the persistent unemployment of university graduates resulting from the 'over-expansion' of higher education enrolments in India. See Blaug *et al.* (1969).

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