Education, class structure and income equality

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PART I. ANALYTICAL ISSUES

The relationship between education and income equality has always been a question of interest to economists and sociologists. However, the critical interaction of economic theory, and its paradigms, to this question has rarely been made explicit; and the fact that one can emerge with radically different points of view on the question, depending on the analytical scaffolding which one scales in examining this question, is only now beginning to emerge into formal discussion.

Basically, one can distinguish between two fundamentally different kinds of questions in this area. (*A*) Given the initial income distribution, the working of the labour markets and other related characteristics of the *economic* system in a society, can the expansion of educational facilities and the educated labour force improve income distribution in the sense of reducing income inequality? (*B*) Given the *political* system, particularly in the sense of the class structure and its influence on the pattern and level of educational expenditures and subsidization by the State, can educational expansion be expected to improve income distribution?

(*A*) The former question has traditionally been approached in the fashion of the current proponents of the 'human capital' doctrine: for earned-income distribution, it is assumed that education provides the skills which lead to increased reward. Alternatively, as some sociologists have recently argued, education provides the 'socialization' (e.g., docility, punctuality, discipline, etc.) which permits the individual to absorb on-the-job training *more* readily, a view which equally suggests that the educational process works to increase reward by raising an individual's productivity. Either way, it follows that if the supply of educated labour could be increased at the expense of uneducated labour, the income inequalities would be reduced. Thus, Barbara Wootton quotes and critically comments on Cannan on this issue as follows:[1]

> 'Forty years ago, in a discussion of the first of these factors [cited to explain the inequality of incomes, i.e., the restriction of supply of educated labour arising from the high cost of the training required], Professor Cannan pointed out that, if differences in earnings are to be reckoned as the return on capital invested in the acquisition of professional skills, such investment must be quite exceptionally remunerative; and it might, indeed, well be asked why money is not "spent in training more young people for the occupations of superior advantageousness until the competition reduces this excess of advantageousness to nil?" Professor Cannan himself found the answer in the fact that "the conditions of human life have not hitherto allowed the spending of money in this way to become an ordinary investment to which savings can be attracted in the ordinary way by the expectation of interest. They have not done so because society has not thought fit to provide means by which money could be advanced to young people for their training on terms which would make the lenders secure of recovering their money with interest." (Cannan, *Wealth* (London: King, 1914) p. 199.) In the forty years that have elapsed since these words were written, society has, however, experienced a considerable change of mind upon this question. Today money is not even loaned to young people for their training: it is largely provided free. If Professor Cannan and the economists have the whole truth of the matter, the destruction of the financial barriers to higher education initiated by the Education Act of 1944 should reduce the "excess advantageousness" of professional skills very nearly, if not quite, to nil. But from any such result as this we are still, clearly, a very long way off: and . . . to anticipate any such outcome is to reckon without the formidable social pressures that are at work to prevent it.'

To take another recent example of this kind of conventional wisdom, Assar Lindbeck in his recent diagnosis of the political economy of the new left in the United States commits himself to the following view:[2]

> 'Of course, the nationalization of physical and financial capital by itself would have important, not to say drastic, effects on the distribution of income, wealth, and power in society. The most obvious substitute for nationalization of human capital is probably nationalization of (part of) the *return* on human capital, for instance, by progressive taxation. *A much more efficient method, in the long run, is probably an expansion of the educational system to increase the supply of highly educated people, thus influencing wage differentials.*'

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1. Barbara Wootton, *The Social Foundations of Wage Policy* (London: George Allen & Unwin, 1955) Chapter 1 on 'Some Economic Curiosities of British Wage Structure', p. 51.

2. Assar Lindbeck, *The Political Economy of the New Left* (New York: Harper & Row, 1971) p. 58; italics inserted in the last sentence. By 'efficient', it may be noted, Lindbeck means 'effective' rather than 'optimal'.

However, take an alternative stylized paradigm where education is essentially a process of acquiring a credential with which you can outcompete someone else who lacks it—the kind of thing one observes typically in India with people acquiring steadily more degrees—M.A., LL.B., etc.—and successfully bidding for jobs which 'require' objectively nothing more than literacy! One can then conceive of the economy, at any point of time, as consisting of a number of jobs with different rewards/price-tags attached to them. This job distribution may be historically and sociologically determined: e.g., as René Dumont has observed for French Africa, the colonial salaries of the French civil servants in Africa were generally taken over by the succeeding African civil servants;[3] and the pattern of wage and salary differentials among different occupations is a clearly complex business.[4] Sociologically, educated labour would outcompete uneducated labour; and the more the education, the greater the access to the higher-paid jobs: this could be one of the principal rules of the game, defining the access of different groups to the different jobs. Under this paradigm, which does not in any way attribute higher productivity to more education but merely says that society works so that the better-paid jobs are given to the more educated—and this may be because of notions of 'fairness' or that 'education should be rewarded'—the effect of shifting the population from the uneducated into the educated category is to filter the educated down into the *top* jobs of the uneducated, thus lowering the average real income of the uneducated as also of the educated (if we think of only two homogeneous groups, for simplicity). The net result may well be to *widen*, rather than narrow, the average-wage differential between the two groups, in contrast to the Cannan-Lindbeck type of assertion, thus *increasing*, rather than reducing, income inequality as a consequence of the educational expansion.[5]

Clearly therefore the economic paradigm of the labour market and the role of education in that market makes for a critical difference in the expected impact of educational expansion on income distribution. For the bulk of non-professional education, which means over 60 per cent of the Indian educational expenditure, I would argue that the *latter* 'job-access' paradigm is indeed the more appropriate one, and *not* the 'human-capital' or the 'socialization-hence-increased-productivity' paradigms; and that we need to revise our notions on *social* returns to investment in education as also on the impact of educational expansion on income distribution accordingly.[6] Note also that, by hypothesis, the job distribution being pre-defined, the Gini coefficient should remain unchanged with more education—so that income equality in *that* sense is also not improved.

3. Cf. René Dumont, *False Start in Africa* (New York: Praeger, 1969).

4. See, for example, Barbara Wootton, op.cit., Chapter 1.

5. In this model, since the social product remains unchanged, the social return to the extra educational expenditure is zero, whereas looking merely at the continuing differential private returns to the educated *vis-à-vis* the uneducated, a pure 'human-capital' type of economist would conclude erroneously that the marginal (social) return was positive.

6. Four other observations are in order. (*a*) The 'job-access' paradigm is deliberately painted here in its simplest form; and hence, in its rejection of the view that education is socially productive, it does not *fully* mirror reality (while capturing its essence for liberal-arts education far better than the productivity-based paradigms). The economist looking at this paradigm is therefore going to be tempted to reject it as 'simplistic' and not in conformity with the reality. However, it should be remembered that *all* paradigms and theories are essentially abstracting from some aspects of reality: that is indeed what theory is all about, as distinct from history. The only relevant question is whether this paradigm is more insightful than the alternative ones, in understanding the role of education in the economy. In this connection, it is interesting to note that (as Lindbeck, op.cit., also does) economists typically tend to dismiss Galbraith's contention that tastes are determined by firms via advertising in the advanced capitalist societies, by producing evidence showing that some firms fail despite advertising, that products also occasionally fail in this fashion, and so on, while failing to realise that *their own* classroom exercises where *they* start with the assumption that a consumer has given tastes and then proceed to discuss welfare results such as the consumer cost of protection, etc., are equally unrealistic in ignoring the evidence of *some* taste formation by advertising; and that they should judge each paradigm as a paradigm rather than judge one *qua* its paradigmatic quality and the one they do not like by confronting it with some 'noise' from the real world!

(*b*) In case it bothers the reader whether a general equilibrium model could be built which takes the distribution of jobs with *pre-assigned* price-tags as one of its central features, the answer is in the affirmative. Models with sticky wages, for example, are easy to build; recent examples are the Harris-Todaro model for discussing urban employment, and ones built by me to analyse the phenomenon of over-qualification and the problem of the brain drain, all of which work with pre-assigned sticky wages and adjust the labour market through the creation of open unemployment. Cf. Harris and Todaro, 'Migration, unemployment and development: a two-sector analysis,' *American Economic Review*, March 1970; Bhagwati and Hamada, 'The brain drain, international integration of markets for professionals and unemployment: a theoretical analysis', 1972 (mimeo); and Bhagwati and Srinivasan, 'Overqualification, education and welfare: a theoretical analysis', 1972 (mimeo).

(*c*) K. Arrow has analysed higher educational expenditure on the basis of a yet different paradigm: 'Higher education, in this model, contributes in no way to superior economic performance; it increases neither cognition nor socialization. Instead, higher education serves as a screening device, in that it sorts out individuals of differing abilities, thereby conveying information to the purchasers of labour . . . The screening or *filter* theory of higher education, as I shall call it, is distinct from the productivity-adding human capital theory but is not in total contradiction to it. From the viewpoint of an employer, an individual certified to be more valuable *is* more valuable, to an extent which depends upon the nature of the production function. Therefore, the filtering role of education is a productivity-adding role from the private viewpoint; but, as we shall see, the social productivity of higher education is more problematic.' Cf. Arrow, 'Higher education as a filter', Stanford University, 1972 (mimeo) pp. 2–3. Arrow does not spell out the implications of his paradigm for income inequality, however.

(*d*) The 'job-access' paradigm, in an 'adulterated' form bent in the direction of incorporating some productivity effects, vitually underlies also the arguments of Lester Thurow in 'Education and Economic Equality', *Public Interest*, No. 28, Summer 1972, where he argues against conventional economic wisdom on this question and talks of 'job-competition' as contrasted with the conventional 'wage-competition', also contending that U.S. data on income distribution better match the job-competition model's predictions.

(*B*) But we can probe a little further and ask whether the class structure has anything to contribute to this issue. The most obvious question here is: which classes manage to get their children educated, so that they get access to the better jobs?

In a complete Becker world, where the capital markets are so perfect as even to equalize the returns on human and physical capital, this question has the obvious answer that it truly does not matter: each decision-making unit earns equal returns to investment at the margin in equilibrium, here and now, and both rich and poor have automatically equal access to education and better-paid jobs.

But, for those who do not accept this Chicagoesque view of the world, the question of the class distribution of the benefits from the educational process *is* pertinent to the problem of equality.

Two different approaches to this interaction may now be differentiated, one which is to be attributed to Bowles, and the other which I propose to develop later in this paper at some length.

The Bowles hypothesis

Sam Bowles, in an interesting discussion of this problem,[7] has argued that in capitalist LDCs (among whom India qualifies), the benefits from higher education tend to go to the *élite* groups and the benefits from primary education to the masses; given the influence of the class structure on State action, therefore, one should expect that capitalist LDCs are likely to overspend resources on higher education and underspend them on primary education.

The most telling argument that he produces in support of his thesis is that one should expect, in an ideal world, that the returns to education, both primary and higher, should be equal. However, if one finds that the returns to higher education are below the returns to primary education, that indicates that those who determine policy have pushed resource allocation to higher education too far; since the *élite* groups are likely to benefit from higher education and the masses from primary education, this indicates that capitalist LDCs pursue a resource-allocational policy which is favourable to the *élite* groups.[8] Furthermore, it may be argued, if private and social returns are identical, then this is also a sub-optimal result.[9]

This conclusion is clearly of great interest in linking up educational policy to the class structure in a country. However, I have a number of reservations about Bowles's procedures:

(i) First, I do not believe that, for LDCs such as India, it makes sense to compute even *private* rates of return to any kind of education unless the vast asymmetries in the costs and benefits facing different classes and groups are noted and the rates of return are computed separately for these classes. The computation of aggregate rates of return ignores these significant asymmetries and therefore cannot really cope adequately with the problem of the influence of economic power and class structure on the receipt of benefits from the pattern of educational expansion in a country. All rates of return which I have seen are therefore nothing but crude averages which have little meaning if we seek to analyse this important question.

(ii) Next, note that it is implausible to base an argument on the assumption that the allocation of resources in the absence of a bias from the class structure would be such that the rates of return to different types of education would be equalized. Capital markets *are* imperfect, segmented in many cases between different parts of the country and between different sectors of the economy, and again it is not sensible to claim that the opportunity cost of capital, against which the rates of return are to be set, for the lower classes, in India for example, is as favourable as to the middle and upper classes.

(iii) Finally, the rates of return used by Bowles do not distinguish between private rates of return, social rates of return which allow for the (often enormous) State subsidies to education as costs, and social returns which additionally allow for externalities (e.g., literacy may make agricultural extension less expensive) and non-economic effects (e.g., Morris-Jones has found a statistical relation between the proportion of votes cast for the Communists in Indian elections and the literacy rate in a constituency).[10] As it happens, there are quite enormous differences, thanks to heavy State subsidies to education, between the first two measures (leaving out the problems of measuring the last one).

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7. See his 'Class power and mass education', Harvard University, October 1971 (mimeographed).

8. Whether this would also lead to accentuated relative income inequality between the two groups, the *élites* and the masses, would depend on the precise model of education and labour markets which is deployed, and there seems to be no *a priori* reason to deduce any result one way or the other.

9. Bowles's paper is quite rich in ideas, and I am concentrating merely on the major empirical test that he sets up and checks out against evidence on rates of return to alternative types of education in a number of LDCs.

10. This, of course, does not 'prove' anything: rice-consumption is also nicely correlated with left-wing politics in India! But there may well be a more meaningful link between literacy and Communist inroads into a constituency than between the latter and rice consumption! Morris-Jones's results were reported by him in a seminar at M.I.T. in early 1972.

It may also be noted that the relationship of literacy to politics has been thought often to go the other way! Thus, the Indian Education Commission had the following to assert: 'In spite of all odds, Indian democracy has given a fairly good account of itself so far. But it will not be permanently viable unless its foundations are deepened by the creation of an educated electorate, a dedicated and competent leadership and the cultivation of essential values like self-control, tolerance, mutual goodwill and consideration for others all of which make democracy, not only a form of government, but a way of life.' (p. 3). This view accords with the view of the function of schooling, taken in some recent radical writings in the U.S., e.g., Sam Bowles, 'Unequal education and the reproduction of the social division of labour', *The Review of Radical Political Economics*, Fall/Winter 1971.

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Alternative hypothesis

For these reasons, I would reject Bowles's precise argument but advance a related but different hypothesis as follows:

For each class of education, the State (in capitalist LDCs) will subsidize the cost of education; the benefits of these subsidies will accrue disproportionately less to the poorer groups at each level of education; the higher the educational level being considered, the higher will be the average income-level of the groups to which the students belong; and the rate of governmental subsidization to higher education will be greater than that to primary education.

This hypothesis is based on the view that the pattern of governmental subsidization of education will reflect class structure, that the classes that benefit more from (any) education in general will be the higher-income groups—as is indeed the case with capitalist governmental subsidization in any area: e.g., the beneficiaries of cheap credit and fertilizers to promote the Green Revolution have tended to be the bigger farmers; that the income levels of the recipients of State subsidy via education would be greater for those attending higher education than those attending primary education; that therefore the rate of subsidization would be greater for higher than for primary education, given the greater political clout of the upper-income groups in general.

The reason why I expect the ability to receive the benefit of educational subsidies to vary inversely with income level is that, as I argue later in this paper, the costs of education tend to be higher and the returns from it lower, the lower the income level, by and large.

The reason why education generally is an excellent vehicle for the State to be so handing out subsidies, in effect to the better-off groups, is possibly a complex issue. But a hypothesis that readily suggests itself is that:

The benefits can be handed out to élite *groups by the State without obvious disaffection if they are handled via the educational system which, in principle, at least, is open to all classes and castes and therefore conceals effectively its inegalitarian impact.*

How does this mechanism of interaction between the class structure and educational expenditures affect equality? The impact on earned-income distribution would depend critically on the paradigm one chooses from those outlined earlier: as the higher education expands more than it would if it were privately paid for, the effect on earned-income distribution (say, the Gini coefficient) would critically depend on what this expansion of the educated labour force implies, which in turn depends on the economic paradigm one is working with.[11]

But one implication for equality in a *broader* sense seems clear. By enabling *some* lower-income groups to educate their children so as to have access to the better-paid jobs for the educated, the process of educational subsidization is likely to generate a greater sense of mobility and hence of equality than would otherwise obtain in a capitalist society. Of course, with Marcuse, one could argue that this is no more than a way of obscuring the inequality that obtains and is possibly even accentuated by the educational programme. On the other hand, the fact would remain that one of the results of even an inegalitarian educational process could indeed be to generate a greater sense of equality, making the capitalist system paradoxically more viable and palatable to the lower-income groups.[12]

PART II. INDIAN EVIDENCE

1. *Introduction*

In Part I of this paper, I advanced the following hypothesis on the interaction of class structure with educational expenditures:

For each class of education, the State (in capitalist LDCs) will subsidize the cost of education; the benefits of these subsidies will accrue disproportionately less to the poorer groups at each level of education; the higher the educational level being considered, the higher will be the average income-

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It may also be noted that missionary educational activities in the heathen countries were inspired by the notion that education would tilt the now-enlightened to Christianity. Thus, the American missionary, David Allen, was to write: 'In commencing their operations, missionaries have generally seen the propriety and importance of establishing schools. One reason for them is to educate the minds of the people so that they may be more capable of understanding and appreciating the facts and evidences, the doctrines and duties of the Scriptures. Another reason for them is to increase the influence of missionaries with the people by communicating some advantages which they can appreciate, and by showing that Christianity rests upon an intelligent perception of its doctrines, and contains reasons for the performance of all its duties. And another reason for such education is in its procuring means and opening ways of access to the people, and opportunities for preaching to them.' *India: Ancient and Modern* (Boston: John P. Jewett and Co., 1856) p. 567.

11. For a general equilibrium treatment of this issue, where the labour market is set up so that the educated are given job-preference over the uneducated, education is paid for by the State and undertaken until the expected wage to educated labour equals the expected wage to uneducated labour, and the market allows for unemployment—a model which applies to India, I believe, see the paper by T. N. Srinivasan and myself, op.cit.

12. The sense of equality is a function with many arguments, and not just income distribution. Aside from the sense of mobility, the arguments would generally include (*a*) the availability of 'basic' goods to the poor—e.g., the more the basic needs of the poor are satisfied, the more unequal the distribution can be (Cf. Tibor Scitovsky, 'Equity' in *Papers on Welfare and Growth* (London: Allen and Unwin, 1964) p. 255; J. Bhagwati, *The Economics of Underdeveloped Countries* (London: Weidenfeld and Nicolson, 1966) p. 22; and my essay in J. Bhagwati (ed.), *Economics and World Order: From the 1970s to the 1990s* (London: Macmillan, 1972)); and (*b*) The presence of conspicuous consumption by the rich—e.g., the more the rich consume conspicuously, the less acceptable will be any particular degree of income inequality.

level of the groups to which the students belong; and the rate of governmental subsidization to higher education will be greater than that to primary education.

I now propose to discuss empirical evidence for India which seems to corroborate the parts of this hypothesis which relate to the differential access of different income-groups to educational opportunity, thanks to differential costs and returns. Sections 2 and 3 discuss these issues for primary and higher education respectively.[13]

2. *Primary education*

The little sociological and economic evidence which I have been able to find supports the notion that the lowest-income groups typically have not been able to have the same effective access to primary education as the higher-income groups because, for them, (i) the opportunity cost (of labour) of primary education is higher, (ii) the benefit from primary education is lower, (iii) the private rate of return to them from such education is therefore lower, and at the same time (iv) the cost of capital, against which such rate of return must be compared, is higher than for the higher-income and caste groups.

These hypotheses are based on the following assumptions about the lower income groups:

(i) The opportunity cost of labour, resulting from the fact that children of primary-school age cannot work during the time that they attend school, is higher because typically these groups can and do use children of this age in gainful work whereas this is not possible (or allowed) with the other, higher-income groups.[14]

(ii) The benefits from primary education are lower for these groups again because (*a*) the probability of finding the rural jobs such as primary schoolteaching, post office and such other jobs requiring primary (and secondary) education is lower for these groups; (*b*) if higher returns accrue through increased productivity on the farm, it is unlikely to accrue in full to the educated but low-income landless labourer whereas these returns would accrue fully to the educated but richer landholding farmer; and (*c*) in so far as the higher returns accrue through higher mobility to the urban sector where jobs requiring primary education (e.g., watchmen in Delhi colleges) are relatively less scarce, the lower-income groups with less urban contacts and generally lower mobility would correspondingly have less access to such returns from primary education.

(iii) At the same time, clearly, in a world where many of the members of the lower-income groups, especially in the rural areas, have indebtedness at high rates of interest, their opportunity cost of capital is greater than that of the middle- and upper-income groups in general; this asymmetry is further reinforced by the general banking and lending practice of charging higher interest rates to the smaller borrowers.

Evidence for these hypotheses should not be difficult to find. A good example is to be found in Oscar Lewis's careful account of Rampur in northern India in 1953. His analysis clearly confirms in a broad way the arguments set out above. It is best to quote him:[15]

> '. . . In terms of primary school attendance the castes of the village fall into three groups which cut across the usual caste rankings in some respects. The relatively low-caste Nais and Khatis are grouped with the Jats and Brahmans in the category with highest school attendance; the Camars and Jhinvars form an intermediate group, while the Chipis, Lohars, Kumhars, Dhobis, and Bhangis (mostly low castes) make up the group with lowest school attendance. [See Table 1.] As part of the national effort to raise the lot of untouchables, Harijan (low-caste) students are not only exempt from the 2-annas-per-month school fee but may apply for special scholarships of 1 or 2 rupees per month. But only some Camar families have taken advantage of this opening. Although the Bhangis and Dhobis make up fourteen of the village's 150 families, they have no children in the primary school, and the Kumhars, with seven families, have contributed only one student. Economic and occupational factors seem to be involved here. The group with highest school attendance includes those with the most economic security, especially in the case of the Jats, who are the landowners of the village. It also includes occupational groups (Nai and Khati) whose work does not demand the help of children in the 5–14 age bracket. There is no great demand at present for the services of the barber and carpenter, and in their work children can be of use primarily after twelve years of age. In the case of Kumhars, however, children can be put to work at various unskilled or semiskilled tasks: carrying clay, breaking the clods, adding water, taking care of the donkeys. The same may be said of the Bhangis. Since the struggle for livelihood is serious, it may be hard to spare children in

13. I have not been able to get the evidence to support the two other elements of my hypothesis: (i) the relative ranking of the average income-level of the participants in higher and primary education; and (ii) the relative rates of subsidization by the State of higher and primary education. I expect to return to these two aspects later, when I have managed to gather the necessary data in a usable form. I might note here, however, that the hypothesis could be sensitive to whether the subsidy to education is defined per student or as a percentage of total education cost per student. I should also remind the reader that the total, general-equilibrium impact on relative class benefits from education would have to consider both the effects on earned-income distribution (as per Part I) and the distribution of the tax burden implicit in governmental subsidy to education.

14. It is worth mentioning here that there are *institutional* factors which disproportionately affect the opportunity cost of sending children to school among the lowest-income groups. Among these is the pattern of school vacations, for example. As Balogh and other left-wing economists have long observed, the vacations were set in the colonial countries to coincide, as far as possible, with the routines of the ruling country rather than to coincide with the harvesting seasons, as in Europe. The vacations in the primary schools, which are predominantly in the rural areas, thus are not well synchronized in India either with the need to have the children of the small cultivators and landless labourers on the farm during harvests, thus contributing to dropouts and low enrolments of such children from primary education. A parallel is to be found in Robert Coles's eloquent and impassioned study of migrant workers' children in the United States in his *Uprooted Children: The Early Life of Migrant Farm Workers* (Perennial Library Paperback, 1971), where he describes the disorientation of these children in the schools which are not organized to meet the needs of these itinerant children, and the resulting dropouts and/or impairment of their educational process.

15. Oscar Lewis, *Village Life in Northern India*, pp. 42–5.

the 5–14 age group when their work is of real assistance to the family. Some lower-caste informants also said that untouchables are discriminated against to some extent at the schools and are not treated as well as the higher-caste children. Moreover, education is not always seen as an asset. When there are educated villagers without jobs, the value of such training may be called into question.'

Lewis's data and description also strongly suggest that the income levels of the two major castes with high enrolment rates, the Jats and the Brahmans, as also of the Khatis, are significantly higher than of the low-enrolment castes.

Table 1. *School attendance, ages 6–15, Rampur, 1953*

	Boys	*Girls*	*Boys and Girls*
Jat			
total	87	77	164
school attendance	80	31	111
per cent	91.9	40.2	67.6
Brahman			
total	19	10	29
school attendance	16	3	19
per cent	84.2	30.0	65.5
Camar			
total	14	16	30
school attendance	12	1	13
per cent	85.7	6.2	43.3
Bhangi			
total	6	7	13
school attendance	0	0	0
per cent	0	0	0
Kumhar			
total	4	6	10
school attendance	1	0	1
per cent	25.0	0	10.0
Jhinvar			
total	9	4	13
school attendance	6	0	6
per cent	66.6	0	46.1
Khati			
total	4	5	9
school attendance	4	4	8
per cent	100.00	80.0	88.8
Dhobi			
total	4	1	5
school attendance	0	0	0
per cent	0	0	0
Nai			
total	3	1	4
school attendance	3	0	3
per cent	100.0	0	75.0
Chipi			
total	1	3	4
school attendance	1	0	3
per cent	100.00	0	25.0
Lohar			
total	2	1	3
school attendance	1	0	1
per cent	50.0	0	33.3
General			
percentage	81.0	29.7	57.3

Source. Oscar Lewis, *Village Life in Northern India*, p. 44.

I would expect that these results hold broadly for most parts of India. Also, data on dropouts from primary school should also confirm my general thesis here: even when participation is tried, it may not be carried through to completion, because of the realization that the rates of return *are* significantly low in relation to cost of capital, by the lower-income and caste groups.[16]

The available data on enrolment and attendance in primary education, from surveys and census inquiries, indeed underline these conclusions, although the data are not often as sharply defined as one would wish.

Thus, Table 2 gives the summary results of a study of 20 villages in the Punjab and the Eastern U.P. States of India, showing the children attending primary schools as a proportion of eligible children is distinctly higher when the income level rises above Rs.1,500 per annum ($200, at the pre-August 1972

Table 2. *Income classification and primary school attendance—U.P. (Eastern Districts) and Punjab*

Village	*Income classification*[1]	*Number of households*	*Children attending as a percentage of the total number of children in the income group*
1. Walidpur	A	134	10.26
	B	50	43.30
2. Palanpur	A	93	40.00
	B	17	66.67
3. Mohdpur Gazmalpur	A	88	24.56
	B	29	50.00
4. Kalinjar	A	116	35.37
	B	26	50.00
5. Patti Beharipur	A	56	7.32
	B	21	42.86
6. Sohalpur Gara	A	60	2.33
	B	39	9.30
7. Gati	A	92	7.89
	B	25	20.59
8. Ghiana	A	81	9.09
	B	57	36.96
9. Purena Pandey	A	122	17.89
	B	50	43.14
10. Zahidpur	A	48	15.38
	B	46	12.20
11. Katra Rahmat Khan	A	196	16.79
	B	69	28.09
12. Ratta Khera	A	48	46.67
	B	29	60.00
13. Bhatian	A	44	21.57
	B	37	60.98
14. Kukar Majra	A	40	50.00
	B	46	58.49
15. Saran	A	59	11.11
	B	83	43.37
16. Bahautwas Bhondu	A	93	44.30
	B	45	51.16
17. Rataul Rohi	A	62	30.00
	B	50	26.67
18. Sakrali	A	54	7.40
	B	62	39.13
19. Mehtiana	A	99	57.14
	B	58	68.49
20. Sochania	A	91	32.93
	B	69	52.94

Note. 1. A – Annual income below Rs.1,500.
B – Annual income above Rs.1,500.

Source. Primary Education in Rural India: Participation and Wastage, Agricultural Economics Research Center, Delhi University, May 1968 (mimeo) p. 39.

16. The low enrolments in some low-income groups, however, may also reflect the factor listed by Lewis: the social harassment from castes refusing to mingle with the *harijans* and related low-caste children. More is said on this issue later in the paper.

Table 3. *Caste-classification and primary school attendance*

Village	Caste classification[1]	Number of households	Children attending school as a percentage of the total number of children in the caste group
1. Walidpur	H.	116	14.14
	N.H.	68	34.78
2. Palanpur	H.	94	49.25
	N.H.	16	23.08
3. Mohdpur Gazmalpur	H.	117	34.07
	N.H.	n.a.	n.a.
4. Kalinjar	H.	67	31.43
	N.H.	75	49.02
5. Patti Beharipur	H.	38	3.70
	N.H.	39	31.43
6. Sohalpur Gara	H.	77	8.06
	N.H.	22	n.a.
7. Gati	H.	37	0
	N.H.	80	16.88
8. Ghiana	H.	80	9.84
	N.H.	58	40.00
9. Purena Pandey	H.	105	18.95
	N.H.	67	41.18
10. Zahidpur	H.	36	10.34
	N.H.	58	15.79
11. Katra Rahmat Khan	H.	55	66.25
	N.H.	210	23.71
12. Ratta Khera	H.	46	32.76
	N.H.	31	84.38
13. Bhatian	H.	53	27.54
	N.H.	28	73.91
14. Kukar Majra	H.	38	38.24
	N.H.	48	66.04
15. Saran	H.	39	17.14
	N.H.	103	37.63
16. Bahautwas Bhondu	H.	24	32.25
	N.H.	114	49.06
17. Rataul Rohi	H.	32	31.82
	N.H.	80	26.42
18. Sakrali	H.	60	9.59
	N.H.	56	48.00
19. Mehtiana	H.	104	51.65
	N.H.	53	79.66
20. Sochania	H.	73	53.78
	N.H.	87	50.54

Note. 1. H. – Harijans (Untouchables).
N.H. – Others.

Source. Same as for Table 2, op.cit., p. 44.

Table 4. *Proportion of children (5–15 age group) attending school according to occupation groups, 1962*

Occupation	Percentage of children in sample households
(Cultivators)	
Big	61.0
Medium	48.8
Small	41.5
Landless	34.9
All groups	48.9

Source. Report of the Programme Evaluation Organization (PC), *Problems of Extension of Primary Education in Rural Areas*, New Delhi, 1964.

Table 5. *Proportion of households sending children to primary school, by occupational groups of households, 1962*

Occupation group (Cultivators)	School Villages	Non-School Villages	All Villages (Weighted)[1]
Big	84.4	66.0	75.0
Medium	73.6	48.1	60.1
Small	64.0	46.2	54.6
Landless Labourers	51.5	35.6	43.1

Note. 1. The weighting is by percentage of school and non-school villages, the percentage of the latter being 53.

Source. Same as for Table 4, op.cit.

parity). Poor families thus show lower, and indeed low, enrolment rates for their children in the primary schools.[17]

The results of a sample survey reported in the Report of the Programme Evaluation Organization (Planning Commission), 1964, relating to school attendance in the 5–15 age group (which corresponds somewhat roughly to the primary school age group) also were indicative of the same fact—that attendance varies monotonically with economic status and income. Thus, Table 4 shows that the 'big' farmers sent a higher proportion of children to school than the 'medium' farmers, these in turn higher than the 'small' and the landless were trailing last. The same conclusion seems to follow from a slightly different statistic. Table 5 gives the proportion of households sending children to primary school, by occupational groups of households, showing again that this proportion varies directly with the occupational/income level by broad groups of cultivating households.[18]

The evidence of low enrolments and attendance by the poorer groups thus seems to corroborate the hypotheses about the opportunity costs of (primary) education being higher for the poorer groups and the returns lower. On the other hand, we may well ask whether there is *direct* evidence for these hypotheses and also whether other factors, say sociological, may not account for the low enrolments and high drop-outs among the poorer groups. Let me deal with these two problems, in turn.

As for *direct* evidence, Table 6 tabulates the reasons stated by households in the villages included in the P.E.O. (1964) study, just cited, for not sending their children to school. Interestingly, financial difficulty (by which is meant the costs of books and other direct costs of school attendance, as distinct from the income foregone by attending the school) cropped up far more significantly for the landless labour group (which is at the bottom of the scale of income distribution in India) than for other groups, and even more strikingly so for boys rather than girls (a difference which I will presently discuss). Once again, we have data here which are not ideal—e.g., a family that cites financial difficulty may at the same time have been influenced almost as much by some of the other factors, and ranking families by principal reason cited could be misleading—blotting out this

17. It should be noted again that the correlation between ranking by castes and by income classes is not necessarily strong throughout India. However, as Table 3 shows, if one confines oneself only to untouchables versus the others, the conclusion about enrolment does carry over; but this is almost certainly because the untouchables are at the bottom of the income distribution.

18. Ideally, these data should be adjusted for varying proportions of male and female children—the female participation in schools is significantly lower than male participation for all classes, but may vary between them—and other social characteristics which may vary differentially between the classes distinguished in the tables. For such reasons, it is best to regard these data as indicative of the relations which I am talking about, rather than as definitive evidence in support thereof.

Table 6. *Reasons for not sending children to school (as given by parents) by broad occupational groups (classified by percentage of households citing a principal reason)*

	All Villages (weighted)			
	Boys		*Girls*	
Reasons	*Landless labour households*	*other than labourers*	*Landless labour households*	*other than labourers*
1. Financial difficulty	53.8	20.4	27.2	13.4
2. School at a distance	13.3	27.6	20.4	32.6
3. Cattle grazing	5.1	8.9	–	2.0
4. Needed for farm work	1.6	10.8	0.4	0.6
5. Needed for domestic work	3.1	3.9	20.5	12.4
6. Indifference	2.0	3.4	5.9	11.1
7. Under aged	6.8	12.1	4.6	6.5
8. Marriageable age	–	–	5.0	2.3
9. Social barrier	–	–	1.1	3.3
10. No lady teacher	–	–	–	2.1
11. Other	14.4	13.0	14.8	14.0

Source. Same as for Table 5.

information—but they are sufficiently corroborative of the argument in this paper.

As for the *non-economic* reasons which may account for the low enrolments and high dropouts among the low income groups, there are enough reasons to believe that, by and large, they are less important than the economic reasons discussed in this paper.

(i) I have already stated that the relationship between caste, for example, and income is not necessarily strong. Thus, low enrolments and high dropouts by low-income groups cannot really be explained by the fact that the low-income groups are low-caste groups with difficult access, on social grounds, to education.

(ii) The 'social barrier' reason in Table 6, which was presumably to pick up this kind of reasoning, is negligible for boys and applies, in the case of girls, only to the higher-income groups ('other than labourers').

(iii) Sociological evidence also confirms that caste reasons such as untouchability have not been, over the years, quite so important a barrier to schooling as one might imagine. It is worth reproducing here the telling account in the classic work, *Behind Mud Walls: 1930–1960*, by William and Charlotte Wiser, of the educational problems of the untouchables in the village of Karimpur near Agra, which indicates accurately the fact that, while the progress in removing the stigma of untouchability has not been dramatic, it is still substantial in secular areas such as education and that the economic reasons focused on in this paper are clearly the dominant ones today in holding back the access of the poorer and bottom strata to educational opportunities:

The 1930 Situation in Karimpur

'Whenever we have tried to secure for the untouchables some social or economic benefit which seems to us the reasonable right of any member of the community, we have come into conflict with the wills of some of our best friends. Our latest endeavor has been in education. Muni, our pastor's only son, is nine years old. The father expressed the hope that his son might have advantages greater than his own. The first logical step was to get the boy started in regular school work. We consulted the master of the District Board School in our village. He said that if we would wait until the beginning of a new term, we could enter Muni in the school. When the new term opened we sent Muni. The master had been with Christian boys in a town school, and saw nothing heretical in the presence of a Christian. But to the village boys Muni was a *bhangi*.

'At noon of the first day, all the older boys took their books and slates home, and refused to return to school. The smaller children returned. But at the close of the afternoon session, when their parents became aware of what had happened, they were thoroughly bathed. On the following day a few children from the lower castes answered the roll call. From then on, all fifty were absent, and Muni remained the lone pupil.

'A month passed. The Sahib was the first to introduce the subject one evening while with a group of leaders. He asked why it would not be possible for this boy, with no taint of the *bhangi* about him or his parents, to learn along with more fortunate children? The boy had expressed his willingness to sit apart from the others. He was not going to school for the purpose of touching them. He could learn without touching them, just as all of his untouchable neighbors did everything else without touching any member of the village.

'Then the village leaders expressed their feelings. The government had no right to upset the established order by allowing children from any caste or untouchable group to attend school. And the Sahib was making a great mistake in giving a *bhangi* the notion that he could learn. If the boy must be taught, let him learn from his own father. Or let there be a separate school for such boys.'

Karimpur in 1960

'My figures on school attendance for this year are limited to children of Karimpur proper. The concil president reports that there are 306 boys and girls in the village between the ages of six and twelve. There are 96 Karimpur boys enrolled in the school and 32 girls. The amount of "wastage", that is the number of drop-outs, is suggested by the fact that in the first and second grades combined there are 44 boys and 14 girls, while in the sixth grade there are four boys and two girls. At least half of the members of each class are Brahmans. *Kachhis* are the next most numerous. Other castes have one or two in a class—carpenters, water carriers, potters, shepherds, sewing men, goldsmiths, flower growers, and leather workers. There are also a few Muslims. There are no children of the two washerman families in school, and this

is easily understood when one watches them at work all day beside the pond. There are no oilsmith children nor *dhanuks*, who belong, like the washerman, to groups below caste lines. And there are no Christians, also classed as below caste lines because all Christians in Karimpur are converts from the sweeper caste. This is disappointing after all the effort on the part of the Christian pastor to make it possible for his son to attend. I thought our Brahman friends responsible for the exclusion of the Christians, but this they denied. Later I talked with Christian parents, who said that no objection had been raised to their children's attending, but that they just do not see enough benefit from school attendance to compensate for the trouble of sending them. They say they cannot afford the fees—which are extremely small. In addition there are books to be purchased, and there is the problem of clothes. School children are dressed simply, like their parents, but they do look neat and their clothes are clean. The *dhobi* will not wash clothes for the Christians as he does for others, because they are the sweepers and he considers them too dirty. The scavenging duty they do for the village makes it difficult for the mothers to keep their children clean. In addition to their own cooking and household work, they must spend hours every day in other homes, making them clean for other people's children.' (Wiser, op. cit., pp. 180–1.)

(iv) But if factors like low caste and untouchability are no longer important in reducing the accessibility to education, what about sex? It is well known, and the data in Table 1 also underline this, that the enrolment of girls is significantly lower than that of boys, as a proportion of those eligible to enrol within each category. It would appear that the fact of lower enrolment of girls, on the average, fits in with (*a*) *either* the view that social factors *directly* inhibit sending girls to school *or* (*b*) the view that the economic returns to educating girls are lower and that parents, when faced with the choice of investing in the education of boys or girls, prefer the former. I am inclined to the latter view, though clearly social factors do help in reducing the returns from girls' education. For, not merely (as elsewhere) is the probability of finding an equally remunerative job generally lower for girls than for boys, given the same ability and education, but girls typically marry and merge into their *husbands'* families whereas boys generally in a patrilineal society are supposed to look after their own parents in old age—which is a social factor affecting the parental returns to girls' education adversely.[19]

In any case, the fact that *low-income* groups participate disproportionately less in the educational process *could* be linked up with the lower female enrolments, and the arguments for it produced here, by arguing further that, while there is no reason to expect a different sex-ratio in the children of the lower-income groups, the facts (*a*) that education in girls is less likely to be a socially-valued (and hence dowry-reducing) good at low income levels, and (*b*) that girls in the lowest-income groups are more likely to have useful household chores and hence higher opportunity costs for attending schools than girls in higher-income groups with domestic servants, are likely to *accentuate* the disadvantage in investing in girls', as distinct from boys', education.[20] If so, we should be able to observe, not merely a lower enrolment rate among the lower-income groups but also a relatively higher male-sex-ratio in their enrolment.[21] Such data, however, are not systematically available to my knowledge—though, Table 1 would seem to support this hypothesis.

Clearly, therefore, more empirical evidence needs to be collected and analysed to sort out the relative importance of the social and economic factors which inhibit the participation of the low-income groups in the primary education process, although there is enough prima facie evidence and supporting argument that can be advanced to indicate that the economic factors are the more important.[22] I would also like to see a systematic, empirical examination of whether there are factors which are tending to reduce the differentials in rates of return to primary education by different classes and thus ensure a steadily less

19. In economic terminology, the market here is imperfect. Over time, there could be a tendency however to have the dowry (traditionally paid by parents to sons-in-law in many parts of India, though not all) reduced when the daughter is educated: though, here again, this may be, not because educated brides are expected to produce more income but because they are socially valued over uneducated ones.

20. The view taken in the text seems to be further corroborated by the evidence on nutritional levels among 6–24 month-old children, produced by Jim Levinson, *The Morinda Experience: An Economic Analysis of the Determinants of Malnutrition Among Young Children in Rural India*, Ph.D. Dissertation, Cornell University, June 1972: 'The greater premium placed on sons than on daughters clearly results in major differentials in their care and upbringing . . . the [lower-income] Ramdasia female child not only is breast fed for a shorter time period than the Ramdasia male, but consumes less supplementary milk and less solid food, begins consuming solid food later, and receives less of each of the nutrients.' (pages 75–6). Levinson's excellent work also indicates strongly that the higher-income Jat families are also characterized by differential, lower nutritional care of female children but that this differential is accentuated among the lower-income level Ramdasia families where resources for nutritional care are far more tight. Yet another supportive evidence for discrimination against females is the finding at the Narangwal Rural Health Research Center in the Ludhiana district of Punjab, directed by Dr. Carl Taylor of the Johns Hopkins University Department of International Health, which shows higher infant mortality rates for females (196 per 1000) than for males (125 per 1000) for this area (Cf. Levinson, op.cit.).

21. John Mellor tells me that his Indian agricultural studies also indicate a disproportionately lower enrolment of girls from the lower-income classes at primary level. Jim Levinson's nutritional studies in the Punjab indicate one additional reason why this may be so: the incidence of malnutrition involves very high family-labour input for dealing with the diarrhoea which frequently follows malnutrition in this area, and the 'labour-intensity' of treatment tends to increase as one goes down the income ladder (as people substitute labour for expensive medical treatment, at the margin). This could presumably be one of the major sources in the demand for 'domestic help' addressed to girls from the lower classes by their own households.

22. On reading the penultimate draft of this paper, Richard Shortlidge, Jr., of Cornell University, who has worked on Indian education in 14 villages (12 in Badaun district and two in Nainital district), communicated to me that he has found 'a direct relationship between the household's income and the participation of children in school' and that 'the labour force participation rates and the school participation rates for boys follow an inverse relationship.' He also confirms the importance of access to urban jobs as affecting educational motivations.

inegalitarian distribution of the subsidies to primary education. Thus, are the participation rates rising and dropout rates falling in specific areas for the lower-income groups over time; and is this phenomenon to be explained in terms of increasing benefits (among which would be State-provided measures such as quota-determined access to jobs and to subsidized higher education, increasing access to jobs owing to exogenous factors such as growth of surrounding towns or influx of governmental programmes, etc.) or lower costs (among which would be State-provided subsidies to these groups for school-attendance)?

3. *Higher education*

If we shift the focus now to higher (post-matriculation) education, it can again be argued that the State subsidies meted out through this educational area are also differentially accruing to income groups depending on their economic status.

Not merely is the college-participation rate for the lower-income groups likely to be much lower than for the middle- and upper-income groups; even within the latter groups, the participation rates are likely to be linked to the income level. This is because again both the opportunity costs of education would tend to be higher and the benefits lower, the lower the income groups.

Blaug *et al.* have recorded the results of a 1954 graduates survey, which show that the average monthly incomes of the families from which they come are strikingly higher than for the population as a whole: Table 7 has the data. Table 8 underlines this also for *professional* (as distinct from liberal-arts and general-science and commerce) education: the heavy preponderance of students in the income groups over Rs.150 per month—way in excess of the *per capita* income of the country, which is now approximately Rs.100 per month—is evident.

Why do the lowest-income groups show so poorly in higher educational attendance? The hypothesis of this paper, that the opportunity costs tend to be higher and the benefits lower, the lower the income groups, seems to be the main reason (although 'social conditioning' and 'value differences' among different income groups may also play a role, as some sociologists have argued).

Table 7. *Distribution of families of 1954 graduates and of all families: by average monthly family income (per cent)*

Average monthly income of family (Rs.)	*Percentage of graduates' families*			*Percentage of all families*	
	Men	*Women*	*Total*	*Urban*	*Rural*
500 and above	22.7	28.4	23.3	4.0	0.9
200–499	45.8	44.5	45.7	15.7	8.5
Below 200	29.9	22.1	29.1	80.3	90.6
Not known	1.6	5.0	1.9	–	–
Total	100.0	100.0	100.0	100.0	100.0

Source: Blaug *et al.*, *The Causes of Graduate Unemployment in India.*

Table 8. *Family background of students in professional colleges, polytechnics and technical training institutes, 1965 (per cent)*

	Indian Institute of Technology	*Regional Engineering Colleges*	*Engineering Colleges (other)*	*Medical Colleges*	*Agricultural Colleges*	*Polytechnics*	*Industrial Training Institutes*	*Other Technical Institutes*
Income of parents (Rs.)								
over 500	59	18	13	26	4	7	–	14
301–500	21	24	20	20	11	12	2	21
151–300	14	26	29	24	27	25	15	38
150 or less	7	33	39	31	59	56	83	28
Occupation of parents								
professional	7	11	9	17	5	8	4	11
services	61	37	35	33	27	32	19	39
business	20	18	21	18	7	19	13	22
agriculture	4	24	22	21	58	29	43	16
others	7	10	13	11	2	13	22	12
Area of home residence								
urban	87	59	66	68	41	57	41	68
rural	13	41	34	32	59	44	59	32
Total	100	100	100	100	100	100	100	100
number of students (= 100 per cent)	2,574	2,425	15,144	6,118	2,818	47,900	7,399	2,980
Number of institutions covered	5	7	48	45	11	172	28	25

Source: Blaug *et al.*, op.cit.

Thus, I would expect that the returns to lower-income groups would be lower for two main reasons: (i) for equivalent qualifications, the sons (and daughters) of the more prosperous families would tend to get better-paid jobs;[23] and (ii) again, for equivalent qualifications, they would also generally get jobs quicker, thus procuring higher returns from earlier employment. Both these hypotheses seem eminently plausible from casual observation of the employment situation in the urban areas.

And, interestingly, the second of the factors listed here seems to be supported by some Ceylonese and Indian evidence that I have seen recently. Thus, Table 9 shows that the incidence of unemployment seems to be highly concentrated, in this socio-economic survey in Bombay city for 1971, on the lower-income families—suggesting that the frictional (and possibly some chronic) unemployment tends to be heavily concentrated in the lower-income groups which presumably have greater difficulty in finding jobs in a scarce-job situation.[24] A similar result for Ceylon is evident from the results of a socio-economic survey, 1969, reported in Table 10.

It should be possible, through suitably designed surveys, to pick up evidence on the hypotheses advanced here. Thus, to test whether indeed higher-income parents' children do get higher starting salaries and/or accelerated rises in their salaries (adjusting for other factors such as quality of degree, level of

Table 9. *The incidence of unemployment, by sex, among households with different levels of income, in Greater Bombay, 1971*

Household Income (Rupees per Month)	*Incidence of Unemployment* Crude	Standardized[1]
	MALES	
100 or less	11.23	38.49
101–200	8.48	7.41
201–300	5.48	9.54
301–400	6.13	5.01
401–500	5.12	3.89
501–750	4.44	3.08
751–1000	3.00	1.82
1001–1500	3.90	5.19
1500 +	–	–
ALL	5.69	5.69
	FEMALES	
100 or less	–	–
101–200	6.41	4.98
201–300	31.05	31.82
301–400	11.39	9.85
401–500	15.94	12.27
501–750	10.27	6.37
751–1000	2.88	2.77
1001–1500	3.55	5.60
1500 +	–	–
ALL	9.65	9.65

Note. 1. The age distribution of the total population of surveyed households is used as the standard.

Source. A Survey undertaken on behalf of the C.I.D.C.O., 1971.

Table 10. *Distribution of all households and of unemployeds' household of residence by income group, 1969 (Ceylon)*

One month income	*Urban*				*Rural*				*Estate*			
	All households	*Unemployed by household of residence*			*All households*	*Unemployed by household of residence*			*All households*	*Unemployed by household of residence*		
		Male	*Female*	*Total*		*Male*	*Female*	*Total*		*Male*	*Female*	*Total*
Rs. – 200	24	21	16	19	48	37	35	35	62	45	40	42
200 – 399	39	40	50	43	35	37	30	34	34	45	56	47
400 – 599	16	20	13	17	11	18	25	21	3	10	2	9
600 – 799	9	10	10	10	4	6	8	7	1	–	2	2
800 – 999	5	5	6	6	1	1	–	1	–	–	–	–
1,000 +	7	4	5	5	1	1	2	2	–	–	–	–
	100	100	100	100	100	100	100	100	100	100	100	100

Source. Socio-Economic Survey, 1969, 1st round, unpublished; reprinted from P. J. Richards, *Employment and Unemployment in Ceylon* (Paris: O.E.C.D. Development Center, 1971).

23. John Pettengill has remarked to me that if the differential return is due to parental incomes giving more contacts, the higher return is a rent to that differential income level rather than a return to education. This is correct but irrelevant to my argument since I am taking the position that the better job would not have been available without the educational qualification. Except in cases such as where a tycoon can put his illiterate and boorish son into the highest job in his own business and get away with it, the ability to land a better job, thanks to greater influence, requires that the disparity between your own educational qualification and that of your rival with inferior influence *appear* not excessively conspicuous. Hence, I believe that the education is necessary to enable the influential to earn the rent accruing from the influence; hence, this rent can properly be ascribed as a higher return to education by these income groups.

24. Ideally, the data here, as also in Table 10 for Ceylon, should have been broken down by the level of education among the unemployed, the quality of the degree (e.g., first class, second class, etc.), the length of unemployment, etc., if the hypotheses I am advancing in this paper are to be truly contrasted against facts.

education), it would be necessary to survey the urban firms which offer employment, with individual employees being the objects of the survey. The usual unemployment surveys could, on the other hand, be amplified to check on the length of unemployment and the social and economic background of the unemployed, to turn up evidence on my second hypothesis.

I might add, however, that (as in many branches of economic analysis) there may be a U-shaped behaviour and the unemployment rates may tend to fall at the *very low* income levels, rather than rise as per my second hypothesis, because (as J. Krishnamurti has pointed out to me) the capacity of members of the lowest-income families to hold out for better jobs is seriously limited and they must take whatever happens to come by. This may partly account for the fact that Table 9, for example, does not uniformly support my hypothesis for each class as against the ones above and below it, while showing that the higher classes on the average have lower unemployment rates than the lower classes. All that this means, however, is that these classes are more likely to be getting inferior wages, the more they shift from 'waiting-for-a-decent-job' type of unemployment to accepting any job. Thus, the basic argument of this paper remains unaffected.

I should also add one more corroborative piece of evidence, due to Panchamukhi and Panchamukhi. These authors have, in an important contribution, analysed the relationship between earnings and socio-economic variables as evidenced in the survey of Bombay for 1954 initiated and financed by the Research Programme Committee (Planning Commission). While they cite interesting evidence of the role of sex and other variables in 'explaining' income differentials, they also show that there is indeed a significant effect of family incomes on the income earnings of an individual.[25]

4. *'Higher-higher' education and overqualification*

Before I conclude, let me comment on one more aspect of higher education, which is increasingly relevant to LDCs such as India. The political pressure for subsidizing higher education has evidenced itself in the expansion of *higher*-degree institutions in India, so that the business of getting a degree to beat the next man to a job which does not require that degree at all gets to a point where higher degrees (M.A., Ph.D.), and more degrees (M.A., LL.B.), are sought to compete successfully against the candidates with lower and/or less degrees (again for jobs which do not require this qualification, in an objective sense, in the first place).

This process of politically-determined State subsidization of higher-higher education, accompanying a process by which jobs get filled with 'over-qualified' people, is clearly evident in India. It could be readily documented, as it has not been so far, by a systematic survey which would, for example, compare the *ex ante* (advertised) educational requirements as also the *ex post* 'revealed' educational requirements in a job filled by vacancies at different points of time. I would guess that, for many jobs (such as 'lower division clerks' in the Indian bureaucracy, to take one example), the candidates of later vintages would also show more years of schooling and/or more degrees.[26]

This process of 'overqualification' has not merely the obvious implication that the private and social marginal product of higher-higher education will diverge. It also means, because of the State subsidization that I have pointed out, that those who manage to go further up—thanks to better resources—in the educational ladder, get the advantage of the State-subsidy and thus also to compete more effectively against the economically less well-endowed.

Yet another consequence of this phenomenon of overqualification has been the effect on the quality of education. The expansion of higher education, meting out more and higher degrees in a labour market which works by overqualification, leads typically to emasculation of courses so that, to acquire the same knowledge as ten years ago, one has to go to 'school' for more years—a situation which, with sticky wages and costs, implies increasing real costs. At the same time, the objective of maintaining any high-quality educational institutions for pursuit of science at the highest levels becomes steadily more difficult to achieve.[27] In this regard, the inherited English model of a university with a federal structure has been the cause of more inefficiency than an American-

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25. For details of the methodology and quantitativ estimates, see Panchamukhi and Panchamukhi, 'Socio-economic variables and urban incomes', Department of Economics, Bombay University, 1969; now published in N. H. Pandit, 'Measurement of cost, productivity and efficiency of education', National Council of Educational Research and Training, 1969, pp. 306–36.

26. Bhagwati and Padma Desai, *Planning for Industrialization: India* (O.E.C.D. Development Center, Oxford University Press, 1970) had a story to illustrate both the overqualification thesis and the problem of influence: '. . . education was being demanded by larger numbers of candidates purely as a means of "beating the next man to the job", with educational requirements for many jobs thus being upgraded in consequence. An apocryphal story, with a double twist, runs: in response to an advertisement for the job of a floor-sweeper, the applicant with higher secondary school education was dismayed to find a rival with a B.A. degree, who in turn faced a rival with an M.A., to be capped by an applicant with a Ph.D. (in the art of sweeping), only to find that the job ultimately went to the son-in-law of the advertiser.' (p. 83). An early, empirical paper which briefly considers the phenomenon of overqualification is R. S. Eckaus, 'Economic criteria for education and training', *Review of Economics and Statistics*, May 1964; and, recently, theoretical analyses have been undertaken by Bhagwati, Srinivasan and Henry Wan, Jr.

27. This objective has legitimately been emphasized in Indian educational-policy reports. Cf. The Indian Education Commission's statement on this issue: 'India . . . must make her own contribution as an intellectual and cultural equal to the eternal human endeavour to extend the frontiers of knowledge.' (op.cit., p. 3).

Japanese model of 'each-College-is-a-University' would have been. As I argued many years ago:[28]

> 'In the majority of English-tradition countries, universities are also examining bodies. The growth of colleges, affiliated to these universities, inevitably leads to lower standards all round because of bad entrants. The best solution under these circumstances is *not* to use the federal structure at all. As in Japan and the United States, each new college should be permitted to run its own instructions and examinations. *Its* standards, if bad, will not then affect those of the other, better institutions. It is only when everyone has to swim together that the good institutions suffer from the bad. A scheme of decentralisation would at least preserve the better ones.'

Indian thinking has recently begun to move in this direction, in attempts at increasing the number of universities, freezing the burden of enrolments at maximum levels for existing universities, 'bribing' 'advanced centres' of research at universities with rewards so that they may preserve better standards in the face of pressures to lower standards, etc. But the basic sub-optimality of the English model, which continues to dominate the scene, has not sunk into the thinking to make for any dramatic change in this area of education.

PART III: SOCIALISM AND THE LIMITS OF EGALITARIANISM

1. *Socialism and education*

Clearly, therefore, it would appear that the higher-income groups manage to get the subsidies which come via either primary or higher education; and educational subsidies would not appear to be quite the egalitarian instrument they are often believed to be. In fact, as is so often the case with our mixed economy, the benefits of State subsidization seem to accrue predominantly to the higher-income groups, no matter what the area of subsidization.

Such an outcome may be the inevitable result of a political system which attempts to combine progressivism with a basically unchanged political structure. It may be that the income groups which would benefit from these educational subsidies are politically more powerful and manage to use education, which is considered socially progressive, nationally a matter of pride, and in principle an instrument of egalitarianism, to distribute relatively innocuously to themselves the benefits of State expenditures. If one accepts this thesis altogether, there is little scope for shifting the distributional impact of educational subsidies in the desired direction of the lower-income groups.

However, one might take a more optimistic view and argue that partly the result has been the outcome of an inadequate understanding of how difficult it is to have programmes truly be beneficial to the lower-income groups when economic opportunity and political muscle are likely to make the higher-income groups more capable of taking the State-subsidized opportunities under governmental programmes. Economists have certainly aided and abetted in this outcome, by concentrating on nearly everything except income distribution in their major concerns; the calculation of dubious numbers, masquerading as rates of return to education undifferentiated by social class and caste, is only one case in point.

If one believes that there is indeed some degree of freedom to introduce reform in the distributional impact of State subsidies to education, clearly the answer lies in broadening the employment opportunities to the lower-income groups and lowering their opportunity costs, by suitable policies.

These policies must include a reallocation of the educational subsidies, at all levels of education, so as to redirect them to the lower-income groups such that the richer groups pay for their children's education fully, whereas the poorer groups are subsidized. They would also include an enhanced quota-wise reservation of jobs for these groups. But, quite aside from quotas, we need to attack the present economic regime's built-in discrimination against the lower-income groups, which we noted in Part II, by ensuring that institutional devices are invented and implemented which ensure equal economic opportunity for people from different economic and social backgrounds. There is need to examine the present working of the labour markets—for different levels of education and differentiating between the public sector, the bureaucracy and the private sector—to devise such policies as will ensure truly equal opportunities for all.

Let me suggest one possible scheme, which should be appropriate, for example, for hiring clerks in all kinds of offices. Rather than work with the current practice of hiring people from the vast pool of available people with the requisite B.A., or similar qualifications, by the principle of 'who knows whom' which works against the underprivileged and lower-income groups, why not require that there be a *random* selection from the qualified applications? We could require that such jobs would have to be registered with the Employment Exchange; all applications which meet the necessary qualifications would then be pooled and then lots drawn to make the appointments. Such a system would be a useful supplement to the special-examination system under which the *top* governmental services are recruited and which works, on balance, quite fairly.

Another such egalitarian move would be to rule out legally the widespread practice of appointment of the sons of businessmen to lucrative managerial positions by these businessmen in 'their' *public* limited companies and thus to insist that these positions be available to the public *on merit*.[29]

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28. Cf. Bhagwati, *The Economics of Underdeveloped Countries* (London: Weidenfeld and Nicolson, World University Library, 1966) p. 186.

29. I am well aware that the possibility of 'swaps' among business houses, and other such evasion possibilities, would have to be ruled out as well.

Unless such imaginative new practices are devised, and the mere expansion of public sector employment is not regarded naïvely as synonymous with the grant of equal opportunity for all,[30] education cannot become the instrument of egalitarianism in the manner we have traditionally assumed it to be.

2. *Limits of egalitarian policies*

But even if these policy changes were actively adopted, the fact remains that the genuine equalization of educational opportunity (in the sense of equalization of costs and benefits from any level of education) would not follow for all classes because of three further reasons.

(i) The recent evidence on the effect of pre-natal and neo-natal nutritional deficiency on neural growth and mentation indicates strongly that early deficiency in nutrition can cause lasting damage to the intellectual ability—and hence to eventual ability to go through a sustained educational process on equal terms with those not so deprived and afflicted. Eichenwald and Fry report the following evidence on this issue:[31]

> '. . . experiments on various animals have indicated that nutrition inadequate in calories and protein, coinciding with the period in life in which the brain is growing most rapidly, produces a brain which is not only smaller at maturity than in control animals but also one which matures biochemically and functionally at a slower rate . . . The brain of the mature rat malnourished during infancy is not only physically smaller but histologically may show degenerative changes of neurons and neurological cells.
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> 'These data suggest that inadequate protein nutrition or synthesis, or both, during brain development could result in changes in function and that, if the degree of deprivation were sufficiently severe and prolonged, the changes in function might be permanent. Other experimental observations do in fact indicate that insufficient intake of protein during early neural development affects mentation. In rats and swine, . . . protein deprivation in early life . . . reduces the capacity of the experimental animal to learn at a later age. Furthermore, rats born of and suckled by malnourished mothers are similarly deficient in their learning capacity.
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> 'Protein-calorie malnutrition in the human infant, if severe enough, produces two clinical conditions—infantile marasmus and kwashiorkor . . . The early investigators of protein-calorie malnutrition in infants found that apathy was universally present in these children . . . The electrical activity of the brain in protein-malnourished children shows consistent abnormalities in the form, frequency and amplitude of activity . . . Follow-up studies of children who have been treated for infantile marasmus and kwashiorkor indicate that during recovery they first grow physically with great rapidity. However, if observations are continued over sufficiently long periods, the child never completely catches up with his healthy peers; growth stops at the usual chronological age . . . the intellectual attainments of children who have recovered from a clinically severe episode of protein-calorie malnutrition are consistently lower than those of individuals with adequate nutrition during infancy.'

Thus if nutritional levels, especially the protein intake, are inadequate in pre-natal and early neo-natal stages in the lowest-income groups, as indeed they are in India, the intellectual ability of the children in these classes will almost certainly be impaired; and the fact that malnutrition is morally certain to continue into the later years of child-rearing and early youth as well, only underlines the fact that no 'catching up' in any significant way, even when feasible with improved nutrition, would be available for such underprivileged children. Their 'competitive' edge, and hence true equalization of educational outcomes and success at getting better jobs *vis-à-vis* the higher-income groups with adequate nutritional standards, are certain therefore to be unachievable.

(ii) The psychological and sociological evidence on the importance of 'environmental' factors associated with family rearing in the critical ages of three to five, as also their impact at later ages in imparting educational motivation etc., also underlines the *de facto* inequality of opportunity that is likely to go with the accident of which income class you are born into. The poorest families, in the bottom three income deciles in India, surely do not have the financial and cultural means to provide the kind of environment that the first three deciles from the top would have.

(iii) Finally, the higher-income groups confer an unequal advantage on their children by being able to invest *more* money in their education *either* by giving them better-quality education through more expensive private schools *or* by that common Indian phenomenon of hiring private tutors to improve performance at critical competitive examinations such as the Matriculation, the Intermediate Science and Bachelor's Degree level examinations. In the general case, where scarce admissions go by performance, this practice invariably manages to give a significant edge, *ceteris paribus*, to the children of the upper three to five decile groups and a significant disadvantage to the groups below.[32]

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30. Often, the public-sector plants, recruiting at many levels in the same way as the private sector firms, have merely replaced private-sector discriminatory practices with similar public-sector discriminatory practices in countries such as India.

31. Heinz Eichenwald and Peggy Fry, 'Nutrition and learning: inadequate nutrition in infancy may result in permanent impairment of mental function', *Science*, **163** (14 February 1969) pp. 644–8. This paper cites the various studies on which its conclusions are based; the authors also carefully note why the evidence is not yet *fully* conclusive on many points, while strongly leaning in the direction suggested in the text here.

32. A minor paradox may be noted here. Occasionally, the ability of the poor, but talented, students to pursue higher studies has been improved by the fact of being hired by the rich to tutor their children. A vignette of some interest is provided by Nikolay Valentinov in his *Encounters with Lenin* (Oxford University Press, 1968) when he notes his revolutionary days at the Polytechnical Institute in Kiev and his intellectual debates with Bulgakov, then Professor of Political Economy there: 'Probably because I was a frequent, loquacious, and very loud opponent of his at these gatherings and in his seminar, Bulgakov took note of me as someone who especially needed to be liberated from the harmful "spell" of Marxism. I saw Bulgakov very frequently. He helped me to obtain books and even lent me them from his own library, and he drew my attention to interesting articles in the foreign press; in addition, he took a lot of trouble to help me earn my living. Thanks to him I got work on the *Kievskaya Gazeta* [Kiev Gazette] and was hired to give some marvellously well-paid mathematics lessons in the family of a rich merchant who had come from Siberia.' (pp. 156–7).

I do not believe that, within the 'capitalist' mode of socio-economic organization, it is possible to eradicate significantly the inequalities arising in these ways.

(i) An approach to assuring minimal nutritional standards, for example, could be made via the distribution of free, nutitionally-balanced meals at school—though, with primary education essentially beginning at six, the critical effects of pre-natal and neo-natal malnutrition would already have wrought their havoc. Also, assuring free meals to children of ages six to thirteen throughout the country for the bottom half of the population, for example, is probably a proposal that would not be met with enthusiasm because of its cost—indeed, it presupposes a degree of egalitariansism which is somewhat improbable in the existing framework. Nonetheless, it is an approach that needs to be seriously considered—for it would, in providing this subsidy linked to school attendance, also lead to increased participation of the lowest-income groups in primary education.[33] The disexternality of such a subsidy, however, is that it could well lead to a marginal incentive *against* population control: the fact that malnutrition may no longer be caused for the family by the addition of more children may be removing an important reason for adopting family planning measures. If such a disincentive effect is to be avoided, it may be useful to restrict the free meals to a limited number of children per (nuclear) family—a policy that may, however, be politically unpopular and administratively unfeasible (e.g., could one really exclude a child from such a programme when the rest of the child's classmates are enjoying its benefit?).

(ii) As for the differential effect of family rearing and environment, this is really difficult to eliminate under the existing societal framework. The availability of day-care centre facilities to the poor classes could help; but it would cost a great deal if the centres are to recreate the environmental conditions of the higher-income families, while at the same time it would be some time before these centres were accepted and utilized by the lowest income groups, if at all. Thus, again, the feasibility of this policy instrument to eliminate the unequal environmental disabilities of the children of the poor seems extremely dubious.

(iii) The inequalities arising from more intensive or higher-quality education by the better-off parents are again relatively intractable. Special quotas in the better schools for the poorer classes would help; but nothing really can be done to eliminate the advantage conferred on the children of the better-off by private tuition.

(iv) By contrast, it would appear that the Chinese communes have actually gone a long way towards achieving genuine equality on these counts. (*a*) The significant equalization of income and consumption has eliminated malnutrition as existing under the earlier unequal distribution. (*b*) At the same time, the greater equalization of what I called the 'environmental' effect also follows from the reduced income-inequality, the alleged availability of commonly shared school and day-care-centre opportunities within the communes and the possible sharing of a common ethos on societal and individual goals and motivations, while private hiring of tutors is apparently not practised,[34] thus ensuring greater equality of educational outcome among those who attend school.

There are really no policy instruments in the framework of an LDC such as India to match these spectacular possibilities in the Chinese model—thus reinforcing the general view that China's major achievement is in the sphere of income and general egalitarianism, rather than in its growth rate (which has, in the absence of reliable statistics, spawned as many controversies around 'guestimates' as ideological differences and a willing suspension of

33. Of course, in so far as the net cost of sending their children to school remains, on balance, too high for the lowest-income groups, the programme will still not result in more enrolment and better nutrition: the 'elasticity of supply' of enrolment from the lowest-income groups may not be high enough! Indeed, there is some evidence that the nutritional-assistance programmes in India have not always been successful in percolating down to the lowest-income groups—as is evidenced in a recent study by Gunvant Desai of the Indian Institute of Management, Ahmedabad, to which John Mellor has drawn my attention.

34. Seymour Martin Lipset has independently noted this source of inequality and cites the following, interesting evidence for the socialist countries:

'In 1969, the Rector of Moscow University, discussing the advantages which some applicants had in gaining admission, pointed to the fact that "many children frequently make use of the services of private coaches". In that year, 85 per cent of those admitted to the Faculty of Mechanics and Mathematics at this university had received private special instruction before they took the entrance examination. This fact provoked *Komsomolskaya Pravda* (the Young Communist newspaper) to comment: "With the approach of summer, many teachers at higher educational institutions display feverish activity . . . For the duration of the coaching 'boom' some even give up their summer holidays . . . They have made out a scale of payments for their services: the average fee is 5 rubles an hour, but the children of well-to-do parents pay more. . . . Some fond fathers and mothers will go to any lengths to obtain a 'guarantee' that their son or daughter will be accepted. Behind the closed doors of secluded houses, countless meetings and 'confidential' negotiations take place [since some of the tutors are 'prepared, on the basis of their connections, to guarantee success in the entrance examinations.]" ' 'Social mobility and equal opportunity,' *Public Interest*, Fall 1972, pp. 102–3.

But, as is typical with conservative intellectuals, Lipset's tone and argumentation suggest that this puts the Communist and the capitalist countries on a par—and only a critical reader will sit back and realize that the degree to which these advantages can be secured via private tuition when income and wealth differentials are dramatically lower is going to be correspondingly lower, in general.

discretion and disbelief will generate).[35] The problem of ensuring to the children of the lower-income groups genuine equality of access (in its fullest sense) to education must thus remain one at the solution to which the capitalist LDCs would thus appear to remain inept and inferior, in principle, to LDCs following the Chinese model. In all these regards, therefore, the success of genuine egalitarianism in China would seem to be impressive, and not merely in the matter of reducing *income* differentials (whether rural *v.* urban, region *v.* region, educated *v.* uneducated) to which Sinologists have drawn our attention.[36]

35. To reach a *full* judgement on the issue of equality, however, in the Chinese society today, one should ideally have (*a*) better and more systematic information so that the presumptions noted in the text are checked out in the same scholarly way that we have learnt to do regarding all professions by all governments; and, in particular, (*b*) some notion of how assignments to jobs work out for equally educated people (which relates to the question of equality of success in finding jobs, for all, for identical qualifications).

On the former question, it would be wise to withhold full judgement, not merely in light of the discrepancies between professions and realities which escaped even discriminating visitors to the Soviet Union in the 1930s and 1940s, but also in the light of the evidence for China itself in this direction. Thus, Merle Goldman has noted, in her *Literary Dissent in Communist China* (New York: Atheneum, 1971) the struggle of Chinese writers, of revolutionary vintage, who were to be discredited again and again, through several lapses into deliberalization and hard-line policies, for opting out of revolutionary romanticism (which dictated that only utopian situations be depicted) and preferring social realism (which, in its original version, required that the 'real conditions' be portrayed).

On the latter question, one should like to know, for example, who gets sent off to Tibet and Sinkiang, and who stays on in Peking and Shanghai, who manages to get better-paid jobs, and whether these decisions reflect class structure or other sources of influence and power within the system. These are issues on which neither the Soviet Union nor China is agreeable to having critical scrutiny; and the high incidence of sons-in-law (of Soviet Premiers) and wives (of Chinese leaders) in the high positions in these societies, no different from what tends to happen in capitalist societies, suggests that perhaps everything is not all right on this front. Indeed, according to Katz, 'Sociology in the Soviet Union', *Problems of Communism*, **20** (May–June 1971), there are distinct differences in the participation in higher education by different classes in the Soviet Union, the classes considered being 'peasants' versus 'urban intelligentsia'.

36. See, for example, Shigeru Ishikawa, 'China's economic landscape: 1965–1995', in Bhagwati (ed.), *Economics and World Order*, op.cit., p. 344.