

THE EDUCATIONAL SITUATION & Other Essays on Education

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To KAMALA

**who gave up much
to throw in her lot with me**

PREFACE

For the last few years some friends had been suggesting that they would like to see in print at one place a collection of my nonmathematical writings in which I have been occasionally indulging myself. Although I often imagined (and which author doesn't?) that there were perhaps some readers who were appreciative of what I was writing, not being endowed with the necessary initiative or enterprise, I used to smile away the idea of a publication. This would have continued but for the unexpected intervention of Mohit Sen who, without previous acquaintance, came to see me early in 1971 and insisted that I should immediately prepare a selection of my essays for publication. In the process of selection I soon came to the conclusion that the proposed volume would have a measure of unity if it is confined to studies and essays on education. Nonmathematical writings on other topics were therefore left out to wait, if at all, for some other collection.

This volume contains fifteen studies or essays on different aspects of education in India. They broadly fall under two categories. First, there are educational investigations which use the quantitative and/or statistical approach to study important aspects of the present educational process such as measurement of wastage and stagnation and their possible association with different socio-economic factors, institutional costs per student in different undergraduate and postgraduate courses in colleges and the university, and the socio-economic characteristics of the spread of literacy and education in rural areas. Two other smaller contributions (5) and (6) also follow the same simple quantitative approach towards the respective problems in education. While in one of the essays a quantitative historical approach is adopted to describe the educational development in a village over almost a century, another, on Gokhale, follows critically an important chapter in the educational history of our country. In yet another essay an

attempt is made to conceptualise the problem of efficiency in education and discuss a possible methodology for its measurement.

The rest of the essays are of a different *genre* in that they try to discuss various aspects of the educational development in this country by placing them in the general socio-economic perspective, by viewing them as part of the developing socio-economic situation. They discuss live issues in the educational situation such as the so-called public schools, selective admission, 'major' universities, institutional autonomy, academic freedom, priorities and organisation of educational research, financing of education and its implications, education and social change, etc. The reader will find it helpful to look up the dates of their writing for the contemporary relevance of some of the references or remarks occurring in their argument.

These discussions have generally avoided the risk of making prophecies for the future. But at least one of the few which have been risked has not come about. It is not at all a matter of personal disappointment that the proposal of 'major' universities made by the Education Commission and supported by a powerful lobby of educationists could not be realised. I think I underestimated the factor of the in-fight among the universities and their political supporters which its implementation would have involved; perhaps an equally important factor was the still-birth of the Indo-US educational foundation which was looked up to by many as a ready source of finance for developing the proposed 'centres of excellence'. But the idea of elitist institutions at state expense does not seem to be completely given up as will be evidenced by the recent proposal for raising the status of a few schools and colleges as 'pace-setting' institutions. There are also other issues, as for instance, those arising from the educational development outlined for the Fifth Plan, which invite comments and criticism. But it is not fair to the discerning reader that they be treated to casual comments in a short preface like this instead of serious discussion in full-length essays.

The essay "The Educational Situation" written in 1971 sums up briefly my total view of the developing situation in education observed against the backdrop of the developing socio-economic and political situation in the country. (Perhaps, as some friends have suggested, the theme could bear considerable elaboration,

both factual and argumentative, to become an independent self-contained volume on education and social change in India.) In a sense, however, all these studies and essays are concerned with the Indian educational situation in its different aspects, whether in the educational sphere proper or otherwise. It is hoped readers of the volume will view them in that light irrespective of whether they react favourably or adversely to their contents.

The usual exigencies of the publishing profession have somewhat lengthened the gestation period. Printing of the manuscript prepared in May 1971 was started only in March 1973.

The year and source of the studies and essays included in this collection are as follows :

- (1) "Some Features of the Growth of Education in Rural Maharashtra" was published in the *Indian Educational Review* in 1968.
- (2) "Education in Gulumb" appeared in the *Indian Educational Review* in 1967.
- (3) "Wastage and Stagnation in College Education" is a modified version of three papers which were first published in *Artha Vijnana* in 1960.
- (4) "Institutional Costs in Higher Education" extracted from *Two Studies in Education*, first appeared in a short version in *Artha Vijnana* in 1967.
- (5) "Women's Education in Rural Areas" was contributed in 1966 to the *Golden Jubilee Commemoration Volume* of the S.N.D.T. Women's University.
- (6) "Comparison of Examination Marks with Assessment by Teachers" was published in the *Indian Educational Review* in 1966.
- (7) "Efficiency in Education" was a paper presented to a seminar in 1967 and published in *Measurement of Cost Productivity and Efficiency of Education*.
- (8) "Gokhale the Educationist" was written in 1966 for *Gopal Krishna Gokhale, A Centenary Tribute*.
- (9) "Private Institutions of Education" was published in the *Economic Weekly* in 1965.
- (10) "Higher Education : Myths Old and New" appeared in the *Economic and Political Weekly* in 1967.
- (11) "Reorganising the NCERT" was published in the *Economic and Political Weekly* in 1968.
- (12) "Priorities in Educational Research" is based on the paper contributed to the Educational Conference in 1969 during the Silver Jubilee Celebrations of Tilak College of Education, Poona.
- (13) "Financing of Education in India" was written in 1972 for a seminar which did not take place.
- (14) "Education, Social Change and Political Development"

is a slightly modified version of a paper contributed to International Conference on Education and Politics held in 1973 in Freiburg. (15) "The Educational Situation", written in 1971, appeared in the *Economic and Political Weekly* in 1972.

Titles (12), (13) and (14) appear in print for the first time in this volume but may appear in the respective proceedings if they ever get published. Some of the remaining, in addition to their first publication mentioned above, have also been reprinted in other volumes. All of them are gratefully acknowledged.

Finally, particular mention must be made of the following : For (3), "Wastage and Stagnation in College Education", Shri A. G. Deshmukh (who is now with the University Grants Commission) was a coauthor and the factual data for (2), "Education in Gulumb", was taken from the comprehensive village survey data collected by my colleague Professor V. M. Dandekar. These should have really been stated at their proper places. The error was realised at a stage too late for rectification. I should therefore like to make amends for this inadvertent lapse by mentioning them specifically here.

Erandawana, Poona

1 August 1970

A. R. KAMAT

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SOME FEATURES OF THE GROWTH OF EDUCATION IN RURAL MAHARASHTRA

A considerable growth has taken place in literacy and education in India during the postindependence period. It is however well known that this progress is in much greater evidence in the urban areas; the vast rural areas remain relatively backward. The object of this paper is to study the progress of education in rural areas, the rural areas of Maharashtra, during this period.

We have selected Maharashtra because we had with us considerable educational data about rural Maharashtra, collected in a large number of socio-economic village surveys which were conducted by the Gokhale Institute, Poona, over the last two decades. Although they were not educational surveys as such, much systematic information on education was available in their schedules for all the families in the village. (Many of these surveys were agro-economic surveys with the objective of measuring village change during a period of five years and were therefore necessarily followed by resurveys.)

It is true that fairly comprehensive information on literacy and education for the postindependence period is available in the relevant reports of the two population censuses of India of 1951 and 1961 and the information covers each and every town and village in India. The information on which this paper is based covers only a few villages, but it may be considered to have certain other advantages over the census information. Firstly, the institute's surveys were conducted by qualified research workers with the assistance of field investigators trained for this purpose, while the census is necessarily (and understandably) a hurried piece of work, carried out with whatever personnel may be available. Secondly, in these surveys much other information was also recorded on many important socio-economic items which cannot and need not be covered in a population census. For instance, classification by caste, which is an important social factor in con-

sidering educational progress (in fact any socio-economic progress) in this country, is just not available in the census statistics of 1951 and 1961. Finally, in the case of the institute's surveys it was also possible to relate the figures of literacy and educational progress in a village to the development and growth of educational institutions in the village.

This study may, therefore, be looked upon as an attempt to go behind the familiar figures of totals and averages for literacy and educational progress, and to find out what is happening in this respect at the level of the individual village. Such investigation is expected to reveal in greater detail the different features of the progress achieved in this sector and also to indicate the areas where special attention needs to be focused. It is also expected to pinpoint the difficulties which have to be faced and overcome in this sphere in rural society.

The methodology followed in these investigations is to separate the educational information collected in the village surveys from the rest of the data and match it against the relevant socio-economic factors of village society such as caste, occupation, income and size of landholding. The survey information is supplemented with a survey of educational institutions in these villages for the postindependence period, from 1947 to 1964, which was specially carried out for this purpose. Thus the paper deals with the broad socio-economic features of the progress of rural education as well as its institutional aspect.

Description of the Coverage

It should be stated here, however, that the villages selected for these surveys are not a properly constituted sample of the rural areas of Maharashtra. They were chosen as typical villages for the purposes of the agro-economic or other surveys, and the surveys are essentially case-studies. No attempt is therefore made to blow up the figures to give estimates for Maharashtra state. What is described here should therefore be taken only as typical instances of what is happening in the villages of the different rural regions of Maharashtra.

The villages together with their centres and districts are as follows :

LIST OF CENTRES AND VILLAGES

<i>Centre</i>	<i>District</i>	<i>Villages</i>
1. Manor	.. Thana	Manor, Maswan, Kondhan, Avdhan, Ambhan
2. Mithbav	... Ratnagiri	Mithbav (R)
3. Waghode	... Jalgaon	Waghode (R), Maskawad Khurd, Maskawad Seem
4. Gulumb	... Satara	Gulumb (R), Kawathe (R), Ozarde (R)
5. Devapur	... Satara	Jambhulani (R), Gangoti (R), Panvan (R), Devapur, Pulkoti, Valai, Hingoni, Shirtav, Palasawade
6. Pusegaon	... Satara	Pusegaon (R), Visapur (R)
7. Malthan	.. Poona	Malthan, Sone Savangi, Nimgaon Bhogi, Amadabad
8. Kasabe Sukene	... Nasik	Kasabe Sukene (R), Mauje Sukene (R)
9. Selu	... Wardha	Selu, Dhanoli, Belgaon, Vadgaon
10. Dhad	... Buldhana	Dhad (R), Dudha (R), Dhal Savangi (R), Savali (R), Karadi (R)
11. Jawala	... Yeotmal	Jawala, Taroda, Brahman Wada, Selu, Gavna, Kinhi, Jamb, Khandala
12. Goregaon	.. Bhandara	Goregaon, Ghoti, Zanjia
13. Kothari	... Chanda	Kothari, Palasgaon, Kawadjai, Amdi
14. Murud	... Osmanabad	Murud (R), Watawada (R), Karakata (R)
15. Bori	... Parabhani	Bori (R), Dhanora (R), Nagpur (R), Devgaon (R), Mudha (R), Nagathapa (R), Ganapur (R), Dohara (R), Chandaaj (R)
16. Karkheli	... Nanded	Karkheli, Chikana, Dhanora, Vilegaon

Note: 'R' denotes that the villages were resurveyed.

Thus the surveys cover 69 villages from 14 districts (out of the total number of 25 districts, excluding the Bombay suburban district which is mainly urban) of the present state of Maharashtra. There is a fair geographical representation of the four main regions of Maharashtra, viz the coastal strip of Konkan, the rest of

Western Maharashtra or *Desh*, the Nagpur-Vidarbha region and Marathwada. This may be seen from the following brief summary:

CLASSIFICATION OF SURVEYED VILLAGES

<i>Region</i>		<i>Total No. of districts</i>	<i>Villages covered</i>	<i>From districts</i>	<i>No. of centres</i>
Konkan	...	3	6	2	2
<i>Desh</i>	...	9	23	4	6
Nagpur-Vidarbha	...	8	24	5	5
Marathwada	...	5	16	3	3
Total	...	25	69	14	16

Among the 69 surveyed villages, six villages are from two districts of Konkan, 23 from four districts of Western Maharashtra, another 24 from the five districts of Nagpur—Vidarbha, and the remaining 16 from three districts of Marathwada. Actually the 69 villages constitute 16 centres or clusters. In most cases a centre comprises one large central village together with a few smaller surrounding villages naturally connected with it, the total aggregate population of the centre being about 5,000. For our purpose, the central village is called the nuclear village; the surrounding smaller villages are called peripheral villages. Some centres are exceptional in the sense that they constitute just one village, or two or more villages of comparable size.

Most of the first surveys were carried out during the years 1955 to 1960 except : (i) the Devapur surveys which were village surveys conducted in the famine tract of Satara district during the period of 1949-50, and (ii) the Gulumb surveys which were carried out first during 1942-44. All the resurveys, which have taken place in 29 of the 69 villages mentioned above, were carried out during the period 1959-63.

The paper is divided into six sections :

1. General progress in literacy;
2. Analysis by caste;
3. Analysis by occupation and size of landholding;
4. Analysis by income and other factors;
5. Educational institutions;
6. Summing up.

1. GENERAL PROGRESS IN LITERACY

The general situation in Maharashtra as regards literacy during the last two decades can be seen from the census figures for 1951 and 1961, which are given in the following table :

MALE AND FEMALE LITERACY IN INDIA AND MAHARASHTRA
STATE IN 1951 AND 1961

		Percentage of literates to total population			
		India		Maharashtra	
		1951	1961	1951	1961
<i>All Population</i>					
Male	...	24.88	34.44	31.64†	42.04
Female	...	7.87	12.95	9.93	16.76
Total	...	16.61	24.02	21.11	29.82
<i>Rural Population</i>					
Male	...	19.02*	29.07	22.55†	33.51
Female	...	4.87	8.54	4.18	9.34
Total	...	12.10	19.00	13.35	21.46
<i>Urban Population</i>					
Male	...	45.06*	57.49	51.65†	61.62
Female	...	22.33	34.51	25.67	37.90
Total	...	34.59	46.97	40.04	51.07

(Source: *Census of India*, 1961, Vol. I, Part II-A (ii); *Census of India*, 1961, Vol. X, Part II-A: *Census of India, Paper No. 5, Literacy and Educational Standards*, 1951 Census; and *District Census Handbooks* of Bombay State, Hyderabad State and Madhya Pradesh)

* These figures are based on the ten per cent sample of the census population of 1951.

† These figures are arrived at by taking the 1951 figures for the districts which are now in Maharashtra, but *without* adjusting them for subsequent changes in their boundaries when they became parts of Maharashtra State.

The figures show that, although in literacy Maharashtra is ahead of India as a whole, the increase during the ten years from 1951 to 1961 is of the same order for both Maharashtra and India whether we consider the total population and the rural popu-

lation (about 7 to 8 per cent) or the urban population (11 to 12 per cent.). It is important to note that there is hardly much difference between the country as a whole and Maharashtra, in respect of literacy among the rural population which is lagging considerably behind the urban population. In the rural areas the female population is still largely illiterate; the literacy percentage for 1961 for Maharashtra is only 9.34, and the increase registered from 1951 to 1961 is only 5 points as compared with the increase of 11 points for the male population which showed a literacy percentage of 33.51 in 1961. The data collected in the village surveys will be considered against this background of the general progress of literacy.

Definitions of Literacy

Before we consider the data, however, it is necessary to consider the question of the definition of literacy. In the censuses before 1901 there used to be a threefold classification: literate, learning and illiterate. As the second category 'learning' could include both literates and illiterates (if the 'learner' has not acquired literacy by then) this was dropped in 1901. Both the definition of literacy and the instructions in respect of this item have remained more or less unchanged since 1911 in all the subsequent censuses. According to the current census definition, literacy is defined to mean the ability to read and to write a simple letter.¹ It seems that in the case of school-going children, all those in the third standard and above in primary schools are recorded as literates. But those who are studying in the first and second standards of the primary school are not counted as literates unless they satisfy the criterion laid down above. (The idea appears to be that those who leave primary school in the first two standards may often lapse into illiteracy.) It is anybody's guess how precisely or effectively this definition works in the actual conduct of the hurried largescale operation which the population census is. It is very likely that all adults who assert that they are literates are recorded as literates. And in the case of children

¹ See *Census of India, 1951, Volume IV, Part I, p. 137; Census of India, 1961, Volume X, Part VIIIA, pp. 80, 109.*

studying in the first two classes of primary schools an arbitrary number (in some cases, perhaps all of them) is excluded.

The definition of literacy followed in the village surveys conducted by the institute is different from the census definition. A person is recorded as literate if the respondent asserts that he can read and write; this assertion can always be corroborated, if necessary, since the investigator has to stay in the village for an appreciable period. In the case of school-going children, all of them are counted as literates, irrespective of the standard in which they are studying. This definition of literacy is operationally very simple although in the case of school-going children it rests on the hopeful assumption that all those who join primary school will remain there long enough to be able to read and write and will not lapse into illiteracy after leaving school. The age-group 0-4 years is recorded as illiterate even though a few exceptional children belonging to this group may happen to attend school.

It is not intended here to compare the census and survey data on villages. In fact it is impossible to reproduce detailed village-wise tables in this paper. The difference in the definitions of literacy is given for two reasons : firstly, for clarification ; secondly, it is convenient to use census figures to see the broad features of the progress from 1951 to 1961 in the rest of this section, although in the subsequent sections, survey figures will be used.

Broad Features of the Progress

The general picture which emerges from the census as well as survey data is that of a general progress in literacy in most of these village during this period. But the figures also show that this growth was very uneven. Taking the 1961 census figures for the literacy percentage in the total population, one finds that while six of the villages (Mithbav, Maskawad Khurd and Maskawad Seem, Kawathe, Ozarde and Pusegaon) had more than 45 per cent literates, more than a dozen villages had not yet crossed even the ten per cent mark. This unevenness is to be seen not only in the literacy for 1961 but also in the increase in literacy from 1951 to 1961. Mithbav, Maskawad Khurd, Kawathe, Devapur, Visapur and Amadabad had more than 20 per cent rise in literacy during this period, as will be seen from the following figures :

RISE IN PERCENTAGE OF LITERATES BETWEEN 1951 AND 1961

<i>Village</i>	1951	1961	<i>Rise</i>
Mithbav	20.8	47.0	26.2
Maskawad Khurd	14.4	45.3	30.9
Kawathe	27.2	48.4	21.2
Devapur	5.1	26.1	21.0
Visapur	10.4	34.2	23.8
Amadabad	4.6	30.2	25.6

On the other hand, several villages show very little progress in this period and appear to have stagnated, as will be seen from the figures for the following villages :

RISE IN PERCENTAGE OF LITERATES BETWEEN 1951 AND 1961

<i>Village</i>	1951	1961	<i>Rise (or fall)</i>
Manor	34.7	37.2	2.5
Maswan	22.2	25.0	2.8
Kondhan	3.7	7.7	4.0
Malthan	18.1	17.8	-0.3
Jawala	31.1	33.8	2.7
Palasgaon	14.6	17.1	2.5
Amadi	14.1	17.9	3.8

Among these are to be found nuclear villages like Malthan, Manor and Jawala, which have a sizable population and where primary schools were established as far back as 1874, although in others the educational effort is of a much more recent origin.

Another feature of this uneven progress is the disparity between the literacy figures for males and females. The literacy percentage for women was in most cases less than half of that for men, and very often much less. This is seen from the figures for the following nuclear villages. In smaller (nonnuclear) villages this disparity is even greater, and in some of them, such as the Devapur villages, and in some of the peripheral villages in Manor, Dhad, Bori and Karkheli centres, very few women, if at all, were literate in 1961.

LITERACY BY SEX (1961 CENSUS)

	<i>Male</i>	<i>Female</i>	<i>Total</i>
Devapur	42.5	4.0	26.1
Goregaon	56.4	14.5	35.3
Kothari	39.8	7.3	23.9
Murud	45.1	11.5	30.6
Bori	42.5	10.1	26.3
Karkheli	32.5	7.0	19.9

The nuclear villages have a larger population and generally have better educational facilities than the surrounding, smaller, peripheral villages. Primary schools have been in existence in these villages for a much longer period. As a consequence they have a larger proportion of literates in most of the centres. The following figures for Bori, Manor and Kothari centres, where all the surrounding smaller villages are taken together for convenience, show this contrast in a pronounced form:

LITERACY IN NUCLEAR AND SURROUNDING VILLAGES (1961 CENSUS)

<i>Centre</i>		<i>Male</i>	<i>Female</i>	<i>Total</i>
Manor	...	43.8	28.7	37.2
Other villages	...	18.4	7.4	12.8
Bori	...	42.5	10.1	26.3
Other villages	...	21.3	1.5	11.5
Kothari	...	39.8	7.3	23.9
Other villages	...	26.1	4.2	15.7

The other important features of this progress are socio-economic in character. They will be considered in Sections 2, 3 and 4.

2. ANALYSIS BY CASTE

It is proposed now to analyse the progress of literacy among the principal caste-groups. It may be recalled that the census figures do not give this information. For this purpose we shall be using the data of the surveys and resurveys where this information was collected. In fact, for all further discussion throughout this study we shall mainly rely on these data.

Procedurc of Analysis

On the basis of previous experience of village surveys in Maharashtra, castes are grouped into eight major groups as follows :

- I. Brahmins;
- II. Advanced Hindus;
- III. Marathas and similar castes;
- IV. Intermediate Hindus—1;
- V. Intermediate Hindus—2;
- VI. Backward classes and tribes;

VII. Scheduled castes;

VIII. Muslims, Christians and other non-Hindus.

Details of this grouping are given in an appendix at the end. The sequence I to VII of caste-groups generally follows the social hierarchical sequence as traditionally observed in village society in Maharashtra; the groups III, IV and V, however, should not be considered rigidly sequential.

The population considered here (and from here onwards in this study for the calculation of literacy percentage, unless otherwise mentioned) excludes children who have not completed four years of age. The following stages of education were used: (i) illiterate, (ii) literate, and up to the completion of primary education, i.e. up to standard IV, (iii) from standard V to standard VII, or middle school education, (iv) from standard VIII and above, or high school education. (Tables for individual villages have not been given owing to considerations of space.)

In most villages, the major caste-group is the Maratha community (III) followed by the scheduled castes (VII), all other caste-groups together forming less than 20 to 30 per cent of the population. In some villages, caste-group II (advanced Hindus), caste-group VI (backward classes and tribes) and caste-group VIII (non-Hindus, who are mostly Muslims) also assume importance. But, by and large, it is the progress in education of the Marathas and the scheduled castes (caste-groups III and VII), mainly that of the Marathas (caste-group III), which sets the pace for the educational progress of the village as a whole. This was amply corroborated by our analysis.

General Picture

Although it may not be strictly appropriate to compare the literacy percentages in different caste-groups within each village because of the small numbers in several caste-groups, an over-all scrutiny of the figures for all the villages gave the following general pattern of the relative positions of different caste-groups. Considering the Hindus first, caste-group I (Brahmins) stands first; then comes group II, consisting of advanced castes; this is followed by the artisan caste-group IV (intermediate Hindus—1). The next positions are occupied by the Marathas (caste-

group III), and by caste-group V (intermediate Hindus—2). They are followed by the scheduled castes (group VII), and the caste-group VI (backward classes and tribes) is very often the last. There are, of course, variations in this order from one village to another but this appears to be, by and large, the order in literacy, both for surveys and resurveys, and for males and females. The non-Hindu group VIII, which is overwhelmingly Muslim, occupies a position near the caste-groups IV, III or V.

Now the traditional association between castes and professions in village society in Maharashtra may be broadly described as follows. The advanced professions, including the priesthood and the learned professions, were in the hands of the Brahmins (I), but were shared to a certain extent by the advanced Hindus (II) who also controlled trade and commerce. The intermediate Hindus (IV and V) manned the skilled and semiskilled non-agricultural occupations, the more skilled occupations being with caste-group IV. The Marathas (III) were chiefly landholders and cultivators. The scheduled castes (VII) were mainly agricultural labourers (either landless or with very little land) and they did other kinds of unskilled labour which included the so-called low occupations (e.g. that of cobblers). The backward classes or tribes (VI) consisted of groups which were nomadic, semisettled or settled (with a recent nomadic past). And the Muslims (VIII) in villages were closer to the Marathas (III) and intermediate Hindus—2 (V) in their occupations. For fifty years and more before independence, the educational attainment among males was closely associated with this traditional occupational structure, in the order described above, viz from caste-group I, through II, IV, III, V, VII, to VI in this descending order, with the Muslims (VIII) taking a position (in education) somewhere in between caste-groups IV, III or V. (The reader is however cautioned against treating this pattern as a hard and fast pattern. Actually there would be considerable variations in it as one goes from one subregion to another due to the following factors : the Marathas are a large group and not quite homogeneous; differences in income had considerable influence on educational attainment; the Marathas, especially in the higher income group, were often more advanced educationally than intermediate Hindus—1; the backward class castes when fully

settled tended to become educationally more advanced than the scheduled castes. Moreover, the pattern of female literacy was different.)

It appears, therefore, at least in the case of the male population, that the growth of literacy still generally corresponds to the occupational pattern traditionally associated with the caste structure of the village society so far as relative positions are concerned. We should, however, hasten to add that this does not mean that the educational situation in the village has not changed during the recent past. In fact, the reverse is true. Although the relative positions of literacy percentages in different caste-groups are in the same order as before, a sea-change has taken place in the village society because of the very substantial increase in literacy and education during the last few decades among the major, but hitherto more or less illiterate, caste-groups. This will be illustrated by figures towards the end of this section.

Male Literacy

Taking a closer view of literacy among males, it was observed that the Brahmins had already reached a high literacy rate, almost 100 per cent, at the time of the first survey in many villages. Caste-group II (advanced Hindus) had also attained a fairly high literacy, very often comparable to the Brahmins, even at the survey stage. The other caste-groups were relatively far behind. But almost all of them have registered definite progress during the short period from survey to resurvey, except in villages where male literacy was already high at the time of the first survey. The Maratha caste-group, which was in most cases ahead of the scheduled-caste group at the survey stage, not only maintained that position but has invariably registered greater increase in literacy during the period between survey and resurvey. There were a few exceptions like the Devapur villages, and Mauje and Kasabe Sukene where the scheduled castes still have a higher male literacy. Barring these exceptions, however, the scheduled castes are lagging behind considerably in many villages, both in absolute terms and in terms of increase in literacy, as will be seen from the following figures :

MALE LITERACY AMONG CASTE-GROUPS III AND VII

Village	Caste-group	Literacy (percentage)		
		Survey	Resurvey	Increase (or decrease)
Visapur	III	44.0	53.3	9.3
	VII	22.4	24.0	1.6
Waghode	III	57.4	61.8	4.4
	VII	51.3	51.2	-0.1
Kasabe Sukene	III	49.7	58.9	9.2
	VII	69.3	67.7	-1.6

The Muslims are in a sizable group only in Waghode, Dhad, Bori, and to a certain extent in Murud, and they seem to have maintained their position except in Waghode where they have registered a small setback from 64.2 per cent to 60.9 per cent.

Two other general features of this progress were observed. Firstly, in villages like Pusegaon, Mithbav, Waghode, Dhad, Kasabe Sukene, Mauje Sukene, Kawathe and Ozarde, where male literacy has reached 60 per cent and more, most communities have registered this progress except the backward classes (caste-group VI) and in some villages the scheduled castes (group VII). Secondly, in peripheral villages the pace of male literacy is much more slow than that in the nuclear village but the general pattern is similar to what is described above, the only other notable point being the almost complete absence of caste-groups I and II in the populations of these peripheral villages.

This is the situation of the immediate past and present. What about the future? The future trend in male literacy will be indicated to a considerable extent by the proportion of educands to the total population in each group. Here also, there was general improvement in most villages, among all caste-groups, from survey to resurvey. Many of them like Pusegaon, Kawathe, Gulumb, Ozarde, Mithbav achieved a high proportion of educands, 25 to 30 per cent.² But others like Dhad and its peripheral

² If children of age-group 0-4 years are excluded, according to the 1961 Census, the male population between the ages 6 and 14 in Maharashtra is 22.7 per cent, and that between the ages 6 and 17 is 29.9 per cent. Even if it is assumed that some children under 6 also join school, 25 to 30 per cent is a fairly high proportion of educands. This also applies to the female population and the total population.

villages, and the peripheral villages of Murud had still a rather low proportion of educands, and the three Devapur villages (in the famine tract) with 4.6 per cent educands have indeed a long way to go. Here also the peripheral villages are lagging behind the nuclear villages.

The analysis of the proportion of educands by caste-groups showed almost the same relative pattern as that for total male literacy observed above. Examining closely the major caste-groups III and VII, and other caste-groups where they are in substantial number, one finds certain significant trends. The Maratha caste-group III is pushing ahead rapidly and achieving a high proportion (more than 25 per cent) of educands. But the scheduled castes (group VII) appear to be lagging behind almost everywhere. In fact, in some villages the scheduled-caste group is stagnant in this respect or has even suffered a setback as will be seen from the following table. A part of this difference may possibly be accounted for by differential migration to the cities. Even then the differences are rather large. This means that while the Maratha community, and with it the other village population, will attain high male literacy in the near future in most villages, the scheduled castes (and the backward classes, group VI) are likely to trail considerably behind in many villages.

PROPORTION OF MALE EDUCANDS IN CASTE-GROUPS III AND VII
(PER CENT)

<i>Village</i>	<i>Caste-group</i>	<i>Survey</i>	<i>Resurvey</i>
Visapur	III	22.7	28.4
	VII	16.0	13.3
Gulumb (15-year period)	III	12.2	29.9
	VII	19.5	15.6
Mithbav	III	37.7	44.8
	VII	32.7	27.8
Waghode	III	19.7	24.8
	VII	11.9	14.9
Murud (peripheral villages)	III	16.5	23.2
	VII	12.2	11.0

So far as the Muslims (group VIII) are concerned, in Dhad and Murud (nuclear villages) they had registered progress in the proportion of educands; in Waghode, Bori and Dhad (peri-

pheral villages) they appeared to have stagnated in this respect or had even suffered a setback like the scheduled castes. Nowhere did they appear to register any rapid advance comparable to that shown by the Maratha caste-group.

Female Literacy

Let us now turn to female literacy. It was observed that female literacy was moving with a considerably slower pace in all villages, and this was particularly so in the smaller peripheral villages. It was only in Pusegaon, Ozarde and Mithbav that it had crossed 30 per cent at the time of the resurvey; in many other villages it is still less than 20 per cent. In the smaller villages it is as low as 10 or 11 per cent; in the Devapur villages and in the peripheral villages of Bori it was as low as 3 per cent at the time of the resurvey. But it had stepped up from survey to resurvey in most relatively advanced villages.

The figures for female literacy by caste-groups showed almost the same relative positions for the different caste-groups as in the case of male literacy. Among the Brahmins it is considerably high and follows closely the male literacy, and in caste-group II (advanced Hindus) it is also catching up. But in all other caste-groups, and especially in the major caste-groups III and VII, it is still considerably behind male literacy as will be seen from the following resurvey figures for villages relatively advanced in general literacy. These figures also show that the scheduled-caste women are in a much worse position in most of these villages.

COMPARISON OF MALE AND FEMALE LITERACY IN
CASTE-GROUPS III AND VII

Village	Caste-group III		Caste-group VII	
	Male	Female	Male	Female
Visapur	53.3	19.5	24.0	4.2
Mithbav	72.2	36.5	60.0	15.0
Kawathe	63.1	24.3	51.9	22.2
Gulumb	57.9	20.4	42.7	6.6
Waghode	61.8	21.9	51.2	14.6
Dhad	62.7	14.5	60.3	15.8
Murud	60.0	20.5	43.9	11.0
Bori	60.9	19.0	26.6	3.0

Again, if the survey and resurvey figures are compared, one finds that the Marathas often show a much greater increase in female literacy than the scheduled castes who almost stood still at their very low level in some villages, especially the peripheral villages, where there is no literacy to speak of among the scheduled-caste women. This is seen from the following illustrative figures.

COMPARISON OF FEMALE LITERACY IN CASTE-GROUPS III AND VII

<i>Village</i>	<i>Caste-group</i>	<i>Survey</i>	<i>Resurvey</i>	<i>Increase</i>
Pusegaon	III	20.2	34.6	14.4
	VII	7.7	16.9	9.2
Visapur	III	8.6	19.5	10.9
	VII	4.0	4.2	0.2
Dhad	III	8.6	14.5	5.9
	VII	7.3	15.8	8.5
Murud	III	10.6	20.5	9.9
	VII	2.9	11.0	8.1
Bori	III	6.9	19.0	12.1
	VII	1.9	3.0	1.1
Dhad (peripheral villages)	III	6.9	12.3	5.4
	VII	3.0	7.8	4.8
Murud (peripheral villages)	III	2.5	14.9	12.4
	VII	1.0	4.9	3.9
Bori (peripheral villages)	III	...	5.5	5.5
	VII	...	...	...

Muslim women appeared to fare better than the scheduled-caste group in Waghode, Dhad (where they fared even better than the Maratha caste-group) and Bori, but in Waghode there was a clear setback for female literacy among Muslims, from survey to resurvey (from 22.4 per cent to 17.7 per cent).

One important point has to be remembered when considering female literacy: it does not reflect the educational effort in the village itself, since many of the married women may hail from other, though perhaps nearby, villages. This will especially be so in the case of the smaller villages. The proportion of female educands in the total female population in a category would serve as a better indicator of the progress of female education in the village since girls in school will be unmarried and therefore indigenous to the village. The figures for female educands showed that

although there was an increase in most villages in the proportion of female educands to the total female population, this proportion is still very low. At the time of the resurvey it had not even reached 20 per cent except in one village, and was less than 15 per cent in all villages except four. In most villages it was less than 10 per cent, and in the peripheral village of Bori it was only 1.1 per cent.

Taking castewise figures, it was found that among the Brahmins and the advanced Hindus the proportion of female educands was considerably high, and the relative positions of the other caste-groups are similar to their positions in female literacy. There is undoubtedly an increase in these figures from survey to resurvey in most caste categories. But here again, there was evidence that caste-group III (the Marathas) is pushing ahead in many villages much more rapidly than caste-group VII (the scheduled castes) as will be seen from the following figures:

PROPORTION OF FEMALE EDUCANDS IN CASTE-GROUPS III AND VII

Village	Caste-group	Survey	Resurvey
Pusegoan	III	10.4	22.3
	VII	6.1	7.0
Visapur	III	4.6	9.3
	VII	3.0	3.4
Waghode	III	10.6	11.1
	VII	7.4	5.5
Bori	III	4.4	8.0
	VII	1.4	1.7

Actually, in Waghode the proportion of educands in caste-group VII has decreased from survey to resurvey. The situation in the smaller peripheral villages was even more pitiful than in the big nuclear villages. It is clear from the figures that female education in the villages has still a long way to go to catch up with male education. While in the bigger villages the major caste-group III is on the move, the same cannot be said of the second major caste-group VII of the scheduled castes.

Literacy in Different Age-Groups

The situation in literacy at the time of the survey and the resurvey was also analysed by age-groups, separately for males.

and females, for the total population (excluding the age-group 0-4 years) and for the major caste-groups in the village. The age-groups used were 5-9, 10-14, 15-19, 20-34, 35-49 and 50 and above.

Comparing the literacy figures in the corresponding age-groups for the survey and the resurvey, it was clear that literacy had increased in almost every age-group, both for males and females and for most of the major caste-groups during the period from survey to resurvey. Literacy also increased, both in the case of the survey and the resurvey, from the older age-groups to the younger age-groups; this reflected the spread of education from generation to generation. The crucial age-group for indicating future trends is the age-group 10-14. In fact, it is a better indicator of the figures in the future than the proportion of educands considered above, because once this age-group attains high literacy and the subsequent generations continue to maintain it at that level the whole population in that village (or category) will soon have achieved the aim of high literacy in course of time. (In the case of women, however, this may not always happen as an appreciable number of them belonging to higher age-groups, higher than 15, may have been immigrants on account of their being married into the village.)

Considering the progress of literacy over time, shown by this analysis by age-groups, it was clear that male literacy in most of these villages had been making rapid strides over the past 10 to 15 years, and in particular, during the period from survey to resurvey. Focusing attention on the age-group 10-14, in the resurvey it was found that Pusegaon, Gulumb, Ozarde, Kawathe, Mithbav and Dhad had already crossed the 90 per cent mark in male literacy in this age-group, and all other villages were between 70 and 90 per cent, except Bori (66 per cent) and its peripheral villages (53 per cent) and the Devapur villages (32 per cent). Here again, the nuclear villages were doing better than the peripheral villages which appeared to lag behind by several years.

The differential progress of the major caste-groups III and VII were also well brought out by the corresponding figures of male literacy in this age-group in the resurvey. There are villages like Kawathe, Ozarde and Dhad (nuclear village) where scheduled-caste males have reached almost 90 per cent mark in this age-

group. But, by and large, they are lagging considerably behind as will be seen from some of the larger differences for the age-group given below from the resurvey figures:

MALE LITERACY IN AGE-GROUP 10 TO 14 FOR CASTE-GROUPS
III AND VII

Village	Caste-group III	Caste-group VII
Visapur	81.8	47.9
Gulumb	95.8	72.2
Waghode	91.2	50.0
Dhad (peripheral)	91.3	79.3
Murud (peripheral)	78.7	56.4
Bori	78.6	41.4
Bori (peripheral)	72.1	31.8

Again, the position is worse in the peripheral villages than in the nuclear villages. And in Waghode (which has been discussed earlier) there was actually a setback for the scheduled castes in this age-group of 10-14 from 73 per cent to 50 per cent.

Female Literacy in Different Age-Groups

Considering the agewise literacy figures for females, there was evidence of the same general progress during the last ten to fifteen years and, in particular, from survey to resurvey. Scrutinising the age-group 10-14 it was found that while villages like Pusegaon, Ozarde, Kawathe and Mithbav had reached the 75 per cent level in this age-group at the time of the resurvey and others like Gulumb, Kasabe Sukene, Mauje Sukene and Waghode were between 50 per cent and 75 per cent, many more were very much below, such as Visapur (24), and the peripheral villages of Murad (20). In the peripheral villages of Bori (3.3) and the Devapur villages (5.8), female education did not appear to have made a beginning at all, even at the time of the resurvey. It is clear that female literacy had a long way to go to catch up with male literacy. The time-lag was from 5 to 10 years in Mithbav and Ozarde, to more than 20 to 25 years in many other villages. This was even more so in the peripheral villages.

Comparing female literacy in the age-group 10-14 among caste-groups III and VII, it was found that (except for Ozarde and

Dhad) the Marathas (group III) are much more ahead of the scheduled castes (group VII) as is seen from the following figures for the resurvey:

FEMALE LITERACY IN AGE-GROUP 10 TO 14 FOR CASTE-GROUPS
III AND VII

<i>Village</i>	<i>Caste-group III</i>	<i>Caste-group VII</i>
Pusegaon	81.3	30.0
Visapur	47.6	10.0
Kawathe	72.8	58.6
Waghode	43.6	29.0
Murud (nuclear)	36.1	21.1
Murud (peripheral villages)	23.3	6.1
Bori (nuclear)	35.0	6.1
Bori (peripheral villages)	9.5	...

But it is a hopeful sign that at least in certain villages like Kawathe (58.6) and Ozarde (88.0) female literacy among the scheduled castes in this age-group is catching up with the rest and is reaching a high level.

In sum, female literacy is still a long way behind male literacy and exhibits in a more accentuated form the same features as male literacy in respect of differences between the bigger and smaller villages and differences among caste-groups. It is only in a few villages like Mithbav and Ozarde that, in spite of a relatively late start, female literacy has made rapid progress and is already reaching the high level attained by male literacy.

Analysis by Stages of Education

Finally, we consider briefly the progress of education, by the stages of education : (i) up to the standard IV or primary education ; (ii) standards V to VII or middle-school education ; and (iii) standard VIII and beyond. No further division was done in (iii) because there is usually a very large migration to towns and cities of persons who pass or go beyond the SSC examination (i.e. the standard XI in high school). Examining the figures in (iii), or in (ii) and (iii) together, one can easily see the change that is taking place in villages even in the short period of five years from the survey to the resurvey. The number of persons reaching the higher stages of education was increasing every-

where, not only in villages with high literacy like Pusegaon, Mithbav, Ozarde, Kawathe, Waghode, Dhad and Murud, but also in villages with low literacy. Further scrutiny of these figures showed patterns similar to those observed above in respect of differences between the male and the female population, between nuclear and peripheral villages and between the different caste-groups.

We shall therefore avoid details and would like to mention only one important point in this respect. Although, as mentioned earlier, the traditional relative positions of the different caste-groups in the rural areas still continue in respect of literacy and education, a great change has come over them in recent years because of the very growth of education. Unlike the situation some years ago, a large number of people from the less advanced communities have now gone through schooling, with the result that the Brahmins and advanced castes are not the only literate or educated communities in village society. In fact, even the higher stages of education are now no longer a preserve of the advanced caste-groups as against the less advanced ones, or of men as against women. The small percentage figures of those who have reached the higher stages of education in the major caste-groups is likely to mislead the reader about the importance of this change. We are, therefore, giving below as illustrations the actual numbers of persons who are educated beyond the standard VII (middle-school education) for the different caste-groups in the villages of Mithbav and Pusegaon from the survey data:

NUMBER OF PERSONS EDUCATED BEYOND MIDDLE SCHOOL				
Caste-group	Mithbav		Pusegaon	
	Males	Females	Males	Females
I	20	11	15	6
II	10	5	14	...
III	165	46	82	10
IV	5	4	20	3
V	2	1	20	1
VI	...	...	1	...
VII	4	0	12	2
VIII	...	...	3	2
Total	206	67	167	24
Total population	1,927	2,660	1,188	1,150

These figures bring out clearly the far-reaching changes and shifts in social and cultural life in the village, which have already taken place and which are bound to develop further in the years to come when the major caste-groups, both their men and women, continue to make big advances in education.

3. ANALYSIS BY OCCUPATION AND BY SIZE OF LANDHOLDING

In this section we shall first analyse literacy and education in the villages by the occupation of the head of the household. A brief analysis according to the size of the landholding is also attempted towards the end.

Occupational Classification

For the purpose of these surveys, occupations were classified under the five broad groups as follows :

- I. Cultivators ;
- II. Labour, including agricultural labour, other primary producers, transport and construction workers, etc. ;
- III. The artisan class, including processing occupations and semiskilled services in the village ;
- IV. Trade and commerce ;
- V. (Skilled) services such as health, teaching, etc.

It will be seen that this broad classification is a sort of compromise between the elaborate standard occupational classification and classifications based on the type and amount of skill or training involved in the occupation. It therefore imposes its limitations on interpretation. For instance, group II not only includes mine and quarry workers, etc. but also primary producers like fishermen and hunters. Again, most of the artisan class in the village will naturally fall under group III. While group IV is fairly demarcated, the same cannot be said of group V. For instance, the government servants in the village will be all included under that group. For the sake of convenience, the groups will be briefly referred to as : (I) cultivators ; (II) labourers ; (III) artisans ; (IV) trade and commerce ; and (V) services with the connotations given above.

The relative strength of population in the first four occupation groups in a village is invariably in the descending order, the major occupation-group being that of cultivators (I) and the next major group that of labourers (II). The population in group V (services) varies from village to village and it as well as the population of group IV is generally small. Illiterates and literates classified by the three broad stages of education (mentioned in the last section) were grouped under these five occupation-groups separately for males and females, for surveys and resurveys. As before, figures for peripheral villages are taken together. (Tables for individual villages are omitted for reasons of space.)

A scrutiny of these figures shows that in most of the different occupation-groups literacy had increased from survey to resurvey. Generally, the services (V) had the highest literacy; then came the groups of trade and commerce (IV), artisans (III) and cultivators (I) in that order; the labourers (II) had almost always the lowest literacy. With some variations this is the general pattern in most villages for both males and females and both for the survey and the resurvey.

Male Literacy

Comparison of the two major occupation-groups, cultivators (I) and labourers (II), is especially important because the general educational progress of a village consists of the progress of these two groups which together constitute the bulk of the population. [It is useful to note the other major features of these occupation-groups. In terms of castes, occupation-group I (cultivators) will include a large proportion of the Marathas; and group II (labourers), although fairly mixed, will include most of the scheduled castes. It is also obvious that occupation group I will be economically much better off than group II.] Let us first consider male literacy for which the following table (next page) may be taken as illustrative. The relative positions of these two groups are very clear, with the cultivators often very much ahead of the labourers. What is even more important is that while occupation-group I has registered progress, often a rapid one, during the period from survey to resurvey, occupation-group II has remained stagnant in many villages, and has even deteriorated, as in

LITERACY AMONG MALES IN THE TWO MAIN OCCUPATION-GROUPS

<i>Village</i>	<i>Occupation-groups</i>			
	<i>Survey</i>		<i>Resurvey</i>	
	I	II	I	II
Pusegaon	59.2	51.1	69.2	51.2
Visapur	40.3	31.0	50.0	19.6
Mithbav	74.6	62.1	75.2	67.3
Kasabe Sukene	55.9	38.5	59.5	45.9
Mauje Sukene	60.9	46.1	67.0	39.6
Waghode	80.1	53.2	83.0	53.0
Dhad (nuclear)	58.2	37.7	74.5	57.9
Dhad (peripheral)	47.5	28.3	58.5	36.2
Murud (nuclear)	43.3	36.1	57.1	36.1
Murud (peripheral)	41.0	20.4	51.0	31.7
Bori (nuclear)	52.5	33.1	66.8	26.9
Bori (peripheral)	22.2	6.5	42.6	17.3

Mauje Sukene and Visapur. The principal reason for the backwardness of labourers in education is well known: children have to seek work from an early age.

The prospect for the future is also not at all very encouraging for this occupation-group (labourers) as will be seen from the following figures for the proportion (per cent) of educands in the population in that group for the following villages which registered a reverse during the period.

PROPORTION OF MALE EDUCANDS IN OCCUPATION-GROUP II

<i>Village</i>	<i>Survey</i>	<i>Resurvey</i>
Visapur	20.8	11.7
Mauje Sukene	23.4	14.1
Dhad (nuclear)	14.1	13.4
Dhad (peripheral)	13.2	10.2
Murud (nuclear)	17.9	13.1
Murud (peripheral)	14.4	10.7
Bori (nuclear)	13.8	9.9

The cultivators (I), on the other hand, have recorded notable progress in this respect in many villages from survey to resurvey; e.g., in Pusegaon (from 26.0 to 35.1), Waghode (from 25.4 to 32.1) and Bori nuclear village (from 14.6 to 27.5); and in no village have they stagnated or suffered a setback in the proportion of educands.

Female Literacy

Literacy among women showed the same sort of relative positions for different occupation-groups, but at a relatively much lower level of literacy than among men. For instance, a comparison of the two major occupation-groups (I and II) gave the following figures :

LITERACY AMONG WOMEN FOR OCCUPATION-GROUPS I AND II

Village		Occupation-group			
		Survey		Resurvey	
		I	II	I	II
Pusegaon	...	22.2	11.3	37.4	14.1
Visapur	...	8.9	4.4	18.3	5.5
Mithbav	...	30.7	24.6	39.1	31.5
Kasabe Sukene	...	20.4	9.5	27.2	10.8
Mauje Sukene	...	25.2	7.3	34.3	6.9
Waghode	...	31.3	11.2	39.7	13.8
Dhad (nuclear)	...	17.5	5.7	29.7	10.2
Dhad (peripheral)	...	7.4	2.0	11.8	6.3
Murud (nuclear)	...	9.0	4.2	17.6	8.4
Murud (peripheral)	...	3.2	0.9	14.0	3.5
Bori (nuclear)	...	12.1	3.9	18.9	3.1
Bori (peripheral)	...	0.2	—	4.0	1.1

It is clear that, even against the general background of very slow progress of female literacy, the occupation-group II (labourers) has not really started on the road to female literacy and is very far behind the cultivators (I) as well as the other occupation-groups which are even further ahead in this respect.

We shall now consider the proportion of educands (per cent) in the female population for different occupation-groups. It will be recalled that this is not only indicative of the future trend but also more representative of the actual educational effort among girls in the village itself. In villages where female education had advanced, from survey to resurvey, it was found that occupation-group I was advancing, and in some cases outstripping other advanced groups (III to V), more particularly group III of artisans. But group II was lagging far behind group I, and in some villages it had not moved at all, as will be seen in the case of villages like Pusegaon and Waghode for which the figures are given below :

PROPORTION OF FEMALE EDUCANDS IN OCCUPATION-GROUPS I AND II

Village		Survey		Resurvey	
		I	II	I	II
Pusegaon	...	11.7	4.3	24.0	7.5
Waghode	...	13.5	5.3	18.1	6.0

Educational Progress by Stages of Education

With the increase in literacy a large number of persons are reaching the higher stages of education. This is accompanied by a gradual but significant change in the relative positions of the different occupation-groups as shown by the number of persons reaching higher stages of education. It was found that the major occupation-group of cultivators (I) is pushing ahead so that higher education is no longer the preserve of occupation-groups III, IV and V. Occupation-group II is relatively far behind although it has also registered some progress in this respect with the increase of literacy. This is observed, for instance, in the figures for the number of persons who had passed standard VII, for the villages of Pusegaon and Waghode, at the time of the resurvey.

NUMBER OF PERSONS WHO HAD PASSED STANDARD VII

Occupation-group		Pusegaon		Waghode	
		Male	Female	Male	Female
I	...	71	16	74	5
II	...	12	1	13	—
III	...	28	2	11	—
IV	...	17	1	6	—
V	...	39	4	8	3
Total	...	167	24	112	8

Analysis of Literacy by Size of Landholding

The size of landholding is an important basis for the classification of the rural population, and the progress of literacy in villages was therefore analysed by this characteristic. For this purpose, the households were first divided into two broad categories: (1) those who actually worked on land, irrespective of whether they were owner-cultivators, tenants or agricultural

labourers; and (2) those who did not work on land. Next, households in each of these categories were classified into the following subclasses by the size of landholding: (i) less than 2 acres, (ii) 2-5 acres, (iii) 6-10 acres, (iv) 11-20 acres, and (v) above 20 acres. The category of households, not actually working on land, corresponds to the households who follow nonagricultural occupations but who may also own land. It was, however, found from the actual tables that most of the households in this group owned very little or no land and thus came under the single subclass of less than 2 acres; there were very few households owning larger-sized holdings. (This situation has come about during the recent years after the enactment of the tenancy laws under which land which is not worked by the owner has to be transferred to the tenants. So, at least for official purposes, there are no landholders who do not work on land themselves. There may still be a few households whose *principal* occupation is nonagricultural and yet some members of whose families may be cultivating the family holding.) Since analysis by occupations, whether agricultural or nonagricultural, had already been done, it was not worth while to pursue this second category in the present analysis.

The figures for literacy and stages of education of persons belonging to the first category, i.e. from households actually working on land, classified by the size of landholding they are cultivating, were analysed separately for males and females and for surveys and resurveys. It should be remembered that many in the subclass of less than two acres have no land (either as owner or tenant) but are in fact just agricultural labourers. It is, therefore, to be expected that this group when contrasted with others will show in the main all the characteristics of the contrast between agricultural labourers and the cultivators which was examined earlier in this section when we compared occupation groups I and II. Attention must, therefore, be focused on other subgroups.

Considering first the literacy among males, it was found that a well-differentiated pattern of literacy, increasing with the size of the landholding, as observed in Waghode and Murud in resurveys in the following short table, was hardly in evidence in other villages:

LITERACY AMONG MALES BY SIZE OF HOLDING

Village	Size of holding				
	Below 2 acres	2-5 acres	6-10 acres	11-20 acres	Above 20 acres
Waghode	... 56.6	73.7	80.7	83.3	88.0
Murud	... 28.3	33.3	40.9	48.5	61.4

But considerably high literacy was in evidence in the above 20-acre group in some other villages as well. This is seen, for instance, in the following figures for resurveys:

LITERACY AND EDUCANDS AMONG MALES

Village	Size of holding			
	11 to 20 acres		Above 20 acres	
	Literacy	Educands	Literacy	Educands
Gulumb	... 55.1	24.4	67.6	32.4
Bori (nuclear)	... 38.6	14.3	69.8	29.2
Bori (peripheral)	... 26.6	6.3	54.0	18.8

This was also seen in the proportion of male educands in many villages. This means that literacy takes a significant jump in the high-income group among the cultivators in some of the villages. The figures for Bori (not given here) also showed the tendency that those with a size of holding larger than 20 acres had also progressed more rapidly than the others during the period from survey to resurvey. (The slow progress of those with less than two acres and their deterioration in some villages have already been indirectly noted above while comparing the occupation-groups of labourers as against cultivators.)

With literacy attaining higher levels it was found that relatively more persons are reaching higher stages of education from the more well-to-do class of cultivators. This is illustrated by the following resurvey figures for males for Pusegaon, Waghode and Murud. Thus it is clear that it is the more affluent section among the cultivators which is making further advance in education.

**NUMBER OF EDUCATED MALES BY STAGES OF EDUCATION
CLASSIFIED BY SIZE OF LANDHOLDING**

		<i>Educational stage</i>				
		Up to 4th	5-7	8-11	S.S.C & above	Total literate
Pusegaon	Below 20 acres	230	149	59	5	443
	Above 20 acres	21	18	15	2	56
Waghode	Below 20 acres	483	215	56	4	758
	Above 20 acres	34	37	20	4	95
Murud	Below 20 acres	133	22	10	—	165
	Above 20 acres	189	51	23	15	278

The general level of female literacy and education is low in most villages, and female education had made very little progress among households with less than two acres of land. But, similar to what was observed above, there was a markedly higher level of female literacy and education among households having more than 20 acres of land than among those having less, and the rate of increase was also relatively faster. This is seen from the following figures for surveys and resurveys:

**LITERACY AND EDUCANDS AMONG FEMALES CLASSIFIED BY SIZE
OF LANDHOLDING**

<i>Village</i>			<i>Size of holding</i>					
			11 to 20 acres		Above 20 acres		All holdings	
			Lite- racy	Edu- cands	Lite- racy	Edu- cands	Lite- racy	Edu- cands
Bori	...	S	5.7	1.9	17.1	7.5	8.0	3.6
		R	5.8	2.9	19.5	9.8	8.5	4.2
Murud	...	S	2.3	1.2	9.5	6.4	7.4	4.7
		R	5.8	2.6	22.8	11.3	12.7	6.5
Dhad	...	S	15.7	6.5	18.7	5.7	13.4	5.2
		R	25.7	9.0	32.9	11.9	21.0	7.4
Pusegaon	...	S	24.2	13.7	28.7	17.2	19.7	9.9
		R	40.6	22.4	51.2	32.9	33.1	20.9

Note: 'S' denotes survey and 'R' denotes resurvey.

In fact, this differentiation in female literacy among cultivators by the size of landholding begins to appear at the level of ten acres at Pusegaon and Waghode, and at the level of five acres at

Kasabe Sukene, all of which are irrigated areas. Thus, among cultivators, income appears to be an important factor in the growth of literacy and education. This will be investigated in greater detail in the next section.

4. ANALYSIS BY OTHER FACTORS

In the last two sections the progress of literacy and education in the surveyed villages was analysed using the three socio-economic classifications of caste, occupation and size of landholding. In this section it is proposed to examine it in relation to three other characteristics : (i) income of the household, (ii) educational status of the head of the household, and (iii) urban contact.

Analysis by Household Income

Let us first consider the classification by household income. (The reader is here referred to a previous study by Deshpande and Sapre.³ In that study the authors investigated literacy differentials according to the relative prosperity of villages, using the average income, irrigation facilities and cultivation of cash crops as classificatory characters. Here analysis by income is carried further and both male and female literacy in a village are examined.) Although individual income figures collected in village surveys conducted by the interview method may very often suffer from lack of reliability, it is expected that they are much more reliable when grouped under broad income-groups. Actually, in these surveys the income figure was very often computed by the investigator after converting, wherever necessary, the reported physical produce into income in money.

The grouping used for the annual household income was : (i) below Rs 250, (ii) Rs 251 to 500, (iii) Rs 501 to 750, (iv) Rs 751 to 1,000, (v) Rs 1,001 to 1,500 and (vi) above Rs 1,500. In some villages the second and third income-groups are constituted slightly differently but this will not affect much the general ob-

³ "Extent of Literacy in Rural Maharashtra" by V. D. Deshpande and S. G. Sapre, *Indian Journal of Agricultural Economics* (1963), Vol. 18, pp. 294-301.

servations that follow. (Individual village tables are not given for reasons of space.)

Scrutinising the tables, a general pattern was in evidence for most villages; the percentage of literates and educands generally increased with income. For instance, see the remarkable regularity in the following figures for Pusegaon, for male and female literacy, for the six income-groups in the increasing order:

MALE AND FEMALE LITERACY IN PUSEGAON CLASSIFIED BY
HOUSEHOLD INCOME

<i>Income group</i>		1	2	3	4	5	6
Male literacy ...		27.9	29.6	40.0	42.3	45.6	52.5
Female literacy ...		3.2	5.4	9.0	13.0	16.0	26.3

Of course, not every village threw up such close regularity but the general direction was easy to see. This is brought out more clearly by the following summary table (next page) which uses only two broad income groups: (A) above Rs 1,000, and (B) below Rs 1,000. The table gives data for nine centres where all the villages in a centre are pooled together. All the three percentages are higher for the high-income group. When the general literacy for males is high, as in Waghode, Pusegaon, Kasabe Sukene and Goregaon centres, the difference between the income-groups narrows down and it may almost vanish for the next generation as can be inferred from the figures for the proportion of educands in Kasabe Sukene and Goregaon centres. The same is shown by the Waghode centre in the case of females, when contrasted with other centres. (This narrowing down of difference occurs only in respect of bare literacy; the differences in attaining higher stages of education remain, as has been observed in the earlier sections of the paper.) The figures for women show not only the general lag but also the wide differences in female literacy between different income-groups at many centres. An important tendency for the future is indicated by the high figures for the proportion of educands among women in the high-income group, e.g. at Manor, Waghode, Kasabe Sukene and Selu. [Other important factors working towards high female literacy were nearness to a big city (Bombay) as in Manor, and the general prosperity of villages as in the case of Waghode and Kasabe Sukene,

and nearness to a city (Wardha) and block-development activities as at Selu.]

LITERACY AND EDUCANDS (PERCENTAGES) CLASSIFIED BY TWO
BROAD INCOME GROUPS

Centre	Income group	Male			Female		
		Literacy	Educands	Educands among nonadults*	Literacy	Educands	Educands among nonadults*
Manor	A	54.3	19.7	38.1	33.4	15.1	29.8
(and 4 villages)	B	21.7	7.6	14.3	9.4	3.8	8.2
Waghode	A	65.7	21.7	41.6	32.4	14.2	36.0
(and 2 villages)	B	52.0	17.1	32.1	20.4	10.0	24.3
Pusegaon	A	48.6	21.9	38.9	20.8	10.2	24.7
(and Visapur)	B	36.2	18.1	33.8	8.3	4.6	11.1
Malthan	A	29.2	14.1	30.7	9.8	5.6	13.4
(and 3 villages)	B	23.8	9.1	20.3	6.3	3.5	8.5
Kasabe Sukene	A	51.9	17.8	38.6	21.3	10.8	27.5
(and Mauje Sukene and one village)	B	47.4	17.9	36.3	10.7	6.2	16.7
Selu	A	54.7	19.2	36.7	27.6	11.4	28.1
(and 3 villages)	B	40.0	13.2	28.8	11.6	5.6	14.2
Dhad	A	51.8	17.9	37.5	15.3	7.0	18.5
(and 4 villages)	B	34.5	13.0	27.1	6.6	3.0	7.1
Goregaon	A	54.6	13.9	33.2	13.1	5.9	16.3
(and 2 villages)	B	44.7	13.9	33.1	7.1	3.1	9.2
Murud	A	57.8	24.6	46.5	17.1	10.1	22.1
(and 2 villages)	B	32.2	14.5	27.6	3.8	2.2	5.3

* This is the percentage of educands among persons of age 15 or below.

The analysis by household income was not pursued further to investigate the attainment of higher stages of education as it was expected to give results similar to those observed in the analysis by caste, occupation and size of landholding.

Education of the Head of the Household

Another important influence on the development of literacy and education is the education of the head of the household. Generally, one would expect that a literate head will not allow

the younger members of his household (at least the male children) to remain illiterate, and that the higher he has climbed the educational ladder, the higher he will desire and help them to reach. To study this influence the data of literacy and education for a few nuclear villages were analysed, classifying the literacy and education of the head of the family under the same five classes : (i) illiterate, (ii) literate and up to standard IV, (iii) standards V to VII, (iv) standards VIII to XI, and (v) passed the SSC examination and above. (Tables for individual villages are not given here for reasons of space.)

Before drawing conclusions it is necessary to note a few procedural points. In this analysis heads of households in the relevant group were not included among the members of the households classified by educational attainment so that the numbers and proportions in the various classes (except for the proportion of educands) were based on the *remaining* members of the households. But the heads were included in the respective populations, male or female, before calculating the proportion of male or female educands. Secondly, it was noted whether the household had a female head. The number of female heads was sizable in the case of the class of illiterate heads of households, and it was quite large in some villages like Gulumb and Mithbav. (In the case of many households with illiterate or less educated female heads, they might just be nominal local heads and the real mainstay of, and influence in, the family might be living in Bombay, or elsewhere in big cities, and it may well be that the latter person is well educated.)

It was very clear from this analysis that literacy in a household increases with the educational attainment of the head of the household. This is true for both males and females. The following table (next page) for literacy and the proportion of educands extracted for a few villages contrasts households having illiterate heads with those having heads who have reached standard VIII or beyond. The difference between these two classes is quite substantial, both in literacy and the proportion of educands for males as well as for females. Literacy is very high in households where heads are educated beyond the standard VII—more than 80 per cent among males and above 60 per cent among females. Here one expects that the backlog of adult illiterates will be

cleared through the efflux of time and they will assume more or less full literacy in the next generation. This is also seen from the high proportion of educands⁴ both among males and females, the only exceptions being the females in Dhad and Murud, where they are still to catch up with men. But in the case of households with illiterate heads, although they appear to have registered substantial progress with male literacy, the situation among females is far from satisfactory. The prospect for the immediate future is also not very bright as will be seen from the

LITERACY OF HEAD OF HOUSEHOLD AND PROPORTION
OF EDUCANDS

Village	Head of household	Male		Female	
		Proportion Lite- racy	of educands	Proportion Lite- racy	of educands
Mithbav	Illiterate reached	74.6	46.4	44.1	16.4
	8th standard	94.3	43.0	78.2	41.2
Pusegaon	Illiterate reached	70.2	27.5	26.7	16.6
	8th standard	96.4	34.7	68.2	28.6
Kasabe Sukene	Illiterate reached	57.4	19.0	14.1	7.3
	8th standard	76.2	30.0	73.8	23.8
Dhad	Illiterate reached	61.7	16.2	12.7	6.0
	8th standard	83.7	27.8	65.8	15.7
Murud	Illiterate reached	53.4	17.7	8.5	4.8
	8th standard	82.4	28.4	74.5	17.1

⁴ The figures for the proportion of educands among females in the group of households with illiterate heads in Mithbav need explanation. Here, while the proportion of educands is 46.4 per cent for males which is comparable to (in fact, higher than) the other group, it is very much less for females, only 16.4 per cent. The high figure in the first case and the low figure in the second is due to the fact that out of 736 households in this category, 509 had female heads. The sex-ratio is also extremely adverse for these

very low figures for the proportion of educands (five to seven per cent) among females in this group of households for Kasabe Sukene, Dhad and Murud.

When we examined the number of persons in different classes of households who had reached various stages of education, we arrived at a similar conclusion. Men and women from households having heads with a higher educational attainment tend to reach higher stages of education; this is much more so in the case of men than in the case of women. Two points should be mentioned in this connection. Firstly, there is usually a higher rate of migration among persons reaching higher stages of education. This is reflected in the relatively much smaller number of families where the heads have reached the standard VIII or the SSC stage. Secondly, if we look to the future it is significant to note that young men and women from families with no background of education (with illiterate heads) are coming to school and reaching higher stages of education. This will be clearly seen from the following table for Mithbav, Waghode, Pusegaon and Murud. From the logic of the process described above it is clear that this will tend to accelerate the educational progress in the years to come. There is also no doubt that this process will bring about (this must have already started) considerable shifts in the social and cultural life in the village.

PERSONS FROM HOUSEHOLDS WITH ILLITERATE HEADS
REACHING STANDARD VIII AND ABOVE

Village	Households with head illiterate	Persons reaching Standard VIII and above	
		Men	Women
Mithbav	736	83	14
Waghode	291	30	3
Pusegaon	263	120	6
Murud	401	35	2

households. This tends to yield an inflated value for the proportion of educands in males because many adult working males will be away, and a deflated value of the proportion of educands among females because many adult women will continue to stay in the village instead of migrating with their men.

Influence of Urban Contact

One expects that urban contact will exert an influence in favour of literacy and educational development in the rural areas. Members of a rural household who have migrated to big cities such as Bombay will not only avail themselves of the better educational facilities in the urban centres for their children but will also be more favourably disposed towards education because of the urban environments. An attempt was made to study this factor with the help of the survey data. Unfortunately a systematic study became possible only in the case of two villages, Gulumb and Kawathe, where the number of illiterates and literates classified by the usual stages of education, separately for men and women, were classified by major occupation-groups and according to whether they had at least one of their members living in a city (mostly Bombay, in this case) or none at all. In Gulumb, 210 out of the total number of 417 households had such urban contact, and in Kawathe 174 out of 464 households were connected with the cities.

The following table shows that households with urban contact have a higher literacy among men; but there is no such difference among women. The occupational pattern in the village in both types of households was similar. Again, it was also clear from the tables (not given here for reasons of space) that a relatively larger number of persons reaches the higher stages of education among households having urban contact, especially in the case of men. The percentage of men who reached beyond standard VII among the literates was 12.2 at Gulumb and 19.9 at Kawathe, among households with urban contact, as against 5.8 and 11.4 respectively among households without urban contact. (This also implies that migration to the cities is greater from the better educated households.)

LITERACY CLASSIFIED BY URBAN CONTACT

<i>Literacy</i>	<i>Urban contact</i>		<i>No urban contact</i>	
	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
Gulumb	72.0	20.3	62.3	21.0
Kawathe	77.3	27.9	70.7	27.3

5. EDUCATIONAL INSTITUTIONS

It was mentioned in the beginning of this paper that information about educational institutions was collected from the 69 surveyed villages. The idea was to study the institutional aspect of the educational development in these villages from 1947-48 to 1963-64. All this information will be summarised and discussed in this section.

In the year 1963-64 there were in all 79 elementary schools in the 69 villages under survey. Out of them, six were separate schools for girls and three were Urdu schools. There were two high schools (secondary schools) in one village (Selu) and one each in 13 villages; in two other villages secondary school classes were run in the main elementary school of the village. Thus, facilities for secondary education were available in 16 of the 69 surveyed villages. There were two training colleges for primary teachers, one at Mithbav and the other at Murud.

Primary Schools

Let us first consider the elementary or primary schools, starting with their distribution over the villages. The following table classifies villages by population and the number of primary

VILLAGES CLASSIFIED BY POPULATION AND NUMBER OF
PRIMARY SCHOOLS IN 1964

<i>Population</i>	<i>Village with</i>				<i>Total</i>
	No school	One school	Two schools	Three or more schools	
Below 500	5	11	—	—	16
501-1,000	—	25	—	—	25
1,001-1,500	—	6	—	—	6
1,501-2,000	—	—	—	—	—
2,001-3,000	—	8	1	—	9
3,001-4,000	—	2	3	2	7
4,001-5,000	—	1	3	—	4
Above 5,000	—	—	—	1	1
				(with 6 schools)	
Total	5	53	7	3	68

schools. The population is the 1961 Census population. (It is necessary here to explain the total number of villages which is given in the table as 68 instead of 69. Three villages, Maskawad Budruk, Maskawad Seem and Maskawad Khurd, with populations of 1902, 1765 and 687 respectively, in 1961, have two primary schools in common, one for boys and one for girls. Since the villages are very close to one another we have taken the three of them together as one composite Maskawad village with population 4,354. Thus, for the present analysis the 69 villages will be treated as 68 villages.)

The figures show that out of these 68 villages, three villages have three or more primary schools, seven have two schools, 53 have one school, and five had no primary school. At the upper end, the three villages are Pusegaon, Dhad and Mithbav, which has six primary schools. One of the three schools at Dhad is an Urdu school and one of the six schools at Mithbav is only for girls. There are 21 villages (including the 'composite' Maskawad village described above) with a population exceeding 2,000, and all of them have one or more schools, ten of them having two or more schools. At the other end, out of 47 villages with a population of less than 2,000 (less than 1,500 in fact) 42 have one school each and five have no school. Actually, all villages in this investigation, with a population above 500, have now a primary school and from the 16 villages with a population of below 500 no less than 11 do have a school. The five villages without any school in 1964 were Dhanora (411),⁵ Nagapur (143), Nagthana (179) and Ganapur (184), all in the Bori centre in Parabhani district, and Gavana (58), in the Jawala centre in Ycotmal district. Actually, Gavana is very close to the nuclear village Jawala, and out of the four schoolless villages in the Bori centre, Dhanora is at a distance of only one mile from Devgaon which has a school, and the other three are within two miles of Bori. In the last four villages, facilities for elementary education for very young children were available in the form of private classes. Therefore, so far as educational facilities for primary education are concerned, all these villages appear to have them in a reasonable measure.

⁵ The figure in brackets gives in each case the population of the village.

Since the size-classification of villages—(i) big villages, with population over 2,000, and (ii) small villages, with population less than 2,000—will be often used in the following analysis it will be convenient to specify the villages. The 21 villages which are called big villages for the purposes of the present paper are : Manor, Mithbav, Waghode, Maskawad, Gulumb, Kawathe, Ozarde, Devapur, Pusegaon, Visapur, Malthan, Kasabe Sukene, Mauje Sukene, Selu, Dhad, Jawala, Goregaon, Kothari, Murud, Bori and Karkheli. Out of these, 16 are the nuclear villages of the 16 centres of our village surveys; Devapur has been included among them although its population is less than 2,000 because it is in a sense the nuclear village of that centre. The remaining 47 villages are the peripheral villages of 11 centres.

Year of Starting

When were these schools established? Following the historical developments in primary education, it is convenient to conceive of eight periods as follows : (1) before 1855, (2) 1855 to 1870, (3) 1871 to 1900, (4) 1901 to 1920, (5) 1921 to 1936, (6) 1937 to 1947, (7) 1948 to 1955, and (8) after 1955. Classification of schools by the year of their starting, over big and small villages, gives the following table. The earliest seven schools which started almost a century back are in the following villages, and are

CLASSIFICATION OF SCHOOLS BY THE YEAR OF STARTING

<i>Period</i>	<i>Big villages</i>	<i>Small villages</i>	<i>Total</i>
Before 1855	1	—	1
1855-1870	6	—	6
1871-1900	11	—	11
1901-1920	7	2	9
1921-1936	4	6	10
1937-1947	4	5	9
1948-1955	—	20	20
After 1955	4	9	13
Total	37	42	79

given in chronological order as : Kasabe Sukene (1845), Kothari (1857), Pusegaon (1864), Ozarde (1865), Dhad (1867), Mithbav

(1870) and Kawathe (1870). All these villages are big villages. During the next thirty years, 11 more schools were started, again, in the big villages. In the first twenty years of this century, another nine schools were started, of which seven were in the big villages. By 1920, twenty of the twenty-one big villages of this inquiry had at least one primary school. Only the Devapur school (1940) belongs to a later period; and Devapur is, after all, a small village. But up till 1920, primary schools were established in only two small villages of this group, one at Taroda of Jawala centre in 1902 and the other at Maswan of Malthan centre in 1919. In fact, no real progress appears to have been made in this direction until 1947. Most of the schools in small villages, 29 out of 42, were established after 1947, during the campaign for opening schools in schoolless villages undertaken during the years 1953-55. These schools are mostly in villages with a population below 1,000, and 11 of them are in villages with a population of less than 500 each. This clearly brings out the great difference between the efforts for the spread of education made before and after 1947.

All these schools are public schools, i.e. they are run by the local boards (now called zilla parishads). There were no voluntary or aided schools in any of these villages in 1963-64 although some of the present public (zilla parishad) schools had started as voluntary (private, aided) schools.

Systems of School Classes

Before further classifications are attempted it will be helpful to give a brief description of the different systems of school classes in Maharashtra state as they existed in 1963-64. They differed somewhat in the three regions : (i) Western Maharashtra (Konkan and Desh), (ii) Vidarbha and (iii) Marathwada.

Western Maharashtra : Here the total duration of the school course is eleven years. This consists of an integrated primary course of seven years (standards I to VII) and a high school course of four years (standards VIII to XI). Standards V to XI, when taught in an integrated manner, are said to constitute the full secondary course. The primary course is subdivided into the lower primary or junior basic course of the first four standards (I to IV) and the upper primary or senior basic course of three

years (standards V to VII). At the end of the full primary course there is a public examination called the Primary School Certificate (PSC) examination held by the Department of Education. Several high schools run the full secondary course of seven years (standards V to XI). At the end of the secondary course (standard XI) there is another public examination, the Secondary School Certificate (SSC) examination held by the SSC Examination Board. (English is not a compulsory subject for this examination although it is compulsory for admission to a college.)

Vidarbha : The primary course in Vidarbha consists of only four standards (I to IV), at the end of which there is a public examination held by the Inspectors of Schools. Pupils passing this examination join the secondary course in the middle schools. The middle schools are either (i) Indian middle schools or senior basic schools teaching standards V to VII with standards I to IV attached to them, or (ii) Indian English middle schools teaching standards V to VIII. (The main difference between these two categories was that while schools in (i) did not teach English, schools in (ii) taught it. This difference is now not so sharp as many schools in category (i) have introduced standard VIII and also teach English.) The upper secondary course from standard IX upwards is of two types : (i) the high school course of two years (standards IX to X) and (ii) the higher secondary course of three years (standards IX, X and XI). At the end of these courses there are respective public examinations.⁹

Marathwada : In this region the primary school course extends over five years (infant class and standards I to IV). There is no public examination at this stage. The middle school course consists of three years (standards V to VII) where English is a compulsory subject. This is followed by the high school course or the higher secondary course, the former consisting of three years (standards VIII to X) and the latter of four years (standards

⁹ The main difference in the SSC course in Western Maharashtra or the high school courses in Vidarbha and Marathwada, on the one hand, and the higher secondary course in the latter two regions on the other, is that pupils completing the former courses join college in the beginning year called the predegree year, while those completing the latter can straightway join the first year of the three-year degree course, that is, the second year in college.

VIII to XI). From 1964-65, the infant class has been named as standard I and the subsequent standards are renumbered so that the full course is from standards I to XII, including the higher secondary course. At the end of each of these courses there are corresponding public examinations.

The classification of primary schools by the standards taught is given for big and small villages in the following table. The

CLASSIFICATION OF PRIMARY SCHOOLS BY STANDARDS TAUGHT

<i>Standards taught</i>	<i>Big villages</i>	<i>Small villages</i>	<i>Total</i>
Up to I	1	2	3
" II	—	3	3
" III	1	6	7
" IV	11	25	36
" V	1	3	4
" VI	2	—	2
" VII	21	3	24
Total	37	42	79

instruction provided in 13 schools had not yet reached the standard IV stage in 1963-64, and 11 of them were in small villages. Some of the schools were started after 1960 and have therefore yet to reach this stage. But in some small villages like Ambhan (population 234) in Manor centre and Dhanora (population 866) in Karkheli centre, the schools have not reached the complete junior primary stage even after a period of more than four years. Of the 49 schools with classes up to and including standard IV, as many as 23 are one-teacher schools, and in most of them the enrolment is below fifty. Twenty of these one-teacher schools are in small villages. On the other hand, it is important to note that in most of these small villages children can complete the first stage of the primary course, and in three of them they can complete the full primary course of seven years up to the PSC examination. In the case of big villages, 16 out of the 21 have one or more full primary schools of seven standards. In the remaining five, there are secondary schools or high schools which provide education for standards V to VII, so that all the big villages have facilities for education at least up to the PSC level. In fact, as mentioned in the beginning, 16 villages have

also secondary schools and can thus provide education up to the SSC level.

Progress from 1950-51 to 1963-64

Let us now see the progress of primary education in these villages in the postindependence period as shown by the data from the schools. The following is a summary table of figures for the 21 big villages and 47 small villages, giving the number of schools, the number of pupils and the number of teachers, by their main classifications, for the years 1950-51 and 1963-64. The year 1950-51 is selected instead of 1947-48 because the educational policy had stabilised by then and the areas under the princely states had also merged in the Indian union. (It should be mentioned that figures were not available for 1950-51 for six of the

PRIMARY SCHOOLS, PUPILS AND TEACHERS IN BIG
AND SMALL VILLAGES

	21 Big villages		47 Small villages	
	1950-51	1963-64	1950-51	1963-64
Population (no age-group is excluded)	56,666	88,032	26,345	31,835
Schools	33	37	20	42
Boys	5,311	6,867	867	2,153
Girls	2,015	4,192	244	851
Total	7,326	11,059	1,111	3,004
Teachers	198	299	31	79
Trained	119	248	15	50
Untrained	79	51	16	29
Women teachers	20	64	—	5

33 schools in the big villages and for seven of the 20 schools in small villages, because the records were not available. We have, therefore, substituted for this purpose the figures for the nearest succeeding year for which they were available. Since this is a period of general expansion of education, this improvisation has inflated somewhat the figures imputed to the year 1950-51 and the educational growth from 1950-51 to 1963-64 is in fact somewhat more than what is shown by the comparison of the two sets of figures given above. The population figures for the two

sets of villages for the 1951 and 1961 censuses are also given. Another point which should be borne in mind while interpreting these figures is that, while some children from the small villages will be attending the schools in the neighbouring big villages, the reverse will not ordinarily happen.)

Both in the number of schools and in their enrolment, the small villages have registered a more rapid progress than the big villages during these thirteen years. Schools have more than doubled and the total enrolment has almost tripled in the small villages as against the 12 per cent increase in the number of schools and 50 per cent increase in the enrolment in the big villages. But it must be remembered that the big villages had a much earlier start and this difference in their pace of progress is therefore perfectly natural. There is a corresponding increase in the number of teachers. The number of girls shows a much greater increase than the number of boys in the case of both big and small villages. This again is to be expected.

The following table constructed from the one above will facilitate comparison between the situation in the big and small villages in 1950-51 and 1963-64. While, both in the total enrolment of children and relative enrolment of girls, the big villages

CERTAIN RATIOS ABOUT SCHOOLS, PUPILS AND TEACHERS
IN BIG AND SMALL VILLAGES

	<i>Big villages</i>		<i>Small villages</i>	
	1950-51	1963-64	1950-51	1963-64
Children in school per 100 of population ...	12.9	16.3	4.2	9.4
Proportion of girls in the total enrolment (per cent)	27.5	37.9	22.0	28.3
Average size of school ...	222	299	56	72
Pupil-teacher ratio ...	37	37	36	38
Proportion of trained teachers (per cent) ...	60.1	82.9	48.4	63.3
Proportion of women teachers (per cent) ...	10.1	21.4	—	6.3

have achieved considerable progress, the smaller villages are still lagging behind. The relative position of the enrolment of girls

in the small villages in 1963-64 is comparable to the level reached by the big villages in 1950-51, but in the total enrolment they have yet to reach even that level. Similar is the situation in respect of trained teachers; but the progress achieved in this respect in both big and small villages is indeed impressive. Considering women teachers, one finds that while one in every five teachers in the big villages is a women teacher in 1963-64, in the case of the small villages this has just made a beginning. It seems educated women are still not prepared to go and teach (or remain and teach) in smaller villages.

Analysis by centres showed large differences reflecting widely different local conditions. The enrolment is relatively much lower in the small (peripheral) villages than in the big (nuclear) villages at every centre. Also, it is generally lower for centres in Vidarbha and (more so) in Marathwada than for centres in Western Maharashtra. This is in accordance with the general progress of primary education in the three regions.

Secondary Schools

There were 17 high schools (or secondary schools) in 1963-64 in the following 16 villages, all of them (except Devapur) with a population over 2,000: Manor (1960),⁷ Mithbav (1924), Ozarde (1960), Devapur (1955), Pusegaon (1950), Malthan (1963), Mauje Sukene (1961), Selu (1944, 1961), Dhad (1958), Jawala (1963), Goregaon (1957), Kothari (1956), Murud (1953), Bori (1959) and Karkheli (1962). There were two high schools at Selu: all other villages had one each. The high schools at Mauje Sukene, Selu, Dhad, Goregaon, Kothari and Murud have classes from standard V onwards. The remaining have proper high school classes from standard VIII onwards. The school at Murud is craft-oriented, and agriculture and technical subjects can be offered in the secondary course. Two of the schools, those at Bori and Karkheli, are not really separate secondary institutions; the zilla parishads have provided facilities for standards VIII to X in their elementary schools in these villages.

Two of the high schools, those at Dhad and Goregaon, are

⁷ The figure in brackets gives in each case the year in which the high school was started.

conducted by the zilla parishads; the remaining are under the management of private educational societies. The earliest of them to be started is the high school at Mithbav, which was established more than forty years back, in 1924. The next, chronologically, is one of the schools in Selu, started in 1944. All others were established after 1950, and nine of them after 1959. This last year is important because in that year the Maharashtra state government introduced the EBC concessions, i.e. full fee concessions for the economically backward classes (those having an annual income below Rs 1,200) which have acted as a strong incentive for starting secondary schools and colleges in the rural areas.

To study the growth of secondary education in the surveyed villages it will be unrealistic to go back to 1950-51 because in that year there were only three high schools (at Mithbav, Selu and Pusgaon) with a total enrolment of less than 300 pupils. The major part of this development has taken place after 1950-51. It is, however, useful to compare the situation in 1963-64 with that in 1959-60, the year in which the EBC concessions were introduced. This is done in the following summary table.

SUMMARY OF HIGH SCHOOL INFORMATION

		1959-60	1963-64
Number of villages with high schools	...	9	16
Number of high schools	...	9	17
Entrolment	{ Boys	1,798	3,509
	{ Girls	198	776
	{ Total	1,996	4,285
Teachers	{ Men	81	169
	{ Women	4	13
	{ Total	85	182

Note: The table includes the high school boys from Bori and Karkheli.

In four years the extent of secondary education has doubled, thanks to the EBC concessions which have accelerated the pace of secondary education. The number of girls has increased almost four times. The number of women teachers, however, is still very small. If women primary teachers avoid small villages,

women secondary teachers appear to avoid rural areas and prefer towns.

Let us examine the 1963-64 figures a little further. If pupils in standards V to VII are separated we are left with the proper high school pupils (standard VIII onwards). The primary school figures (for all villages, big and small) considered earlier can be similarly broken into : (i) (junior) primary school students (up to standard IV), and (ii) middle school or senior primary students (standards V to VII). All these figures are then collected and presented together below.

SUMMARY OF SCHOOL-GOERS FOR 1963-64

	Boys	Girls	Total	Proportion of girls (per cent)
Junior primary (up to standard IV) ...	6,868	4,172	11,040	37.8
Senior primary (from standards V to VII in primary schools) ...	2,047	870	2,917	29.8
Total primary (standards I to VII) ...	8,915	5,042	13,957	36.1*
Junior secondary (from standards V to VII in secondary schools) ...	1,184	348	1,532	22.7
High school (from standard VIII onwards) ...	2,202	408	2,610	11.8
Total secondary ...	3,509	776	4,285	18.1*

* The corresponding ratios for the whole of Maharashtra state for 1963-64 were 36.4 and 27.8 respectively. For rural areas they were 32.8 and 15.2 respectively.

It is clear that the proportion of girls in the total enrolment is fairly high at the junior primary stage, and with the spread and enforcement of compulsory education it should reach 50 per cent. This proportion decreases in the higher stages; it decreases sharply at the secondary stage. There are three reasons for this. Firstly, there is still a strong tendency to withdraw girls from school when they grow up. Secondly, at the secondary stage, parents prefer to have for girls separate schools of which there are not many and, in these villages, none whatsoever. Thirdly,

parents send their boys to secondary schools in the neighbouring villages at appreciable distances from home (they even send the boys to stay there for this purpose) but very few rural parents are willing to do this for their girls.

Training Colleges

Before we end this account of institutions of general education we should mention, for the sake of completeness, the two training colleges for male primary teachers. The college at Mithbav was started in 1949 and is conducted by a private educational society. The course of training is of two-year duration. In 1950-51 the college had 23 trainees, and in 1963-64 the number rose to 86. The college meets in the morning in the high school building. The college at Murud, conducted by the zilla parishad, was started in 1959 to meet a long-felt need in this region for the training of primary teachers. The college provides a junior training course of two years and a senior course, also of two years. The building was put up by the local body at Murud. In 1963-64, there were 188 trainees in the college.

Education of Girls

This is the general educational situation in the villages surveyed. Let us now consider particular sectors of education such as the education of girls. For the last many years, and particularly since 1947, the policy of the government has been to encourage coeducation, especially at the primary stage. Consequently, the number of separate primary schools for girls is not

PRIMARY SCHOOLS FOR GIRLS (1963-64)

<i>Village</i>	<i>Year of starting</i>		<i>Standards</i>	<i>Number of</i>	
				<i>girls</i>	<i>teachers</i>
Mithbav	...	1962	Up to V	24	1(1)
Maskawad	...	1958	VII	430	11(9)
Jawala	...	1956	IV	112	3(3)
Selu	...	1917	IV	227	7(7)
Murud	...	1942	VI	147	3(3)
Bori	...	1923	III	72	2(2)

Note: The figures in brackets give in each case the number of women teachers.

very large. (For instance, in 1963-64, in Maharashtra state there were only 1,557 primary schools exclusively for girls. Out of these, 656 were in the rural areas, which had a total of 33,970 primary schools, so that less than two per cent of schools in the rural areas were schools exclusively for girls.)

In the 68 villages under investigation, only six of the 79 primary schools in 1963-64 were separate schools for girls. The rest of the primary schools, and all secondary schools, were coeducational. The exclusive primary schools for girls were all situated in big villages and the following figures summarise the information regarding them.

Only three of these six schools were started after 1947, and at least three girls' schools are reported to have been closed down during that period. In Mithbav a special school for girls existed till 1937 when it was merged in the common school; it was revived again in 1962 when a local donor offered to construct a building for it. It does not appear to serve any special purpose in the village as it has on its rolls only 24 of the 671 girls in the six schools in Mithbav. The school at Maskawad was separated from the common school in 1958 and is undoubtedly a flourishing institution. But it is almost like a girls' wing of the big common school. The Jawala school was started in 1956 and became a middle school in 1958 but was reverted to the first four standards in 1962. Girls in Jawala now join the common school for further education. The schools at Selu and Murud appear to be working satisfactorily. But the Bori school seems to be in difficulties.

So three of the six separate schools for girls do not appear to be in a satisfactory situation. Whatever purpose the separate schools may have fulfilled in the past and may be fulfilling even now in particular local situations, they do not seem to make a major contribution to the education of girls, at least at the primary stage of education. Including Maskawad they account for only 1,012 of the 4,192 girls in primary schools in the big villages (and excluding Maskawad, for only 582 of the 3,762 girls). An overwhelming majority of the girls receive primary education in common schools.

Urdu Schools

In the villages under investigation there are three Urdu primary schools, one each at Manor, Waghode and Dhad (see table). It was a part of the educational policy of the British government ever since 1870 to establish separate Urdu schools for the education of Muslims, and some of these schools are as old as the school at Dhad. This policy was more vigorously pursued later, after the Morley-Minto reforms of 1909, till the assumption of power in 1937 by the popular ministries. After inde-

URDU PRIMARY SCHOOLS IN VILLAGES (1963-64)

Village	Year of starting	Stds	No of students			Teachers
			Boys	Girls	Total	
Manor	1911	Up to VI	56	62	118	4
Waghode	1920	„ IV	57	22	79	2
Dhad	1879	„ IV	107	72	179	4

pendence the religious and linguistic minorities have been assured of the right to have their own schools if they so desire and they are provided with adequate grants-in-aid. But no sectional interests are shown any special favour, except the scheduled castes, the scheduled tribes and other backward communities. The existing Urdu primary schools are therefore continued, and new schools are opened if there is a sizable segment of the local population desirous of having facilities for schooling in that medium. The following figures for 1964 give information about the 1,474 Urdu primary schools in Maharashtra state (both urban and rural areas). A large majority of Muslims in Maharashtra live in urban or semiurban areas. In some big villages they are in sizable proportions but very few Muslims, if at all, live in small villages.

URDU PRIMARY SCHOOLS IN MAHARASHTRA STATE (1963-64)

		Schools	Boys	Girls	Total
Western Maharashtra	...	1,075	95,362	89,106	194,460
Vidarbha	...	366	29,406	23,424	52,830
Marathwada	...	33	11,313	6,271	17,584

Many of the Urdu schools are, therefore, in small towns and big cities. There are not many Urdu schools in the rural areas.

Let us briefly consider the Urdu schools in the villages under survey against this background. The Muslim population at Manor, Waghode and Dhad was, according to our village survey figures, 22 per cent, 18 per cent and 39 per cent respectively of the village population. At Manor, the Urdu school meets in the same building as the main common primary school; at Waghode, it meets in a masjid; and at Dhad, it has a separate building of its own built by the zilla parishad. Thus the Urdu schools seem to have the same kind of accommodation as other village primary schools. From their records it appears that, while the school at Dhad is quite vigorous, the other two schools are plodding along like many of the common primary schools. These schools are coeducational but have no women teachers.

Among the villages included in this investigation only two other villages have a comparably large Muslim population : Bori—18 per cent, and Karkheli—44 per cent. (In most other villages the Muslim population is insignificant.) Both these villages belong to Marathwada which was a part of the former princely state of Hyderabad. Under the circumstances, one would expect to find Urdu primary schools in these two villages, but it is surprising to see that there are no such schools. The reason perhaps is that this region has been backward in education and the rural Muslim community shares this backwardness. This is to be seen from the much smaller number of primary schools (and also Urdu schools) in this region as a whole. It is only during the last fifteen years that this region has moved in education.

In some of these villages there are facilities for private teaching in Urdu. For instance, such classes were reported to have been working at Dhal Savangi in Dhad centre till 1963-64, and in 1964 a regular Urdu school was started with the help of the zilla parishad, with 40 children on its roll. There are about 50 Muslim households in this village, the only one in our small villages having a sizable Muslim population. Similar classes, but on a much smaller scale, are also reported at Bori and Karkheli.

Education of the Scheduled Castes

The third special interest in primary education for which separate schools were provided during the preindependence period is the scheduled castes (the former 'untouchables'). Special primary schools began to be established for them in 1870 and this policy continued up to 1937. When the popular ministries came to power in 1937 they laid greater stress on integration and on special concessions and incentives to the scheduled caste pupils rather than on separate schools. In the postindependence period all separate schools were abolished; instead the Constitution directs the state to promote the educational interests of the scheduled castes and scheduled tribes. Special scholarships, stipends and concessions have been provided for the students from these communities. We have observed earlier in this connection that, although these communities have registered progress during the last two decades, they are still lagging much behind the other communities in education; the position of women in this respect is much worse.

Turning to the question of social disabilities in schools for the scheduled caste children, our survey shows that integration has been achieved in all villages; discrimination was not in evidence against scheduled caste children and scheduled caste teachers in primary schools (even in schools which use temples for accommodation). But it is well known that this does not hold for other aspects of the ordinary civic life in the village. The number of scheduled caste teachers in the rural areas is small, and among them, women teachers are extremely rare. And it is well known that scheduled caste teachers find it extremely difficult to get suitable living accommodation, particularly in small villages.⁸

⁸ The following additional remarks are based on the impressions of a friend who is a knowledgeable person in the matter. In villages in the interior there exist schools where scheduled caste children are still made to sit apart or outside the main temple buildings used for schools. Scheduled caste teachers are denied accommodation in the village proper and they are forced to seek a transfer from the village on account of this and other pressures, including false accusations. This happens even in villages which have received awards for the *complete eradication* of untouchability! Scheduled caste youth is taking in large numbers to the profession of primary teachers, one of the lowest paid professions

Basic Education

Other important aspects of education in the villages under investigation will now be considered, particularly basic education, compulsory primary education and adult education (which has recently assumed the name of social education). Although it was recognised very early in theory that primary education should not be merely book-based but should involve manual work oriented towards urban or rural life, till 1939 little was done to give it this orientation, beyond establishing a small number of agricultural-bias schools in the twenties. After the Congress ministry came to power in 1937, influenced by the thought of Mahatma Gandhi, they made a beginning in what has since been called basic education, i.e. primary education built around the teaching of a craft such as agriculture or spinning and weaving. After independence, this policy was pursued more vigorously, turning many full-grade (standards I to VII) primary schools first into craft-oriented schools, and then into proper basic schools as teachers adequately trained in basic education became available. Since 1960, the junior primary schools (standards I to IV) are also being converted into basic schools. Although this drive now seems to have slowed down, a considerable number of children receive primary education in basic schools.

Basic schools now invariably go by the name *Jeevan Shikshan* (Vidya) Mandir. One of the following five crafts is usually taught in the basic schools: (a) agriculture (including kitchen gardening), (b) spinning, (c) spinning and weaving, (d) cardboard work, (e) cardboard work and wood work (carpentry). A large majority of basic schools offer either agriculture or spinning and weaving.

In the villages under this investigation, 19 of the 79 primary schools in 1963-64 were basic primary schools—14 in big villages (two in Mithbav and one each in the remaining 12) and five in small, peripheral villages. Some ordinary primary schools also carry the name of *Jeevan Shikshan Mandir*, perhaps hopefully, although they do not teach a craft. Out of the 19 schools, nine

for those who are educated. They prefer to work in the urban areas where social conditions are less discriminatory.

have agriculture, seven have spinning or spinning and weaving and three have wood work as the basic craft. Besides the basic schools there is one fishery school at Mithbav which has a sea-coast and a large fishing population. In the girls' school at Maškawad, cooking and needlework are taught. Two of the agricultural basic schools, at Kothari and Kasabe Sukene, were started in 1926-27, the period when agricultural-bias schools were first started. Five more basic schools were started during 1947-49, eight more during the period 1950-59, and the remaining five after 1960. In 1964, some of these basic schools appeared to be very active but others gave the impression of being almost like other nonbasic primary schools. In one school all the agricultural equipment was lying idle because land had not been made available by the villagers. The fishery school was reported to lack teachers who were qualified in fishery. And the process of conversion from ordinary to basic schools is not always a one-way process. It was reported that three schools stopped basic education after a few years because the land leased to them was taken back by the owner. One of these schools was in a big village and was basic in agriculture; the two others were basic in spinning.

We should also mention here that two training colleges at Mithbav and Murud for male primary teachers impart training in basic education. In fact, most training colleges for primary teachers in Maharashtra state are basic training colleges.

Compulsory Education

The information collected by us in 1964 shows that compulsion was, in fact, introduced in all the surveyed villages in the eight centres in Western Maharashtra, and the process had been completed by 1961. In Vidarbha, although the introduction of compulsion started as early as 1926, compulsion had not been extended to many areas till 1964; in Marathwada also, compulsory education, which had made a beginning in 1952, had covered only a few villages by 1964. From out of the five centres in Vidarbha, compulsory education was in force only in one centre, in the two villages of Goregaon and Ghoti. It was introduced in 1926 for boys only and continued to be so in 1964. The rest of the villages in Vidarbha and Marathwada, i.e. the villages in

seven other centres, were not covered by compulsory education till 1964.⁹

How is compulsion operating? How far is it effective in the surveyed villages where it had been introduced? It was not possible to make a quantitative estimate of its enforcement because the number of children in the compulsory age-group was not available. But it is clear from the information collected that the enforcement and effectiveness of compulsion is very uneven as between centres, between big and small villages and between boys and girls.

In Mithbav, Ozarde and Pusegaon, it was reported, all children registered under compulsion were in school in 1963-64; even in Pulkoti, a small village in Devapur centre, this was so. But in many villages, big and small, a number of children on the compulsion register did not attend school. In some villages the register has not even been brought up-to-date for several years. In Malthan and many other small villages it was reported that children in the age-period of compulsion did not attend school in spite of reminders and sending of notices and in spite of the legal proceedings launched (in a few cases). There is a larger number of defaulters among girls than among boys. For instance, in Maskawad, a fairly progressive village, while according to our information ten boys in the compulsion age-period did not attend school, as many as 25 of the girls did not attend in spite of the fact that there is a thriving separate school for girls. The main reason is, of course, the apathy of parents and social neglect as in the case of scheduled castes. But sometimes there are other genuine reasons, such as distance (in the case of very young children), household work (in the case of girls) and the nature of the occupation of parents (goatherds and other communities on the move). Two schools reported the difficulty that the defaulting children did not have adequate clothes to wear for going to school. So the enforcement and effectiveness depends on local conditions and on the enthusiasm of the local leadership and school teachers. The success of the little village of Pulkoti of less than 800 souls was largely due to the efforts of one single individual, a social worker who has devoted himself

⁹ Compulsory education was extended to the age-group 7-9 years in Vidarbha and Marathwada from August 1965.

to education for the last 15 years and who ran a small hostel for boys. It was the observation of the field investigators that the legal provisions of compulsion are seldom invoked or enforced. The general impression was that in many villages the initial enthusiasm has waned and the organisation has become slack except in the (few) villages where the Gram Shikshan Mohim (described in the next few paragraphs) has succeeded or is active.

Adult Education

The demand for the abolition of adult illiteracy had grown in strength with the growth of national consciousness. In cities like Bombay, there was a fairly widespread public movement for literacy in the preindependence period, especially during the thirties. It was, therefore, natural that organised attempts for adult education, backed and financed by the Department of Education, should be started after the Congress ministry came to power in 1937, and more effectively after 1947. Soon, the concept of adult education broadened beyond the mere imparting of literacy to include simple introductory lessons on problems related to everyday life in the rural community, such as hygiene, civics, elementary history and geography, social and economic problems as well as recreational and cultural activities. Adult literacy thus acquired the name of social education. Ordinarily two sequential courses are organised under the scheme of social education classes with tests at the end of each course, the preliteracy course of four months for acquiring literacy and the postliteracy course of five months for strengthening it by dealing with the topics mentioned above for the benefit of the new literates. The administrative set-up and schemes of assistance were soon drawn up. Primary school teachers in the village were required to take up this work. In addition, or alternatively, social education classes could be conducted by any person suitably qualified for that purpose at any suitable place. The target was to bring all illiterate persons in the village between 14 and 50 years in the literacy classes and make them literate. There are regular literacy classes, postliteracy classes and also home classes where children teach adults; separate classes can be organised for

women, and many such classes exist. Books and booklets, charts and other material were specially prepared for this purpose, both for imparting literacy and for maintaining it in the neoliterates. Periodicals are being published, e.g. *Lokashikshan*, a Marathi monthly, and *Rehbar*, an Urdu fortnightly. Village libraries and reading rooms have been started and recreational and cultural programmes are organised with the help of local primary schools, under the scheme of social education.

A new impetus was given to adult education activities in 1961 by what has now been named as *Gram Shikshan Mohim* (campaign for village education). The idea underlying the new scheme is to make the whole adult population of the village literate by an intensive and concerted effort. All adult literacy work in rural areas is now done under the auspices of the Committee for Gram Shikshan Mohim. It is reported that the new scheme has been very successful in some villages where *gram gowrawa* (praising the village) celebrations were held to announce the achievement of a hundred per cent literacy.

Let us now summarise against this background the information collected in 1963-64 about social education activities in the villages under survey. Adult education classes were started in some of these villages as early as 1954, or even earlier. It was reported that out of the 21 big villages no classes were ever started in five, and in another seven they were started but discontinued before 1964. In the remaining nine big villages they have continued. Among the 42 small villages with primary schools, classes were not yet started in 15, and in 18 of the 27 villages where they were started they have been discontinued.

Classes were discontinued in some villages because, it is reported, all the target population was now literate on account of the Gram Shikshan Mohim or otherwise. Celebrations of full literacy were performed some years back in a few villages.¹⁰ In a few others good work seems to be going on. But there is no

¹⁰ Some of these claims may be exaggerated, especially about the female population. For instance, one village where the celebration of full literacy had taken place in 1960 did not show even 50 per cent total literacy in the 1961 Census; and female literacy as reported in the census was less than 40 per cent.

activity at all in many other villages, and in some it has stopped after partial fulfilment.

To sum up, social education activity is extremely uneven and much depends on the local initiative. Apparently, the efforts which started round about 1954-55 stagnated in a few years but a new impetus was given in some villages by the Gram Shikshan Mohim started in 1961. The results of this latter campaign appear to have been impressive in a few villages. (But this would not be reflected in the figures given in this paper based on surveys and resurveys, as this campaign is a much later development.)

The School and the Village

Before we end this account of the educational institutions in the villages under survey, we shall record briefly the general impressions about the working of the primary schools and the interest taken by the villagers in their work. Except in a few small villages where the school meets in a temple or chavadi or in a rented place most of the schools have their own buildings; most of these buildings were built jointly by the village and the government or zilla parishad. The contribution of the village is usually one-third or more in the form of cash and shramadan (voluntary labour). The contribution by the village towards the school building, known as popular contribution, appears to be a condition for obtaining the government or zilla parishad share. In a few places the village or some philanthropic persons or trusts have borne an even larger share, sometimes even the full cost. Community development grants were also made available for school buildings, for instance, in Selu and Gulumb centres.

The quality of work in the village school naturally depends a great deal on the teachers and the interest taken by the influential persons in the village. The effort of putting up a building for the school no doubt implies interest in the school on the part of the village people. But where this interest does not continue after the building has been put up, the school work appears to slacken and suffer. Most of the schools find their present accommodation insufficient for the growing number of pupils,

and this problem can be solved only if the local population and the zilla parishad take an active interest in solving it. In villages like Mithbav and Maskawad and in villages in the Gulumb centre, where the village leadership takes keen interest, the schools—especially the big schools—are flourishing. In Mithbav, a number of families have earning members in Bombay, well-placed in life, and many of them are actively interested in improving the educational facilities in their native village; in Gulumb, Ozarde and Kawathe, there are prominent local persons who are also influential leaders in the taluka or the district; and so on. Normally, the gram panchayat does take interest in the local schools. Sometimes the enthusiasm of some local busy-bodies oversteps the bounds of helpful interest and becomes a nuisance affecting adversely the day-to-day administration of the school. And in some villages there are factions and quarrels, with a resulting neglect or even animosity towards the school. (In one school the teachers are reported to have remarked to our investigator that the local leaders visit school only when they intend to find fault with it or to put obstacles in its working.)

In some big schools the teachers are enthusiastic and the schools are working well. In others, especially in the smaller villages, the teachers lack interest and are apathetic and would like to be transferred to bigger places. In some cases the school has stagnated because the teacher does not live in the village but comes only during the school hours, the reason given being lack of suitable accommodation or that the teacher is a resident of a neighbouring village. In some schools (mostly small schools) the teachers complained about lack of minimum equipment in the school.

A closer liaison between the school and the village panchayat (without undue interference in the day-to-day academic work), better teaching aids and equipment, provision of at least the minimum suitable accommodation for the teacher in single-teacher small-school villages, and a keener interest by the zilla parishad leadership appear to be the most important desiderata for effecting improvement in the working of rural primary schools.

6. SUMMING-UP

The growth of literacy and education in the rural areas of Maharashtra during the postindependence period was considered in the foregoing sections of this paper. Let us now conclude by summing up briefly its main features.

A General Picture of the Progress

The general picture which emerges from this study is that of an advance in rural education during the last two decades. Primary schools have grown in size and classes. New schools have been opened in small and remote villages. Compulsory education of four years' duration has been introduced in Western Maharashtra and is now being extended to Vidarbha and Marathwada. With the implementation of compulsion a large proportion of the younger generation, often as large as 80 to 90 per cent in the age-group 10-14 years, especially among males, has acquired literacy. Girls are also taking to education in increasing numbers. Those socio-economic strata which were till now backward in education are on the move, and the pace of advance is often quite rapid. Education is making inroads among those sections of population who had in the past absolutely no background of education. And not only literacy and elementary education but also high school education is spreading in the rural areas, thanks to the introduction of the EBC concessions.

Main Socio-Economic Contrasts

This general educational progress, however, is not uniform ; it is extremely uneven. The bigger villages where schools have existed for a number of years are much ahead of the smaller villages where schools have been opened only recently. Moreover, the bigger villages have better schooling facilities in terms of the classes taught. Many schools in small villages are just one-teacher, four-standard schools. Western Maharashtra, where compulsory education was introduced during the period 1947-55, has a much higher percentage of literacy and of school-going children than Vidarbha and Marathwada where it is being implemented only now. Moreover, Marathwada has also to overcome the relative

backwardness in education due to its historical legacy, having been a part of a feudal princely state.

Another contrast in the educational progress is the relative backwardness of women. The situation is, no doubt, improving as regards elementary education, especially in the bigger villages where compulsory education has been effectively implemented. But even here, as compared with men, women do not reach the higher stages of education. In smaller villages and in villages where the educational effort is of a much more recent origin (as, for instance, in many Marathwada villages), female education has not made much progress; it has just started.

The spread of education in rural areas is also very uneven as between different socio-economic sections of the society. It is true that great changes have taken place during the last two decades, so that education is no longer the preserve of the few advanced caste-groups of Brahmins and advanced Hindus. Although, both in terms of the percentage of literacy and percentage of persons who have attained the higher stages of education, the latter caste-groups are still leading, the spread of education in the other caste-groups which form the overwhelming majority in rural areas has completely changed the composition of the village elite. The very logic of large numbers has inevitably brought about major shifts in social influence and social prestige in the village society.

The three main caste-groups in the villages of Maharashtra are the Marathas and allied castes, the scheduled castes (mainly Mahars) and the backward class communities (mostly the scheduled tribes), and their numerical strengths are generally in that order in most of the villages. After independence, the Marathas have made considerable educational progress, often a very rapid one. The progress of the scheduled castes has a slower pace. And the progress of the backward class communities is the slowest; in certain areas they are just making a beginning. Both because of their numerical superiority and greater advance the Marathas and allied castes have now emerged as educationally the most dominant section of the rural society. Female education, although lagging considerably behind, shows the same pattern in respect of the three important abovementioned caste-groups. Thanks to the extension of compulsion, elementary education has made con-

siderable headway among the Maratha women, but it has not registered similar progress among the two other caste-groups. In fact, it is found that education stagnated in some areas among the scheduled caste women, and did not even touch the women of the backward classes in certain areas. Evidently much remains to be done in this respect. So far as Muslims are concerned they are in sizable numbers only in certain of the bigger villages, and while they are maintaining their progress along with other sections of the society in Western Maharashtra and Vidarbha, they seem to be still dragging their feet in Marathwada.

Classification by other criteria such as occupation, size of landholding and income enhances our understanding of the rural educational progress. It is found that it is the peasant farmer who is pushing ahead, often very rapidly; the labourers (mainly agricultural labourers) are relatively backward. In terms of the size of landholding and income, it is the more affluent sections of the society that have registered greater progress. In this context it assumes importance whether the village has irrigation or cash-crop economy. On the other hand, the spread of compulsory education operates towards reducing these differences, especially in the case of men. When the general (male) literacy is high, the differences in literacy according to income narrow down considerably. But the contrasts mentioned above always crystallise sharply when one considers higher attainments in education and even literacy among women. These differences are obviously closely related with those mentioned above in the caste-wise analysis.

Influence of Local Factors

At the level of individual villages, several other local factors also operate. For instance, urban influence due to easy communications and proximity to a big city is an important factor. But the urban influence does not necessarily operate through geographical proximity alone. As in the case of Mithbav and Gulumb it sometimes operates, even more powerfully, through the large number of villagers who have gone to a big city (like Bombay) for employment.

The peculiar local conditions within the village itself are also important. In villages where the population lives in far-flung clus-

ters, in *vadis* or *vastis*, the distance between the school and the *vadis* influences the spread of education. Another relevant factor in a village is the particular combination of the major caste and subcaste groups and their different traditions in different regions. For instance, in certain areas of Maharashtra, Mahars (scheduled castes) have a stronger tradition of education than in some other areas. Again, certain subcastes in the major caste-group of Marathas have not yet shown much interest in the education of girls. Thus, the general features of the educational progress described above contain within themselves several important local variations.

The organisation of the school, its teaching personnel and its relationship with the village population are important elements in the educational progress of the village. The spread of education in its initial stages and during the initial period of compulsory education greatly depends on the enthusiasm and initiative shown by the school teachers, and particularly the headmaster, and it is accelerated when the teachers live in the village rather than when they merely come to the village to attend school. Similar is the effect of the presence of trained teachers on the staff. In some villages, it was noticed that the education of girls made a real start only after the school staff acquired a lady teacher. In a village in a Marathwada centre, it was noticed that the attendance of girls in a girls' school dropped considerably after the services of the woman servant who went round the village to collect the girls and bring them to school were discontinued. The attitude of the local leadership towards education and the village school plays an extremely important role in the educational progress of a village. In some villages, thanks to the enthusiasm of the local leaders who collected funds and organised voluntary labour, good school buildings have come up and many other amenities have been provided in the school. In this, the schools were sometimes benefited by the local patriotism of the villagers working in big cities, particularly in Bombay. So the personnel of the staff, the proportion of trained teachers among them, the presence of lady teachers and the interest shown by the village leadership are all relevant to the progress of rural education.

APPENDIX

A NOTE ON CASTE CLASSIFICATION

- I. *Brahmins*: Chitpavan, Deshastha, Karhada, Saraswat, etc.
- II. *Advanced Hindus*: Vaishya (Vani), Marwari, Bania, Lingayat, Chandraseniya Kayastha Prabhu (CKP), Pathare Prabhu, Rajput, Khatri, Leva Gujar, Hindu Jangam, Krishna Pakshiya, etc.
- III. *Marathas and Other Castes*: Maratha, Patidar, Jain (cultivators), Agarwal, Oswal, Mali, Gavali, Dhangar, Gabit, Kunbi (Telangi), Marathan, etc.
- IV. *Intermediate Hindus*—1: Sutar, Lohar, Shimpi, Sali (Koshti), Sonar, Tambat (Gingar), Kasar, Rangari, etc.
- V. *Intermediate Hindus*—2: Nhavi, Parit, Kumbhar, Gurav (Gondhali), Gosavi, Devali, Teli, Kalal, Bhoi, Lonari, Bairagi, Kajabu, etc.
- VI. *Backward Classes and Tribes*: Laman, Vadar, Bhil, Kaikadi, Raval, Vanjari, Burud, Khatik, Govari, Gond, etc.
- VII. *Scheduled Castes*: Mahar, Chambhar, Mang, Dhor, Bhangi, Holap, Nava Buddha, Ramoshi, etc.
- VIII. *Non-Hindus*: Muslims (all sects), Christians, Sikhs, Parsees.

EDUCATION IN GULUMB

This is the story of the growth of education in a village in Western Maharashtra.

Gulumb is a village in the Wai taluka in the north-western part of Satara district in Maharashtra. It lies off the Poona-Bangalore highway, two miles west of the village, Vele, which is on the highway, 46 miles south of Poona and 24 miles north of Satara. Two miles south of Vele on the highway is another village, Surur, where a metalled road branches off westward to the taluka town, Wai, and then to Mahabaleshwar. Wai is seven miles away from Surur. The nearest railway station is Wathar, 18 miles away to the east. (The Poona-Satara road which had been laid by the year 1848 lies along a still older bullock track; the metre-gauge railway in the Satara district had been completed by 1887.)

Gulumb is within 30 miles of the Sahyadri mountains (Western Ghats) and lies in a hilly tract. The annual rainfall is approximately 30 inches. A stream, Chandraganga, flows past the village and is its vital source of irrigation; about one-fifth of the cultivable land (400 acres) is under irrigation. For drinking-water the people depend on wells. The main crops are jowar, bajra, wheat and groundnut, and other miscellaneous cash crops.

The 1961 Census put the population of Gulumb at 2,060. The two major caste-groups in the village are the Marathas and allied castes (about 80 per cent) and the scheduled castes, mainly Mahars (about ten per cent), all other castes making up the remaining ten per cent. The main occupation is agriculture; the overwhelming majority of the population consists of cultivators and agricultural labour. There is considerable migration to Bombay for employment; almost half the households have one member or the other working in Bombay.

Gulumb has a fairly active gram panchayat. There is a primary school with seven standards, and a branch post-office. The nearest

telegraph office is at Wai. Electricity reached Gulumb in 1963-64 and is now used for lighting and for operating irrigation pumps. The panchayat has also utilised it to lift water from a large well to an overhead tank and thus provide drinking water through taps at 25 to 30 points in the village. Gulumb has no weekly market; for this, as also for high school and medical facilities, it depends on Surur.

The first survey of the village was carried out in 1942-43. The village was surveyed again in 1957-58. These were comprehensive surveys covering almost every aspect of village life. Educational information was brought up to date again in 1966 by an ad hoc investigation. This account is based on these three investigations.

Early Beginnings

It was during the rule of Lord Ripon, who was the Governor-General of India from 1880 to 1884, that local bodies were established in urban and rural areas and limited powers and responsibilities transferred to them in certain spheres of local administration. Primary education was one such subject. This led during the subsequent years to the opening of new primary schools in rural areas; the school at Gulumb was started during this period, in 1887. Thus the present school at Gulumb is eighty years old. It is possible that an indigenous school¹ or a private school may have been working in the village before 1887, but this could not be ascertained.

When the Gulumb school was opened, the primary school course in the Bombay presidency consisted of the infant class and standards I to VI; the seventh standard was added to the course in 1901-2 when the full primary course became an eight-year course. We do not know the number of pupils with which the school started. The school record as regards the number of pupils and other such particulars is not very satisfactory till the year 1899. But we know that in 1899 the school had only one teacher and six classes (up to the fifth standard). During this

¹ Before the modern system of schooling started with the advent of British rule in India, there were indigenous schools with their own content of education. See, for instance: J. P. Naik (Ed.), *A Review of Education in Bombay State, 1855-1955*, Government of Bombay, 1955.

period the annual promotion to the next class was based on an annual examination conducted by the inspectors of schools belonging to the Department of Education. The results of the annual examination were recorded in an inspection book. Such an inspection book exists among the records of the school and the first entry in it shows that in 1899 there were 72 pupils in the school, of whom 46 appeared for the annual examination.² There were no schools in the neighbouring villages of Vele and Chandak at that time and it is possible that some of the pupils in the Gulumb school were from these villages.

In the years that followed, educated public opinion in India had started demanding free and compulsory primary education. Gopal Krishna Gokhale was making a powerful plea for universal primary education, inside the legislatures and outside. The British government however did not concede even the principle of compulsory primary education. But due to insistent demand and public pressure a number of primary schools were opened during this period, among them a school at Vele in 1909 and another at Chandak in 1911.

It seems however that while political leaders were pressing the demand for more education, the school at Gulumb was just plodding along; it had not evoked much interest among the villagers. In 1907 there were only 51 pupils on the roll of whom only 23 appeared for the annual examination, a clear setback when compared to the figures of 1899. Moreover, the fifth standard was discontinued in that year, reducing the teaching in the school to the junior primary course.

The inspection book of the school records that in 1913 the birthday of the then Viceroy, Lord Hardinge, was celebrated in the school on 20 June when the school committee of the village met in the school and sweets were distributed to children. But this need not be indicative of the villagers' interest in the school and in education. The occasion must have been officially inspired in order to offer felicitations to the Viceroy who had escaped an attempt made on his life by revolutionaries a few months earlier at the time of the Darbar procession in Delhi. In 1914, the num-

² The population figures for Gulumb as recorded in the successive censuses are: 1,323 in 1911, 1,230 in 1921, 1,450 in 1931, 1,558 in 1941, 1,830 in 1951 and 2,060 in 1961.

ber of pupils dwindled further, perhaps also because of the depletion caused by the new schools at Vele and Chandak, and the fourth standard was also closed down. It was reopened in 1918 but the school had still only 60 pupils on the roll of whom 55 appeared for the annual examination. The school was now thirty years old and many of the pupils of its initial period must have had children of school-going age. But this does not seem to have made a great difference. Education in the village had not really taken a stride.

Education Evokes Interest

With the introduction of the Montagu-Chelmsford reforms in 1921 a new phase in administration, the diarchy, began in the provinces. Education was transferred to an Indian minister appointed from the elected element in the legislature. A comprehensive Primary Education Act was passed in the Bombay province in 1923. The administration and inspection of schools were entrusted to district school boards. Compulsory education could be introduced under this Act both in urban and in rural areas. Actually, compulsory education had already been introduced in Satara city in 1921 under the Patel Act of 1917 which was meant for urban areas. Nothing was done however to introduce it in the villages of Satara district until 1946. But the situation began to improve during this period because of the change in the government policy, and more so because of the rise in the political and social consciousness in the country. In 1924, the school in Gulumb had 60 pupils on its roll of whom 54 appeared for the annual examination. But the school still had only one teacher. In 1925, a second teacher was added to the school and the number of pupils began to increase.

The greater attention and encouragement given to the education of the scheduled castes (untouchables) during this period is also reflected in the school record. For instance, it is recorded for the year 1928 that slates, pencils and books were distributed free to the children of the scheduled castes which in Gulumb mainly consisted of the Mahar community. The first untouchable students to join the Gulumb school were two Mahar boys who joined in 1892. The school had from then, off and on, a few

untouchable students. They were made to sit apart from the others until 1930 or thereabout. The segregation in school gradually decreased and ended completely after independence. This does not mean however the end of social segregation in the village ; it still exists.

In 1930, the school had 90 pupils of whom 77 appeared for the annual examination. That the school had now definitely aroused interest in the village is seen from the fact that in 1930 the villagers decided to erect a school building through their own efforts. When the school was opened in 1887, it met first in the house of one Govindrao Kulkarni and then for some years in the house of Mahadu Patne. After a few years it moved to the Maruti temple in front of the temple of Bhairav. The Maruti temple was a small place and obviously inadequate for the 90 pupils the school had on its roll in 1930. So the villagers built a structure around the Bhairav temple with 1,565 square feet of covered and enclosed space divided into five classrooms and 1,028 square feet of verandah. The school moved into the new building in 1931 and in that year the fifth standard was started again after a lapse of 23 years. One of the headmasters of this period, Appaji Hiraji Kumbhar, was keenly interested in gymnastics and games, and the school acquired a gymnasium. In the year 1934-35, the Governor of the Bombay province paid a visit to Gulumb. On this occasion the villagers had built roads connecting Gulumb with Vele and with Kenjal. In 1937, the sixth standard was added and the school had now four teachers and 151 pupils.

Full-Grade Primary School

With the advent of provincial autonomy a new period started for education. The first popular ministry, a Congress ministry, came to power in 1937 and adopted a number of new measures. The administration and inspection of primary schools were now taken over by the Department of Education. Changes were made in the system of examination for promotion in the primary schools. Examination now became internal, held by the teachers themselves, but the results of the examination and promotion were scrutinised by the inspectors and the administrative officer of the District School Board to ensure that the

promotions were fair and equitable. The inspection book continued to be maintained as a record of the results of the annual examination.

The school continued to grow and in 1940, with the addition of the seventh standard, it became a full-grade primary school. Up to now pupils who wanted to take the vernacular final examination³ (renamed the primary school certificate examination in 1937) at the end of the seventh standard had to join schools outside Gulumb, the nearest being in Surur, two and a half to three miles away. Such pupils were necessarily few. Now it was possible to complete the full primary course in Gulumb itself and appear for the PSC examination. The school had taken 53 years to reach this stage, and had passed through numerous ups and downs before reaching it. In 1940, the strength of the school was four teachers and 140 pupils, but the average daily attendance was as low as 85. The habitual absentees appear to have been removed from the roll in the next two years, for in 1942-43 there were only 117 pupils; the average attendance however was still 86. The following year the roll came down to 108 pupils, with an average attendance of 73—a decrease probably due to the disturbed conditions in the district during the Quit India movement of 1942-44. In 1943, of the four teachers in the school, one was a Brahmin, another a Maratha, the third a Muslim and the fourth a Christian! None of them belonged to Gulumb. They came every day from their native villages nearby, like Surur and Kenjal, to attend to their duties in the school.

Year of First Survey

This brings us to the year of the first survey (school year 1943-44) when the school had already completed its 55th year. This means that there had been a school in Gulumb during the lifetime of most of its senior inhabitants. But the survey information shows that only 341 of the 952 men and 26 of the 949 women

³ The school system in the Bombay province during this period consisted of the infant class and seven standards, which made the full primary course. After completing the fourth standard, one stream joined high school for secondary education of seven years' duration.

were literate in that year.⁴ (They include 87 boys and 6 girls who were reported to be attending the Gulumb school. The school register had 108 names, 91 boys and 17 girls; apparently 15 of them, 4 boys and 11 girls, never attended after registration!) The percentages of male and female literacy were therefore 35.8 and 2.8 respectively in 1943.

Male Literacy in 1943

It is instructive to analyse the literacy in Gulumb in 1943 by age-groups as follows. The figures then indicate the progress in literacy achieved in successive 15-year periods. In the first place this clearly shows that the younger people were more literate than

Age-group	Literacy among males (per cent)	Literacy among females (per cent)
8—17	62.7	6.5
18—32	51.9	3.7
33—47	35.3	0.7
48—62	19.8	
63 and above	19.6	

the older ones. This is as it should be. Secondly, we can now consider the age-group 18-32 which would have attained the maximum possible literacy in that generation, since nobody would ordinarily join school as a fresher after he is 18 years old. Since the age-group 33-47 in 1943 was the age-group 18-32 in 1928, by a throwback procedure, the table above also helps us to construct figures for literacy in this age-group of 18-32 for successive points of time in the past. Thus we obtain the following figures for literacy among men in the age group 18-32 in successive periods with fifteen-year intervals.

⁴ These figures will not tally with the census figures because they also include members of Gulumb households staying in Bombay and other places for employment. In other words they consist of all members of the *reconstituted* entire households. The procedure was found necessary for other objectives of the survey.

Year	Inferred literacy among males of age-group 18-32 (per cent)
1898	19.6
1913	19.8
1928	35.3
1943	51.9

This throwback method is based on the following assumptions: (i) that mortality and migration did not depend on literacy, and (ii) that literates did not ordinarily lapse into illiteracy. The first was unlikely and investigations showed that the second did not take place. It was further found that there was very little migration out of the village in the period prior to 1943, and there was no evidence of differential migration. Since most of the literates were educated at Gulumb, these figures reflect the progress in literacy in the village from 1898 to 1943. The inferred figures generally agree with the history of the school described above. Thus we may summarise the situation about male literacy up to 1943 as follows : it reached 20 per cent in 1898 and stagnated at that level for the next 15 years after which it steadily rose at the rate of one per cent a year till 1943.

Female Literacy in 1943

Compared to men, the Gulumb women were mostly illiterate in 1943; only 26 women were literate, of whom 6 were girls in school. Since girls from Gulumb have mostly married out and the older women in Gulumb have married into Gulumb, it will not be appropriate to attempt a throwback and thus try to trace the progress of female education in the village. But this progress can be gauged otherwise by considering the number of girls attending school. The school records show that the first girl pupils joined the school within six years of its opening and that in 1898-99 there were five girls attending school regularly; two were Brahmins, two Tambolis (trader families) and one from a Dhangar family who wove and sold indigenous blankets (*ghongadi* or *kambali* in Marathi). That a group of five girls was in school in those early years was no doubt an exceptional situation. Further

figures show that although the number of girls on the register was often as high as 20, those who attended regularly were very few and in number comparable to the six for 1943. So the education of girls had not made much headway during fifty-five years; most of the villagers in Gulumb, except a few householders belonging to the advanced castes, had not got over their prejudices or inhibitions in this respect even in 1943.

The education of boys was far more widespread in 1943, but even here it was nowhere near its goal. In that year there were 121 boys of the age-group 7 to 11 but 64 of them did not go to school. (Among them were 11 of the 12 boys of that age-group in Kochalewadi. Kochalewadi is a wadi or cluster of houses in Gulumb, separated from the rest of the village. It is beyond the Chandraganga stream and the school at Kenjal was more convenient for these boys than the Gulumb school. But even that school was a mile away and only one out of the 12 boys joined.) Compulsion had not yet been introduced and the major social groups, especially the poorer and more backward strata among them, had not yet been drawn towards education. Another local factor which must have definitely operated against the popularisation of education was that none of the four teachers lived in the village. They were in Gulumb only during the school hours, and this was not conducive to developing closer contact with the village population.

Further Advance

The situation altered in 1944-45 when the new headmaster, Bopardikar, came to live in Gulumb. The subsequent improvement can be seen from the following figures :

Year	Number on roll			Average daily attendance
	Boys	Girls	Total	
1943-44	91	17	108	73
1944-45	120	20	140	101
1945-46	121	19	140	115
1946-47	126	17	143	118

Both the number on roll and attendance improved and stabilised. In 1946-47 the school gained one more teacher, so that there were now five teachers of whom three were trained. It will be seen

however that the increase was only in the number of boys; the number of girls remained at the same low figure as before.

The Congress ministry in the province had resigned from office in 1939 and was engaged in political struggle during the period that second world war lasted. It reassumed power in 1946-47 and started implementing the programme of compulsory education for boys and girls in the age-group 7 to 11, by stages, in villages with a population of 1,000 and above. So the scheme was introduced in Gulumb in 1947 and all children in the age-group 7 to 11 were covered by it by 1950-51. Under the new scheme the infant class was abolished but it continued to remain in the Gulumb school under the name of standard 1-A or in some other form till 1949-50; it was finally abolished in 1950-51. The duration of the junior primary course was thus reduced to four years. Education up to the first four standards now became free for all children.

Let us at this stage briefly deal with the government's policy about fees in primary schools. Fees were generally charged for primary education ever since elementary schools were started during the British rule. But those who paid local fund cess had concessional rates of fees for their children since income from this cess was diverted for expenditure on education. For girls, primary education was free from the beginning. Later, it became free for children from the untouchable castes. With minor variations, consisting of concessions towards the poorer sections of the population, this was the policy as regards fees until 1946-47 when free compulsory education was introduced and schooling in the first four standards became free for all children. Simultaneously many categories of pupils were exempted from paying fees from the fifth to the seventh standards, so that it was claimed in 1951 that nobody who could not afford to pay fees was required to pay them. In 1959, all elementary education (up to the seventh standard) became free for all students. Already a number of educational concessions were available at various stages of education to scheduled castes and scheduled tribes. In 1959, the government took another far-reaching step and education at all stages (not merely elementary education) was made free for students whose guardians had an annual income of less than Rs 900. This limit was raised to Rs 1,200 in 1960. These concessions are

called the economically backward class (EBC) concessions, and have acted as a great incentive for secondary and higher education.

After the Introduction of Compulsory Education

When compulsory education was introduced in 1946-47 an intensive drive was launched to enrol all children in the age-group 7 to 11 after taking a complete count of them. The following figures give the picture of the entire implementation of the scheme. In four years the strength of the school almost doubled but it is clear that the enrolment of girls was far short of

Year	Number on roll			Average daily attendance
	Boys	Girls	Total	
1946-47	126	17	143	118
1947-48	149	53	202	129
1948-49	170	104	274	171
1949-50	171	98	269	173
1950-51	179	85	264	171

the mark. Although the total attendance stabilised at around 170, its proportion to those enrolled was less than before, indicating that a large number of children had merely their names on the roll but did not in fact attend school. This was particularly so in the case of girls.

There were no doubt many difficulties. The efforts of the special attendance officers appointed to persuade and enforce compulsion proved ineffective and the posts were soon discontinued. The school building around the Bhairav temple built 20 years earlier was inadequate for accommodating a hundred more children. To get over this difficulty the first two standards began to meet in two shifts, girls in the morning and boys in the afternoon. The staff position, too, was not satisfactory. Only one more teacher was added during this period, bringing the total number of teachers to six of whom only two were trained. Their number was clearly inadequate for the task of bringing all the enrolled children to school and of teaching them.

If we examine the attendance and other figures for the school during the period 1951-59, given below, it seems that the initial

enthusiasm about compulsion soon wore off. The pupils who were very irregular in their attendance either withdrew their names or were struck off the register. While the number of boys increased steadily, so far as the girls were concerned, in 1953-55 the situation returned to what it was before the introduction of compulsion in 1946-47! In other words the importance of educating their sons was realised by most people in the village but they were not yet enthusiastic about educating their daughters.

Year	Number on roll			Average daily attendance	Teacher	
	Boys	Girls	Total		Total	Trained
1951-52	159	81	240	172	6	2
1952-53	165	59	224	141	6	2
1953-54	189	29	218	157	6	2
1954-55	202	30	232	178	7	4
1955-56	217	100	317	221	7	4
1956-57	237	109	346	257	8	5
1957-58	213	133	346	256	8	6
1958-59	245	157	402	290	9	8

Girls' Education on the Move

Perhaps the problem was not that simple. As the number of teachers, and among them trained teachers, increased after 1954-55 the number of boys began to show a steady increase. The enrolment of girls, it seems, required the presence of a lady teacher in the school. For it made a sudden spurt after the school secured its first lady teacher, when a teacher couple came to the Gulumb school in 1955-56. Since then there was always a lady teacher in the school till 1965. The number of girls in the school went on steadily increasing so that in 1958-59 it was five times the number in 1954-55. Thus it was almost ten years after the introduction of compulsory education that girls' education could make headway in Gulumb. The presence of a lady teacher in the school was without doubt an essential factor in this process.

The steady increase in the number of pupils created, inevitably, the problem of accommodation. As mentioned earlier, the first two standards were already meeting in two shifts. With the further increase in 1955-56, some classes began to be held in the

Maruti temple where the school was conducted before 1931. But even this improvisation soon proved inadequate and a new structure became absolutely necessary. This was built in 1958 on a plot of land outside the village but close to it. The finances came partly from the community development block administration and partly from collection by the villagers, the major share coming from the "Gulumbers" in Bombay. The new building however provided only two classrooms. So now the school met in three places, the main school building around the Bhairav temple, the Maruti temple and the new school building.

Year of Resurvey, 1958-59

We shall now take a more detailed look at the educational situation as it existed in Gulumb in 1958-59, the year of the resurvey, and compare it with the situation 15 years earlier at the time of the first survey. The population of the village had no doubt considerably increased meanwhile but so had literacy. Out of the male population of 1,301 in 1958, 692 were literate and 198 of the female population of 1,244 were literate.⁵ This means that in the 15 years from 1943 to 1958, male literacy rose from 35.8 per cent to 53.2 per cent and female literacy from 2.8 per cent to 19.5 per cent. It is instructive to go through the agewise analysis as before. The figures are as follows.

<i>Age in years</i>	<i>Male literacy (per cent)</i>		<i>Female literacy (per cent)</i>	
	1943	1958	1943	1958
8—17	62.7	90.9	6.5	48.4
18—32	51.9	80.2	3.7	20.7
33—47	35.3	52.6	0.7	5.6
48—62	19.8	37.4	—	} 0.6
63 and above	19.6	17.0	—	

Examining the literacy figures for men, the figures for age-groups above 33 for 1958 are found almost to coincide with those for age-groups above 18 for 1943 thus supporting the throw-back procedure followed earlier for estimating the extent of literacy in the earlier periods. (This does not apply to women where

⁵ See footnote 4 *supra*.

the age-group above 18 consists of those who are married into Gulumb.) Secondly, in the period from 1943 to 1958 male literacy in the age-group 18-32 increased from 51.9 per cent to 80.2 per cent, the rate of increase being two per cent per year, double the rate of the previous 15-year period. Again, the literacy figures, 80.2 per cent and 90.9 per cent, for age-group 18-32 and 8-17, respectively, for 1958, show that the expansion of education, including enforcement of compulsory education, was nearing its objective of full literacy among the younger people.

In 1943, literacy among women in the age-group 18-32 was 3.7 per cent. In 1958, it was 20.7 per cent. The progress of education among women was slow, at the rate of about one per cent per year, and compared to men they had only made a beginning. But the important point is that they were on the move. As has been said earlier, this is not the result of the educational effort in Gulumb itself but it reflects the general rise in female education in the surrounding rural areas. In Gulumb itself the effort was quite impressive; the literacy percentage in the age-group 8-17 increased from 6.5 in 1943 to 48.4 in 1958. It is clear that women will not now take all that long which men had taken to achieve literacy of the order of 90 per cent.

We have observed earlier that the Marathas and allied castes constitute the overwhelming majority in Gulumb. So this advance of education in Gulumb primarily means the advance of the Marathas. The scheduled castes have also progressed but not to the same extent.

Enforcement of Compulsion in 1958

Let us now examine the situation as regards the enforcement of compulsory education in 1958. In 1958, only 24 of the total number of 196 boys of the age-group 7-11, that is about 12 per cent, did not attend school. This percentage was over 50 in 1943. Scrutinising the cases of the defaulters in 1958, one finds that ten of them belonged to Mahars (now Nava Boudhas) and five to partially settled communities like Kaikadis, Vadars and Dhangars. The default of the latter is explained by the unsettled character of the occupation of the father. But in the case of Mahars the reasons were just dire poverty and social neglect on

the part of the village. Education had made very little progress among these communities even after the introduction of compulsory education. From among the remaining households having 160 boys of the age-group 7-11, only nine did not join school; two of these nine were physically disabled, one mentally handicapped, and one a case of parental poverty and neglect; so that there were only five boys whom their parents could have sent to school but did not. Even at Kochalewadi the situation had vastly changed from that in 1943; all the 15 boys there in the age-group 7-11 attended the school at Kenjal. In short, the primary education of boys was now considered a "must" by large sections of the population in Gulumb.

The situation as regards girls' education was however different. Definite progress was no doubt registered during the four or five years previous to 1958; the enrolment rose from 30 in 1954-55 to 157 in 1958-59. But about a third of them did not attend school; only their names were on the register. Out of the 189 girls of the age-group 7-11 only 55 per cent were in school. That is, girls' education was at the same stage in 1958 at which boys' education had been in 1943, fifteen years ago. The default was of course the largest in the economically and socially backward sections of the population. For instance, there was only one girl from the Mahars (Nava Boudhas) in the school. Therefore the realisation of the objective of universal education was still rather remote. Nevertheless, girls' education was no doubt on the move and considering the rapid pace of the recent past one would expect a much shorter period than 15 years for girls to achieve the same progress in education as boys in the near future.

Greater Awareness of Education

The principal objective of the introduction of compulsion was to make primary education up to the fourth standard universal. We observed above that it was fairly effective in its operation in 1958 so far as the boys were concerned. This led to a spread of literacy and primary education in the village. But this was not all. There was now a far greater awareness of education (apart from mere literacy) than in 1943. This is seen from the following breakdown of the educands of Gulumb in 1943 and 1958 by standards

reached in school.⁶ In 1943, only seven boys had progressed beyond the fifth standard and there was none who had reached the

<i>Standard</i>	<i>Boys in 1943</i>	<i>Percentage</i>	<i>Boys in 1958</i>	<i>Percentage</i>
I to IV	70	67.0	165	59.2
V	14	15.4	39	14.0
VI and VII	7	7.6	40	14.3
High school	—		35	12.5
Total	91		279	

high school stage. In 1958, 75 boys, which is more than one-fourth of 279 educands, were schooling in standard VI or above.⁷ Moreover, 35 of them, i.e. one-eighth of the total number of educands, were studying in a high school or in higher institutions. Out of these 35, one was doing radio technology in Bombay and another was in the Military Academy at Dehra Dun and the remaining 33 were in high school—6 in Surur, 17 in Wai, 7 in Bombay and 3 at other places. The nearest high school was at Surur, three miles away from Gulumb, and had only been recently started. Many of them joined the much older high school at Wai which is ten miles away from Gulumb. Naturally they could not get there every day; so they lived in Wai and managed their own cooking. They were determined to have high school education.

It is interesting to have a look at the caste composition of the 35 high school boys of 1958; 8 of them were Brahmins, 20 were Marathas (farmers), 3 were Dhangars (blanket-makers), 2 Kasars (bangle-sellers), one a Mahar (Nava Boudha) and one a Mang (rope-maker). So, although the advance of education was still confined to the traditionally advanced communities it was to some extent beginning to spread towards the backward communities.

Education of Girls in 1958

Let us now investigate the progress of education of girls. It was observed above that the enrolment of girls in 1958 was com-

⁶ See footnote 4 *supra*.

⁷ The liberal policy as regards fees, mentioned earlier, must have been one of the factors underlying this advance.

parable to the enrolment of boys in 1943. Analysing the figures by standards, however, it is found that the advance of education among girls was not very fast. Only a few girls had advanced

Standard	Boys in 1943	Percentage	Girls in 1958	Percentage
I to IV	70	77.0	107	92.2
V	14	23.0	2	7.8
VI	2		3	
VII	5		4	
Total	91		116	

beyond the junior primary course of the first four standards in 1958. It is true that the education of girls had clearly got going from 1954-55. But there is no doubt that the tendency to withdraw older girls from school persisted to a very large extent in 1958. Even then there was definite progress over the situation 15 years ago when only six girls attended school regularly and all of them except one were either in the infant class or in standard I. At that time, in 1943, there was only one exception to this general rule. This was a daughter from a forward-looking Muslim family who believed in educating their girls as well as their boys. This girl, their eldest daughter, was in standard VII in 1943—i.e. she had already been in school for seven years, which was very exceptional indeed in those days. Now in 1958 there were nine girls in standards V to VII: three Brahmins, four Marathas (farmers), one Sonar (goldsmith) and one Dhangar (blanket-maker). Of the four girls in standard VII, one was a daughter of a Brahmin teacher in the Gulumb school and two had their fathers working in mills in Bombay. So in 1958 the education of girls in the real sense was still very selective in Gulumb and had only just begun to move. The large enrolment in the primary classes had not yet effectively advanced to the higher standards.

Education among the Adult Population in 1958

We shall now consider the changes that the spread of education had brought about in the adult population, those of age 18 years and above. While only 250 men above 18 had some sort of schooling in 1943, there were 456 such men in 1958.^a Not only

^a See footnote 4 *supra*.

were the latter larger in number and in proportion to the total population than the former (56.9 per cent as against 35.8 per cent) but they were also educationally more advanced. This is seen from the following figures. In 1943, those who had completed standard VII were only 24, less than 10 per cent, and only

STANDARD-WISE CLASSIFICATION OF MEN

<i>Standard completed</i>	<i>Men in 1943</i>	<i>Percentage</i>	<i>Men in 1958</i>	<i>Percentage</i>
I	10	4.0	10	2.2
II	42	16.8	48	10.5
III	42	16.8	61	13.4
IV	69	27.6	114	25.0
V	41	16.4	64	14.0
VI	22	8.8	50	11.0
VII	22	8.8	74	16.2
High School	2	0.8	35	7.7
Total	250	100.0	456	100.0

2 of these 24, both Brahmins, had higher attainments. Even they had not progressed beyond standards VIII and IX, respectively. Conditions had changed during 15 years. In 1958, out of all the men who had gone through school, 109, i.e. nearly 25 per cent, had completed standard VII and 35 of these 109 had higher attainments. The caste composition of the 35 men was as follows : 5 Brahmins, 15 Marathas (farmers), 5 Dhangars, 3 Mahars, 2 Muslims and a Sonar, a Nhavi (barbar), a Shimpi (tailor), a Koli (water-carrier) and a Mang. The following breakdown of these 35 by stage of educational attainment is instructive. This means that 15 of these 35 had definitely attained a higher stage in education.

Standard VIII	8
" IX	4
" X	3
" XI	5
Matriculates (SSC)	10
Intermediate (in college)	1
Teacher training (after Standard VII)	3
Teacher training (after SSC)	1
Total	35

Effect of Education on Occupations

It is instructive to examine how and to what extent education has changed the occupations of the educated in Gulumb. Education up to standard IV in a primary school makes a person literate with a fair proficiency in the three Rs. Anything further may be considered a real educational attainment, especially if he completes standard VII. For many decades, the passing of the public examination at the end of standard VII was considered an adequate qualification to join the subordinate public services like the primary school teacher, the talathi (or the village record-keeper), the surveyor, or other similar jobs. In fact, till 1905 this examination was called a public service examination of some sort or the other. After 1905, it was called the vernacular final examination, and in 1940 it was renamed as the primary school certificate (PSC) examination. After the popular ministries came to power in 1937, and especially after independence, much thought was given to the content of primary education. Under the influence of Gandhiji's ideas, education was sought to be oriented towards life in the village. Basic education came into prominence. Syllabuses were revised and many primary schools were converted into basic schools or Jeevan Shikshan Mandirs. The Gulumb school became basic in 1956-57 with carpentry and paper-craft as the basic crafts. It can be safely assumed, however, that in the period previous to 1958 the PSC examination was still looked upon in Gulumb and elsewhere as an opening to the lower governmental or similar services.

It was observed earlier that in 1943 there were 24 men who had passed the PSC examination. Out of them 15 were still living in the village and following the traditional occupations. Ten continued as farmers; one, a Dhangar, continued to weave indigenous blankets; one, a Brahmin, continued to follow his traditional occupation in the village; two others were Marathas of whom one started a grocer's shop and the other worked on a sewing machine as a tailor; and finally the last one, a Brahmin, engaged himself in small trade in agricultural commodities. Although education may have played an indirect role in the case of the last three in their opening out on new lines, many others in the village without similar educational attainment were also following

similar occupations. So in the case of the 15 who stayed in Gulumb the passing of the PSC examination had not made much difference in their occupations. Nine others who moved out of Gulumb were in Bombay : four were working in textile mills (two Mahars, a Maratha and a Brahmin); one, a Maratha, was doing odd jobs, including physical labour, in a grain-dealer's shop; a Nhavi was working as a barbar; and finally, two Marathas had become policemen. The passing of the PSC examination was perhaps directly useful in the case of the last two; in the case of others it may have played only an indirect role.

In 1958, more than a hundred men had completed standard VII (i.e. the PSC level) and 35 had progressed further. Instead of following all of them, obviously a very elaborate procedure, we shall follow only the latter 35 in their occupations. The biggest group among them is that of 10 primary teachers; 3 of them came to Gulumb from other places, and 7 belonged to Gulumb. Out of the seven from Gulumb two were working in the Gulumb school and the remaining five in various other villages; three of these seven were Dhangars, and the other four comprised a Maratha, a Mahar, a Koli and a Muslim. From the remaining 25 there were seven who lived in Gulumb and pursued more or less their traditional occupations. Three, who were sons of Maratha farmers, continued farming but did not like it over much; another three, a Brahmin, a Nhavi and a Muslim, followed their ancestral occupations; and the seventh, a Dhangar, was running a shop. This accounts for 17 out of the 35 who had attained high school education. The remaining 18 had gone out for jobs : 11 were in Bombay and the others at Poona, Wai and Kolhapur. Classified by occupation, they were : textile mill workers 3; hotel worker 1; shopkeepers 4; bus conductor 1; clerks 4; shop assistant 1; peons 2; army 1; jail warder 1. For many of these their high school education must have been relevant to their present employment.

The same analysis for 1958 for women above the age of 18 years, who had gone through school, gave the following figures. It is clear that this compares favourably with the men in 1943, since the percentage of women completing standard VII in 1958 in Gulumb was 11.6 while that of men in 1943 had been 9.6. Amongst the 14 women, one was a school teacher who had come

Standard	Number of women in 1958	Percentage
I	7	5.8
II	33	27.3
III	24	19.8
IV	36	29.7
V	3	2.5
VI	4	3.3
VII	11	9.1
High School	3	2.5
Total	121	100.0

from outside to the Gulumb school. Out of the remaining, only two were from Gulumb; the others were married into Gulumb and therefore had their education elsewhere. One of them was the wife of a school teacher who was employed in Gulumb while she herself worked as a teacher at another place. Leaving out the two school teachers, from amongst the remaining 12 only one was doing a job, as a clerk in Bombay. The remaining all stayed at home working in the house: six in Gulumb, two in Bombay, two in Poona and one in Wai. We can therefore say that the education of women had affected very little their occupations in Gulumb in 1958.

Looking at the educational progress in the period from survey to resurvey, one is left in no doubt about the changes brought about by the expansion of education. This had inevitably brought about a remarkable change in the village elite, both in its strength and its composition, and consequently considerable shifts in the cultural life of the village.

This was the picture in 1958, with a promise of further progress in the future. What is the situation today, in 1966-67? To see the progress of the last eight years, a rapid count was taken recently; the salient features of this investigation are briefly described below.

The Educational Situation in 1966-67

In 1966-67, the population had increased further; there were now 1,470 men and 1,414 women^a, and out of them 971 men and 449 women were literate. This means that during the eight years from 1958-59 to 1966-67 male and female literacy increased from

^a See footnote 4 *supra*.

53.2 per cent to 66.1 per cent and from 15.9 per cent to 31.8 per cent respectively. Analysing by caste, one finds that illiteracy is more prevalent in the scheduled castes (mainly Mahars or Nava Boudhas) and in the backward class caste-groups (Kaikadis, Vadars, etc.). But every caste-group has made progress during the eight-year period. If we examine literacy in the two important age-groups, 8-17 and 18-32, and compare it with that in 1958-59, we have the following figures.

Age group	Male literacy (per cent)		Female literacy (per cent)	
	1958	1966	1958	1966
8—17	90.9	96.8	48.4	76.6
18—32	80.2	87.4	20.7	32.6

Literacy among boys in the age-group 8-17 shows that the spread of education has almost achieved its objective of complete literacy; there are only 11 illiterate boys in the total number of 344 boys of this age-group. Looking further into their cases, we find that these 11 consist of 2 Kaikadis, 3 Vadars, 2 Marathas and a Koli, a Mahar (Nava Boudha), a Dhangar and a Ramoshi. One of them is dumb. The three Vadars pleaded that they did not know the Marathi language and hence did not join school (which was merely an excuse for neglect). The others did not join school either because of poverty or neglect. Four of them are working, one in Bombay and the other three as farm servants in Gulumb.

A substantial increase in literacy has also been registered among the girls in this age-group, from 48.4 per cent in 1958 to 76.6 per cent in 1966. Thus an increase of more than three points per year has taken place during these eight years, a very rapid pace indeed. Scrutinising the case of the 79 illiterate girls in this age-group we have the following figures (next page), which show that the sections of society where female literacy is slow to penetrate are precisely the socially and economically backward communities.

The adult age-group 18-32 has also progressed but not as rapidly as was expected. While men are on their way to achieving full literacy, women are still appreciably behind. It is true that most of the women in this age-group are married into Gulumb. If it is

<i>Caste group</i>	<i>Number of girls in age-group 8-17</i>	<i>Number of illiterates among them</i>	<i>Percentage of illiteracy</i>
Marathas	264	51	19.2
Scheduled castes	27	11	40.7
Backward class castes	17	13	76.5
Other castes	29	4	13.8
Total	337	79	23.4

assumed however that the progress of literacy among the girls of age 8-17 observed above is a general phenomenon in the surrounding rural areas and not merely confined to Gulumb, there is no doubt that literacy among women in the age-group 18-32 will show a comparable rise in the next ten years.

Progress of the Gulumb School, 1958-66

This progress in literacy, especially in the age-group 8-17, has to be viewed against the background of the progress of the Gulumb school. The enrolment and attendance figures for the period 1958-59 to 1965-66 are given below. So, except for the natural

<i>Year</i>	<i>Enrolment</i>		<i>Average daily attendance</i>	<i>Teachers</i>	
	<i>Boys</i>	<i>Girls</i>	<i>Total</i>	<i>Total</i>	<i>Trained</i>
1958-59	245	157	402	290	9
1959-60	237	165	402	278	9
1960-61	252	150	402	293	9
1961-62	252	142	394	314	9
1962-63	250	119	369	327	11
1963-64	270	144	414	329	11
1964-65	275	142	417	351	10
1965-66	270	149	419	352	9

increase in population, the enrolment in school appears to have stabilised (around the figure of 270 for boys and 150 for girls). Attendance has greatly improved during this period, which is an indication that the people in Gulumb are now convinced about the usefulness of education to their children and are more watchful about it.

The enrolment of girls, compared to that of boys, is still rather low and has not improved during the last eight years. This is not merely due to apathy on the part of many parents towards

the education of their daughters, which no doubt still exists to a considerable extent. The smaller number of girls in the school relative to the boys is also due to their early withdrawal from school as they grow older. This is seen from the following figures of the pupils in the school, standardwise, for the year 1965-66.

<i>Standard</i>	<i>Boys</i>	<i>Girls</i>
I	30	26
II	34	39
III	56	30
IV	52	22
V	35	24
VI	36	7
VII	27	1

The same fact is also observed from the following analysis of boys and girls of age group 8-17 for 1966 classified under the categories: (i) too 'young' to join school (according to the parent), (ii) attending school, (iii) withdrawn from school, and (iv) never joined school. In the case of girls, about one-fourth of them were not sent to the school at all. But at least an equal

	<i>Too 'young' to go to school</i>	<i>Attending school</i>	<i>With- drawn</i>	<i>Never joined school</i>	<i>Total</i>
Boys	—	298	35	11	344
Girls	4	149	105	79	337

number was withdrawn early from the school. This means that even those parents who send their daughters to school are still not very enthusiastic about educating them beyond standard IV or V. They would rather see them married off early enough.

Compulsory Education in 1966-67

What is the situation in 1966-67 as regards compulsory education? Out of 191 boys of age-group 7-11, only four did not attend school. One of them, a Maratha, is seven years old and his parents think that he is still too young to go to school.

Another, a Dhangar, is nine and his family has neglected his education. The remaining two are Vadar boys aged eight and ten. The excuse given by their parents was that they did not know Marathi; yet there are six other Vadar boys of the same age-group in the school! But the important point to note is that during the eight-year period compulsory education has moved closer to its objective of total enrolment. Almost everyone in the village now accepts that his son has to join school.

In the case of the girls, however, Gulumb is still away from realising the objective of universal primary education. Of the 170 girls of age-group 7-11 in 1966, only 132 are in school, which is 77.6 per cent. There is no doubt an increase from the 55 per cent enrolment in this age-group in 1958, but it is clear that further efforts are necessary. Investigating the cases of the 38 girls of this age-group who are not in school we have the following figures by caste-groups.

<i>Caste group</i>	<i>Total number of girls in age group 7-11</i>	<i>Number not in school</i>	<i>Perce</i>
Marathas	129	22	17.1
Backward class castes	9	8	88.9
Scheduled castes	15	4	26.7
Other castes	17	4	23.5
Total	170	38	22.4

So it is the backward class group, Vadars and Kaikadis, who are least reconciled to the education of their daughters. Classifying these 38 girls by the reasons given by their parents for not enrolling them in school, it was found that one of them was blind, one was mentally handicapped, four were considered 'too young' to go to school, 31 were required to help the family in household work or tending cattle, and one Vadar was not enrolled as her parents (and they gave it as their special reason) did not know Marathi! It seems that many among the socially and economically backward sections of Gulumb have not yet accepted that they must educate their daughters along with their sons. This realisation may very well come to them during the next few years.

It should be mentioned here that a register of children of this age-group in the village used to be maintained by the teacher ever since the introduction of compulsory education and it used to be brought up to date every year. But this practice has been discontinued for the last four years.

Spread and Deepening of Education

During these eight years not only literacy but education as such has also increased. This can be seen from the following analysis of educands in 1966 by the stage of their educational attainment—the standard they are studying in at school. The

<i>Standard</i>	<i>Boys</i>	<i>Percentage</i>	<i>Girls</i>	<i>Percentage</i>
I to IV	176	44.4	137	68.8
V to VII	123	31.1	44	22.1
High school	93	23.5	18	9.1
Beyond SSCE	4	1.0	—	—
Total	396	100.0	199	100.0

number of educands, both boys and girls, have not only increased in number from 1958 to 1966 but also relative to the respective populations : they are respectively 26.9 per cent and 14.1 per cent in 1966 as against 21.4 per cent and 9.3 per cent in 1958. While there were 35 boys (12.5 per cent of the educands) in high school in 1958 there are now 93 in high school, almost one-fourth of the educands. Only 13 of them are living in Bombay and other towns; the remaining 80 receive high school education in Surur or in Wai. Four boys are continuing their education after passing the SSC examination; three of them are Marathas, two are in arts colleges in Wai and Satara, one in the engineering college in Poona; and one, a Brahmin, is in college in Poona.

Compared to boys, girls have not yet progressed to the higher standards in school to this extent. Most of them are withdrawn from school as they grow up. But some have managed to climb the higher reaches of the educational ladder. There were no girls in high school in 1958; now there are 16 girls in high school, four in Bombay, two in other towns and ten in Gulumb. Among

them are a Brahmin, a Sonar and a Kasar; the rest are all Marathas. It should be remembered that there is no high school at Gulumb; so those in Gulumb walk for this purpose to Surur two and a half to three miles away.

The desire for high school education has therefore taken firm root in Gulumb, especially among boys. The EBC concessions introduced in 1958, described earlier when considering fees, have no doubt played a considerable role in this development. The demand for places in high school has greatly increased with the result that the high school at Surur is already finding it difficult to accommodate all the new entrants from Gulumb and other surrounding villages and there is a proposal that high school classes starting from standard VIII should be started in the Gulumb school. Among other things this will necessitate additional classrooms. If this and other difficulties are met, Gulumb may soon provide high school education.

Let us now examine the educational attainment of men and women who have passed through school and are no longer receiving education. Before we do this, let us examine the situation as regards adult education in Gulumb. After independence eradication of adult illiteracy formed an important part of the government's educational programme. The concept of adult literacy was soon widened into what was named social education of the adults. Literacy and social education classes are run mainly through private initiative and efforts, but are coordinated and assisted financially by the government. After 1960, mass campaigns (called Grama Shikshan Mohim) were started for making the whole adult population in a village literate within a specified period. The campaign was successful in some villages. It appears, however, that in Gulumb adult education was only fitfully attempted in the past. Although adult classes are said to have been in existence for a few years before 1966, in that year only ten men and six women were recorded as literates without having had formal schooling. At the same time it was reported that in the home literacy classes conducted by school students under the guidance of their teachers there were 8 men and 22 women in 1965 and 9 men and 104 women in 1966. If this effort persists, the backlog of illiteracy among adults (especially women) should soon disappear.

Returning to the men and women (above 18 years of age) in 1966 who had had schooling of some sort, there are 565 such men and 244 women in Gulumb in 1966. Classifying them by standards attained in school we obtain the following figures. Comparing them with the figures for 1958 it is evident that a greater proportion of both men and women have achieved higher educational attainments in 1966. No less than 203 men have now passed at least standard VII; 106 of them have gone beyond this

<i>Standard completed</i>	<i>Men</i>		<i>Women</i>	
	Number	Per cent	Number	Per cent
I to IV	225	39.8	156	63.9
V to VI	137	24.2	59	24.2
Passed VII	97	17.2	24	9.8
High school or training college, etc.	74	13.1	4	1.6
Passed SSCE	32	5.7	1	0.4
Total	565	100.0	244	100.0

stage and 32 have passed the SSC examination. In 1958 only three men in Gulumb had passed the SSC examination. In the case of women, while in 1958 only 14 women had completed standard VII in 1966 there are 29 such women now, and one of them has passed the SSC examination. The progress in both cases during the last eight years has been much faster than in the previous years.

Occupational Change

What is the occupational distribution of these men and women who possess higher educational attainments? For the 1958 data, we considered for this purpose all those men (35 in number) who had some sort of education in high school or in other institutions after standard VII. Now in 1966 there are 106 such men; so we shall confine our attention only to those 32 amongst them who have passed the SSC examination. They belong to all castes: 3 Brahmins, 15 Marathas, 6 Dhangars, 3 Mangs and a Nava Boudha, a Kasar, a Sonar, a Koli and a Muslim. This means that high school education has spread among all sections

of the village society in Gulumb. Only one of them continues to live in Gulumb working on his farm ! The rest are all scattered elsewhere. Classified by occupation they are : 7 primary and 1 secondary school teachers ; 9 clerks (or they are in similar positions in government or private offices) ; 1 in the navy and 2 in the air force, 2 policemen; 3 in radio concerns; 1 in a textile mill; 1 in an automobile tyre company; 2 bus conductors in the BEST organisation; and 1 running his own restaurant. All the last ten are in Bombay. The remaining one is unemployed and seeking a suitable job. There is now hardly any doubt that the progress of education is leading young men from Gulumb into the cities and into urban occupations. It should be remembered however that all these men are much more educated than the group of 35 whom we considered for 1958, only three of whom had passed the SSC examination.

Out of the 29 women in Gulumb in 1966, who have passed the seventh standard, three have spent a year or two in high school, one has completed a two-year training course as primary teacher, and one has passed the SSC examination. There are 7 Brahmins (including the one who has done the SSCE), 15 Marathas (including the one who has done teacher-training), 4 Dhangars, 2 Muslims, and a Koli. Only three of them, two Brahmins and one Maratha, are serving elsewhere. One is a primary school teacher in Wai; the other two are in other taluka towns, one (who has passed the SSCE) is a clerk in a family planning centre, and the third is a clerk in a social welfare centre. The remaining are all at home (21 in Gulumb and 6 in Bombay or elsewhere) occupied in domestic work or as helping hands in farming and allied occupations. All the three women employed in service are married out. From among the remaining 26 women, 19 are married into Gulumb. But the remaining eight are Gulumb girls, all between 15 and 18 years of age, waiting to be married. Therefore, in 1966, women's education had not yet spread out to all sections of the population in Gulumb, nor had it much affected their traditional rural occupations. From what we have observed above in the case of men, the passing of the SSC examination now appears to be the 'critical' stage for bringing about change and diversification in occupations. The progress of education among women has begun only recently in Gulumb.

Perhaps when more women have more education (there was only one with the SSC in 1966) there will also be changes in their occupational structure.

There is no doubt, however, that the educational progress already attained has considerably affected the traditional pattern of life and human relationships in rural households and in village society.

WASTAGE AND STAGNATION IN COLLEGE EDUCATION

PART I : ARTS STUDENTS

Introduction

Much has been said during the last few years in the press and from the platform about wastage and stagnation in education. The comments have generally been provoked by the large number of failures in the school leaving and in many examinations at the university stage. In order to get some idea about the magnitude of the problem investigations were planned on a modest scale based on students of Fergusson College, Poona. In this part the method of investigation followed by us is described and the broad results about wastage among arts students are summarised.

A three-year entry of freshmen to Fergusson College was considered for this purpose, and the careers of all the students who joined the college in the first year class, in arts or science, in 1949, 1950 and 1951, were followed until they passed out after taking the B.A. or B.Sc. degree, or left Fergusson College to join some other college, course or university or simply dropped out. A period of eight years was considered adequate for this purpose as students who did not succeed in getting the first degree within eight years of their joining the first year class had a very remote chance of doing so after that period.

Information was collected from the college records, the main sources being the admission forms which are filled in by all students every year, the results of the Poona University examinations and the register of leaving certificates of the college. The students who left Fergusson College to join another local college were followed up with the help of the records of the local colleges, and

the results of the examinations held by the Poona University. In the case of those who joined colleges outside Poona but affiliated to the Poona University, attempts were made to trace them in the examination results of the university. However, we did not try to follow up students who joined other universities as that would have extended the scope of the inquiry beyond the modest scale on which it was planned. It should be emphasised that no questionnaire was issued and no interviews were taken. The relevant information available in the sources mentioned above alone was collected and it was recorded on cards prepared for this purpose. It was then put on punched cards for analysis.

Some Explanations

It is perhaps necessary to explain why the period 1949-51 was selected. It may be recalled that the new secondary school certificate (SSC) examination of the Bombay state replaced the old matriculation examination of the Bombay University in the year 1949. The Poona University was established in 1948-49, and consequently students who joined the college in or after 1949 could ordinarily be followed in the records of the college and the university locally. We stopped with the 1951 entrants as this just gave us the period of eight years (mentioned above) up to 1959, when the inquiry was completed.

Before presenting our results it may be desirable to describe briefly some features of Fergusson College relevant to these investigations. This college is one of the oldest colleges in Poona and it prepares students for a degree in arts or science. For the last many years its total strength has been between 1,800 and 1,950, of which a little less than three-fourths study science. The performance at the university examinations is usually higher than the average performance in the university as a whole. The examination at the end of the first year which was till recently conducted by the colleges concerned was said to have been stiffer in this college than in most other colleges. Selection is exercised at the time of admitting students to the first year class, especially to the science class, with the result that students joining Fergusson College have, on an average, a better performance at the SSC examination than those joining most other arts or science

colleges in the Poona University. (This is reflected in the figures quoted in Table 3.)

We are therefore dealing here with a subgroup which is not entirely representative of the main group of college students in the Poona University. Even so it is felt that the results of these investigations deserve a careful scrutiny and should throw much light on the wastage in college education in this part of the country.

It should be helpful for understanding if we briefly describe the structure of the degree course in arts or science in the Poona University during the period 1949-59. A student was eligible for admission to a college affiliated to the Poona University provided he had passed the SSC examination (for which the passing percentage was 35) with English as one of the subjects, or any other equivalent qualifying examination. The degree course was of four years which divided itself into two natural stages of two years each. The examination at the end of the first year was conducted by the college and at the end of the second year the first university examination, the intermediate examination in arts or science, was held. This examination was a qualifying examination for those who wished to take law, engineering, medicine or Ayurved. After passing the intermediate examination, students who wanted to continue the arts or science course were given instruction for two more years at the end of which period they appeared for the degree examination (B.A. or B.Sc.).

Table 1 gives the number of fresh entrants to the first year class during the three-year period 1949-51. As it is not our objective to study the trend, and for which in any case a three-year

Table 1

NUMBER OF ENTRANTS TO THE FIRST YEAR CLASS OF THE COLLEGE
DURING 1949-51

<i>Class/Year</i>	<i>1949</i>	<i>1950</i>	<i>1951</i>	<i>Total</i>
Arts	141	156	149	446
Science	529	549	556	1,634
Total	670	705	705	2,080

period would be too short, the data are pooled before analysing it. This will also smooth out any special conditions which may have been operating in any single year.

How the Students Fared

Table 2 which is the main table of the inquiry shows how the students fared, and how they left the college. The vertical classification shows how and/or when the student left the college. Categories (1), (2) and (3) are self-explanatory. Category (4) consists of students who left for taking degree courses in law, commerce, Ayurved or agriculture in the colleges of the Poona

Table 2

PERFORMANCE OF ENTRANTS

	<i>Arts</i>		<i>Science</i>	
	<i>No.</i>		<i>No.</i>	<i>%</i>
1. Completed B.A. or B.Sc. course in Poona University (PU)	203	45.5	393	24.0
2. Joined engineering course in PU			209	12.8
3. Joined medical course in PU			98	6.0
4. Joined other degree courses in PU	12	2.7	67	4.1
5. (1)+(2)+(3)+(4)	215	48.2	767	46.9
6. Joined other universities	38	8.5	211	12.9
7. Joined other nondegree courses			43	2.6
8. Left without passing first year examination	65	14.6	235	14.4
9. Passed the first year examination but left without passing intermediate examination	70	15.7	169	10.3
10. Left without passing intermediate = (8)+(9)	135	30.3	404	24.7
11. Passed intermediate but left without joining the degree class	29	6.5	152	9.3
12. Joined the degree class but left without passing	29	6.5	57	3.5
13. (11)+(12)	58	13.0	209	12.8
14. (10)+(13)	193	43.3	613	37.5
Total (5)+(6)+(7)+(14)	446	100.0	1,634	100.0

University. In category (6) are included those who left and joined another university either to continue arts or science courses, or to take a professional course such as engineering, medicine or law. The students who left the college without taking a degree to join nondegree courses such as the diploma in engineering, etc. or to take up another career such as defence services, etc. are included in category (7). Categories (8), (9), (11) and (12) consist of students who left Fergusson College at various stages in their college career and who did not join, at least immediately, another university. Their results could not be traced in the records of examination results of the Poona University beyond the stages mentioned. Category (14) will therefore form the main bulk of wastage.

Table 3 records the distribution of students by sex, by the

Table 3

MARKS AT THE SSC EXAMINATION

		<i>Marks (per cent)</i>									
		35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84 blank
Arts											
Men		9	36	69	53	29	13	8	9	2	— 27
Women		1	21	39	44	27	21	10	6	2	— 20
Total		10	57	108	97	56	34	18	15	4	— 47
Science											
Men		3	42	226	307	277	235	179	110	37	5 60
Women		—	3	13	40	26	27	17	10	3	1 13
Total		3	45	239	347	303	262	196	120	40	6 73
		Total					Average				
Arts											
Men		255					51.06				
Women		191					53.43				
Total		446					52.08				
Science											
Men		1,481					57.70				
Women		153					58.18				
Total		1,634					57.74				

percentage of marks secured at the SSC examination. The blanks account for (1) those who were 'exempted' in certain subjects at the time of their previous failure at the SSC examination and, as a result, whose total marks were not recorded in the results; and (2) those who had passed other qualifying examinations such as the Cambridge school certificate. Women students form more than 40 per cent of students joining the arts class and their number is also greater than the number of women students joining science. The table also brings out that students joining Fergusson College, especially in the science class, have a high average of marks at the SSC examination and that women students have higher average marks than men students both in arts and science classes.

Definition of Wastage

It is also necessary at this stage to define the term wastage as applied to college education. By wastage we shall mean all those students who joined college in the first year class but for some reason or the other could not or did not pursue college education to obtain the first degree in arts, science, or any professional course. While sounding the customary warning against identifying wastage in college education with failure in life, we shall clarify certain points about wastage by examples. X who leaves college without taking a degree to join defence services is considered a case of wastage. Y, a woman student, who joins college at the desire of her parents to pursue liberal cultural education before they find a suitable match for her, contributes to wastage if she leaves college before completing a degree course on account of marriage although her few years in college may have helped her parents to secure a good young man for her. The case of Z who could not get admission to the diploma course in engineering after SSC examination but could do so after making a good grade at the intermediate science examination, or simply by marking time in college, is perhaps debatable. But as it is not necessary for him to join a college to get admission to the diploma course, he amounts to wastage according to the definition given above.

Preliminary Comments on Table 2

It may perhaps be helpful to make preliminary comments on those categories in Table 2 which contribute to wastage, confining our observations to entry in arts. Category (4) in the case of arts students consists of those who joined law after passing the intermediate arts examination. The criterion of getting the first degree will be applied to them. The cases under category (6), students who joined some other university were difficult to decide. The methods followed in estimating wastage amongst them will be described below. Students falling under the consolidated item (14) are of two kinds, (a) those who left Fergusson College without taking a leaving certificate; and (b) those who left taking a leaving certificate. As it is not possible for a student to join a college in this or any other university without producing a leaving certificate of the college previously attended, students coming under (14a) have been wholly considered as contributing to wastage. Students under (14b) have not joined another university, at least in the first instance. Some of them may have joined another college in the Poona University and a few of them may have then gone over to other universities but the number of such cases would be very small.

Estimation of Wastage

We shall now try to build up an estimate of wastage. The second column of Table 2 summarises how 446 students who joined the first year in arts during 1949-51 fared. Before considering the cases of wastage let us consider those who left the college to take up another course or who joined other universities.

Out of 12 students who joined law, 11 completed the course and one failed to do so. The cards of the 38 students (category (6) of Table 2) who joined other universities were carefully scrutinised. Taking all the available information about each one of the cases into consideration it was thought that not more than 27 of them would be able to complete a similar arts course in their new university. From amongst 193 students (see category (14) Table 2) who left the college at various stages 43 had taken their leaving certificates. They certainly did not immediately join another university as there was no record to that

effect in the register of leaving certificates. Some of them joined other arts colleges in the Poona University but they did not clear the B.A. examination according to the records of examination results of the Poona University. As mentioned above, it is possible that a small fraction may have migrated to other universities from their new colleges. Every card was therefore carefully gone through and it was thought that not more than five from these 43 may have joined another university and successfully completed a similar arts course. Hence a reasonable upper estimate of those who should have obtained the first degree can be put down as $203+11+27+5=246$. The amount of wastage therefore would not be less than 200 which works out as $200/446=44.8$ per cent, or 45 per cent approximately. It is necessary to allow for the factor of mortality. It is clear that the few students whose careers were snapped on account of premature death come under the cases of students who left the college without completing the degree course, there being no evidence in the college record about their deaths. Since the college students are a selected population, the normal mortality rates would not be applicable. After consulting the usual life-tables and also the special life-table used by the insurance companies (which are perhaps more relevant in this case) it was thought that not more than 2 per cent could be accounted for by this factor. So the estimate of wastage among arts students may be taken as 42.8 per cent or as $42.8/98=43.7$, or approximately 44 per cent of those who survived.

An alternative method adopted to estimate the wastage amongst the 38 students who joined other universities proceeds on the assumption that they form a representative group from amongst the total batch of 446. They are classified according to the stages at which they left the college to join other universities as follows :

Joined other universities (total)	38
During the first year	1
After the first year, but before the intermediate	20
After the intermediate	17

The remaining 408 students fared through the corresponding stages in colleges as follows :

Joined first year	408
Joined intermediate	323
Joined B.A. or law	244
Passed B.A. or law	214

Hence another estimate of those among 38 (joining other universities) who would succeed in completing the college course would be :

$$1 \times \frac{214}{408} + 20 \times \frac{214}{323} + 17 \times \frac{214}{244} = 29$$

approximately. This figure is not very different from the one arrived at above by actual scrutiny of the cards.

Analysis of Wastage

Table 4 analyses wastage as it occurred at various stages. For

Table 4

WASTAGE FIGURES BY DIFFERENT STAGES

Stage	Number of drops	Cumulative drops	Left over
1. Joined FY arts class	—	—	408
2. Left during the year	35	35	373
3. Left after failure at FY arts examination	30	65	343
4. Passed FY arts examination but left without appearing for intermediate arts examination	29	94	314
5. Left after failure at intermediate arts examination	41	135	273
6. Passed intermediate arts examination but left without appearing for the degree examination	41	176	232
7. Left after failure at the degree examination	18	194	214
8. Passed the degree examination	—	—	214

this purpose, for simplicity, all 193 cases in category (14) have been included under wastage; all 12 students who joined law have been assumed to have completed their course; and the 38 cases under category (6) have been excluded altogether from all further analysis. 15.9 per cent students were not able to proceed beyond the first year in the college and a further 17.2 per cent who proceeded further gave up the course without passing the intermediate examination. In all, 135 students out of 408, i.e. 33.1 per cent students were not able to complete the first stage of two years. From the remaining 273 who completed the first stage, 59 could not complete the second stage. The wastage in the second stage is therefore 14.5 per cent of the original entry, and it is 21.6 per cent of the students who could complete the first stage. If we confine ourselves to 244 students who joined the junior B.A. class (or law), the wastage at the second stage works out as 12.3 per cent.

We now proceed to classify the cases of wastage according to the following factors: (1) marks at the SSC examination (2) age, (3) sex, (4) caste, (5) schools (local or otherwise), (6) guardian's address, and (7) guardian's income.

SSC Examination Marks

The most important factor is the marks obtained by the student at the SSC examination. Table 5 classifies these 408 students by their percentage marks at the SSC examination, the cases of wastage being subdivided under: (1) those who dropped before passing the first year examination; (2) those who dropped after passing this examination but before passing the intermediate arts examination; and (3) those who dropped after passing the latter examination. It may be observed that a big drop has taken place during the first stage and that almost 70 per cent of the wastage cases gave up before passing the intermediate examination. Their proportion to the total wastage is nearly the same in all groups except in the groups below 40 per cent, and above 65 per cent marks at the SSC examination.

Viewed as a whole the cases of wastage outnumber those who completed the degree course among students scoring less than 50 per cent marks at the SSC examination after which the situa-

Table 5

WASTAGE BY THE SSC EXAMINATION MARKS

	Marks (per cent)										Total
	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	Blank	
1. Completed the course	2	11	42	53	35	19	12	13	3	25	215
2. Left before passing FY examination	5	14	24	10	2	6	—	—	—	4	65
3. Passed FY but left without passing intermediate	3	12	23	17	5	1	1	—	1	7	70
4. Left after intermediate	—	15	12	12	8	3	3	2	—	3	58
5. Wastage (2) + (3) + (4)	8	41	59	39	15	10	4	2	1	14	193
Total	10	52	101	92	50	29	16	15	4	39	408

tion is reversed and there is considerable improvement after 55 per cent marks. This can be briefly stated as follows :

(Wastage—per cent)

Below 50 per cent marks at the SSCE	66
Between 50 per cent and 55 per cent at the SSCE	42
Above 55 per cent at the SSCE	28

It may be noted that even among 19 students who had secured more than 70 per cent marks at the SSC examination there were a few students who could not (or did not) complete college education.

It may be pertinent to pose the question whether a certain minimum percentage other than the passing percentage of 35, at the SSC examination, could be considered necessary for admission to colleges. Table 5 shows that the chances of a student completing the college course definitely increase with the

increase in the marks obtained at the SSC examination. But there does not appear to be a well-defined barrier below which he cannot succeed at all. It is clear, however, that in the case of students who have less than 45 per cent marks at the SSC examination the chances of completing the college course are as low as one in five.

Age at Entry

Table 6 classifies the students by age at entry. This shows that wastage increases with the advance in age at entry. When the

Table 6
WASTAGE BY AGE AT ENTRY

	Age								Blank	Total
	15	16	17	18	19	20	21 & above			
1. Completed the course	26	50	53	45	14	11	16	—		215
2. Left before passing FY examination	—	3	11	13	10	11	15	2		65
3. Passed FY examination but left without passing inter examination	—	5	13	18	13	11	9	1		70
4. Left after intermediate	4	7	13	10	11	9	3	1		58
5. Wastage (2)+(3)+(4)	4	15	37	41	34	31	27	4		193
Total	30	65	90	86	48	42	43	4		408

age at entry is 19 or above wastage is as high as 70 per cent. This is to a certain extent accounted for by the lower marks at the SSC examination among students belonging to higher age-groups, as shown by the following figures :

Age at entry	15	16	17	18	19	20 and above
Average marks at the SSCE (per cent)	59.3	55.8	52.4	51.6	49.2	47.5

But even for the same marks at the SSC examination the wastage is much higher for students belonging to higher age-groups. Omitting cases of incomplete information (about age or marks, or both), we give below a short table which brings out this fact (the figure in each cell indicates the number of students who joined college and the next figure in bracket gives the cases of wastage amongst them):

Age at entry	Marks at the SSC Examination			
	35-50	50-60	60 and above	Total
15 to 17	56 (31)	70 (14)	49 (8)	175 (53)
18 and above	105 (75)	71 (39)	26 (18)	202 (132)
Total	161 (106)	141 (53)	75 (26)	377 (185)

Students with higher age at entry are generally those who are also retarded in school. Many of them have rural background, and belong to backward communities and poorer social strata. These factors and the fact that those who enter college at a late age get fewer years to complete their college education would be the underlying cause of this tendency. The last factor would also account for another tendency observed in Table 6, that the wastage among higher age-groups occurs at earlier stages.

Sex

Table 7 classifies wastage by sex. This shows that the wastage among men students is remarkably higher than among women

Table 7
WASTAGE BY SEX

	Men	Women	Total
1. Completed the course	119	96	215
2. Left before passing FY examination	50	15	65
3. Passed FY examination but left without passing intermediate	41	29	70
4. Left after intermediate	33	25	58
5. Wastage (2)+(3)+(4)	124	69	193
Total	243	165	408

students, the wastage percentage being 51 for men and 42 for women. The performance of women at the SSC examination was somewhat better than that of men the average marks being 53.4 and 51.1 per cent respectively. But this does not wholly account for the difference in wastage as shown by the following short table where students have been classified by sex and marks at the SSC examination (the figure in each cell gives the number of students who joined college and the next figure in the bracket gives the cases of wastage amongst them; blanks are excluded):

	<i>Marks at the SSC Examination</i>			
	35-50	50-60	60 and above	Total
Men	108(71)	78(34)	31(10)	217(115)
Women	55(37)	64(20)	33 (7)	152 (64)
Total	163(108)	142(54)	64(17)	369(179)

It seems therefore that women have done better than men among the higher-marks groups.

Women students on an average were also younger than men students. Their average ages at entry were 17.2 and 18.5 years respectively (see tabulation p. 109). To these two factors the following may be added. (1) The proportion of local students is very high—72 per cent among women students as against 53 per cent among men students. (2) Women students mostly belong to advanced communities. It seems these factors have offset the usually known adverse factor of early marriage so far as the overall wastage among women students is concerned. It may be that the last factor is now not so operatively effective to the extent it used to be a few decades back.

There is a comparable adverse factor for men. Many of them are subject to the pressure that they must start earning as soon as possible and those who do not show promise in college are urged to go in for some vocation or job. Women students who are not subject to such pressure can persist even after repeated failures. While the pressure of seeking employment on men would begin to operate from the early stages of education the

'marriage' effect on women should appear more clearly in later stages (or higher ages). The classification of wastage (Table 7) by the stages at which students gave up college education appears to confirm this. In the case of men students a higher proportion of wastage occurs during earlier stages, whereas the pattern of wastage amongst women is different and seems to be influenced by the 'marriage' effect which is submerged under other factors when total wastage is considered. The same effects can also be observed in the following table where wastage is analysed by sex, and age at entry (the figure in each cell gives the number of students and the next figure in bracket gives the cases of wastage; blanks are excluded):

	Age in years					Total
	15	16	17	18	19 and above	
Men	10(3)	27 (7)	41(15)	54(23)	107(72)	239(120)
Women	20(1)	38 (8)	49(22)	32(18)	26(20)	165 (69)
Total	30(4)	65(15)	90(37)	86(41)	133(82)	404(189)

Wastage is comparable for men and women for age-groups 15 and 16, it is higher among women for age-groups 17 onwards.

Caste

The analysis by caste, given in Table 8, shows two clear group-

Table 8

WASTAGE BY CASTE

Caste	Completed	Wastage			Grand total
	the course	Before Inter	After Inter	Total	
1. Brahmin	141	66	36	102	243
2. Maratha	25	23	9	32	57
3. C. K. Prabhu	15	8	3	11	26
4. Jain, Marwadi, Gujarati	10	8	4	12	22
5. Lingayat, Lewa Patil, Sonar, etc.	12	12	—	12	24
6. Mali, Sutar, etc.	5	5	1	6	11
7. Backward Classes	2	4	1	5	7
8. Others	5	9	4	13	18
Total	215	135	58	193	408

ings: the advanced communities of Brahmins and the CKP where the wastage is about 42 per cent and all other communities where it is 50 per cent or more. Even if we exclude the backward classes where it is the highest (where the figures are small), it is as high as 56 per cent among the Marathas. The analysis by the SSC examination marks had shown that although the average marks for the backward classes were the lowest there was not much difference in the average marks at the SSC examination for the other communities. But the average age at entry was definitely lower for advanced communities.

Schools

Table 9 gives analysis of wastage by the schools from which the students came—Poona schools or from schools in the mofus-

Table 9
WASTAGE BY SCHOOLS

	Schools			Total
	Local	Outside	Others	
1. Completed the course	130	81	4	215
2. Left before passing				
FY examination	40	25	—	65
3. Passed FY examination but left				
without passing intermediate	40	30	—	70
4. Left after intermediate	35	23	—	58
5. Wastage (2)+(3)+(4)	115	78	—	193
Total	245	159	4	408

sil. Wastage seems to be higher for students coming from mofus-sil schools. We have noticed that they have higher average marks at the SSC examination. Further analysis shows two other features. From the break-up by schools (local or nonlocal), and by the marks at the SSC examination, it was observed that it is in the higher-marks groups that the wastage among local students

is lower as compared with nonlocal students. Secondly, as stated above the proportion of women students among local students is much higher, and it is the better performance of local women students which substantially contributes to the higher proportion of successful local students. This can be seen from the figures given below: (the figure in each cell denotes the number of students and the next figure in the bracket gives the wastage amongst them; blanks are excluded):

	Local	Nonlocal	Total
Men	125 (66)	112(54)	237(120)
Women	118 (47)	45(22)	163 (69)
Total	243(113)	157(76)	400(189)

Other Factors

The analysis by guardian's address given in Table 10 seems to confirm the remarks made above. But it also shows that the

Table 10

WASTAGE BY GUARDIAN'S ADDRESS

Guardian's address	Completed the course	Wastage			Grand total
		Before Inter	After Inter	Total	
1. Local	134	84	37	121	255
2. Poona district	7	7	3	10	17
3. Satara	14	15	6	21	35
4. Nagar, Nasik, Sholapur	21	14	3	17	38
5. Kolhapur, Ratnagiri, Goa	4	2	1	3	7
6. Khandesh	15	6	2	8	23
7. Bombay, Kolaba, Thana	6	2	3	5	11
8. Other places	14	5	3	8	22
Total	215	135	58	193	408

pattern for the mofussil districts is not uniform, and that, in fact, students from some districts do much better than the local students.

In Table 11 is given the analysis by guardian's income. Al-

Table 11

WASTAGE BY GUARDIAN'S INCOME

<i>Income (Rs)</i>	<i>Completed the course</i>	<i>Wastage</i>			<i>Grand total</i>
		<i>Before Inter</i>	<i>After Inter</i>	<i>Total</i>	
1. Less than 1000	22	23	7	30	52
2. 1000 to 3000	84	53	23	76	160
3. 3000 to 10,000	82	35	20	55	137
4. above 10,000	19	8	3	11	30
5. Blank	8	16	5	21	29
Total	215	135	58	193	408

though the income figures given by students in their admission forms in the college are not always reliable, it may be permissible to draw the conclusion that the higher the income of the guardian the better is the chance for his ward to complete college education.

It would have been certainly very helpful to analyse the wastage figures by the guardian's occupation. But during the years 1949 and 1950 no record was kept of this important item in the college admission form and its absence has given rise to a disproportionate number of blanks in the wastage cases.

Estimating Wastage in Arts for the Poona University

We will now make an attempt to estimate the wastage amongst arts students in the Poona University as a whole, with the help of the percentage of failures at the intermediate and B.A. examinations in the relevant periods, and with the help of the proportion of students who dropped out at each stage, as observed in Fergusson College (see Tables 4 and 12).

Table 12

ANALYSIS OF STUDENTS APPEARING AT UNIVERSITY EXAMINATIONS,
IN ARTS

	Attempt	Appeared	Passed	Percentage of passes	Failures	Left
(A) Inter Arts	1	314	176	56.05	138	16
	2	122	73	59.84	49	12
	3	37	16	43.24	21	7
	4 or more	14	8	57.14	6	6
			273			41
(B) B.A.	1	220	163	74.09	57	6
	2	51	33	64.70	18	6
	3	12	3	25.00	9	4
	4 or more	5	4	80.00	1	1
			203			17

Let us start with 1,000 students joining the first year class in arts colleges. Then $86 (=1,000 \times 35/408)$ students leave college education without appearing for the college examination at the end of the first year. As the results of this examination were very liberal in most colleges, it is not unreasonable to suppose that 90 per cent of the remaining, i.e. $914 \times .90 = 823$ pass and join the intermediate arts class. From these $69 (=823 \times 29/343)$ would give up without appearing for the intermediate examination. We are thus left with 754 students who make one or more attempts to pass the intermediate examination. The percentage of passes at the successive intermediate examinations will be assumed to be uniformly 50, that being approximately the university average for the four years 1952-55. But a number of students give up after one or more attempts, and they may be estimated with the help of Table 12(A) constructed from the corresponding figures for the Fergusson College. The percentage of passes among the repeaters shows considerable fluctuations. It may be reasonable to suppose that it decreases with an increase in the number of attempts. However, because the numbers are small, it will be difficult to construct estimates for our purpose from

these figures and we shall assume that the percentage of passes remains the same as before, i.e. 50. Table 13(A) shows the estimates of passes, failures and drops at successive attempts, the last figure being estimated from the last two columns of Table 12(A). Thus we arrive at the estimated figure of 126 who leave the

Table 13

ESTIMATED FIGURES FOR STUDENTS APPEARING AT UNIVERSITY
EXAMINATIONS, IN ARTS IN THE POONA UNIVERSITY

	Attempt	Appeared	Passed	Percentage of passed	Failures	Left
(A) Inter Arts	1	754	378	50.00	376	44
	2	332	166	50.00	166	41
	3	125	63	50.00	62	21
	4	41	21	50.00	20	20
			628			126
(B) B.A.	1	534	361	68.00	173	18
	2	155	105	68.00	50	17
	3	33	22	68.00	11	5
	4	6	4	68.00	2	2
			492			42

course without passing the intermediate examination. So, out of 1,000 students entering the arts course, 628 complete the first stage of two years.

Out of these 628, 94 ($=628 \times 41/273$) give up college education without appearing for the B.A. examination leaving 534 to make one or more attempts at passing the B.A. examination. As in the case of the intermediate examination, it may be assumed that the results of the B.A. examination over the four years 1954-57 were uniform, i.e. equal to the four-year average of 68 per cent. Table 12(B) gives the figures of passes, failures, and drops, amongst the students of Fergusson College, at the B.A. examination in one or more attempts. Using its last two columns we

construct, as before, Table 13(B). This gives as an estimate of 42 who drop out without obtaining a degree. Thus 492 students from the initial entry of 1,000 succeed in completing their college education and 508 are not able to do so. The wastage is almost 51 per cent. (The effect of mortality can be considered in this case as well. It should be borne in mind, however, that several assumptions have been made in arriving at this figure because of the lack of relevant information.) Table 14 summarises the figures obtained in the last two paragraphs.

Table 14

ESTIMATED WASTAGE AT SUCCESSIVE STAGES, IN ARTS
IN THE POONA UNIVERSITY

	<i>Drops</i>	<i>Total drops</i>	<i>Remaining</i>
1. Entry into FY class	—	—	1,000
2. During first year	86	86	914
3. Failed in FY examination	91	177	823
4. During the inter year	69	246	754
5. Failed in inter examination	126	372	628
6. During the B.A. class	94	466	534
7. Failed in B.A. examination	42	508	492

PART II: SCIENCE STUDENTS

Introduction

In the first part we have discussed wastage among arts students, of a three-year entry of freshers to the Fergusson College. In this part we deal with wastage among science students basing it on the same investigations. We start with Tables 2 and 3 given above, which give respectively, how the entrants fared, and the distribution of the entrants by their marks at the SSC examination.

Comments on Table 2

Out of 1,634 students who joined the first year science class, 393 students given under category (1) completed their education

by obtaining the B.Sc. (or the B.A.) degree. (Ninety-three students from the total of 1,634 subsequently changed their course from science to arts and 53 of them succeeded in taking the B.A., or the LL.B. degree. We do not consider them separately but include them among the larger group to avoid more complicated analysis.) Categories (2) and (3) do not need explanation. Category (4) consists of students who left the Fergusson College to join the degree courses in law, commerce, Ayurved, or agriculture in the colleges of the Poona University. In category (6) are included students who left to join other universities to pursue arts, science, or professional courses. Those who left the college without taking a degree to join nondegree courses or other careers such as defence services are included under (7). Categories (8), (9), (11) and (12) consist of students who left the college at various stages, and who did not join, at least immediately, another university. Their careers could not be traced in the examination results of the Poona University beyond the stages mentioned.

The criterion of obtaining the first degree will be applied to students coming under categories (2), (3) and (4) to determine the wastage. Category (7) wholly contributes to wastage according to our definition of wastage given in the previous part. Cases of wastage have to be estimated for categories (6) and (14). This is done in the next paragraph.

Estimation of Wastage

From 209 students who joined the engineering course under the Poona University, 195 have completed the course. The remaining 14 cases were carefully gone through and it was estimated that there would be 7 cases of wastage, and the other 7 are expected to have completed the engineering or some other college course in another university. Out of 98 students who joined the medical college in the Poona University, 75 have so far completed the medical course, and 21, who are in the final year, are expected to complete it. There are, therefore, two cases of wastage. Out of 67 students who joined other degree courses in the Poona University, 10 have given up their education before taking the first degree. This brings the total of wastage cases to

19 under categories (2), (3) and (4) of Table 2, the number of those who have completed or would be completing their courses being 355.

On examining the cards of the 211 students who joined other universities, we found that some had joined either an engineering or a medical course. And from the available information about these and other cases we estimated that 179 of them would be able to obtain a degree in science, engineering, or medicine. Out of 613 students under category (14), who left the college at various stages, 411 had not taken their leaving certificates with them, and could be therefore considered as clear cases of wastage. The fate of the remaining 202 who had taken leaving certificates was more difficult to decide. They did not join another university at least immediately. Some of them joined other colleges in the Poona University, but they have not passed a degree examination of the Poona University according to its records. Every card was therefore carefully gone through and it was thought that not more than 81 of them might have joined another university and completed a degree course. (This estimated number is rather large as compared with the number arrived at for arts students in the first part, because it is not usually possible for science students who have a failure at the first year or the intermediate examination at the Fergusson College to continue in the same college next year because of limited seats in science classes. Many of them joined other local colleges and did well at the intermediate examination. A few of them might have then migrated to some other university and succeeded in obtaining a degree in science, or professional courses.)

A reasonable estimate, therefore, of those who must have obtained a degree can be put down as $393+355+179+81=1,008$, the remaining 626 being the cases of wastage. The wastage works out to be $626/1,634=38.3$ per cent, or 38 per cent approximately. If we allow for the factor of mortality, as we have done in the case of arts students, the wastage among the survivors would be 36 per cent approximately. However, these figures are much smaller than the corresponding figures of 45 and 43 for arts students, obtained in the previous part, the main reason being the difference in the quality of entrants as shown by

the SSC examination marks of arts and science students given in Table 2, in Part I.

An alternative estimate of wastage can be formed for the 211 students who left to join other universities by assuming that they form a representative group from amongst the total of 1,634 students. They are classified below according to the stages at which they left :

Joined other universities (total)	211
During the first year	16
After the first year, but before the intermediate	32
After the intermediate	163

The remaining 1,423 students fared as follows:

Joined the first year	1,423
Joined the intermediate	1,149
Joined the degree class (in science, arts, or other courses)	898
Passed the degree examination	829

Hence an estimate of those (among 211) completing the college education would be :

$$16 \times \frac{829}{1423} + 32 \times \frac{829}{1149} + 163 \times \frac{829}{898} = 183$$

approximately. This is close to the estimate made above from the scrutiny of individual cards.

Analysis of Wastage

For a further study of the wastage figures we have excluded the 211 students who joined other universities. But we have included the students from category (14) from which an estimated number of 81 students has completed the course. (This procedure is different from the one followed for arts students as their number was negligible and was ignored. However, the analysis is comparable with the analysis of arts students because, after excluding those who left to join other universities, the batches of the remaining students are comparable.)

Table 15, reconstituted from Table 2, after including the 81 students mentioned above among those who completed their

courses, gives the wastage according to the stages at which it occurred in the case of these 1,423 students. The table shows that 235 (or 16.5 per cent) of them could not complete the first

Table 15

WASTAGE FIGURES BY DIFFERENT STAGES : SCIENCE STUDENTS

Stage	No. of drops	Cumulative drops	Left-over
1. Joined FY science class	—	—	1,423
2. Left during the first year	71	71	1,352
3. Left after failure at FY examination	164	235	1,188
4. Passed FY examination, but left without appearing for intermediate examination	53	288	1,135
5. Left after failure at intermediate examination	122	410	1,013
6. Left without joining any degree course	115	525	898
7. Joined the degree course but left without passing	69	594	829
8. Passed the degree examination	—	—	829

year course, and 175 more (or 12.3 per cent) gave up before passing the intermediate examination. This means that 410 students out of 1,423 (or 28.8 per cent of them) did not complete the first stage of two years in college. Out of the remaining 1,013 who passed the intermediate examination, 184 were not able to complete the second stage. The wastage at the second stage is 12.9 per cent of the total entry of 1,423 and is 18.2 per cent of those who completed the first stage. It may be observed that these percentages are smaller than the corresponding figures for arts students except the figure for wastage before the completion of the first year in college, which is slightly higher. Again, as among the arts students, the big drop occurs during the first stage of two years; almost 69 per cent of the wastage cases occur during this stage.

We now analyse the cases of wastage according to the different factors. For this purpose we classify the wastage cases as follows: (1) those who dropped before passing the first year examination; (2) those who dropped after passing this examination but before passing the intermediate examination; and (3) those who dropped after this examination.

SSC Examination Marks

Table 16 classifies wastage by the dominant factor, viz the marks obtained by students in the SSC examination. The figures show that in the lower mark-groups more wastage occurs during the first stage of two years. Secondly, the wastage cases are more than the number of those who completed the degree course among students securing 55 per cent marks or less at the SSC examination. After this stage the situation improves, and after 75 per cent marks there is a solitary case of wastage of a student who joined the medical course and could not cope up with it. The following gives a brief picture :

	Wastage (per cent)
Below 55 per cent marks at the SSCE	61
Between 55 and 65 per cent marks at the SSCE	33
Between 65 and 75 per cent marks at the SSCE	18
Above 75 per cent marks at the SSCE	2

It may be observed that even among 150 students getting 70 per cent marks or above, there is wastage of the order of one in every ten. At the lower end it is seen that for students obtaining less than 45 per cent marks the chances of completing college education are as low as one in four. A comparison of wastage figures among science students and arts students as grouped according to the marks at the SSC examination shows that for the same SSC marks wastage is higher for science students. This suggests that the science course is perhaps more exacting than the arts course.

Age at Entry

Table 17 analyses wastage by age at entry. The wastage steadily increases with age at entry, and it is found that for age at

Table 16

WASTAGE BY SSC EXAMINATION MARKS (PERCENTAGE)

	Marks											
	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	Blank	Total
1. Completed the course	—	11	78	135	157	160	136	91	38	6	17	829
2. Left before passing FY examination	—	19	71	64	28	16	10	2	—	—	25	235
3. Passed FY but left with- out passing intermediate	1	8	37	68	25	19	8	3	—	—	6	175
4. Left after intermediate	1	3	36	45	40	28	16	9	1	—	5	184
5. Wastage (2)+(3)+(4)	2	30	144	177	93	63	34	14	1	—	36	594
Total (1)+(5)	2	41	222	312	250	223	170	105	39	6	53	1,423

Table 17

WASTAGE BY AGE AT ENTRY

	Age							Total
	15	16	17	18	19	20 & above	Blank	
1. Completed the course	144	271	239	107	46	21	1	829
2. Left before passing FY examination	14	39	59	54	34	31	4	235
3. Passed FY examination, but left without passing intermediate examination	10	33	61	30	25	15	1	175
4. Left after intermediate	17	38	57	37	16	19	—	184
5. Wastage (2)+(3)+(4)	41	110	177	121	75	65	5	594
Total (1)+(5)	185	381	416	228	121	86	6	1,423

entry of 20 or above of students the wastage is more than 75 per cent. This is mainly explained by the fact that students with a lower age at entry are also, on an average, of better quality, as evidenced by their performance at the SSC examination given below.

Age at entry	15	16	17	18	19	20 & above
Average marks at the SSCE (per cent)	60.5	59.9	57.2	56.4	54.6	52.8

If the effect of the SSC marks is separated by considering students in different mark-groups it is found that an increase in age at entry has an adverse effect on their performance. This is shown by the figures given below. (The figure in each cell indicates the number of students who joined college, and the next figure in the bracket gives the wastage amongst them; blanks are omitted.)

Age at entry	Marks at the SSC examination (per cent)			
	35-50	50-65	65 & above	Total
15 to 17	152(89)	535(189)	267(34)	954(312)
18 and above	110(84)	248(143)	53(15)	411(242)
Total	262(173)	783(332)	320(49)	1365(554)

It may also be observed from Table 17 that the older students tend to drop out at earlier stages in their career. These results are similar to those obtained for arts students, and the probable underlying factors have been suggested in the first part. Again, if we compare the wastage in arts and science among students belonging to the same age-groups and mark-groups it is found that the wastage in science is higher except for mark-groups above 65 per cent. This again suggests that the science course is perhaps stiffer than the arts course.

Sex

The analysis of wastage by sex is given in Table 18 which shows that the wastage among women students (32 per cent) is much lower than that among men students (43 per cent). It will be recalled that in the case of arts students a similar difference in wastage between men and women students was partly due to the better quality of women students as evidenced by their higher average marks at the SSC examination. In the case of science students the difference in wastage between the two sex-groups is even higher than that between the two sex-groups of the arts students, although there is not much difference in their average marks at the SSC examination which were 57.7 per cent and 58.2 per cent for men and women respectively. The wastage

Table 18

WASTAGE BY SEX

	Men	Women	Total
1. Completed the course	743	86	829
2. Left before passing FY examination	221	14	235
3. Passed FY examination, but left without passing intermediate	160	15	175
4. Left after intermediate	172	12	184
5. Wastage (2)+(3)+(4)	553	41	594

cases are further analysed by the SSC examination marks and sex as shown below. (The figure in each cell gives the number of students who joined college, and the next figure in the bracket gives the cases of wastage amongst them; blanks are excluded.)

	<i>Marks at the SSC examination (per cent)</i>			
	35-50	50-65	65 & above	Total
Men	250(170)	710(309)	292(44)	1252(523)
Women	15 (6)	75 (24)	28 (5)	118 (35)
Total	265(176)	785(333)	320(49)	1370(558)

It is clear that the wastage among women students is much lower than that among men students except in the group of 65 per cent marks and above. Again women students have a lower average age (16.5 years) than men students (17.0 years). This difference of about half a year is again much less than that of 1.3 years' difference for arts students. The analysis by age and sex gives the following figures. (The figure in each cell gives the number of students who joined college, and the next figure in the bracket gives the cases of wastage amongst them; blanks are excluded.)

	<i>Age in years</i>			
	15-16	17-18	19 & above	Total
Men	498(137)	595(278)	198(133)	1291(548)
Women	68 (14)	49 (20)	9 (7)	126 (41)
Total	566(151)	644(298)	207(140)	1417(589)

In each of the two lower age-groups women have done better than men and the slightly higher wastage in the age-group 19-and-above is of no particular significance because of the small number of women students in that group. As both the SSC marks and age do not completely explain the much lower wastage

among women, the explanation may have to be sought in other factors (e.g. advanced communities to which women students belong and better background of culture at home), which were suggested when analysis was attempted for arts students.

Caste

Table 19 analyses wastage by caste. As in the case of arts students, here also two clear groups are observed : (1) the Brahmin and CKP communities where the wastage is less than 35 per cent; and (2) all other communities where it is as high as 50 per cent. To a certain extent the difference may also be due to the fact that the students from advanced communities are younger than the students from other communities.

Table 19

WASTAGE BY CASTE

Caste	Completed the course	Wastage			Total	Grand Total
		Before FY	After FY before inter	After inter		
1. Brahmin	526	106	94	81	281	807
2. Maratha	59	22	16	24	62	121
3. C. K. Prabhu	35	11	3	2	16	51
4. Jain, Marwadi, Gujarathi	84	31	25	29	85	169
5. Lingayat, Lewa Patil, Sonar, etc.	56	20	18	27	65	121
6. Mali, Sutar, etc.	11	10	7	4	21	32
7. Backward classes	17	7	6	6	19	36
8. Others	41	28	6	11	45	86
Total	829	235	175	184	594	1,423

Schools

The next factor by which the wastage is analysed is the school from which the students came—Poona schools, or schools out-

Table 20

WASTAGE BY SCHOOLS

	Schools			
	Local	Outside	Others	Total
1. Completed the course	459	360	10	829
2. Left before passing FY examination	123	109	3	235
3. Passed FY examination but left without passing intermediate	106	68	1	175
4. Left after intermediate	94	86	4	184
5. Wastage (2)+(3)+(4)	323	263	8	594
Total (1)+(5)	782	623	18	1,423

side Poona. Table 20 shows that there is not much difference between the wastage percentages for local schools and nonlocal schools, the figures for them being 41 and 42 per cent respectively. It had been observed that the averages of marks at the SSC examination were comparable for students from local and non-local schools, and further analysis by the SSC examination marks showed that the wastage figures are comparable in the corresponding mark-groups.

Guardian's Address, Income, and Occupation

Analysis by guardian's address given in Table 21 does not show any definite pattern except to confirm broadly the conclusion drawn above from the analysis by schools.

Table 22, which classifies students by guardian's annual income suggests that the wastage is the highest (48 per cent) for the income-groups below Rs 2,000, and is the lowest (33 per cent) for the income-groups between Rs 3,000 to Rs 5,000. It should be stated here, however, that the income figures are not reliable.

For the reason mentioned in the first part there are a large number of blanks in the classification by occupation, and the corresponding table is not given here. But the available figures

Table 21

WASTAGE BY GUARDIAN'S ADDRESS

Guardian's address	Completed the course	Wastage			Total	Total
		Before FY	After FY Before inter	After inter		
1. Local	445	124	103	91	318	763
2. Poona district	26	13	12	15	40	66
3. Satara	74	20	13	21	54	128
4. Nagar, Nasik, Sholapur	105	36	16	16	68	173
5. Kolhapur, Ratnagiri, Goa	29	2	3	1	6	35
6. Khandesh	65	9	14	20	43	108
7. Bombay, Kolaba, Thana	27	8	4	10	22	49
8. Other places	58	23	10	10	43	101
Total	829	235	175	184	594	1,423

Table 22

WASTAGE BY GUARDIAN'S INCOME

Guardian's income	Completed the course	Wastage			Total	Total
		Before FY	After FY before inter	After inter		
1. Less than Rs 2,000	262	82	82	77	241	503
2. Rs 2,000 to Rs 3,000	188	48	35	33	116	304
3. Rs 3,000 to Rs 5,000	173	40	22	25	87	260
4. Rs 5,000 to Rs 10,000	127	25	20	31	76	203
5. Above Rs 10,000	61	16	9	14	39	100
6. Blank	18	24	7	4	35	53
Total	829	235	175	184	594	1,423

suggest that the wastage may be the lowest for those students whose guardians belong to the professional classes—doctors, engineers, pleaders, etc.

Type of Lodging in Poona

Table 23 analyses wastage by the type of lodging in which a student lived in Poona when he was at college. (This factor was not considered for arts students because the numbers were very small.) Lodgings have been classified as under: (1) home; (2) college hostel; (3) other hostels; and (4) others; the last group covers all those for whom no definite information was available. It is believed that most of those belonging to the last group were living in rented rooms. It is seen from the table that the wastage

Table 23

WASTAGE BY THE TYPE OF LODGING IN POONA

	<i>Type of lodging</i>				
	<i>Home</i>	<i>College hostel</i>	<i>Other hostels</i>	<i>Others</i>	<i>Total</i>
1. Completed the course	486	188	36	119	829
2. Left before passing FY examination	132	19	7	77	235
3. Passed FY examination, but left without passing intermediate	114	13	3	45	175
4. Left after intermediate	102	27	16	39	184
5. Wastage (2)+(3)+(4)	348	59	26	161	594
Total (1)+(5)	834	247	62	280	1,423

is the least (24 per cent) among students who lived in the college hostel, and it is the highest (57 per cent) for students in the fourth category. As the admissions to the college hostel mainly depend on the marks at the SSC examination, a further analysis by marks, as shown below, has been attempted. (The figure in each cell gives the number of students, and the next figure in the bracket gives the wastage amongst them; blanks are excluded.)

This shows that even among students belonging to the same mark-groups wastage is the lowest among students living in college hostels. Younger age of the hostel students may also be another contributing factor.

<i>Type of lodging</i>	<i>Marks at the SSC examination (per cent)</i>			
	<i>35-50</i>	<i>50-65</i>	<i>65 & above</i>	<i>Total</i>
Home	166(110)	463(191)	175(26)	804(327)
College hostel	12 (6)	113 (32)	106(12)	231 (50)
Other hostel	10 (7)	40 (14)	10 (4)	60 (25)
Others	77 (53)	169 (96)	29 (7)	275(156)
Total	265(176)	785(333)	320(49)	1,370(558)

Comparison with Arts Students

In the course of the above discussion comparisons have also been made with results which were obtained for arts students in the previous part. There are three main points of difference. The batch of arts students differs from that of science students in many respects, e.g. the sex composition, the relative proportion of local and nonlocal students, and the better quality of science students as shown by their SSC examination marks. We have seen that some of these factors tend to increase wastage, while others tend to decrease it. But the dominant factor, viz the SSC examination marks, is in favour of the science students as it is more difficult to get admission to the science course where seats are limited. Secondly, after the intermediate examination there is a great flow of the better qualified science students to the professional courses of engineering and medicine with the result that the remnant science batch becomes considerably depleted in quality while the corresponding arts batch remains comparatively unaffected. Finally, comparison between the performances of the arts and the science students in the two two-year stages as well as the complete four-year degree stage suggests a hypothesis that the science course in each of the two stages is stiffer than the arts course (this hypothesis can be put forward also otherwise on considerations of the curricula of the two courses).

It is perhaps useful to describe the important features of the exodus of students after the intermediate science examination referred to above (as observed in the Fergusson College) to see how greatly it affects the batch of science students as it goes from the first stage to the second stage. From the 1,277 students who reached the intermediate examination 1,148 passed. From them, as per available information, 209 joined engineering, 98 joined medicine, and 43 joined other courses; and it is expected that 129 more left to join professional courses (52 engineering, and 77 medicine). It is also known that 397 continued in the college to study the B.Sc. course. To compare the quality of these students we give below the average SSC examination marks, the average intermediate examination marks, and the number of first classes, the number of first and second classes, and the number of students obtaining more than 50 per cent marks at the intermediate science examination. This applies to those who are known to have joined (1) engineering; (2) medicine; (3) other courses; (4) categories (1), (2), (3) put together; and (5) those who joined the B.Sc. course.

	<i>Total No who joined</i>	<i>SSC average marks</i>	<i>I.Sc. average marks</i>	<i>No of I class</i>	<i>No of I & II class</i>	<i>Above 50 per cent marks at I.Sc.</i>
1. Engineering	209	66.05	57.97	81	202	179
2. Medicine	98	65.23	56.48	23	97	93
3. Other courses	43	55.49	44.38	—	20	5
4. (1)+(2)+(3)	350	64.50	55.90	104	319	277
5. B.Sc.	397	57.74	47.30	11	253	108

No comments are necessary to see that the flow of science students after the intermediate stage means a great qualitative change for the batch of students who continue to remain in the science college for the B.Sc. course.

Estimating Wastage in Science for the Poona University

As in the course of arts students we now try to estimate the wastage among science students for the Poona University, with

the help of the percentages of failures in the intermediate science and B.Sc. examinations of the university during the relevant periods, and with the help of the proportion of students who dropped out at various stages, as observed in the Fergusson College. For the sake of simplicity we have ignored the fact that some of the students who joined the first year science class later on changed to arts. Table 24 reconstitutes Table 2 by distributing over the relevant categories the estimated number of 81 students who are expected to have completed engineering, medicine, or other courses including the B.Sc. course.

Table 24

PROGRESS OF STUDENTS THROUGH THE DIFFERENT STAGES

Stage	Number of drops	Cumulative drops	Left- over
1. Joined FY science class	—	—	1,423
2. Left during the first year	71		1,352
3. Left after failure at FY examination	164	235	1,188
4. Passed FY examination, but left without appearing for intermediate examination	53	288	1,135
5. Left after failure at intermediate examination	122	410	1,013
6. Joined engineering, or medical course	327	737	686
7. Joined other degree courses	43	780	643
8. Left without joining any degree course	115	895	528
9. Joined the degree course in science or arts, but left without appearing for examination	20	915	508
10. Left after failure at degree examination in science or arts	37	952	471
11. Passed the degree examination in science or arts			471

Note: (1) Category (7) consists of students who joined law, or Ayurved.

(2) Students who joined commerce, or agriculture are combined with those who joined B.Sc. (or B.A.) in the various stages.

Starting with a batch of 1,000 students who join the first year science class we see from Table 24 that 50 ($=1000 \times 71/1423$) students leave college before appearing for the college examination at the end of the first year. Assuming, as in arts, that the percentage of passes at this examination is 90, we find that $950 \times .90 = 855$ students pass this examination and join the intermediate science class. From these, 38 ($=855 \times 53/1188$) leave the course before appearing for the intermediate examination. The remaining 817 make one or more attempts at the intermediate examination.

As before we assume that the percentage of passes at the intermediate science examination to be uniformly 57, that being the Poona University's average for the period 1952-54. The estimates of students who give up after one or more attempts are formed from Table 25 (A) which gives the figures for the Fergusson College. Table 26 (A) gives the estimated number of passes,

Table 25

ANALYSIS OF STUDENTS APPEARING AT UNIVERSITY EXAMINATIONS
IN SCIENCE

Attempt	Appeared	Passed	Percentage of passes	Failures	Left
(A) Intermediate					
1	1,277	887	69.46	390	72
2	318	205	64.46	113	34
3	79	48	60.76	31	17
4 or more	14	8	57.14	6	6
		1,148			129
(B) Degree					
1	431	278	64.50	153	12
2	141	88	62.41	53	15
3	38	20	52.63	18	5
4 or more	13	7	53.85	6	6
		393			38

Table 26

ESTIMATED FIGURES FOR STUDENTS APPEARING AT UNIVERSITY
EXAMINATIONS IN SCIENCE IN THE POONA UNIVERSITY

<i>Attempt</i>	<i>Appeared</i>	<i>Passed</i>	<i>Percentage of passes</i>	<i>Failures</i>	<i>Left</i>
(A) Inter Science					
1	817	466	57.00	351	65
2	286	163	„	123	37
3	86	49	„	37	20
4 or more	17	10	„	7	7
		688			129
(B) B.Sc.					
1	398	251	63.00	147	12
2	135	85	„	50	14
3	36	23		13	4
4 or more	9	6	„	3	3
		365			33

failures, and drops at successive attempts for these 817 students. We thus arrive at the figure of 129 students who give up without passing the intermediate examination, and 688 who complete the first stage of two years.

In contrast to the batch of arts students a big exodus of students leaving the science college to join engineering, medicine, or other professional courses takes place at this stage. It is not easy to estimate this number. We followed two procedures for estimating the number joining engineering or medicine, which gave us widely differing estimates, and we have taken a figure between them as a reasonably good estimate. The first procedure was to note the proportion of students securing first class or second class in the intermediate examination at the first attempt, and from

this to note the proportion of those who join the engineering, or the medicine course, as observed in the Fergusson College. This figure (which is expected to be an upper estimate) comes out to be 176 for our batch of 688 who pass the intermediate examination. The second procedure was to assume that students obtaining 50 per cent marks or above would be eligible for joining engineering or medicine. The number of students scoring 50 per cent marks or more was obtained on the hypothesis that the distribution of marks is approximately normal. To this number we applied the proportion of students leaving for these courses from the Fergusson College. This gives us the figure 133 which is expected to be a lower estimate. The actual figure would lie between these two figures, and with no other information available we have taken 150 as the estimated number of students who join the engineering or medical courses. From the remaining 538 ($=688-150$) students, another 34 ($=538 \times 43/686$) join other professional degree courses such as law, Ayurved, etc., and a further 90 ($=538 \times 115/686$) leave college without joining any degree course (B.Sc. or professional).

Thus we are left with 414 students who join the second stage of the degree course in science (or arts), out of whom 16 ($=414 \times 20/528$) give up before appearing for the degree examination. The remaining 398 students make one or more attempts to pass the degree examination. Assuming that the percentage of passes at the B.Sc. examination was uniformly 63, that being the Poona University's average for 1954-56, we calculated the number of passes, failures, and drops at one or more attempts by using the figures in Table 25(B) for the Fergusson College. They are shown in Table 26(B), yielding the figure of students completing the course in a science college to 365.

Assuming further that 85 per cent of those who join engineering, medicine, or other professional courses obtain a degree, we estimate that 156 from 184 ($=150+34$) will do so. Therefore out of the initial batch of 1,000 joining the science course $365+156=521$ complete their college education, and 479 form the wastage. The estimated wastage for science students for the Poona University is therefore 48 per cent approximately (the corresponding figure for arts students is 51 per cent). Table 27 summarises the figures obtained in this section.

Table 27

ESTIMATED WASTAGE AT SUCCESSIVE STAGES IN SCIENCE IN THE
POONA UNIVERSITY

	<i>Drops</i>	<i>Total drops</i>	<i>Remaining</i>
1. Entry into FY class	—	—	1,000
2. During first year	50	50	950
3. Failed in FY examination	95	145	855
4. During the inter year	38	183	817
5. Failed in inter examination	129	312	688
6. Joined engineering or medical course	150	462	538
7. Joined other degree courses	34	496	504
8. Left without joining any degree course	90	586	414
9. During the B.Sc. class	16	602	398
10. Failed in B.Sc. examination	33	635	365

PART III : STAGNATION

Introduction

In the first two parts of this paper we discussed the problem of wastage. In this third part we deal with stagnation in college education among arts and science students on the basis of the same inquiry.

Definition of Stagnation

By stagnation we cover the cases of those students who complete the prescribed course only after a delayed progress; they take a longer time to complete the course than the prescribed minimum period.

Description of the Problem

It is convenient for this purpose to divide the four-year degree course in arts or science into its two natural stages : (1) the first stage of two years from the time of entry in the first year class

in college to the time of passing the intermediate examination; and (2) the second stage of two years from the time of joining the junior B.A. (or B.Sc.) class to the completion of the degree course in arts or science. This division is necessary because the intermediate examination is a qualifying examination for students taking the degree courses in law, Ayurved, engineering or medicine. If we do not consider the two stages separately and consider only the four-year degree course in arts or science as a whole it would make a qualitative difference, especially for the analysis of science students, as more than one-third of those who passed the intermediate science examination from Fergusson College left it to join engineering or medicine where admission is competitive and this took away the greater portion of the top layer of the science students. After analysing stagnation in these two stages separately, we also analyse it for the four-year degree course as a whole for those students who have ultimately obtained the B.A. or B.Sc. degree. It should be mentioned therefore, even at the risk of repetition, that in the analysis of stagnation for the second stage as well as for the four-year course as a whole in arts or science we have omitted students who joined professional courses after passing the intermediate examination. The discussion of wastage and stagnation of these latter students is no doubt both interesting and important but that forms a separate issue and is not attempted here.

Some Observations

It is also pertinent to make a few other observations in connection with the B.A. or B.Sc. courses as they were during the relevant period in the Poona University. In the first stage of two years there used to be at the end of the first year in arts or science a qualifying examination which was conducted by the college; the first university examination, i.e. the intermediate examination was held at the end of the second year. In the first year examination the percentage of passes in Fergusson College was about 80 per cent. For the purposes of our analysis we have ignored this examination. During the second stage there was no rigorous qualifying test during the two years; the university examination, i.e. the degree examination, was held at the end of the two-year period. Thirdly it should be mentioned here that stu-

dents who fail in a university examination can appear again, without joining college, on the strength of the terms they have kept before. Lastly there is a provision in the Poona University regulations to appear for its examinations, without joining a college for a part or whole of the course, as external students. In our inquiry it was found that a few students who had joined Fergusson College for a part of their career had later on passed university examinations as external students. We had included these cases in considering wastage but will exclude them while considering stagnation as they are not comparable with other cases in the minimum periods prescribed for these courses.

Analysis of Stagnation : Arts Students

From the three-year entry of 466 students to the first year arts class in Fergusson College, 290 passed the intermediate arts examination of the Poona University. If we exclude three students who passed the examination as external students, and four more who had a gap of several years between their passing the old matriculation examination and their joining the college, we are left with 283, who took from two years to seven years to clear the first stage as shown in Table 28. Out of these 283 students, 168 (or 59 per cent) completed this stage in the prescribed minimum period of two years, and the remaining 115 showed a delayed progress, taking an average period of 3.63 years to complete the stage. For the total 283 students the average period works out to 2.66 years.

Out of the 283 who completed the first stage, 203 cleared the second stage and thus completed the four-year degree course in arts. Here also we exclude 16 external students and two more who showed big unaccounted-for gaps in their career. This leaves us 185 students who cleared the second stage in a period of two years to five years. 161 (or 87 per cent) from them completed the stage in the minimum period of two years and the remaining 24 with a delayed progress required an average period of 3.46 years to do so. The average period for the second stage for the full batch of 185 is 2.19 years.

Considering the two stages together for these 185 students,

Table 28
STAGNATION IN ARTS AND SCIENCE

	Years	Arts Students			Science Students		
		Men	Women	Total	Men	Women	Total
					Per cent		Per cent
I	2	81	87	168	59.4	83	783
	3	51	23	74	26.1	23	251
	4	10	9	19	6.7	9	82
	5	11	3	14	4.9	1	25
	6	3	3	6	2.1	—	5
	7	1	1	2	0.7	—	1
	8	—	—	—	—	—	—
	9	—	—	—	—	—	—
							0.1
Total		157	126	283	100	116	1148
Average A		2.77	2.53	2.66		2.38	2.45
Average B		3.59	3.72	3.63		3.33	3.43
II	2	86	75	161	87.0	49	278
	3	6	11	17	9.2	4	88
	4	1	2	3	1.6	—	20
							70.7
							22.4
							5.1

	5	1	3	4	2.2	6	—	6	1.5
	6	—	—	—	—	1	—	1	0.3
Total	94	91	185	100	340	53	393	100	
Average A	2.12	2.26	2.19		2.43	2.08	2.38		
Average B	3.37	3.50	3.46		3.31	3.00	3.30		
III	4	58	59	117	63.2	120	32	152	38.7
	5	19	15	34	18.4	126	18	144	36.6
	6	11	7	18	9.7	64	3	67	17.0
	7	5	7	12	6.5	27	—	27	6.9
	8	1	2	3	1.6	3	—	3	0.8
	9	—	1	1	0.5	—	—	—	—
Total	94	91	185	100	340	53	393	100	
Average A	4.64	4.69	4.66		5.02	4.45	4.94		
Average B	5.67	5.97	5.81		5.58	5.14	5.54		

Note: The table is divided into three parts: I gives the number of years taken after the SSC examination to pass the intermediate examination; II gives the number of years taken after the intermediate examination to pass the B.A. or B.Sc. examination; and III gives the number of years taken after the SSC examination to pass the B.A. or B.Sc. examination. Average A gives the average duration for all the students in that group. Average B gives the average duration for those students in that group who required more than the prescribed minimum period to pass the examination.

it is found that 117 (or 63 per cent) could obtain the degree in the minimum period of four years, and the remaining 68 took from five years to nine years to do so. The average period for the delayed students is 5.81 years while that for the whole batch works to 4.66 years.

Analysis of Stagnation : Science Students

From the three-year entry of 1,634 students to the first year science class in Fergusson College, 1,148 students passed the intermediate examination of the Poona University. (While 1,077 passed the intermediate science examination, 71 passed the intermediate arts examination having changed the course to arts. Since the two courses are comparable in their lengths all these students are considered together.) Out of these 1,148 students, 783 (or 68 per cent) completed this stage in two years, and the remaining 365 delayed in their progress, taking an average period of 3.43 years to complete the stage. For the whole batch of 1,148 the average period is 2.45 years (see Table 28, column 5).

Out of the 1,148 students who completed the first stage, a very large number (351) joined professional courses in the Poona University such as engineering, medicine, etc. and 163 others migrated to other universities, many of them to join similar professional courses there. About 200 students left the college to take up either nondegree courses or simply dropped out. From those 451 who continued in the college to join the degree course, 393 passed the B.Sc. (or B.A.) degree examination (344 B.Sc. and 49 B.A. see the above paragraph). 'Seventy-one per cent of them (278) completed this second stage in the minimum period of two years and the remaining 115 took from three to six years to complete it. The average period taken by the latter to complete the course is 3.30 years while it is 2.38 years for the whole batch of 393.

Considering the four-year degree course as a whole, out of the 393 students who completed it, 152 (or 39 per cent) did so in the prescribed period and the remaining 241 took from five to eight years to do so. While the average period for the delayed students is 5.45 years that for the whole batch works out to 4.94 years.

If the figures for stagnation for the science students are compared with those for the arts students two things are clearly seen: (1) the extent of stagnation is less for science students than for arts students during the first stage; (2) but it is appreciably greater for the second stage and more so for the four-year course as a whole. The main reasons are perhaps the following: while the batch of science students when it entered college was of much better quality than the batch of arts students, after the intermediate examination the cream of the science students went in for engineering or medicine. Thus at the beginning of the second stage the difference in quality of students who joined the B.A. and B.Sc. courses became less pronounced. Again the B.Sc. course is perhaps much more exacting than the B.A. course.

Stagnation by Factors

We can classify the delayed cases by different factors as we did for wastage. As illustration the analysis by sex is given below. Other factors are not discussed as they give results similar to what were obtained while dealing with wastage.

From Table 28 it is observed that sixty-nine per cent of women arts students completed the first stage in the prescribed minimum of two years as against only 51 per cent of men. For the complete four-year course also this percentage is higher for women (65 per cent) than for men (62 per cent), although the difference is smaller. But for the second stage the pattern is reversed; only 82 per cent of women completed the second stage in the minimum period of two years as against 91 per cent of men. This is probably due to the 'marriage' effect referred to in the first part. In the delayed cases the average period is always longer for women than for men. This confirms the tendency amongst women who are mostly local and from advanced communities to persist after failure referred to in the first part. The table also shows that if we take delayed and undelayed cases together, the average periods of the second stage, as well as for the complete course, is longer for women than for men, although for the first stage it is shorter mainly due to the higher proportion amongst women of those who pass in the minimum period.

Considering the delay in progress for science students the table shows that women students are less delayed in progress than men

students in all stages, both because more of them (women students) have been able to complete the stages in the minimum prescribed period and because the average period taken by them is shorter. Thus 71 per cent of women students cleared the first stage in two years as against 68 per cent men and the average periods for women and men students are 3.33 and 3.44 years respectively. In the second stage the percentages of those who clear it in the minimum period are 92 and 68 for women and men and the average periods are 3.00 and 3.31 years. For the complete four-year stage the figures are 60 per cent and 34 per cent, and 5.14 years and 5.58 years respectively. This difference between men and women and in favour of women is not so appreciable in the first stage but it is quite considerable in the second stage and still more so for the complete four-year course. This pattern is quite different from the one observed for arts students. The following may be the reasons for this difference : (1) the number of women students joining science is much smaller as compared with men students and form a select group; (2) their performance at the SSC examination was better; (3) as the science course is supposed to be more strenuous than the arts course, women students who decide to join it consist mostly of the more determined type of students with scholastic ambition; (4) because of (1) and (3) above the 'marriage' effect is much less operative in the case of women students joining science than in the case of those joining arts.

Planning of a Good Inquiry on the Problems of Wastage and Stagnation

Finally, it is desirable to state here explicitly the limitations and the shortcomings of the investigations covered by the present paper and outline the requirements of a good inquiry on the two problems of wastage and stagnation.

The present inquiry is confined to only one college, with its many distinctive features which do not make it fully representative even of the Poona University. It is necessary to plan an inquiry which will cover at least one whole university. It is possible of course to build a rough estimate of wastage for a university, in each of the distinct stages of a degree course, by collecting

the figures for initial enrolment in all affiliated colleges, the number of students who appear at the university examination marking the end of the stage and the number of passes and failures amongst them, the number of repeaters in the following year and the passes and failures amongst them, and so on. Although such an investigation will cover the whole university it will suffer from the lack of information on all other factors except the examination results.

A more efficient inquiry which will cover the whole university can be planned on the basis of a representative sample drawn from the entry of freshers to the colleges of the university over a number of years and to follow the sampled students until they take a degree (or complete a stage) or leave the college education. Along with items of information collected in the present inquiry it is necessary to introduce some vitally important new items such as the ultimate placement of life and the cause of failure and delayed progress. It is also necessary to devise methods to collect more accurate information on such items like guardian's income, occupation and education and the type of living accommodation, on which the information available in the present inquiry was far from satisfactory. It is desirable also to follow the students who migrate to other universities and to study the causes of migration. This will inevitably involve field-work in addition to the collection of the data available in the records.

It is worthwhile for a university to sponsor an inquiry on a longterm basis, draw for this purpose a random sample of students joining the first year class from each college affiliated to the university at the beginning of the academic year. The college will then be required to keep a detailed card of information (specially prepared for this purpose by the university) for the students in the sample. When a student migrates to another college in the same university the card should be sent to the new college to keep it up-to-date, until the student completes the degree course or gives it up for good or leaves the university in some other manner. Such a procedure should collect a lot of useful data for the university about a representative cross-section of its alumni. A more ambitious university may collect such data for all its students.

INSTITUTIONAL COSTS IN HIGHER EDUCATION

1. INTRODUCTION

Cost studies are of great importance in the study of educational finances and are of particular significance in the present period when rapid educational development is taking place in our country. They assume even greater importance for higher education where it is much more expensive to create facilities and keep them running than at the lower levels of education. The present study is confined to one aspect of the educational cost, the current *institutional cost* per student per year, at the main stages of higher education in the University of Poona, at the undergraduate stage in its colleges, and at the postgraduate stage in its departments. It is estimated on the basis of the figures supplied by the institutions concerned for the academic year 1964-65.

The cost of education can be interpreted in two different ways, from two different points of view : (1) student cost; and (2) institutional cost.

Student Cost

This is the cost which the guardian of a student (or the student himself) incurs in maintaining him in an institution of higher education at a particular stage of education. It may be broadly divided into the following parts : (a) tuition and other fees, (b) cost of books and equipment, (c) cost of maintenance, i.e. board and lodging, and (d) other expenses such as cost of clothing, cost of conveyance and similar miscellaneous items of expenditure. Sometimes further refinement can be attempted by introducing a fifth category : (e) the net opportunity cost, which is the income the student forgoes in pursuing his present education—the net income which he would have otherwise earned by working or serving somewhere else instead of getting himself

educated. While it should be possible to estimate accurately components (a) and (b) of the student cost, the figures for (c) and (d) will widely differ from student to student and no reliable and representative estimates can be constructed without carrying out carefully planned sample surveys. As regards the net opportunity cost, if this component has to be introduced, its proper estimation is extremely difficult in an underdeveloped economy such as ours with its enormous unemployment and underemployment.

Institutional Cost

The institutional cost consists of two parts: (a) nonrecurring cost or capital investment such as cost of land, buildings and equipment; and (b) recurring cost, i.e. the annual expenditure for running the institution. While the first part gives the cost incurred in order to create a seat of higher education, the second gives the cost of *maintaining* or operating that seat. The non-recurring cost can be worked out by assuming norms or by collecting expenditure figures on the relevant items in the recently started institutions. The recurring cost of maintenance or the operational cost has to be obtained from the recent figures of recurring expenditure of the institutions.

It is no doubt important to estimate the total cost of higher education to the society, the total national effort invested in higher education. For this purpose the relevant portions of the student cost and the institutional cost have to be added; care has to be taken to avoid duplication of items such as tuition and examination fees, scholarships, etc. The institutional cost, however, assumes particular significance when one wants to estimate the resources which the community has to find in order to provide higher education to its young men and women in the years to come. This study is an attempt at estimating the *recurring* part of the institutional cost—the amount which an institution of higher learning spends annually to keep a course of higher education going—on per student basis. The cost-estimates and the estimated number of students can then provide estimates of the current or recurring expenditure necessary for running different courses of higher education. The estimates of capital or nonrecurring expenditure for providing higher-education facilities for a larger number of students or for improving

the existing facilities can be worked out from the *nonrecurring* part of the institutional cost. But no attempt is made in this study to estimate this nonrecurring part of the institutional cost or to estimate the student cost. Also, in estimating the current or recurring costs, no allowance has been made for depreciation on the capital investment.

2. DESCRIPTION OF THE STRUCTURE OF THE UNIVERSITY OF POONA

A brief description of the structure of different courses in the University of Poona and the institutions teaching them is given here to facilitate the understanding of what is presented in the following pages. In this university all undergraduate education is given by the colleges; the colleges in Poona are called constituent colleges and those outside Poona are called affiliated colleges. There is no university college, and first-degree courses are not run by the university. Students can join a college of arts, science, or commerce, after passing the SSC (secondary school certificate) examination. The degree course in arts, science or commerce extends over four years. A few years back most colleges taught both arts and science, but there were separate colleges for commerce. During the last few years, commerce is also being taught in arts or arts-and-science colleges. The four years of the undergraduate course are divided into two stages, the first year in college is called the predegree (PD) year in arts, science or commerce, and the next three years constitute the three-year degree course and they are respectively called first year (FY), second year (SY), third year (TY) of the B.A., B.Sc. or B.Com. course. Students who wish to join the degree courses in engineering or medicine have to pass what is called the preprofessional examination at the end of FY B.Sc. (i.e. after two years of the science course). The preprofessional course is almost identical with the FY B.Sc. course, and those who are unable to get admission to engineering or medical colleges can continue to study in the SY B.Sc. class. In the case of agriculture, students can join a college of agriculture immediately after passing the SSC examination and can obtain the B.Sc. in agriculture in four years. For a degree course in law and in education a student must have obtained a first degree (in arts, science or commerce).

The situation is rather complicated in postgraduate teaching which is supposed to be the responsibility exclusively of the university. In practice postgraduate courses in agriculture, engineering, medicine, law and education are located at the respective colleges in Poona and are managed by them. In science all postgraduate teaching is done in the departments of the university. In arts all postgraduate lectures are held in the university, but university departments do not exist for all subjects; some of them are located in a few research institutes in Poona. (This introduces difficulties for costing as will be explained later.) No postgraduate work is done in arts and science in the colleges in Poona, but senior teachers from the colleges participate in the teaching work at the university, and some of them also guide Ph. D. students. In commerce the postgraduate work in Poona is located at the Commerce College and is managed by it. Outside Poona there are a few postgraduate centres located in affiliated colleges where instruction is provided in some subjects in arts and commerce, and a solitary subject in science. Postgraduate work in other faculties is not done outside Poona.*

Costs for undergraduate courses in arts, science and commerce are worked out for three colleges in Poona in section 4. They are estimated separately for (i) the PD year, (ii) the three-year degree course and (iii) the four-year course taken together. (Actually the teaching is still largely organised on the old pattern of "two plus two" division of the four years. This is especially so in science and it would have been perhaps more realistic to work out costs for these two stages. It is visualised, however, that the PD year will ultimately be absorbed in the higher secondary schools and that the preprofessional course will be sooner or later taken over by the engineering and medical colleges. As the three-year degree courses will thus be more or less closely-knit units in future, we have not done this additional exercise.) On account of the manner in which postgraduate education is organised in this university it was convenient to estimate its cost in commerce, along with the first-degree costs. In section 5 the same exercise is repeated for colleges outside Poona for the undergraduate courses

* This was the situation in 1964-65. Some changes have taken place, especially in postgraduate instruction, thereafter.

in arts, science and commerce and for the postgraduate courses in arts and commerce in Nasik. The costs for both first-degree and postgraduate courses in law, education and engineering are estimated in section 6. (We regret it was not possible to work them out for agriculture and medicine.) The costs of postgraduate education in the humanities (arts) and science are estimated in section 7 by estimating the expenditure on the postgraduate departments of the university. Comments are offered in sections 8 and 9. Relevant information is attached in the form of comments and tables.

3. GENERAL PRINCIPLES AND PROCEDURE

It is necessary to state the general principles and the procedure followed in this exercise.

(i) To reiterate what has been mentioned before, this is an attempt to estimate the recurring institutional expenditure per student per annum. Hence all nonrecurring expenditure like investment in land, buildings, structures, furniture or equipment (for the introduction of new educational facilities or improvement of old ones) are excluded. Depreciations on these items are also not taken into account for the same reason.

(ii) Rent paid by the institution (either to an outside agency or to the parent society which also manages other institutions) is included in the recurring cost. Interest charges on loans (on buildings etc.) which continue over a long period and are therefore of a recurring nature are also included. The reason for including this interest is that it is almost similar to recurring expenditure on rent. But repayment of loans is excluded from the current cost.

(iii) Administrative charges paid by the institution to its managing society are included in the current cost. They are considered as the cost of a part of the administration of the institution undertaken by the society for convenience.

(iv) Current expenditure on the purchase of equipment such as books and journals for the library or apparatus for the laboratories is included in the recurring cost. Conventionally this should come under capital investment but the present procedure is adopted for two reasons. Firstly, this is a necessary annual ex-

penditure and one cannot think of a college without annual additions to the library or replacements in the laboratory. In a sense they are some of the "raw material" inputs. Secondly, if it is treated as capital investment, allowance has to be made for depreciation and for the wreckage that takes place in the library and laboratory during the year; it is not easy to estimate it. We have, however, excluded all expenditure on these items which was not of the annual recurring type but was of the nature of block expenditures for development or improvement.

(v) Contributions made by the institution towards running a students' hostel, maintaining staff-quarters, etc. (i.e. the excess of expenditure over income from them) are included in the current expenditure. The underlying principle is that wherever the amenities provided are either essential or eminently desirable for running an institution, the net cost of providing them should be included in the recurring cost.

(vi) For the same reason scholarships awarded by the institution are included under the current cost. But free-studentships have to be excluded because they do not figure as expenditure in the institution's accounts. Again endowed scholarships, government scholarships and such other awards which merely pass through the institutions but are not actually spent from their budgets are not included in the current cost.

(vii) The examination cost does not figure in the current cost of colleges because examinations at most of the important stages of the undergraduate courses are university examinations and are conducted by the university. The cost of conducting term-end and other internal tests in collegiate institutions is included in the current cost. Usually this figure is not large enough to form a separate head. The cost of the university examinations, however, is a large enough item but it cannot be evaluated for the following reasons. In the first place it is difficult to split the total university expenditure on examinations into separate figures for each examination. This is necessary before they can be further separated out for the candidates sent up by each college. Secondly, because of the dropouts and the repeaters, the candidates who appear for the university examination at the end of a stage of a course are not identical with the students who attend

that course in colleges. In any case the fees that the university charges for the various examinations are usually more or less adequate to cover the expenditure in that respect. If it is intended to include the examination cost one may estimate it by the actual examination fees and include it directly under the student cost rather than go through the elaborate but approximate estimation procedure in order to include it under the institutional cost.

The general procedure adopted for obtaining the figures of the current institutional cost will now be described; the particular modifications which were found necessary to suit the characteristics of an individual institution will be explained when it is taken up later for individual consideration. The items of expenditure were first separated under two broad categories : (i) common or nondivisible expenditure, and (ii) divisible expenditure. The first category includes items of expenditure like the salary of the office staff, expenditure on library, expenditure on amenities provided to the students, etc. These items are common to students of all courses given in the institution and are not divisible. The second category consists items of expenditure like the salary of the teaching staff which can be apportioned between different categories of students, e.g. between arts and science, and between the PD class and the three-year degree course. For convenience of identification these two broad categories were subdivided according to the following scheme which was found suitable for most of the colleges.

Common or Nondivisible Expenditure

- CI : Salaries and allowances of the office staff (and establishment including clerks and other servants).
- CII : Gratuity, pension fund contribution, insurance premia, salaries of the teaching staff on leave and other non-divisible salaries of the teaching and other staff, and similar nondivisible contributions.
- CIII : Current expenditure on library including salaries of the library staff, purchase of books and periodicals, and other related items.

- CIV : Amenities provided to students such as college magazine, gymkhana, hobby workshop, NCC, physical training, social functions, contribution towards running a hostel, etc.
- CV : Rent, interest and administrative charges.
- CVI : Rates, taxes, electricity and water charges, building insurance, etc.
- CVII : Current repairs to buildings, furniture, etc.
- CVIII : Contingent expenses.
- CIX : Miscellaneous.

Divisible Expenditure

- DI : Salaries and allowances of teaching staff.
- DII : College scholarships.
- DIII : Current expenditure on laboratories.

Out of the divisible items of expenditure, DI was further subdivided over arts and science, and over the PD and three-year degree courses in the proportion of the periods engaged. (The method of division followed is explained while considering the institutions individually.) The item DII is small and its class-wise subdivision was generally available for each institution. It would have been desirable to divide DIII further over the different science classes. But here no method of allocation could be devised unlike the expenditure on salaries. We were therefore left with no other alternative except to spread it uniformly over all the science students. The cost per student on account of divisible expenditure for each category of students was obtained by adding the cost per student for each of these three items of divisible expenditure. To the figure thus arrived at for each category of students was added the common cost per student obtained by spreading the total common expenditure over all students in the institution to arrive at the final cost per student in each category.

A data sheet giving the relevant information was prepared for each college. It listed the number of students in each class, the number of teachers, common expenditure classified under the nine categories mentioned above and divisible expenditure classi-

fied under the three categories mentioned above. The sheet also noted the division of divisible expenditure over relevant categories of students and finally recorded the component costs as well as the total cost per student per annum for different categories of students. All data sheets are omitted except for two colleges and for the university to serve as illustrations of the procedure followed. They are given at the end.

4. COSTS IN ARTS, SCIENCE AND COMMERCE COLLEGES IN POONA

The following three colleges from Poona, teaching arts, science and commerce, were selected : (i) The Fergusson College, which is an arts and science college ; (ii) the B. M. College of Commerce, which is exclusively a commerce college; and (iii) Shri Shahu Mandir Mahavidyalaya, which is an arts and commerce college.

The Fergusson College

This is the oldest arts and science college in Poona and is under the management of the Deccan Education Society which is a private educational society. It belongs to the large-size class of colleges. Its total strength was 2,335 in 1964-65, out of which 801 were in arts classes and 1,534 in science classes. The detailed breakdown is given in the data sheet. The teaching staff consisted of 151 members in 1964-65, of which the lecturing staff numbered 67, the remaining 84 being demonstrators and tutors. The data sheet also gives the actual expenditure for 1964-65 broken down into common and divisible item-groups outlined above. The total common expenditure of Rs 3,44,514 was spread over the total number 2,335 of students and the common cost per student came to Rs 147.54. The expenditure under DI, the salary of the teaching staff, was first spread over the relevant sub-groups of students. For this purpose we had to take into account the fact that some teachers also participated in the postgraduate teaching conducted by the university. The procedure followed is better explained with an illustration.* Suppose those of the

* There were three grades in the lecturing staff. A further refinement in the calculations can be made if we take the salaries of the three different grades of teachers separately. But this elaboration was not thought worthwhile.

teachers who taught all the three categories of arts courses, viz the PD in Arts, the three-year B.A., and the M.A. classes, worked respectively for m , n and p teaching-periods per week for the three categories, and suppose that their total emoluments were Rs S . Then the share of each subgroup of students in this expenditure could be obtained by dividing S into three parts in the proportion $m : n : p$. (The part spent on the M.A. group was not relevant to the cost of education for undergraduate students in the Fergusson College and was therefore omitted.) It was necessary to make similar apportioning of salaries of teachers who taught both arts and science classes (e.g. those who taught English or mathematics). In this manner the salary expenditure on each category of teachers was subdivided over the relevant category of students. Similar procedure was followed for salaries of demonstrators and tutors. Thus the portion of the divisible expenditure under DI relevant for each category of students was determined and it was then divided by the number of students in that category to obtain the cost per student in that category under the component DI of the divisible part of the expenditure. The classwise expenditure on DII, the expenditure on college scholarships, was available so that the same procedure could be followed for this component. For instance, the amounts of divisible expenditure assigned to the PD class in science from DI and DII were Rs 77,912 and Rs 3,055 respectively. When spread over 645 students of the class the costs per student under DI and DII were Rs 120.79 and Rs 4.74 respectively. Since DIII, the expenditure of Rs 1,21,635 on laboratories could not be so subdivided, it was spread over all the science students numbering 1,534. This gave Rs 79.29 as laboratory cost per science student. All these figures put together, the cost per student in the PD science class became Rs 147.54 + Rs 120.79 + Rs 4.74 + Rs 79.29 = Rs 352.36. Other figures given on the data sheet were similarly worked out. The final figures were as follows :

ANNUAL COST PER STUDENT (IN RUPEES)

	PD	Three-year course	Four-year course
Arts	269	342	319
Science	352	400	380

The last column gives the cost per student per year in arts and science if the PD year and the next three years are not considered as separate courses but are taken together as one continuous course of four years for a degree in arts or science.

The B. M. College of Commerce

This is the oldest and the largest commerce college in the Poona University and it is conducted by the D.E. Society. The postgraduate teaching in commerce in Poona is also located in this college. The postgraduate course is of two years leading to the M.Com. degree. In 1964-65 there were 1,463 students in this college including 100 M.Com. students. Out of 43 persons on the teaching staff, the lecturing staff numbered 33, and tutorial and similar staff, 10. Expenditure figures under various C and D heads for the year 1964-65 are given on the data sheet. The procedure described above was followed in apportioning the divisible expenditure over the PD, the three-year B.Com and the M.Com. students. But there is one important difference. As all postgraduate teaching in commerce was done in this college, the M.Com. portion of the divisible expenditure gave us the annual cost of the M.Com. course when it was added to the common cost per student in the calculation of which the M.Com. students were also included. The final cost figures were as follows :

ANNUAL COST PER STUDENT IN COMMERCE (IN RUPEES)

<i>PD</i>	<i>Three-year B.Com.</i>	<i>Four-year B.Com.</i>	<i>M.Com.</i>
247	224	232	267

Shri Shahu Mandir Mahavidyalaya

This college is one of the two recently started colleges in Poona. It was started in 1960, as an arts college, and is managed by Akhil Bharatiya Maratha Shikshan Parishad which is a private educational society. Recently the college started courses in commerce but it had not reached the TY stage in B.Com in 1964-65. In that year the college had 371 arts students and 192 commerce students and there were 19 members on its teaching staff.

The procedure outlined above was followed in apportioning the items of divisible expenditure over arts and commerce courses. There is, however, one important difference. There are subjects in which there are identical courses for arts and commerce students and it is therefore possible to arrange common lectures where arts and commerce students can sit in the same class. A consequent modification in the procedure was necessary. The final cost figures are given below :

ANNUAL COST PER STUDENT (IN RUPEES)

	<i>PD</i>	<i>Three-year course</i>	<i>Four-year course</i>
Arts	203	256	236
Commerce	222	285	249

5. COSTS IN ARTS, SCIENCE AND COMMERCE COLLEGES OUTSIDE POONA

The Hansaraj Pragji Thackersey College, Nasik

This is the oldest college of arts and science affiliated to the University of Poona from outside Poona and is conducted by a private society named the Gokhale Education Society. With 548 students in arts and 627 in science during 1964-65 it may be described as a middle-size college. A postgraduate-teaching centre of the university, in arts, is located in this college which had 12 students in the M.A. class during that year. There were 53 members on the teaching staff in 1964-65 of which the lecturing staff numbered 36, and 17 were demonstrators. Except for the postgraduate stage the structure of the college is the same as that of the Fergusson College. Similar procedure was therefore followed to calculate the costs for various courses. But in the present case the cost of the M.A. students is also relevant. The final figures for the institutional current cost per student per annum were as follows :

ANNUAL COST PER STUDENT (IN RUPEES)

	<i>PD</i>	<i>Three-year course</i>	<i>Four-year course</i>	<i>M.A.</i>
Arts	348	456	409	889
Science	448	521	486	—

The B. Y. K. College of Commerce, Nasik

This college is exclusively a commerce college. It is the oldest commerce college in the University of Poona outside Poona and is conducted by the same education society which conducts the H. P. T. College. With 569 students in 1964-65 it may be said to belong to the middle-size group. The college has a centre for M.Com. teaching, and there were 61 students reading for the M.Com. during that year. The staff consisted of 21 members of which 17 constituted the lecturing staff and the remaining four were tutors. The method followed for the Commerce College in Poona was followed for calculating the current cost for this college. It gave the current cost as follows :

ANNUAL COST FOR COMMERCE STUDENTS (IN RUPEES)

PD	Three-year B.Com.	Four-year B.Com.	M.Com.
323	309	314	288

The R. B. Borawake College, Shrirampur

This college of arts and science was started only five years ago by the Rayat Shikshan Sanstha, an education society which conducts several schools and colleges in western Maharashtra. This college may be considered representative of some of the newer colleges which are being established during this decade at several smaller taluka towns in this part of Maharashtra. It belongs to the small-size group. Its strength in 1964-65 was 133 arts students and 149 science students. There were 29 professors and lecturers, and 10 demonstrators and tutors, on its staff. The situation is similar to the undergraduate courses in the two arts-and-science colleges considered above. Similar procedure was therefore followed to arrive at the annual cost per student in the different categories which are listed below :

ANNUAL COST PER STUDENT (IN RUPEES)

	PD	Three-year course	Four-year course
Arts	454	587	538
Science	598	814	701

The C. D. Jain College of Commerce, Shrirampur

This college is exclusively a commerce college conducted by the Rayat Shikshan Sanstha. It was started a year after the Borawake College. The college had 139 students in 1964-65 which shows that it belonged to the small-size group. The teaching staff in 1964-65 consisted of 14 members of which the lecturing staff numbered 12 and tutors, two. The college did not offer postgraduate instruction. So the question of the division of expenditure over the M.Com. students does not arise. The annual costs per student were as follows :

ANNUAL COST PER STUDENT IN COMMERCE (IN RUPEES)

PD	Three-year course	Four-year course
365	532	444

6. COSTS IN PROFESSIONAL COLLEGES IN POONA
(LAW, EDUCATION AND ENGINEERING)

The Law College

This is one of the oldest institutions of higher education in Poona and is conducted by the Indian Law Society which is a private educational society. The college runs the two-year course of LL.B. and the postgraduate course of LL.M. which also extends over two years. A student who wishes to read law must have obtained a degree in arts, science or commerce. In 1964-65 the college had 445 students in the LL.B. and 28 in the LL.M. classes. The staff consisted of 12 members of which seven worked on part-time basis. By applying our procedure of apportioning the various items of expenditure over the two categories of students the annual costs were obtained as follows :

ANNUAL COST PER STUDENT IN LAW (IN RUPEES)

LL.B.	LL.M.
302	590

The Tilak College of Education

There is only one college of education in Poona and it is conducted by the Shikshan Prasarak Mandali, a private educational society which also conducts many other educational institutions. The college provides instruction for B.Ed. which is a one-year course after a first degree in some other faculty, and for M.Ed. which is a one-year course after B.Ed. While the B.Ed course is a full-time one, the M.Ed. course can be pursued by part-time students. The college provides two types of courses for M.Ed. : (i) the regular course, and (ii) the vacation course. The former consists of lectures throughout the year for one academic year, but held in the morning to suit the convenience of students, and the latter consists of lectures spread only over two successive summer vacations, in which case a student takes two years to complete the course. (The fees are the same for both the courses.) In 1964-65 there were 151 students for B.Ed., 35 for the regular course in M.Ed., and 41 for the vacation course in M.Ed. There were 22 members of the teaching staff of which four worked in an honorary capacity. The usual method of spreading the expenditure over the different categories of students was followed. Two estimates were obtained under two different assumptions. Under assumption I it was assumed that the vacation course was not a necessary activity of the college but a sort of a desirable afterthought. Hence, under this assumption, the vacation-course students and the extra expenditure incurred on them were both removed before applying our procedure. Under assumption II it was assumed that the vacation-course students were a third category of students served by the college as a regular activity. Therefore, under this assumption, they should share the common expenditure with the B.Ed. students and the divisible expenditure with the regular M.Ed. students. (This assumption was suggested to us by the authorities of the college who maintained that the entire staff was available to these students for consultation during the vacation.) But since the vacation course extends over two years and is held only during the short period of vacations, it was thought reasonable to suppose that two students of the vacation course are equivalent to one student of the regular course. Calculations were made on

this basis. The annual costs per student under the two assumptions are given below as Estimates I and II :

ANNUAL COST PER STUDENT IN EDUCATION (IN RUPEES)

	B.Ed.	M.Ed. (Regular)	M.Ed. (Vacation)
Estimate I	782	543	—
Estimate II	751	486	243

The College of Engineering, Poona

The College of Engineering, Poona, is the oldest engineering college in this part of the country; it celebrated its centenary a few years back. It is run by the government of Maharashtra state. The college offers three-year courses in different branches of engineering leading to the B.E. degree. An entrant must have completed the first two years of the course in a science college after the SSC examination. The M.E. course extends over 1½ to 2 years after B.E., depending on the branch selected by the student. The following specialisations are available for the B.E. students : civil engineering, mechanical engineering, electrical engineering, telecommunications and metallurgy. In 1964-65 there were 1,197 students in the B.E. classes and 32 in the M.E. class. (There were a few students (24) doing the diploma courses in metallurgy and telecommunications but they were ignored for our purpose.) There were 338 members on the staff of which 325 belonged to the categories of professors, readers, assistant professors, lecturers and assistant lecturers, and 13 in the categories of demonstrators and draughtsmen.

The procedure of apportioning expenditure followed here is the same as for other colleges. But three points need a mention : (1) It was not possible to make separate computations of cost for different branches of the B.E. course. (2) A notional division of salaries was thought necessary in the case of those staff members who were teaching only the M.E. classes but who, being heads of departments, were looking after the general administration of the department for both the B.E. and M.E. classes in that subject. We divided them half and half over the B.E. and M.E. classes. (3) For all the colleges considered so far only the college scholarships were included in the expenditure.

Other scholarships and free concessions such as government scholarships which a college does not spend from its funds but which merely pass through it were not included. Here in the case of the B.E. students there was no difficulty in following the same procedure, because the scholarships were, in fact, college scholarships, although technically this expenditure was borne by the state government which runs the college. But in the case of the M.E. students there was a large amount shown as scholarships all of which were actually awarded by the central government. We were told that a large number of the M.E. students would not pursue the course unless some such scholarships were available. Therefore this expenditure could be looked upon as a necessary cost of the course. We have therefore constructed two estimates of the annual cost for the M.E. students (i) including this amount, and (ii) excluding it. The resulting costs are as follows :

ANNUAL COST PER STUDENT IN ENGINEERING (IN RUPEES)

	B.E.	M.E.
Estimate I	1,525	2,363
Estimate II	—	2,081

7. COST IN POSTGRADUATE DEPARTMENTS OF THE UNIVERSITY

As mentioned earlier the University of Poona is statutorily charged with the responsibility of conducting all postgraduate education. In practice the professional colleges look after the postgraduate instruction in their specific fields. Thus the university is directly responsible for the postgraduate effort only in the humanities (arts) and in science. Even in these faculties the university has placed a few centres of postgraduate instruction in specified subjects, mostly in arts, in colleges outside Poona, and they are run by the local colleges. In Poona, university departments manned by the university staff have been established in some subjects. Lectures in these subjects, as well as in many others for which there are no university departments, are held in the university campus. College teachers who are called contributed teachers and who are drawn from the senior staff of the

local colleges and recognised institutions also participate in the postgraduate instruction. There are university departments in seven subjects in arts (including modern European languages) and in six subjects in science on the campus. Three departments—ancient Indian history including archaeology, linguistics and geology—are financed by the university but are located in other institutions. For the subjects philosophy and Persian-Urdu there were no university departments in 1964-65. And finally, for two other subjects (economics, and sociology-anthropology) two recognised institutions, not financed by the university, are deemed as departments for all practical purposes, although formal registration of students is done in the university. This information is summarised below classified by subjects giving postgraduate students in 1964-65 in each case. For simplification of procedure, students enrolled in mathematics-statistics and geography departments are considered as science students whether they are enrolled for M.A. or M.Sc. The first figure in the bracket is the number of M.A. or M.Sc. students and the second figure is that of Ph.D. students. M.A. students can offer eight papers in one subject or four papers each in two subjects; in the latter case their numbers are divided half and half for purposes of counting. Wherever necessary rounding is done to avoid fractions.

University Departments on the Campus or Elsewhere

Science—(i) chemistry (123,17); (ii) physics (52,10); (iii) botany (36,10); (iv) zoology (23,7); (v) mathematics and statistics (79,9); (vi) geography (24,3); and (vii) geology, located at Fergusson College (24,3).

Arts—(i) Sanskrit and Prakrit (13,8); (ii) Marathi (49,23); (iii) experimental psychology (41,6); (iv) politics and public administration (35,18); (v) Hindi (27,20); (vi) English (32,-); (vii) archaeology and ancient Indian history (including history), located at Deccan College (26,6); and (viii) linguistics, located at Deccan College (11,32).

Arts subjects for which there were no departments: (ix) philosophy (10,-); and (x) Persian-Urdu (2,-).

Arts departments for which there are recognised research institutions: (xi) economics (74,12) in Gokhale Institute of

Politics and Economics; and (xii) sociology-anthropology (31, 18) in Deccan College Research Institute.

University department not included above: (xiii) modern European languages (5, -).

Students in economics, sociology-anthropology and modern European languages had to be excluded from this exercise in costing as the expenditure incurred on their teaching could not be extracted even approximately. In the case of the first two subjects it was difficult to estimate the cost incurred for this purpose by the two institutions recognised for them. In the case of the third subject which had only five M.A. students, the same university department also runs undergraduate courses as well as largely-attended evening diploma courses in French, German and Russian. It was therefore not easy to separate the part of the expenditure spent only on postgraduate students.

This information is consolidated as follows, separating the arts subjects for which costing was attempted from those for which it was not attempted because of the difficulties described above.

POSTGRADUATE STUDENTS IN ARTS AND SCIENCE (1964-65)

	<i>Departments considered for costing</i>		<i>Other departments</i>		<i>Total</i>	
	<i>M.A./M.Sc.</i>	<i>Ph.D.</i>	<i>M.A./M.Sc.</i>	<i>Ph.D.</i>	<i>M.A./M.Sc.</i>	<i>Ph.D.</i>
Arts	246	113	110	30	356	143
Science	361	59	—	—	361	59
Total	607	172	110	30	717	202
Grand total : 919						

Among the total 717 M.A./M.Sc. and 202 Ph.D. students studying under the postgraduate scheme during 1964-65, there were 361 M.Sc. students and 59 Ph.D. students in science. Of the arts students, 246 M.A. and 113 Ph.D. students belonged to the departments where costing was possible. Costs were estimated separately for these students in arts and all students in science. Since actual expenditure figures for 1964-65 were not available

when this study was made, we used the revised estimates for the year given by the university. It was later verified that they were close to the actuals.

The data for these university departments, including their expenditure, are presented in the table below. The data sheets from which it is extracted are given towards the end. The figure for the departmental expenditure includes the salaries of the teaching and other staff in the department and other expenses, such as those on laboratories, which were spent exclusively on that department. Expenditure on special research-

POONA UNIVERSITY : STUDENTS, STAFF AND EXPENDITURE
DURING 1964-65

Name of the Department	No of students		Teaching staff		Expenditure (Revised estimates) (in rupees)
	M.A.	Ph.D.	Uni- versity	Contri- buted	
Arts					
1. Sanskrit and Prakrit Languages	13	8	2	13	23,945
2. Marathi	49	23	3	6	28,734
3. Experimental Psychology	41	6	2	1	35,960
4. Politics and Public Administration	35	18	3	3	42,590
5. Hindi	27	20	3	2	33,260
6. English	32	—	1	9	15,696
7. Department of History and Archaeology	26	6	2	6	80,280
8. Department of Linguistics	11	32	7	6	1,80,433
Science					
1. Chemistry	123	17	10	5	2,82,708
2. Physics	52	10	6	6	1,24,685
3. Botany	36	10	8	3	1,46,730
4. Zoology	23	7	4	4	96,842
5. Geology	24	3	2	2	33,494
6. Mathematics and Statistics	79	9	11	10	1,26,405
7. Geography	24	3	4	—	47,500

projects which cannot be considered as regular recurring expenditure is not included in this figure. It should be stated that the departmental expenditure figures for arts (or science) departments do not include the university contribution towards the provident fund of the departmental staff. To obtain the total expenditure incurred on the departments one has to add to the figure of expenditure given in this table the university's contribution to the provident fund. This will account for the difference in figures given in this table and the total expenditures on the departments given in the data sheets.

The university pays a certain amount annually to the constituent colleges and recognised institutions for the part of the teaching done by members of their staff in the postgraduate scheme. The portion of this amount which should be included in the expenditure on the teaching of the subjects mentioned above and its division over arts and science subjects was done on the basis of the hours of lecturing-work in each category. These amounts are added to the expenditure of the arts and science departments. The university also pays annually some grants to these colleges and institutions for strengthening the postgraduate sections of their libraries. This amount is small but is shown along with the expenditure on the university library. The expenditure on scholarships and free studentships was available separately for M.A./M.Sc. and Ph.D. students. All these amounts are shown in the data sheets.

So far there was no great difficulty in estimating the expenditure relevant to the various categories of students mentioned above although we had to use a few approximations and adjustments at places. When we begin to consider the items of common expenditure on postgraduate instruction in the university corresponding to those of common expenditure in the case of colleges we run into formidable difficulties. Some research workers try to seek a way out by spreading all other university expenditure over all students of the university including the undergraduate students studying in colleges in the university town as well as in the affiliated colleges situated elsewhere. We do not think that this is a proper procedure and it would certainly not be so in the case of the Poona University. Facilities like the gymkhana facilities, students' health centre and hobby workshop

are exclusively used by the postgraduate students in Poona, and the expenditure is clearly for the postgraduate education. But other items are not so clearly assignable, and it is necessary to consider each item separately. Let us first consider the university library. In theory all students and teachers (and also other scholars and interested persons) can use the facilities provided by the university library. But in practice it is only the postgraduate students and staff in Poona who avail themselves of these facilities and it will be most inappropriate to apportion the expenditure on the library uniformly over all students of the university studying in colleges spread over seven districts of Maharashtra. In fact we think it far more reasonable to include the whole of it as expenditure on postgraduate education in Poona.

Most of the buildings on the Poona University campus are departmental buildings, and it is clear that a large portion of the expenditure on items such as maintenance and repairs, municipal taxes, water and electricity rates must be put to the account of postgraduate education in Poona. Even in the case of the establishment charges (salary of the office staff) it was the view of some responsible officers of the university (whom we consulted) that a part of the expenditure ~~must~~ also be put to that account since a sizable part of their ~~working~~ time is taken by matters relating to postgraduate instruction in Poona. It is, however, difficult to determine with any ~~precision~~, or by means of an objective criterion, the portion of expenditure assignable to postgraduate instruction in Poona for each of these items of expenditure and we had to resort to notional apportionment. We therefore consulted responsible officers of the university, went through each of these items with them and fixed the notional share of the expenditure on each of them which could be reasonably assigned towards the organisation of the postgraduate instruction in arts and science in Poona. For instance, it was thought reasonable to assign 75 per cent of the total expenditure on maintenance and repairs, 50 per cent of the salaries of the engineering and sanitary staff and 80 per cent of the conveyance charges towards postgraduate instruction. (The last because the bulk of this expenditure is spent over the transport of contributed teachers.) These amounts were then consolidated under broad classifications and they are given under item CI to CIX under

the common or nondivisible expenditure in the data sheets. (As mentioned earlier in section 3, we have not included in these items the expenditure on university examinations which has been left out for the reasons given in that section.) There are thus four broad categories of expenditure: (a) nondivisible common expenditure (except that on library), (b) expenditure on the university library (including grants to college libraries), (c) expenditure of university departments (including payments in respect of contributed teachers), and (d) scholarships. All these are given for reference in the data sheets.

These amounts were then spread over the relevant number of students as follows: Expenditure under (a) on common non-divisible items totalling Rs 4,26,614 was spread equally over the total number 919 of postgraduate students giving Rs 464.21 per head per annum. Expenditure (d) on scholarships was available separately for M.A. and M.Sc. students and for all Ph.D. students. When divided by the respective number of students (M.A. 356, M.Sc. 361 and Ph.D. 202), the annual cost per student, on this account, worked out at Rs 14.08, Rs 39.44 and Rs 445.73 respectively.

For the expenditure (c) on university departments the following three assumptions were tried:

Assumption A: It was assumed that one Ph.D. student takes one lecturing-period per week of the teacher who guides him. (This convention is accepted in many Indian universities.) The total expenses on the departments and subjects considered for costing (corresponding to the 607 M.A./M.Sc. students and 172 Ph.D. students) were first divided in the ratio of the time-units spent on them by the teaching staff separately for arts and science and the separated amounts were then spread evenly on the M.A. (or M.Sc.) and Ph.D. (arts or science) students. It gave the following costs per student (in rupees) on account of (c):

M.A.	M.Sc.	Ph.D. (Arts)	Ph.D. (Science)
1,095.85	2,139.09	2,025.92	2,719.05

Assumption B: One Ph.D. student was considered equivalent to two M.A. or M.Sc. students so far as the teacher's effort and

departmental expenses were concerned. The expenditure on item (c) was then spread over the postgraduate students separately for arts and science. The costs arrived at (in rupees) under (c) were as follows :

<i>M.A.</i>	<i>M.Sc.</i>	<i>Ph.D. (Arts)</i>	<i>Ph.D. (Science)</i>
1,056.16	1,947.05	2,112.33	3,894.10

Assumption C : It was assumed that some research would be done by a postgraduate teacher and that he would devote one-third of his working time to it, another third to M.A./M.Sc. teaching, and the remaining third to guiding Ph.D. students. This may not be true of each teacher, for a junior teacher would perhaps devote more time to teaching than to research guidance. If this assumption is on the whole reasonable, the total expenditure under (c) can be divided first into three equal parts in both arts and science. The portion corresponding to individual research is then taken out and the other two portions are spread uniformly over the relevant number of students. The method of calculation will be clear from the figures given in the data sheets for this assumption. The annual costs (in rupees) on account of (c) were :

<i>M.A.</i>	<i>M.Sc.</i>	<i>Ph.D. (Arts)</i>	<i>Ph.D. (Science)</i>
675.49	861.16	1,470.53	5,269.12

In the case of expenditure (b) on library facilities the following two assumptions were tried :

Assumption D : It was supposed that this expenditure equally benefited all the postgraduate students in arts and science. The university library is used mainly by the postgraduate students in arts and science and their teachers, and it is but rarely used by the undergraduate students and staff in the constituent or affiliated colleges, or by the postgraduate students and staff in other faculties. The total expenditure of Rs 2,35,337 was therefore spread over the total 919 postgraduate students. The annual cost

thus obtained under this head per student was Rs 256.08, whether M.A., M.Sc. or Ph.D.

Assumption E : This assumption is similar to Assumption C, viz that the total benefit of the library facilities is equally shared (one-third each) by the three groups—the staff, the M.A./M.Sc. students (717), and the Ph.D. students (202). This means that the total expenditure under this head should first be divided into three equal parts. The portion corresponding to the staff is then left out and the other two are spread uniformly on the relevant number of students. The annual costs (in rupees) found in this manner under this head were :

<i>M.A./M.Sc.</i>	<i>Ph.D. (Arts and Sciences)</i>
109.41	388.34

Combining the assumptions from A to E and adding the relevant costs per student under the four heads we get six different estimates corresponding to the following six combinations :

Estimate I	:	Assumptions A and D
” II	:	” B and D
” III	:	” C and E
” IV	:	” A and E
” V	:	” B and E
” VI	:	” C and D

Of these the first three are more meaningful than others because when one accepts the one-third principle for expenditure on teaching one should reasonably adopt the same principle for library expenditure and vice versa. The final current costs (in rupees) per student per year for these three estimates are given below :

ANNUAL COST FOR POSTGRADUATE STUDENTS IN ARTS
AND SCIENCE (IN RUPEES)

	<i>M.A.</i>	<i>M.Sc.</i>	<i>Ph.D. (Arts)</i>	<i>Ph.D. (Science)</i>
Estimate I	1,684	2,752	3,324	4,017
Estimate II	1,644	2,560	3,411	5,192
Estimate III	1,410	1,621	2,637	6,435

8. COMMENTS ON COSTS IN DEGREE COURSES

In this section and the next we shall consider the current institutional unit costs worked out in the earlier sections to see whether we can arrive at some broad conclusions about them. Let us first consider the undergraduate costs. The annual current costs per student for the first degree courses in arts, science and commerce, are brought together in the consolidated table given on the next page. The table gives, for each of the colleges under study, the annual cost per student in rupees (rounded off to the nearest rupee) for the PD year, for the three-year degree course and for the entire four-year college course in arts, science and commerce. It also gives the number of students in each category and the student-staff ratio both excluding and including tutors and demonstrators (the last figure is given in bracket). In the case of colleges with more than one faculty the same figure is given for student-staff ratio under each faculty.

Comparing the annual costs per student in arts, science and commerce in similarly situated institutions we find that the cost of the commerce course is the lowest, the arts costs are higher than the commerce costs and the science course has the highest cost. The main reason for the high cost of the science course is obviously the laboratory expenditure. This can be seen from the following figures for the teaching and laboratory costs per student (corresponding to items DI and DIII) for the four-year course in arts and science of the three arts-and-science colleges.

TEACHING AND LABORATORY COSTS (IN RUPEES) PER STUDENT ,

College	Arts		Science	
	DI	DI	DIII	
Fergusson College, Poona	167	148	79	
H. P. T. College, Nasik	185	188	72	
Borawake College, Shrirampur	298	339	121	

Secondly, the costs for the arts and commerce courses may be considered comparable at the PD level, but at the three-year degree stage the arts course has a much higher cost than the commerce course. This is mainly due to the wider choice of

ANNUAL COST (IN RUPEES) PER STUDENT IN UNDERGRADUATE COURSES (1964-65)

	Cost in rupees			Number of students		Student-staff ratio with demonstrators and tutors
	PD	3-year degree course	4-year degree course	PD	3-year	Total (without)
Arts						
1. Fergusson College, Poona	269	342	319	252	549	801
2. Shri Shahu Mandir College, Poona	203	256	236	138	233	371
3. H. P. T. College, Nasik	348	456	409	233	303	536
4. R. B. Borawake College, Shrirampur	454	587	538	49	84	133
Science						
1. Fergusson College, Poona	352	400	380	645	889	1,534
2. H. P. T. College, Nasik	448	521	486	299	328	627
3. R. B. Borawake College, Shrirampur	598	814	701	78	71	149
Commerce						
1. B. M. College of Commerce, Poona	247	225	232	451	912	1,363
2. Shri Shahu Mandir College, Poona	222	285	249	108	84	192
3. B. Y. K. College of Commerce, Nasik	323	309	314	194	314	508
4. C. D. Jain College, Shrirampur	365	532	444	73	66	139
Law		LL.B.				LL.B.
1. Law College, Poona,	—	302	—	—	—	445
Education		B.Ed.				B.Ed.
1. Tilak College of Education, Poona	—	725	—	—	—	151
Engineering		B.E.				B.E.
1. College of Engineering, Poona	—	1,525	—	—	—	1,197

optional subjects provided in the B.A. (and B.Sc.) courses than in the B.Com. course, especially in the last two years of the three-year degree courses, with a consequential rise in the expenditure on the teaching staff. This also accounts to a certain extent for the fact that the annual cost is higher at the three-year degree stage than at the PD stage in arts and science but the reverse seems to hold in the case of commerce. (Both these points are dealt with in detail later in the Appendix.) The case of Shri Shahu Mandir Mahavidyalaya is exceptional and is commented on later. But comparing similarly placed institutions it appears that the costs in science are 20 to 30 per cent higher than those in arts, and that the costs in commerce are 20 to 25 per cent lower than those in arts.

Size or the number of students studying in an institution is another important factor affecting its operating cost. Generally speaking, a larger size means fuller utilisation of the teaching and nonteaching facilities and a consequent lowering of costs for both. This can be clearly seen from the table on the next page which gives for the three arts-science colleges and the three commerce colleges in Poona, Nasik and Shrirampur, the annual cost per student for the four-year course by way of common or nondivisible expenditure (item C of the data sheet) and on teachers' salaries (item DI of the data sheet) and the relevant number of students.

Actually several factors simultaneously affect the operating costs of an educational institution. We have so far discussed only two of them, faculty (arts, science or commerce) and size (the number of students) on the basis of the figures obtained in this investigation. The others are briefly mentioned here indicating the direction in which they may operate. One of the important factors is whether the college has already established itself and has achieved its potential growth or whether it has yet to do so. This can affect both ways. An old and established college with its saturated capacity can utilise its teaching and nonteaching facilities more or less fully and bring down the costs on that account. On the other hand by virtue of its tradition it is likely to provide for many more optional subjects especially at the third-year and fourth-year levels and also be liberal in providing academic as well as extracurricular facilities to students. Secondly, not

NUMBER OF STUDENTS AND COSTS PER STUDENT UNDER
ITEMS C AND DI

Item C				
<i>College</i>	<i>Arts-Science</i>		<i>Commerce</i>	
	<i>Total No of students</i>	<i>Cost (Rs)</i>	<i>Total No of students</i>	<i>Cost (Rs)</i>
Poona	2,335	148	1,463	148
Nasik	1,175	213	569	182
Shrirampur	282	240	139	239

Item DI						
<i>College</i>	<i>Arts</i>		<i>Science</i>		<i>Commerce</i>	
	<i>No of students</i>	<i>Cost (Rs)</i>	<i>No of students</i>	<i>Cost (Rs)</i>	<i>No of students</i>	<i>Cost (Rs)</i>
Poona	549	167	889	148	1,363	117
Nasik	536	185	627	188	508	125
Shrirampur	133	298	149	339	139	204

only the large number of students for the PD course but also their ratio to those in the three-year degree course (or more realistically the ratio of the number of students in the first two years and those in the two final years of the four-year degree course) will also affect the cost. While the class divisions in the lower classes will be working in fuller strength the sizes of the higher classes will be relatively rather small. (See Appendix where this is illustrated.) Again, the university has stipulated that the PD classes must not have more than a hundred students in each division, while the number in the higher classes is restricted to 150. (This is perhaps one reason why the PD costs are higher than the costs in the three-year course in commerce.) There is also a restriction on the maximum number of periods (usually 15

periods a week) to be assigned to a teacher. Both these factors will obviously affect the costs for the entire course or its two stages, depending on the total strength of the college and the strength in different classes. Having more than one faculty (e.g. arts and science, or arts and commerce, or all the three together) will generally tend to work towards reduction in cost (its non-divisible component) by greater utilisation of the available facilities. Finally, the grant-in-aid code of the government is usually more liberal towards newly started institutions and institutions of smaller size.* Although this is meant to assist them in their budget it is also sometimes likely to operate against the exercise of strict economy in expenditure. All these factors operate simultaneously and it is difficult to isolate them unless one studies a larger number of institutions and in greater detail. (Perhaps some of the figures obtained in these institutions can be interpreted as pointing towards one factor or the other but we do not want to indulge in hazardous guesswork.) One would expect, however, that as the institution grows older, both its size and its pattern will more or less stabilise, its running will be more and more 'economic' and the institutional costs will tend to stabilise in relation to the given period and the given local situation.

It is only fair to say something about the representative character of the institutions which we have studied. The Fergusson College which is managed under the life-member system may be considered as typical of the large-size arts-and-science colleges in Poona. The B. M. College of Commerce, which is its sister institution, was the only exclusively commerce college in Poona at the time of this investigation. The H. P. T. College of Nasik is another institution having life-members and may be considered representative of middle-size colleges in the mofussil. The B. Y. K. Commerce College of Nasik, again a single-faculty college, is

* During the last decade several new colleges have been started in smaller towns of Maharashtra. Although this development is chiefly due to the spread of secondary education and local enthusiasm, there is no doubt that the liberal policy about grants and the economically backward class (fees) concessions under which the government pays fees of those students whose guardians have annual incomes below Rs 1200 (now Rs 1800), have considerably helped this process.

a sister institution of the H.P.T. College. The two colleges at Shrirampur have been started very recently by the Rayat Shikshan Sanstha which runs a number of schools and colleges in Maharashtra. They were very small in size at the time of this investigation. Shri Shahu Mandir Mahavidyalaya is typical of some of the newer institutions. At the time of the investigation it appeared to be between a small-size institution and a middle-size institution. As is obvious from the cost figures it is run with strict economy, and the combination of two faculties (arts and commerce) has certainly helped it in this respect. A smaller relative strength of commerce students and a less wide choice of subjects at B.A. have, unlike other colleges, rendered the cost of arts course in this college slightly lower than that of the commerce course.

Taking into consideration these and all other relevant factors, which need not be detailed out here, we feel that the cost in the Fergusson College may be considered as representative of the large-size colleges both in Poona and outside Poona. (Costs may be slightly lower but in any case will not be appreciably higher in similar institutions.) The same applies to the B. M. College of Commerce of Poona. The cost figures for the Nasik colleges (H. P. 'I' and B. Y. K. Commerce College) are about 25 to 30 per cent higher. This is no doubt partly due to their smaller size, but it is felt that these costs perhaps are a little towards the high side. It is believed that costs in most colleges of middle-size and large-size classes in the mofussil will be of the same order as the Fergusson College and the B. M. College of Commerce, perhaps somewhat higher, but not very much so, in middle-size colleges. The costs in the two Shrirampur colleges are about 75 per cent higher than those of the Poona colleges. This is no doubt due to their recent origin, and small size; the student-staff ratio is about one-third to one-fourth of the other colleges. But here again, it is felt that these costs are on the high side and reflect, at least to some extent, the financing-capacity of the society which manages them. Many colleges in the mofussil belonging to the small-size group must be managing themselves with severe economy like Shri Shahu Mandir Mahavidyalaya in Poona and the costs are expected to be appreciably lower than those obtained for the Shrirampur institutions. It may therefore be said in conclusion that the costs may in general

be appreciably higher for small-size and recently-started institutions. But when they grow, the costs should reduce and are eventually expected to be stabilized at the level of the Fergusson College and the B. M. Commerce College for large-size colleges, and a little lower than the Nasik colleges for middle-size institutions for arts, science and commerce.

Let us now consider the professional colleges. The cost for the law course (the LL.B. degree) appears to be comparable with that for arts (or commerce). But it was noted that the teaching-cost was rather low (Rs 53 per student) while the nonteaching-cost was high (Rs 245). The college has the highest student-staff ratio in spite of the fact that many members of the staff are part-time teachers. The B.Ed. course given in the Tilak College of Education, Poona, costs almost double the costs in arts (or commerce). This is of course understandable in view of the small number of students and relatively larger requirement in staff necessitated by the nature of instruction, a vital part of which is supervision of lessons. This is also borne out by the low student-staff ratio. Turning to the B.E. course in engineering, we find that the annual cost is very high indeed, almost three to five times the annual cost in arts or science. Here both the staff and the equipment (as observed in the common expenditure) cost very much more than the other courses. It is interesting to note that the student-staff ratio is very low indeed, one teacher for every three or four students. As mentioned earlier, the College of Engineering, Poona, is one of the oldest in India and the costs here may perhaps be representative of old established colleges of engineering in India. (It is worth investigating how they compare with the costs in other colleges of engineering elsewhere.)

Finally, we conclude this section by giving figures for the total institutional costs for the entire duration of the various degree courses considered in this study. The figures are rounded to indicate the approximate range of costs in the institutions which are by and large stabilised.

**APPROXIMATE INSTITUTIONAL COSTS PER STUDENT FOR THE ENTIRE
DURATION OF DEGREE COURSES**

<i>Course</i>	<i>Duration</i>	<i>Total Institutional cost</i>
Arts (B.A.)	Four years	Rs 1,200 to 1,600
Science (B.Sc.)	Four years	Rs 1,600 to 2,000
Commerce (B.Com.)	Four years	Rs 1,000 to 1,300
Law (LL.B.)	Two years (after a first degree)	Rs 600
Education (B.Ed.)	One year (after a first degree)	Rs 750
Engineering (B.E.)	Three years (after two years in a science college)	Rs 4,500 to 5,000

9. COMMENTS ON COSTS IN POSTGRADUATE COURSES

The annual costs per student for the postgraduate courses in arts (M.A.), science (M.Sc.), commerce (M.Com.), law (LL.M.), education (M.Ed.), and engineering (M.E.) are summarised in the table on next page. The following observations may be made on the consolidated summary.

The costs for postgraduate courses (except engineering, which is considered below) for which there are no university departments, that is, which are given in colleges, are very much less than the costs for those given in the university departments. The costs in commerce (M.Com.) are the lowest; then we have education and law, and then the arts course (M.A.) given in Nasik. The costs for the last are high on account of the very small number (12) of students for that course as compared with the much larger numbers of M.Com., LL.M. or M.Ed. students.

In commerce the costs for the postgraduate course are comparable to the costs for the undergraduate course; in law they are almost double; but in education they are about 25 to 30 per cent less. The reduction in the last is mainly due to the fact that the B.Ed. course involves a large number of practice lessons

COST OF POSTGRADUATE EDUCATION

<i>Annual Cost per Student (in rupees)</i>		
I : Arts	M.A.	Ph.D. (Arts)
(i) University Departments		
Estimate I — Assumptions A & D	1,684	3,324
Estimate II — Assumptions B & D	1,644	3,411
Estimate III — Assumptions C & E	1,410	2,637
(ii) Nasik	889	
II : Science	M.Sc.	Ph.D. (Science)
University Departments		
Estimate I	2,752	4,017
Estimate II	2,560	5,192
Estimate III	1,621	6,435
III : Commerce	M.Com.	
Poona	267	
Nasik	288	
IV : Law	LL.M.	
	590	
V : Education	M.Ed. (Regular Course)	
Estimate I	543	
Estimate II	486	
VI : Engineering	M.E.	
Estimate I	2,363	
Estimate II	2,081	

which need guidance and supervision and a consequent requirement in staff, which the M.Ed. course does not need.

The costs for the postgraduate engineering course (M.E.) are the highest among the postgraduate courses given in colleges. However, they are only about 50 per cent higher than the costs for the undergraduate engineering course (B.E.). The reason for the high costs for this postgraduate course as compared to the other courses given in colleges is therefore to be found in the high costs of technological education in general.

Let us now consider the costs for the postgraduate courses in arts and science (M.A., M.Sc. and Ph.D.) in the university

departments. As mentioned above they are high as compared with those for the other courses. Scrutinising the four components of expenditure given in section 7 we find that the costs are high in all the three main components : (a) administrative, (b) library, and (c) departmental or teaching-expenses. Comments on (a) will not be meaningful because as explained in that section the expenditure figures taken there are notional for many items. So far as (b) and (c) are concerned these costs will always be high. Firstly, the purpose of the university library is not merely to serve the postgraduate students (and staff), although we had to make this assumption for our purpose. It has to purchase many more books and research journals than those which are strictly required for immediate needs of the students and staff. Secondly, the expenditure will always be higher in a good university department where the staff members are not only expected to teach but also to do substantial research work on their own. Compared to the college teachers their teaching-load is low, salary scales are high and departmental facilities are liberal and substantial. The student-staff ratio is very low; for the subjects considered in the table given in section 7 it is 15 for arts and 9 for science if we do not include contributed teachers, and it is 5 and 6 respectively if we include them. There is no doubt that if university departments are established to teach courses which are now being taught in colleges (as, for instance, is being contemplated for law, education and commerce in the Poona University) the costs of running them will rise to the same level as in the other university departments.

The costs for Ph.D. are substantially higher than for the Master's degree in both arts and science. The figures for the Ph.D. courses in other fields were not available, nor for the students who do their doctorate under the recognised guides from the constituent or affiliated colleges.

Finally, a few words about the three different estimates given for the costs for the M.A./M.Sc. and Ph.D. students. Estimates I and II are comparable because the only difference between them is in calculating the teachers' efforts on the Ph.D. students for which there is no information available (see section 7). Estimate I may be taken as standard since it is more or less an accepted convention in most university departments all over India

that a Ph.D. student ordinarily meets his guide once a week for an hour or so. Estimate III is computed to show what figures one may obtain if the individual research of the teachers is separately costed. (If this approach is thought reasonable it opens up a line of research for the costing of research although the problems to be faced there are by no means easy to overcome.) Once this principle is accepted for departmental expenditure it is only fair to apply it also to the library expenditure, and hence the other possible estimates based on other combinations mentioned in section 7 do not become meaningful.

Appendix

FURTHER ANALYSIS OF COSTS : EFFECT OF SPECIALISATION

It was mentioned in section 8 that providing for specialisation—greater option in the choice of subjects—increases the cost. This point is examined here in greater detail; the Fergusson College and the B.M. College of Commerce provide illustrations. An attempt is also made to find the cost differentials in different subjects at the undergraduate stage in colleges and in the university departments at the postgraduate stage. Their implications are pointed out towards the end.

Let us first consider the structure of the B.A., B.Sc. and B.Com. courses of the Poona University in the second year (SY) and the third year (TY) of the three-year degree courses, i.e. the last two years of the undergraduate courses provided in college, as they existed in 1964. In B.A. a student had to offer two papers each in three subjects of his choice at, what is described, the general level in the SY and this was to be followed in the TY by a compulsory paper in English and either four papers from one of the three subjects already selected at, what is called, the special level, or two papers each in two other subjects at the general level. Thus a B.A. student had to offer in the SY and TY together a compulsory paper in English and ten more papers: either (i) two plus two plus six in three subjects, or (ii) two each in five subjects. Science students had to choose two subjects at the subsidiary level in the SY with three units (papers and practicals together) each to be followed by five more

units in a third subject at the principal level and a compulsory paper in English in the TY. In commerce there were five papers in the SY all compulsory and in the TY there were four compulsory papers and two optional papers in a subject of the student's choice. There were some restrictions on the choice of optional subjects in all the three courses, and the actual options available to students vary from college to college. But it is clear from the very structure of the courses that there is much more scope for exercising option in the B.A. and B.Sc. courses than in the B.Com. course.

To illustrate how it works in practice, in 1964-65 the Fergusson College had provided for instruction (and actually had students) in the following 17 subjects at the general level, and in the first 10 among them at the special level, in the B.A. course: (1) Sanskrit, (2) Marathi, (3) English, (4) German, (5) mathematics, (6) statistics, (7) philosophy, (8) history, (9) economics, (10) politics, (11) psychology, (12) sociology, (13) Pali, (14) Ardhamagadhi, (15) Hindi, (16) Gujarati and (17) French.

In science the college gave instruction in the following seven subjects both at the principal and subsidiary levels at the B.Sc. : (1) mathematics, (2) statistics, (3) physics, (4) chemistry, (5) botany, (6) zoology and (7) geology.

The B. M. College of Commerce provided instruction in the following four optional groups (two papers each) at the TY B.Com. in 1964: (1) advanced accounting and auditing, (2) banking, (3) statistics and (4) advanced cost accounting.*

*A similar situation existed in the H. P. T. College of Arts and Science in Nasik in 1964. The college provided for the following eight subjects for B.A. at the general level and the first five amongst them at the special level: (1) Sanskrit, (2) Marathi, (3) English, (4) politics, (5) economics, (6) Ardhamagadhi, (7) Hindi and (8) psychology. In B.Sc. the college taught the following five subjects at the subsidiary level and the first two of them at the principal level: (1) chemistry, (2) physics, (3) mathematics, (4) botany and (5) zoology. The number of students at the special B.A. in 1964 were: Sanskrit 4, Marathi 7, English 4, politics 6, and economics 28; and those at the principal B.Sc. were: chemistry 20, and physics 3.

The B.Y.K. College of Commerce provided for only one special group at the TY B.Com. in 1964.

It is interesting to see this in terms of teaching-effort. The Fergusson College arranged to teach during the last two years of the B.A. course one paper in English, 34 papers in different subjects at the general level and 40 at the special level. It also provided for 21 units (papers and practicals) in the B.Sc. course at the subsidiary level and 35 more at the principal level. (Some papers in mathematics and statistics in the B.A. and B.Sc. courses can be taught together; same is the case with some papers at the subsidiary and principal levels in the same subject; but this does not make much difference.) On the other hand the B. M. College of Commerce provided for nine compulsory papers and eight optional papers for the B.Com.

It is now easy to see why the teaching-costs in commerce are appreciably lower than those in arts. This also explains why the costs for the three-year degree course in arts are higher than those for the P.D. course. The reason for the lower costs for the three-year course in commerce as compared to the P.D. year is to be found in the restrictions on the size of a class division: 150 for the degree classes and 100 for the P.D. classes.

We found it interesting to ~~push~~ this analysis a step further and work out the teaching-costs ~~per~~ student in different optional subjects in the B.A., B.Sc. and ~~B.Com.~~ courses for comparison. This is confined only to the ~~optional~~ papers in the final year at the Fergusson College and the B. M. College of Commerce, since the analysis becomes rather complicated at the SY B.A. with its very large number of crisscross combinations. The following procedure was followed. Identifying the teachers who taught special papers in a given subject to the TY students, we calculated the proportionate part of the salary of each one of them on the basis of the total number of lectures given by him and the number of lectures given to the TY class. These amounts were added to obtain the total teaching-cost for the total teaching-effort in that subject for the benefit of the TY students offering it at the special or principal level. This was then divided by the number of TY students offering that subject to get the cost per student. The following points should be mentioned in this connection. Some subjects have been dropped because of difficulties of separating out the relevant expenditure; this does not adversely affect the analysis which should be regarded as illustrative rather than ex-

haustive. Subjects which are taught in common to the B.A. and B.Sc. classes (e.g. statistics) are shown in the B.Sc. list and the corresponding students are added. It should be noted that the figures correspond to four papers in the special subject in the case of the TY B.A. class, two papers in the case of the TY B.Com. class and two papers in the case of the TY B.Sc. class. The last needs some explanation: for science students, out of the five units of the principal subject, two constitute practical work (for which costing is not attempted here); one unit is a

TEACHING COST PER STUDENT IN DIFFERENT SUBJECTS AT TY B.A.,
B.SC. AND B.COM.

<i>Subject</i>	<i>No. of students</i>	<i>Total teaching- cost (Rs)</i>	<i>Cost per student I (Rs)</i>	<i>Cost per student II (Rs)</i>
<i>B.A. (four papers)</i>				
Sanskrit	9	10,153	1,128	642
Marathi	18	5,366	298	321
English	17	7,044	414	340
Philosophy	18	3,384	188	321
History	5	5,831	1,166	1,156
Economics	62	4,701	76	93
Politics	28	3,966	142	206
<i>B.Sc. (two papers)</i>				
Statistics	7	1,799	257	272
Physics	30	2,066	69	63
Chemistry	62	1,375	22	31
Botany	5	1,446	289	380
Zoology	8	2,109	264	238
Geology	12	2,619	218	159
<i>B. Com. (two papers)</i>				
Advanced Accounting and Auditing (two divisions)	194	6,278	32	29
Banking	7	3,478	497	397
Statistics	4	1,364	341	695

paper of subsidiary level taught in lectures which are common to students offering the principal or subsidiary courses in that subject, thus leaving only two papers which are taught exclu-

sively to the TY students in that subject. The difference in costs in different subjects considered here naturally depends on the difference in the number of students offering that subject as well as on the inevitable variation in salaries of different teachers. To remove the latter source of variation we averaged the teaching-costs over the subjects and then divided this average teaching-cost by the number of students. The cost per student so derived is given in the last column in each case. Thus there are two figures for cost per student, designated Cost I and Cost II. Figures are rounded to the nearest rupee.

It is certainly rather expensive to run the optional groups which attract very few students. Mathematics and German had even fewer students for the B.A. special course. Some of the subjects taught at the general level in B.A. (e.g. Ardhamagadhi, Pali, French and mathematics) attract only a student or two. It must not be concluded, however, that an institution should cease to teach these subjects because of costs. Facilities must exist for their teaching without which higher learning in these subjects will just stop, and this is far from desirable. On the other hand, in a place like Poona with its many colleges it may be economic to decide by mutual agreement that facilities for such a subject will be available only in one of the colleges. (This understanding already exists in a few subjects.)

Similar analysis was also done for the university departments considered in section 7. The procedure outlined there was used to obtain the teaching-cost (expenditure on the department and contribution on account of college teachers participating in the postgraduate teaching of that subject) with recourse to the convention that the Ph.D. students on an average claim one hour a week of their guides. The teaching-costs per student in different arts and science departments are given for comparison (see next page). Figures are rounded to the nearest rupee. The costs depend on three factors: the number of university staff, the number of contributed staff drawn from colleges, and the number of students served by the department. It should be noted that the teaching expenses considered here include the salaries of the teaching staff of the department, contribution on account of contributed teachers, and office and laboratory expenses of the department.

TEACHING COST PER STUDENT FOR M.A., M.Sc. AND PH.D. COURSES GIVEN IN THE UNIVERSITY DEPARTMENTS

Subject	Staff in the Department	Contributed Teachers	M.A. (M.Sc.) students	Ph.D. students	Total teaching-cost		Cost per student	
					M.A. (M.Sc.) students (Rs.)	Ph.D. students (Rs.)	M.A. (M.Sc.) (Rs.)	Ph.D. (Rs.)
Arts								
1. Sanskrit and Prakrit	2	13	13	8	28,380	7,829	2,183	979
2. Marathi	3	6	49	23	9,872	25,288	201	1,097
3. Experimental Psychology	2	1	41	6	25,510	12,755	622	2,126
4. Politics and Public Administration	3	3	35	18	18,760	28,140	536	1,563
5. Hindi	3	2	27	20	18,164	18,164	673	908
6. English	1	9	32	—	24,152	—	755	—
7. Ancient Indian History and Archaeology	2	6	26	6	64,511	24,192	2,481	4,032
8. Linguistics	7	6	11	32	21,428	171,425	1,948	5,357
Science								
1. Chemistry	10	5	123	17	191,910	108,749	1,560	6,397
2. Physics	6	6	52	10	107,737	29,927	2,072	2,993
3. Botany	8	3	36	10	129,116	27,471	3,587	2,747
4. Zoology	4	4	23	7	82,845	23,197	3,602	3,314
5. Geology	2	2	24	3	32,811	4,687	1,367	1,562
6. Mathematics and Statistics	11	10	79	9	136,700	13,038	1,730	1,454
7. Geography	4	—	24	3	45,037	4,358	1,877	1,453

It is clear from the figures that though the development of the university departments as such is desirable, from the point of view of costs it is economical to utilise, wherever possible, the services of qualified contributed teachers from colleges. Secondly, in the departments like Sanskrit-Prakrit, archaeology-history and linguistics in arts, and botany and zoology in science, where the costs are quite high, the existing facilities offer much scope for greater utilisation. The educational authorities like the University Grants Commission should therefore think twice before permitting similar departments to be opened in other recently started neighbouring universities. It will be financially (and even academically) more desirable to send their students to the already established departments, by giving them adequate stipends if necessary, rather than going in for costly repetition of these departments in newer universities, where they will have to face the problems of staffing, accommodation and equipment.

THE BHILAN MAHARASHTRA COLLEGE OF COMMERCE, POONA : FIGURES FOR 1964-65

Number of Students									
PD	FY	SY	TY	3-year B.Com.	4-year B.Com.	M.Com. I	M.Com. II	T.M. Com.	Grand total
451	362	338	212	912	1,363	83	17	100	1,463
College staff									
Teaching-staff				Tutors and others		Total			
33				10		43			
Expenditure (in rupees)									
Nondivisible expenditure					Divisible expenditure				
C I	52,492				D I		1,29,684		
C II	27,920				D II		5,630		
C III	40,830								
C IV	19,369								
C V	38,000								
C VI	8,899								
C VII	15,586								
C VIII	8,413								
C IX	4,426								
Total					2,15,935		Total		1,35,314
							Grand total		3,51,249

THE BHIMAN MAHARASHTRA COLLEGE OF COMMERCE, POONA (CONTD.)

<i>Division of Divisible Expenditure (in rupees)</i>					
	<i>PD</i>	<i>3-year B.Com.</i>	<i>4-year B.Com.</i>	<i>M.Com.</i>	<i>M.A.</i>
					<i>Total</i>
D I	42,770	66,476	1,09,246	11,688	8,750
					1,29,684
D II	1,910	3,490	5,400	230	—
					5,630
<i>Annual Cost per Student</i>					
	<i>PD</i>	<i>3-year B.Com.</i>	<i>4-year B.Com.</i>	<i>M.Com.</i>	
C	147.60	147.60	147.60	147.60	
D I	94.83	72.89	80.15	116.88	
D II	4.24	3.83	3.96	2.30	
Total	246.67	224.32	231.71	266.78	

THE POONA UNIVERSITY : FIGURES FOR 1964-65

		Number of Students			
		Departments on the University Campus		Departments not on the University Campus	
		M.A./M.Sc.	Ph.D.	M.A./M.Sc.	Ph.D.
Arts		246	113	110	30
Science		361	59	—	—
Total		607	172	110	30
				Grand total	919

		Rs.
(a) <i>Nondivisible Common Expenditure (except that on library)</i>		
<i>Heads of Expenditure</i>		
C I	Establishment—salaries and allowances	1,34,840
C II	Contingent expenses	21,900
C III	Amenities to students	74,913
C IV	Additional facilities for research not covered by departmental expenditure such as university journal etc.	28,000
C V	Current repairs to building and furniture	25,294
C VI	Furniture and office equipment	26,920
C VII	Gratuity etc.	16,734
C VIII	Rates, taxes, insurance and other services	42,513
C IX	Miscellaneous	25,500
Total		4,26,614

THE POONA UNIVERSITY (CONTD.)

(b) Expenditure on the University Library (including grants to college libraries); in rupees				
(a) Salaries and allowances				1,03,687
(b) Books and other expenses				1,21,550
(c) Payments to colleges for postgraduate sections of library				10,100
			Total	2,35,337
(c) Expenditure of University Departments (including payments in respect of contributed teachers): in rupees				
		Arts	Science	Total
(i) Departmental expenses		4,58,493	8,92,619	13,51,112
(ii) Payments for contributed staff		40,016	40,016	80,032
	Total	4,98,509	9,32,635	14,31,144
(d) Scholarships (in rupees)				
	M.A.	M.Sc.	Ph.D (Arts & Science)	Total
	3,465	14,240	90,037	1,07,742

THE POONA UNIVERSITY (CONTD.)

Division of Departmental Expenses (in rupees)							
Arts				Science			
	M.A.	Ph.D.	Teachers' own research	Total	M.Sc.	Ph.D.	Teachers' own research
Assumption A	2,69,580	2,28,929	—	4,98,509	7,72,211	1,60,424	—
Assumption B	2,59,816	2,38,693	—	4,98,509	7,02,844	2,29,751	—
Assumption C	1,66,170	1,66,170	1,66,170	4,98,509	3,10,878	3,10,878	3,10,878
							9,32,635

Division of Library Expenses			
Assumption D: Rs 2,35,337 divided equally over 919 students.			
Assumption E:			
M.A./M.Sc.	Ph.D.	Teachers' own research	Total
78,445.66	78,445.66	78,445.66	2,35,337

THE POONA UNIVERSITY (CONTD.)
Annual Cost per Student (in rupees)

	Arts		Science	
	M.A.	Ph.D.	M.Sc.	Ph.D.
(a) Nondivisible expenditure	464.21	464.21	464.21	464.21
(b) Expenditure on university departments				
Assumption A	1,095.85	2,025.92	2,139.09	2,719.05
Assumption B	1,056.16	2,112.33	1,947.05	3,894.10
Assumption C	675.49	1,470.53	861.16	5,269.12
(c) Library expenditure				
Assumption D	109.41	388.34	109.47	388.34
Assumption E	256.08	256.08	256.08	256.08
(d) Scholarships	14.08	445.73	39.44	445.73
Total				
Estimate I: Assumptions A and D	1,683.55	3,324.20	2,752.15	4,017.33
Estimate II: Assumptions B and D	1,643.85	3,410.61	2,560.11	5,192.38
Estimate III: Assumptions C and E	1,409.86	2,636.55	1,620.89	6,435.14
Estimate IV: Assumptions A and E	1,830.22	3,191.94	2,898.82	3,885.07
Estimate V: Assumptions B and E	1,790.53	3,278.35	2,706.78	5,060.12
Estimate VI: Assumptions C and D	1,263.19	2,763.81	1,474.22	6,567.40

WOMEN'S EDUCATION IN RURAL AREAS

If social reformers of the last century like Ranade, Phule and Agarkar could come to life again, they would no doubt be struck by the progress registered by women's education, a cause they held so dear and for which they strove so much during their lifetime. Women are holding important positions in all walks of life; no high office is barred to them, not even the prime ministership of the country. Much of this advance has taken place during the last two generations, and a considerable part of it during the last twenty years, after independence.

While all this progress is no doubt heart-warming, a closer look at it will show that a large part of it is confined to the urban areas. The rural areas are lagging behind in respect of education in general, and more so in respect of women's education. This is clearly seen in the following census figures for literacy for 1951 and 1961.

MALE AND FEMALE LITERACY (PERCENTAGE) IN URBAN AND
RURAL AREAS IN INDIA AND MAHARASHTRA

	<i>India</i>		<i>Maharashtra</i>	
	1951	1961	1951	1961
<i>Urban population</i>				
Male	45.06	57.49	51.65	61.62
Female	22.33	34.51	25.67	37.90
<i>Rural population</i>				
Male	19.02	29.07	22.55	33.51
Female	4.87	8.54	4.18	9.34

This is in a sense a static picture, a picture very much influenced by the inertia of the great mass of older illiterate sections in the population. What about the future? This may be explored in the present enrolment in primary schools. According to the 1963-64 figures for the state of Maharashtra, the proportion of girls in the total enrolment in primary schools was 43.3

per cent in the urban areas and it was only 32.8 per cent in the rural areas. So in spite of the considerable improvement already registered, the education of girls in rural areas has still a long way to go.

It is proposed to consider briefly in this article the different aspects of women's education in rural areas including its lag. This is done with the help of factual material collected in the village surveys conducted in Maharashtra during the last ten to fifteen years. The illustrations cited in this paper are necessarily from individual villages but it is believed that they could be considered typical of the rural areas of Maharashtra.*

An important factor in this connection is the size of the village. Big villages have had primary schools for a much longer period. It is only during the last ten or fifteen years that primary schools are being started in smaller villages with the population of 1,000 or below. Among the 69 villages surveyed, 21 were 'big' with a population above 2,000, the rest of them having a population below 2,000. The following figures give enrolment in primary schools per 100 of population in 1950-51 and 1963-64 and the proportion of girls amongst them. The level of enrolment of girls in small villages in 1963-64 is what it was in big villages fifteen years back and in absolute terms (as indicated by general enrolment), it is even lower.

ENROLMENT AND PROPORTION OF GIRLS IN PRIMARY SCHOOLS

	<u>Big villages</u>		<u>Small villages</u>	
	1950-51	1963-64	1950-51	1963-
Enrolment (per 100 of population)	12.9	16.3	6.2	9.4
Percentage of girls	27.5	37.9	22.0	28.3

In this context it is necessary to examine the role of separate schools for girls. There is no doubt, they were very useful in the early period. But in the present period of rapid expansion and a

* The analysis and the figures given here are taken from the author's book: *Progress of Education in Rural Maharashtra*, Gokhale Institute Studies, No. 56, (1968). The village surveys were conducted by the Gokhale Institute of Politics and Economics, Poona.

consequent paucity of resources, the government's policy of having common schools is also a correct one. Almost all villages have now primary schools and primary education is now free and also compulsory in most areas for the age-group of 7 to 11 years. So it is now more a question of convincing the people of the desirability of sending their children of both sexes to schools to make the compulsion effective. It has been found from the information collected from these villages that the presence of lady-teachers on the staff helps considerably both in the enrolment of girls in primary schools and in ensuring their regular attendance.

Let us now examine the question from the socio-economic angle. In rural Maharashtra the two major caste-groups are (i) the Marathas and allied castes and (ii) the scheduled castes and nava Boudhas. In certain areas, (iii) the scheduled tribes and other backward classes are also numerically important. So the growth of literacy or education in the village moves with their growth among these major caste-groups. The survey material shows that among the Brahmans and other advanced castes, female literacy and education have made rapid progress during the last fifteen years. It is now almost comparable with male literacy. Among the Marathas and allied castes, education is making rapid headway among men but not so rapidly among women. The scheduled-caste men are also progressing but women are trailing very far behind; and among the backward classes and scheduled tribes, while men are getting acquainted with education it has not yet touched women in any great measure. The figures (see table on next page) for three fairly big villages may be considered typical in this respect. They give percentage of literates and percentage of school-goers to the respective population (age-group 0 to 4 is excluded).

All these villages are from Western Maharashtra and, as can be seen from the figures given, they have fairly high literacy. At Kasabe Sukenc, scheduled castes have higher literacy than other caste-groups. '(This is true of a few big villages in Western Maharashtra and Vidarbha.)

It is interesting to analyse the literacy and education of women in rural areas by other factors such as occupation, landholding and income. The two main occupations in rural areas

LITERACY AND SCHOOL-GOERS IN MAJOR CASTE-GROUPS

(PERCENTAGES)

	<u>Literacy</u>		<u>School-goers</u>	
	Male	Female	Male	Female
<i>Village Visapur</i>				
(Satara)				
Maratha castes	53.3	19.5	28.4	9.3
Scheduled castes	24.0	4.2	13.3	3.4
<i>Village Waghode</i>				
(Jalgaon)				
Maratha castes	61.8	21.9	24.8	11.1
Scheduled castes	51.2	14.6	14.9	5.5
<i>Village Kasabe Sukene</i>				
(Nasik)				
Maratha castes	58.9	24.2	23.7	12.9
Scheduled castes	67.7	21.0	32.3	7.6
Backward classes	36.0	4.9	16.7	3.7

are cultivation of land and labour including agricultural labour. It is found that female literacy among the labourers is very low, often as low as 10 per cent and less. The immediate future also does not appear to be bright for them; the proportion of girls attending school is rather low. Figures are not given here but they are comparable to those of the scheduled castes and backward-class communities given above. A point to be remembered in this connection is that many from these two caste-groups are in fact landless labourers.

Among the cultivators a useful classification is that of the size of landholding. This analysis showed that female literacy as well as the proportion of school-goers or educands among women is indeed very low among households having less than two acres of land. It is not significantly high either among those with bigger landholdings until the size of landholdings becomes twenty acres or more. In this latter group of farmers the education of women is making rapid progress. In irrigated areas this differentiation starts at the level of ten acres (or even below). This implies that women's education is now considered to be a desir-

consequent paucity of resources, the government's policy of having common schools is also a correct one. Almost all villages have now primary schools and primary education is now free and also compulsory in most areas for the age-group of 7 to 11 years. So it is now more a question of convincing the people of the desirability of sending their children of both sexes to schools to make the compulsion effective. It has been found from the information collected from these villages that the presence of lady-teachers on the staff helps considerably both in the enrolment of girls in primary schools and in ensuring their regular attendance.

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able thing among the higher income-groups. The analysis according to the household income confirmed these trends more directly.

Taking all these factors together, the rural situation in women's education may be summed up as follows : the pace of education is much slower among women than among men. Women's education is spreading horizontally from big nuclear villages to small peripheral villages and vertically from socially higher caste-groups to lower ones and from high-income groups to low-income groups. It is no longer confined to advanced communities forming a minor fraction of the village population. The more well-to-do households of the major caste-group (the Marathas and allied castes) have now realised the importance and desirability of educating their daughters; and this process is gradually (perhaps very gradually) percolating to other less affluent and weaker sections of the rural population.

Another influence also appears to work for the spread of education among women in rural areas. This is urban contact, contact with big cities, not necessarily through geographical proximity, but mainly because of economic dependence. For instance, some of these villages have a large number of men staying in big cities like Bombay for earning their livelihood, and their families or a part of them stay in their native villages, remittances from Bombay forming a significant part of the latter's income. It was found that their womenfolk, especially the younger members, were better educated than women in households with no urban contact.

Women's education in rural areas described so far dealt mainly with literacy and enrolment in primary schools in the villages. This is naturally and necessarily the first step in the education of women. But even in villages, especially in the bigger ones, middle schools (standards V to VII) and even high schools are being started. For instance, out of the twenty-one big villages, surveyed by us, sixteen had high schools in 1963-64 (thirteen of them were started during the last fifteen years and seven of them during the last five!). How are rural girls progressing in middle school and high school education? Among the pupils in middle school standards (V to VII), the percentage of girls was 22.7 and in the high school standards (VIII

onwards), the percentage of girls was as low as 11.8. Three factors seem to operate against the girls at the secondary stage. Firstly, there is a strong tendency to withdraw them from education as they grow up. Secondly, at the secondary stage, parents prefer to have, for girls, separate schools of which there are none in these villages. Thirdly, while parents are willing to send their boys to the secondary schools in the neighbouring villages at appreciable distance from their homes, and many of them even stay there for this purpose, very few rural parents are willing to do this for their girls.

With the advance of women's education in rural areas, a number of girls (although still rather few) are, therefore, reaching the higher stages of education, middle school and high school education and a handful of them reaching even the collegiate education. The progress of education in rural areas is inevitably changing the pattern of social and cultural life. Sections of society who were hitherto uneducated are getting exposed to its influence; this is true not only in respect of the rural communities, and classes who were hitherto backward but also in respect of the womenfolk of these communities. Imagine, for instance, the situation in a village like Mithbav (in Ratnagiri district), where out of the 273 persons who were educated beyond the seventh standard, 73 were women and where the share of the major caste-group (the Marathas and allied castes) was 211 and 46 respectively, among them. So, education is not only not the privilege of the advanced communities any longer; it is also no longer the privilege of man alone; it has entered and is entrenching itself into his homestead.

This has a great significance for advance in future. An important influence on the progress of education is the influence of parents, especially that of mother in the case of girls. Educated mothers would not like their daughters to be less educated than what they themselves are. In fact, having experienced the liberating force of education, they would like their daughters to reach higher stages than what they could themselves do. This is a powerful factor in women's education in the sense that it works like the law of compound interest. And it is in this that lies the best guarantee of the progress of women's education in future, in the rural areas.

COMPARISON OF EXAMINATION MARKS WITH ASSESSMENT BY TEACHERS

The performance of students in our universities is currently assessed on the strength of the marks obtained by them in the examination held at the end of the year. Some of the examiners, although qualified and competent, are 'external', that is, outsiders who have not taught the students they are asked to examine. This procedure is criticised (and rightly so) for the reason that it does not always reflect the actual abilities of a student, his understanding of the subject and the manner in which he has been working during the year, which his teacher is in a far better position to know and to assess. There is no reason why the teacher's assessment based on his during-the-year valuation should not replace the present system of examination at the year-end. The innovation may be started right away in subjects at the postgraduate level where the number of students is small and where teachers are closely associated with the work of the students, as for instance in the science subjects. To probe this question I conducted a modest investigation in which the teachers' assessment was compared with the examination performance of candidates who appeared for the Master's examination in statistics held recently in a university in Western India. Although the numbers involved were small they revealed some interesting features. An account is given in the following paragraphs with the hope that it will start discussion on this vital reform.

The board of examiners consisted of two external examiners, one internal examiner, who was closely familiar with the courses taught but who had not taught during that year, and two internal teacher examiners. I requested all the teachers (whether examiners or otherwise) in the department of the university a few weeks before the examination to give me their assessment of the students in the courses that they had taught, separately

for each course. Since all the candidates were students in the department I had the teachers' assessment of all candidates in almost all the papers in which they were examined. This could then be set against the candidates' performance in the examination. (I am grateful to the teachers for their cooperation.)

The examination consisted of two parts. Each part had four papers in theory and some 'practical' papers in which a candidate's ability to apply his knowledge of theory to actual numerical data is tested. In the present comparison 'practical' papers have not been considered. The theory papers will be designated as follows : Part I : papers I, II, III, IV; Part II : papers V, VI, VII, VIII. Candidates who were repeaters were not considered for this comparison to avoid taxing the memory of the teacher.

Teachers were asked to give their assessment in the form of grades with the following correspondence between grades and intervals of percentage scores :

<i>Grade</i>	<i>Interval of scores</i>	<i>Notional value for combining scores</i>
A	80 and above	85
B	65 to 79	72
C	55 to 64	60
D	45 to 54	50
E	35 to 44	40
F	Below 35	25

The intervals were more or less determined by the minimum percentage for a pass which is 35, and the minimum percentage for a first class, which is 65. A paper very often consisted of different parts for which courses were taught by different teachers. This necessitated combining grades given by two or more teachers to arrive at the combined grading of a student in that paper. For this purpose the notional values of scores given in the last column of the table above were used. The notional values given for A and F are arbitrary and are based on my experience of examining candidates over a number of years. In any case this will not much affect the comparison since very few candidates were given A or F by their teachers. The weights used for combining the grades in parts of a paper were the same as those given in the examination by the number of questions set in

those parts in that paper. The combined scores were then reconverted into grades for the paper concerned. For a combined grade in the whole examination consisting of four papers the same procedure was adopted. Comparisons were then possible : (i) between the grades obtained from the teachers' assessment and the corresponding examination marks converted into grades; or (ii) between the notional scores and percentage examination marks. Both were attempted in the sequel.

In the examination in Part I only ten fresher candidates appeared for all the four papers while in Part II, 22 candidates took the whole examination. Their classification by teachers' assessment and examination performance are given in the following tables.

Table 1

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN PART I

		<i>Teacher's assessment</i>						
		A	B	C	D	E	F	Total
Examination	A	...	...	...	...	...	...	...
	B	...	...	...	...	...	...	...
	C	...	...	1	...	...	...	1
	D	...	1	2	...	...	...	3
	E	...	...	2	1	...	...	3
	F	...	...	...	3	...	...	3
	Total	...	1	5	4	...	...	10

(Correlation coefficient between scores is 0.7789)

Table 2

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN PART II

		<i>Teacher's assessment</i>						
		A	B	C	D	E	F	Total
Examination	A	...	...	...	...	...	...	...
	B	1	1	...	...	...	...	2
	C	...	2	2	...	...	...	4
	D	...	1	3	3	...	...	7
	E	...	...	...	4	...	...	4
	F	...	...	2	3	...	...	5
	Total	1	4	7	10	...	...	22

(Correlation coefficient between scores is 0.5860)

It was also thought useful to make the same comparison in individual papers. This was based on all the candidates who took a particular paper. (This number will differ from paper to paper.) The following tables present these comparisons for papers I and II in Part I, papers V and VI in Part II, all of which are compulsory papers, and two of the optional papers in Part II, which are called papers VII and VIII for convenience.

Table 3

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN
PAPER I, PART I

Teacher's assessment

		A	B	C	D	E	F	Total
Examination	A	...	...	...	...	...	...	...
	B	...	...	...	...	...	...	...
	C	...	...	...	...	...	...	...
	D	...	...	3	1	...	...	4
	E	1	...	1	...	...	...	2
	F	...	...	...	2	1	1	4
	Total	1	...	4	3	1	1	10

(Correlation coefficient between scores is 0.6511)

Table 4

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN
PAPER II, PART I

Teacher's assessment

		A	B	C	D	E	F	Total
Examination	A	...	...	...	...	...	...	...
	B	...	...	...	...	...	...	...
	C	...	2	...	...	...	...	2
	D	...	...	1	...	...	...	1
	E	...	2	1	...	...	...	3
	F	...	...	7	...	...	...	7
	Total	...	4	9	...	...	...	13

(Correlation coefficient between scores is 0.6320)

Table 5

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN
PAPER V, PART II

Teacher's assessment

		A	B	C	D	E	F	Total
Examination	A	...	...	...	...	...	...	...
	B	...	3	...	...	...	...	3
	C	...	2	1	1	...	...	4
	D	...	2	1	1	...	...	4
	E	...	...	1	4	...	...	5
	F	...	...	2	7	...	...	9
	Total	...	7	5	13	...	...	25

(Correlation coefficient between scores is 0.6745)

Table 6

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN
PAPER VI, PART II

Teacher's assessment

		A	B	C	D	E	F	Total
Examination	A	1	...	...	...	...	...	1
	B	...	2	...	...	...	...	2
	C	...	1	2	1	...	...	4
	D	...	3	3	1	...	...	7
	E	...	1	2	...	...	...	3
	F	...	1	3	4	...	...	8
	Total	1	8	10	6	...	...	25

(Correlation coefficient between scores is 0.5305)

Table 7

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN
PAPER VII, PART II

Teacher's assessment

		A	B	C	D	E	F	Total
Examination	A	1	...	...	...	...	...	1
	B	...	1	2	...	...	...	3
	C	...	1	1	2	...	...	4
	D	...	...	...	3	...	...	3
	E	...	...	...	2	...	...	2
	F	...	...	2	5	...	...	7
	Total	1	2	5	12	...	...	20

(Correlation coefficient between scores is 0.5881)

Table 8

GRADES IN TEACHER'S ASSESSMENT AND EXAMINATION IN
PAPER VIII, PART II

		<i>Teacher's assessment</i>						Total
		A	B	C	D	E	F	
Examination	A	...	...	...	...	...	...	...
	B	...	1	1	...	...	...	2
	C	...	1	1	1	...	...	3
	D	...	...	3	...	...	...	3
	E	...	...	...	...	...	...	...
	F	...	...	2	...	...	...	2
	Total	...	2	7	1	...	...	10

(Correlation coefficient between scores is 0.2512)

I shall now comment on the tables. It will be inadvisable to draw firm conclusions from these data as the numbers involved are small. But this will perhaps be the case in all investigations of this type concerning postgraduate examinations in departments of science and it is therefore desirable to notice tendencies which are clearly shown by the tables. First, in these tables there are very few entries above the main diagonal, which means that the examination grade is very rarely higher than the grade given by the teacher. There are no such cases in the examination in Part I (Tables 1, 3, 4). In the examination in Part II, they do not occur in the examination as a whole but only in the individual papers (Tables 5, 6, 7, 8). They are one each in papers V and VI; four in paper VII and two in paper VIII. Out of these the two from papers V and VI, two from paper VII and one from paper VIII are on the border of score intervals. (This is perhaps inevitable in a comparison involving marks and grades.) For the remaining three the examination scores are not greater than five per cent above the upper limit of the class interval corresponding to the grades. It is also to be noted that these clear cases are found in the optional papers. Taking into consideration the fact that there is a period of one-and-a-half to two months between the end of the term and the examination, during which candidates intensively work on their own, and also

the traditional nature of the examination, such cases could be more frequent; it is remarkable that this did not happen.

Another notable feature is that the number of cases on the main diagonal are also very few, the bulk lying below the diagonal, indicating that the examination grades are invariably lower than those given by the teachers. From these may be excluded the cases of those candidates who, when they become convinced that they cannot score high, merely drag themselves through the examination (taking good care that they will fail) in the hope that they will do better next year. Such cases of 'aberration' were: one in Table 1, one in Table 3 and two in Table 4; three in Tables 2, 5, 6 and 7; and two in Table 8. Even after excluding them the tendency mentioned above is still quite marked. Another aspect of this was observed in the fact that hardly any teacher gave a grade lower than D. Table 4 shows that out of nine students who were given C by the teacher nobody could get C in the examination and seven just failed, and Table 3 shows that one candidate getting A from his teacher was placed as low as E in the examination. The situation observed in Tables 5, 7 and 8, where a teacher himself examined his students, is not a great improvement. If one considers the cases occurring immediately above and below the main diagonal (i.e. a difference of one grade above or below) as not unreasonable deviations, one still finds that (after excluding the 'aberration' cases mentioned above) the downward drop is quite considerable except perhaps in Tables 5 and 7. This may be due to the tendency to grade 'safely' when one is not able to judge precisely.

No comments are offered on the correlation coefficients between the notional scores based on teachers' assessment and the examination marks. The size of the groups is rather small for this purpose and the 'aberration' cases mentioned above affect them considerably. They support, in general, the features noted above.

Investigations such as the above can never reach a clear-cut conclusion, one reason being that they unconsciously tend to take the year-end impersonal examination (which is sought to be replaced) as a standard for comparison. It is clear, however, from the figures given above that the teacher can more

or less accurately gauge the upper limit of his students' knowledge of the subject even in the present conditions when admittedly there does not exist close personal contact between him and his students. If an internal valuation system is adopted the 'aberration' cases will naturally disappear. Moreover, the teacher who is then made responsible for the valuation of his students' work is sure to develop a closer contact with them and devise many more occasions for an appraisal of their work, thus eliminating the tendency of 'safe grading'.

EFFICIENCY IN EDUCATION

I. CLARIFICATION OF CONCEPTS

This short paper discusses some of the problems which arise when one considers the measurement of efficiency in education. It is an attempt at sorting out of ideas and it is hoped that it does not turn out to be a mere repetition of other similar attempts.

To start with it is desirable to clarify the concept of efficiency as used in relation to education. The concept of efficiency can be, and is found to be, used in several contexts in education. We shall mention here the following four to illustrate the different meanings with which it can be used in education :

(i) Efficiency of the total national effort (or expenditure) on education, as an alternative to other welfare or nonwelfare activities;

(ii) Efficiency of the allocation of a given national budget on education over its different parts or subheads, such as primary education, secondary education and so on;

(iii) Efficiency of expenditure over a subhead of education such as higher education or over a group of institutions or over a single institution providing such education, measured in terms of the educational facilities made available from that expenditure.

(iv) Efficiency of expenditure in situation (iii), but here, measured in terms of the actual output, i.e. the trained people, produced in that situation.

It will be observed that the basic idea involved in all the four contexts mentioned above is that of the maximisation of the facilities provided or the output turned out, for a given amount of expenditure or of the minimisation of the amount of expenditure required for providing a given set of facilities or producing a predetermined output. For this purpose it should be possible to measure the different aspects of the facilities provided or the out-

put produced and (preferably) to combine the different measurements into a single measure or index. It is here that most of the difficulties arise. The concept of 'returns to education' is in fact an attempt by the economists to transform the output into a measurable characteristic regarding the expenditure involved as investment in this 'production process'. Although it is doubtful whether the returns quantified by the average earnings of persons trained at various levels exhaust all or even most of the characteristics of the training received, the procedure is understandable as a preliminary approach by the economists towards the problems of measurement indicated above.

The discussion in this paper will be confined to situations (iii) and (iv) listed above, taking for illustration a single institution of higher education (say, a college) as a unit whose efficiency it is desired to measure. The two situations will be described respectively as that of maximising the *facilities* for education provided from a given amount of expenditure and that of maximising the *product* of education turned out for a given amount of expenditure. The problems therefore consist of the measurement of the quantity and quality of the educational facilities provided by an institution and the measurement of the quantity and quality of the educational product, i.e. the persons trained by the institution. They will sometimes (loosely) be referred to below as the *quality* of the educational institution and its *efficiency* respectively.

2. MEASUREMENT OF THE QUALITY OF EDUCATION (OR EDUCATIONAL FACILITIES)

A number of characteristics or variables are relevant for determining the educational quality of an institution, i.e. for forming a measure of the educational facilities provided by it. For instance, for a collegiate institution they may be enumerated as follows:

- (i) Number of students, or size for which facilities are provided (along with its main divisions, e.g. arts and science students, pass and honours students, undergraduates and postgraduates etc.)
- (ii) Size of the teaching staff or student-teacher ratio.

(iii) Capital equipment including buildings, equipment, laboratories, library facilities, etc.

(iv) Hostel facilities, proportion of the students who live in the hostels.

(v) Facilities for extracurricular activities such as gymkhana and sports facilities, NCC, different college societies, etc.

Let us briefly consider the variates listed above before further variates are added to them. It should be observed that most of them can be given quantitative measures, and in the case of some of them other related or auxiliary variates may also become relevant. For instance along with the total number of students in the institution its broad division into arts and science students, pass and honours students, undergraduate and postgraduate students, etc. also becomes relevant. Similarly along with the size of the teaching staff an index of their qualifications, i.e. their quality, is also a very important characteristic. The variate (iii) may be measured by the present value of the capital equipment per student. One may measure the library facilities by the number of volumes per student and by the accommodation of the reading hall. And in the case of facilities for extracurricular activities, variate (v), one may either measure it by the per capita expenditure or the proportion of students who are benefited by each one of these activities.

There are two other problems which need to be considered in this connection. Firstly, in considering the size of the institution, should one measure it by the actual number of students served by it at the moment or by the (maximum possible) number it can serve with the given facilities? It is true that in most of the older institutions the actual would approximate to the potential but in the case of the newer ones this may not be so and the distinction made above assumes some importance. Secondly, should one introduce a sixth variable (along with the five listed above), the annual operating cost per student? On the one hand one may think that such a variate is either redundant or should not be included because what one is here dealing with is the problem of constructing a measure of the educational facilities rather than its cost. On the other hand there may be many 'other characteristics' of the quality of the educational institution in addition to those which are listed above (or which

will be listed below); and the per capita expenditure may serve as a substitute in the absence of their composite index. This question evidently needs further careful exploration.

It is clear that the quality of the educational facilities provided by an institution may be considerably influenced by characteristics other than those listed above, and which moreover may not easily lend themselves to measurement. Such, for instance, are the following:

- (vi) 'Type of administration,
- (vii) General atmosphere,
- (viii) Tradition.

It is evident that the quality of educational facilities available in an institution does depend on the type of the administration. But it is a cause rather than the result and one is not quite sure whether one is justified in including it among the educational facilities which are in the nature of results. Moreover this variate is hardly capable of being measured except by means of a subjective score. The same difficulty of measurement also holds for the other two characteristics listed above. Along with 'tradition' it may be desirable to introduce another auxiliary variable, a variable which depends on the age of the institution. This can be made measurable although the age in years may not be the most suitable measure. Finally we may introduce the residual variate (ix), other characteristics, which has been considered above to some extent, but which as mentioned above needs further exploration.

3. MEASUREMENT OF THE EFFICIENCY OF EDUCATION (THE EDUCATIONAL PRODUCT)

Let us now consider the problem of measurement of the educational product produced by the institution, the measurement of the quality and quantity of training imparted by it to its alumni. The characteristics to be noted here may be grouped under four broad heads, the first two of which are obviously their (i) academic performance, and (ii) extra-academic performance, while in the institution. In (i) the relevant variates are the percentage of passes together with the proportion of first and

second classes (or of honours students) and a score constructed for combining other academic distinctions such as scholarships and prizes won at the university examinations by the alumni of the institution. Since the academic performance at any stage depends both on the previous level of equipment of the student as well as the training he receives in the institution an allowance will have to be made for the former (by using, if necessary, the regression technique). Among the extra-academic achievements included under (ii), one has to take into account the distinctions obtained while in college in sports and games, in drama and debating, in the sphere of art, in social or public service and such other distinctions which can be attributed to the institutional influences, which can be either directly or even remotely traceable to the facilities provided by the institution or to its tradition and general atmosphere. A quantitative index to denote (ii) is no doubt difficult but may not be impossible to construct.

The two sets of variates mentioned above do not exhaust the character of the imparted educational training, some effects of which may mature only in later life. Hence it is necessary to introduce another set of variates which may be described as (iii) performance in later life. The measurement of this group of variates poses several problems. It is obvious that it must take into account the distinctions achieved by the alumni in later life, as scientists, litterateurs, artists, businessmen, public leaders, etc., as well as their entry into higher echelons of public services including defence services. Construction of an index which will include all these achievements is not easy. But perhaps even more formidable are two other problems in this connection. Firstly, this performance in later life will naturally imply a specified period of observation. The longer this period the greater is the opportunity for the unfolding of the latent influences acquired during the years spent in the institution. On the other hand with a longer period this index will not reflect the quality of the educational product in the recent past but during a much earlier period. Moreover, it will give an unwarranted weightage to the older institutions over the more recent ones whose alumni had no such chance to shine in life simply because they are still in the developing stage. Secondly, the approach mentioned above will only account for the performance of the relatively more out-

standing individuals while the performance of the large majority of the alumni in later life will go by default. Perhaps it is to meet these and similar other problems that the economists seek the measure of returns to education, based on the average earnings of individuals who have reached different levels of training. A moment's reflection will show, however, that a pure monetary measure like this may not be a good measure of the academic quality of the product in a society which is primarily money-motivated and where an average businessman may earn a lot more than an outstanding poet or a selfless trade union leader. So the problem needs further examination.

Finally, one has to introduce (iv) the residual effect (of acquisition of general culture), since education is something more than the (measurable, or more-or-less measurable) performances mentioned above. It is clear, however, that the measurement of the residual effect poses problems similar to those posed by the characteristics, tradition and general atmosphere, mentioned above when we considered the measurement of the quality of educational facilities provided by an institution.

4. METHOD OF ANALYSIS

After quantitative measures are given to the variables enumerated in sections 2 and 3 above it is not difficult to construct a composite measure of the educational facilities provided by an institution or of the training it imparted to its alumni, by using appropriate statistical methods in multivariate analysis. One may proceed either by combining all the variables in one particular set of variables into a composite index for that set and then combine the indices of all the different sets of variables, or one may take them all together to build up the final index straightaway since a modern electronic computer can easily handle a large number of component variables simultaneously. For the characteristics which are not directly measurable it may be necessary to give an ordinal scale, and for purely qualitative characteristics the use of zero-one method of quantification may become necessary. In fact in a preliminary investigation one should include all possible relevant variates. As the experience of handling such problems accumulates it will be possible to weed out and

of 1885. Gokhale completed one year of law but then he decided to give it up and throw in his lot with the founders of the Deccan Education Society and joined them in 1886 as a life member. Thus his ultimate choice of career was teaching in a private educational institution. He taught in the New English School and Fergusson College for eighteen years. During this period Gokhale also took a leading part in the management of the Deccan Education Society of which he was the secretary for several years from 1891. He was elected a Fellow of the Bombay University in 1895 and continued to serve the university in that capacity for twenty years. He was also elected to the Syndicate of the University for one year during this period. After completing his life-member's pledge of service in the D. E. Society Gokhale retired from its services in 1904 although he had actually ceased teaching for the last two years before his retirement having gone on furlough from 1902.

The founders of the D. E. Society (Chiplunkar, Tilak and Agarkar amongst them) were the outstanding patriots of this period who believed in selfless public service in all walks of national life. In this atmosphere it was natural for Gokhale to enter other avenues of public work besides teaching in the school and college. But his main inspiration for public work came from Ranade under whose encouragement and guidance he was drawn more and more into public life, first in the Sarvajanic Sabha, then in the Deccan Sabha and in the Indian National Congress. After giving evidence before the Welby Commission in England in 1897, he became an acknowledged political leader of the time. In 1899 Gokhale was elected to the Bombay Legislative Council and later in 1901 to the Imperial Legislative Council. His work in the educational field after retirement mainly lay in these legislative bodies where he powerfully advocated the cause of education in his famous budget speeches and also otherwise. In 1904-5 he raised his voice against the reconstitution of the university structure proposed by Lord Curzon. He opposed the two legislations, the Indian Universities Bill and the Universities Validation Bill. The government could of course get them passed with its statutory majority. After founding the Servants of India Society in 1905 Gokhale devoted all his time to political work and his main contribution to the educational field during this

period was his persistent but unsuccessful attempt to get at least the principle of free and compulsory elementary education accepted by the Imperial Council. He moved a resolution to this effect in 1910 and after it was defeated he introduced the Elementary Education Bill in 1911 on the same subject. The bill was discussed and was circulated for public opinion which resulted in much public awakening on the question. But in 1912 the government had no difficulty in defeating it at the select committee stage with its official majority. This was Gokhale's last important contribution to the educational field.

2

It is clear from this short account that Gokhale's work as an educationist has a twofold character: first, in the academic field whether as teacher-professor, life-member administrator, or Fellow of the Bombay University; second, in the extra-academic field as a great political leader espousing the cause of education. As we shall see later they are not unconnected, that the latter naturally stems from the former. But it will be helpful at this stage to study in greater detail the work Gokhale did in these different capacities.

Gokhale, when he was a teacher in the New English School, taught English and mathematics. When the Fergusson College was started he was asked to teach English for the first five years. After Tilak's resignation in 1890 Gokhale lectured in mathematics as well until D.K. Karve joined the society in 1892. During the later period of his teaching career, however, his teaching was mainly confined to history and political economy (i.e. economics).

It seems Gokhale had a systematic and methodical way of presenting his lesson or lecture for the preparation of which he took great pains and went into meticulous detail. In this he was greatly helped by his proverbial memory, his command over the English language, capacity for hard and sustained work and, above all, an ambition to excel in every task he undertook. For instance it is mentioned by his biographers* that when he was

* See T. R. Deogirikar, *Gopal Krishna Gokhale*, Builders of Modern India Series, Publications Division, 1964, Ministry of Information and Broadcasting, New Delhi.

teaching Southey's *Life of Nelson* he went to Bombay and visited the docks to acquaint himself with ships and tackle, with naval and nautical terms. This was very characteristic of the thoroughness and zeal which Gokhale brought to his teaching work. But it appears he lacked that touch of literary quality which makes a person an inspiring teacher of the masterpieces of literature. He was therefore not a great success as a teacher of English. Nor does he seem to have made a great mark as a teacher of mathematics. But it should be noted that after teaching a couple of years in school he wrote his famous school textbook on arithmetic for high schools, in the writing of which the qualities mentioned above must have helped him considerably.

But Gokhale excelled as a teacher of history and economics which he taught to the B.A. students of the Fergusson College during his last ten years in the college. In addition to the qualities mentioned above two more things must have helped him in this respect. Firstly, his earlier training in mathematics, which gave him a mastery over figures and logical constructs, undoubtedly came to his aid in unravelling the tangles of socio-economic data, and in discovering relationships between apparently disconnected phenomena. Secondly, the strenuous work which he put in under the guidance of his political guru Ranade and his own increasing participation in public affairs must have undoubtedly given him a good knowledge and understanding of the contemporary political and socio-economic situation both in Britain and in India. When he retired from the Fergusson College in 1902 he had already acquired the reputation of being the leading authority on the Indian economic situation.

Now let us turn to the role Gokhale played as a member of the Deccan Education Society. Two more or less distinct periods can be thought of in this connection : before and after Tilak's historic resignation from the society. The New English School, Poona, was founded among others by the three stalwarts, Chip-lunkar, Tilak and Agarkar, who also ran a press and the two weeklies *Kesari* in Marathi and *Mahratta* in English. Their aim was national awakening in this part of the country by means of the spread of secular western education through privately-run educational institutions, and the education of the public at large through the medium of newspapers. The basic principle under-

lying all this effort was the principle of selfless service. Chiplunkar died in 1882, two years after the founding of the school, and soon after his death differences began to crop up among the founders with more or less two clearly formed groups led by Tilak and Agarkar. The differences became more acute soon after the D. E. Society was founded in 1884 and the Fergusson College was started in early 1885. The dispute apparently centred around the issue of accepting outside work, whether remunerative or otherwise, of following the 'Jesuit' principle as Tilak described it. But there must have inevitably been several other overtones. For this was also a clash of two powerful personalities with two very different temperaments and two different outlooks on the national situation, on the consequent priorities and emphases in respect of the tasks to be undertaken and on the methods to be followed. Matters came to a head after Agarkar started his own paper *Sudhakar* to begin the great debate with *Kesari* which was edited by Tilak. Gokhale was not a leading figure in the dispute at the time of Tilak's resignation, although his general sympathies lay with Agarkar. But the immediate cause of the final clash was the acceptance of the secretaryship of the Sarvajamik Sabha by Gokhale which, in Tilak's opinion, was contrary to the interests of the D. E. Society and Fergusson College which should have claimed all his time and energy. After long and acrimonious controversy in the Board of Life Members, carried on with vituperation by both sides, Tilak tendered his resignation of the society. Gokhale offered to resign if Tilak would stay but he was persuaded to withdraw his resignation.* Thus Tilak severed his connections with the society in 1890 (and with him went the two newspapers *Kesari* and *Mahratta*).

The resignation of a scholar and teacher of Tilak's reputation was no doubt a big blow to the college and the society. But as years passed the school and college progressed and Gokhale played an important role in their development. In 1891 he was elected to the post of the secretary of the society. The secretary is the chief public spokesman of the society, one of his tasks being the collection of funds. In this capacity Gokhale had to

* P. M. Limaye, *History of the Deccan Education Society, 1880-1935*, the D. E. Society, 1935, Poona.

take up arduous tours of the Bombay presidency and elsewhere to collect donations. The college built its own building outside the city (the present main building) in 1892-93 and its financial position became stable and sound. After Agarkar's death in 1895 Gokhale was the seniormost life-member of the society, and he led the society during that critical period, especially when it was under great pressure from the government who had suggested many changes in its constitution. Well could he claim, in his farewell speech to the college, that he gave the best years of his life to the college and the society.

What was Gokhale's contribution to the work of the Bombay University of which he was a Fellow ever since 1895? It seems he did not make any significant contribution beyond participating in the routine matters of the university, except in 1910 when the governor of Bombay, in his capacity of the chancellor of the university, directed the senate to reform the curricula for the various examinations and in particular to drop the compulsory subject of British history at the B.A., the teaching of which in his opinion was the root cause of political trouble and unrest among the educated youth in this part of the country. Gokhale (and Pherozeshah Mehta) fought this move on three grounds: the governor should not interfere with the academic life of the university; the B.A. course should be mainly a general course with not much specialisation at that stage; and a certain amount of history (and philosophy) and in particular British history were essential for the training of a person graduating in arts. After a lot of bitter debate and skirmishes, the government side succeeded in removing British history as a compulsory subject although some of the drastic revisions of the structure and the courses of examinations could not be carried out.

3

We shall now describe Gokhale's work for the cause of education in the Imperial Legislative Council. In 1903-4 Gokhale opposed tooth and nail the Universities Bill which was initiated in the Council to introduce reforms in the functions, structure and constitution of the universities which had been working more or less under the same rules since their founding half a century

previously. The proposed changes were based on the findings and recommendations of the University Commission which was appointed for this purpose by Curzon in 1902, and whose members were all Europeans (officials and missionary educationists) except for one belated nomination of an Indian on it. The growth of private institutions during the previous twenty years had created a large number of educated intelligentsia, some of whom were dissatisfied because of their failure to get a degree, while others, who had acquired a degree, because they could not get suitable jobs and suffered discrimination in higher jobs in favour of the Europeans. Curzon wanted to deal with this situation by carrying out sweeping changes in the working of universities and by exercising a stricter governmental control over the functioning of the universities and the colleges affiliated to them.

The main provisions of the bill were as follows: (1) It defined the territorial jurisdiction of the universities and enabled them to introduce teaching departments of their own instead of being as hitherto merely examining bodies. (2) The membership of the senate was restricted to about one hundred, only 15 to 20 of which were to be elected and the term of office of an elected Fellow was to be five years instead of for life. The rest of the Fellows, i.e. the great majority of them, were to be nominated by the government. (3) The syndicates as executive bodies were statutorily recognised and an elective principle was introduced in their composition. (4) Certain powers regarding making of regulations (to be framed by the senate) which were so far with the universities were now assumed by the government. (5) The bill introduced stricter conditions for affiliation of colleges and for their periodical inspection.

Gokhale did not deny the necessity for introducing reforms in the current working of the universities. But he felt that the bill as a whole instead of giving more power, facilities and funds to improve their working, proposed to greatly increase the government control of the universities, to 'officialise' them. He welcomed the proposal about teaching departments but he rightly pointed out that they will merely remain on the statute book without liberal provision of funds which the government had always withheld. He also welcomed the elective principle in the formation of senates and syndicates but he vehemently op-

posed the actual proposals which did not give any representation to the teachers in colleges and which, he pointed out, were so framed as to secure a sure overwhelming majority to the government officials and the European element in the teaching institutions. As if this was not enough to bring the universities under official control, the government also wanted to assume powers for making regulations. And Gokhale fought against the enhanced control of colleges by the universities, which, because of the officialisation of the universities, would spell danger to the interests of the colleges run through private indigenous effort as against the government and missionary institutions.

Gokhale made several speeches in the Council against the bill and fought it at every stage by suggesting amendments to several of its clauses. But the official majority in the Council negatived most of his amendments and the bill was made into an act in the teeth of strong opposition. In 1904 Gokhale had another opportunity to resist the Universities Act when the notification to implement it were held illegal by the high courts and the government brought a validation bill to get over the difficulty. Despite all his valiant efforts, however, the act was validated and its provisions soon came into force.

4

We now come to Gokhale's efforts in the Imperial Legislative Council to introduce the principle of free and compulsory primary education in India. In many of his public representations and speeches Gokhale always referred to India's backwardness in education and pleaded for a better deal from the government. His evidence before the Welby Commission and his budget speeches in 1903 and afterwards stress this need again and again, contrasting the meagre provision for education in British India with the expenditure on the army and on the expansion of railways.

In March 1910 Gokhale gave a concrete form to his demand for the spread of elementary education by moving the following resolution in the Imperial Legislative Council:

"That this Council recommends that a beginning should be made in the direction of making elementary education free and

compulsory throughout the country, and that a mixed Commission of officials and nonofficials be appointed at an early date to frame definite proposals.”*

In his introductory speech Gokhale described in great detail the rapid educational progress made by a number of countries in the world and the pitiful situation in India where the percentage of literacy was less than 6 and only 1.9 per cent of the total population was attending school. At the rate of progress at which the latter proportion was moving, even if the population did not increase, it would take several generations to achieve progress comparable to other countries. He then reminded the government of their oft-declared obligations in this respect and taunted them that even the Gackwad of Baroda (in India itself) had started introducing free and compulsory primary education in his territories.

Gokhale then put forward his concrete proposals in this respect which may be summarised as follows: (1) Local bodies should be given powers to make elementary education compulsory in their areas. (2) Compulsion should be only for boys (and not for girls) between the ages of six and ten. (3) Compulsion should be enforced only in those areas where 33 per cent of the male population is already at school; in other places efforts should be made to bring this proportion to 33 per cent in the first instance. (4) Compulsory education should be free for all, or at least for those children whose parents' income is less than Rs 25 a month. (5) The extra cost should be divided between the government and the local bodies in the proportion of 2 to 1. (6) Education should be a joint head (of the imperial and provincial governments) instead of a purely provincial head and there should be a definite programme for education, as there was for the railways, to be carried out steadily from year to year. (7) There should be a secretary specifically for education, and a progress statement on education should be published from year to year along with the annual financial statement.

Gokhale also estimated the additional expenditure required for the proposed compulsory free education and recommended increase in import and export duties and even an enhancement

* This and the subsequent quotations are from *Speeches of Gopal Krishna Gokhale*, 2nd edition, 1916, G. A. Natesan & Co, Madras.

in salt tax (which he had always sought to reduce) making a poignant remark that "it is a smaller evil that my countrymen should eat less salt than that their children should continue to grow up in ignorance and darkness and all the moral and material helplessness which at present characterise their lives."

The resolution was defeated. The government however soon created a separate department of education and began to publish annual reviews of educational progress; but they ignored the principal part of the resolution on the ground that education was wholly within the purview of the provincial governments.

Undaunted by the defeat Gokhale returned to the attack again next year (1911) with the Elementary Education Bill the object of which was "to provide for the gradual introduction of the principle of compulsion into the elementary education system of the country". The bill was framed on the model of Compulsory Education Acts of England of 1870 and 1876. In his usual persuasive style Gokhale, in his introductory speech, marshalled out all facts and figures about other countries for comparison and made out a cogent case for what he called a "cautious measure". He also made a touching appeal to the officialdom that no task is "greater than this task of promoting the universal diffusion of education in the land, bringing by its means a ray of light, a touch of refinement, a glow of hope into the lives that sadly need them all". That his proposals were very modest will be clear from the following quotation from the statement of objects:

"The bill is of a purely permissive character and its provisions will apply to areas notified by municipalities or district boards which will have to bear such proportion of the increased expenditure which will be necessitated, as may be laid down by the Government of India, by rules. Moreover, no area can be notified without the previous sanction of the provincial government and further it must fulfil the test which the Government of India may, by rules, lay down as regards the percentage of children already at school within its limits. Finally the provisions are intended to apply in the first instance only to boys, though later on a local body may extend them to girls; and the age limits proposed are only six and ten years. It is hoped these are sufficient safeguards against any rash or injudicious action on the part of local bodies."

It will be noticed that Gokhale had further diluted his previous year's proposals in a bid to win acceptance for the principle of compulsion. The bill was not only permissive but the initiative was left to local bodies to meet the objection that the (foreign) government cannot enforce compulsion, and the question of apportionment of the additional cost was deliberately left vague to meet a possible objection on that score from the government benches.

The bill was circulated for opinion and when it came up again for discussion the debate went on for two days. The government was not prepared to accept even these modest proposals and in virtue of their statutory brute majority the fate of the bill was of course sealed. Usual arguments were trotted out for rejection by the official benches: that there was no popular demand for compulsion, that persuasion is always better than compulsion, that the provincial governments were not in favour, that the local bodies were unwilling to shoulder the burden of additional expenditure, and that a section of educated Indians was opposed to the bill! It is necessary to remember however that some of the nonofficial (Indian) members did oppose the measure for some reason or the other. Gokhale's proposal to refer the bill to the select committee was defeated in March 1912. Thus ended a glorious chapter in the history of the fight for compulsory primary education in this country for which Gokhale had so heroically fought stage by stage for several years.

5

We have given a brief account of Gokhale's main activities in the field of education and by any measure it is a giant's work for a man who did not live to see his fifties. Before we try to view it as a whole for its main characteristics it is perhaps convenient to note what Gokhale was *not* as an educationist. This is necessary for demarcating and emphasising the main areas in which he worked as an educationist. In the first place, Gokhale was not an academician or scholar (in the sense in which the term is usually understood) like Tilak, Apte or Rajwade. Nor can it be said of him that he was a 'scer' like Ranade, Chiplunkar, Tilak or Agarkar. This part of India had the good fortune of having had a galaxy of outstanding men during that period

and Gokhale was undoubtedly one of the tallest amongst them; but he was of a different mould, of a different character. Even in history and economics, the two subjects which were his special forte, he did not make any outstanding contributions either in the theory or to their understanding and interpretation.* He wrote no books not even for school or college (except the solitary school text on arithmetic) although his speeches have very often the flavour of the written word. Gokhale does not seem to have given thought to the more technical aspects of education like teaching methods, curricula, examination reforms, education in science and technology, or medium of instruction† beyond mentioning them in a general manner, the only important exception being his insistence on the teaching of British history to the B.A. students but which had extra-academic bearing as well. In the education of the people which was the special concern of all great men of his time his main medium was public speeches. He used to write in *Kesari*, *Mahratta* and later on in *Sudharak* in the initial period but most of his writings as well as speeches were in English.

So we are left with Gokhale's main fields of activities in and for education which were Fergusson College and the D. F. Society and his efforts in the cause of education in the Imperial Council. Let us consider the first of these activities. Gokhale joined the D. F. Society almost simultaneously with its formation and the founding of Fergusson College and he spent eighteen years of his life in shaping them. When he retired the society with its two institutions, the New English School and Fergusson College, was on a sound footing and had built a high reputation for itself. The credit for this achievement goes to him in a very

* In 1910 Gokhale founded the Ranade Economic Institute. It seems his idea was to initiate research in economics as well as industrial research for indigenous economic development. But the institute does not seem to have had a good start; it developed along specialised research in rather limited scientific fields and has now been handed over to the University of Poona.

† Mr D. V. Ambekar, a senior member of the Servants of India Society, in a recent article on Gokhale, has pointed out that Gokhale had advocated the establishment of universities giving instruction in the medium of Indian languages in a speech to the Bombay Graduates Association in 1896.

large measure. Gokhale himself regarded his work in the college as his "best work" to which he could "look back with pleasure and pride", (as he says in his speech of farewell to Fergusson College in September 1902). Reading this speech one feels convinced that in saying this he was not turning a formal phrase suitable to the occasion but that he was really giving expression to a genuine feeling of satisfaction and fulfilment for having successfully striven for an institution which, to him, represented "an idea and an ideal". What was this idea and what was the ideal? In his own words :

"The idea is that Indians of the present day can bind themselves together, and putting aside all thoughts of worldly interests, work for a secular purpose with the zeal and enthusiasm which we generally find in the sphere of religion alone. The ideal is the ideal of selfhelp, that we may learn slowly but steadily to rely less and less upon others, however willing, to bear our burdens, and more and more upon ourselves."

To see the full import of what Gokhale said it is necessary to think of the national situation in which the two great patriots Tilak and Agarkar—"with their minds in fever-pitch" (भणानलेल्या डोक्याची) as Tilak subsequently wrote—with other like-minded persons, decided to start educational institutions and newspapers with the aim of national awakening.* During the period from 1855 to 1882 the number of government-run educational institutions alone, and scholars studying in them, had risen tenfold, the number of arts colleges and secondary schools having increased from 15 and 169 to 38 and 1,363 respectively. A new educated class was coming up, soon to realise that Britain was lording it over with all the higher jobs and services in their complete control and the educational system completely dominated by the government and the European missionaries. In 1882 in the whole of India out of the 23 privately-managed arts colleges only 5 were run by Indians. In the Bombay province there was no arts college run by Indians and they managed only 13 out of the 53 privately-run secondary schools.† These young pioneers did see that the diffusion of secular western education

* *History of the Deccan Education Society.*

† Syed Nurulla and J. P. Naik, *History of Education in India*, MacMillan & Co., Bombay, 1943.

was a must for national regeneration but they also had the vision to see that in order to create an indigenous national consciousness this diffusion had to take place not under a foreign or foreign-dominated agency but under an indigenous agency. As Gokhale himself vividly pointed out later in his evidence before the Welby Commission :

"The excessive costliness of the foreign agency is not, however, its only evil. There is a moral evil which, if anything, is even greater. A kind of dwarfing and stunting of the Indian race is going on under the present system. We must live all the days of our life in an atmosphere of inferiority, and the tallest of us must bend, in order that the exigencies of the system may be satisfied."

In 1902, the year of his retirement, the number of private arts colleges run by Indians had already risen to 42 as against 37 conducted by missionaries.* One can therefore very well appreciate his sense of fulfilment that the educational institutions which he did so much to nurture had assumed a proud place in the country, and had become models for similar efforts elsewhere in India.

This also explains in our opinion the missionary zeal and selfless efforts of those pioneers and Tilak's insistence on the ideal of 'academic seclusion' and 'Jesuitical poverty', which are the same things in a more severe form. Actually it is debatable whether seclusion from the current public movements was a desirable principle and whether the restless spirit of Tilak was following it or would have ever followed it. Both Tilak and the D. E. Society however continued to work in their respective spheres with missionary zeal and in a spirit of selfless service. It is also pertinent to note in hindsight that while Tilak did not start any new organisation on the Jesuit ideal nor did he follow it in the organisation of his newspapers, Gokhale did start one, after his retirement, in the Servants of India Society which resembled a missionary order much more than the D. E. Society.

Although Gokhale's acceptance of the secretaryship of the Sarvajanic Sabha precipitated the crisis this was really not an important factor in the historic controversy which almost shook

* Ibid.

the foundations of the D. E. Society. Meanwhile a significant development was taking place. Gokhale's academic and political personality was assuming shape and maturity under the most powerful influence in Maharashtra of that period, that of his political master Ranade. Young Gokhale was destined to play a very important role in the evolution of the D. E. Society during the later period, especially after the untimely death of Agarkar, a role for which he was fitted both by his temperament and his training under Ranade. Ranade, who believed in constitutional methods in politics and who was a social reformer, was a source of inspiration to persons who dissociated themselves from what they described as the 'agitational approach' and considered themselves as belonging to the 'liberal' or 'moderate' school of politics. They considered themselves strong advocates of social reform and were associated in the public mind with the so-called theory of 'divine dispensation' of the British rule in India. Many of them, especially the later liberals, derived their inspiration from the liberal thinkers and politicians of England of that period. Gokhale's outlook on education was a part of his general 'liberal' outlook on politics : that British connection was essential to the progress and welfare of India, that the advance must be constitutional, deserved through the spread of education, enlightenment and social reform :

Even before Tilak's resignation the D. E. Society had accepted help and guidance from Europeans like Dr Selby, named their college after the governor, and were receiving grants from the government. Tilak's departure severed their connection with Kesari and Mahratta in which trenchant criticism of government policy often appeared. The death of Agarkar removed from amongst them another stalwart who, in spite of his emphasis on social reform, could not be classed as a 'moderate' in his political views. In the ensuing period the society came under pressure from the government and it became more intense during the period of plague (1897) because of some articles in Sudharak written by two life-members, severely critical of the government policy.* Ultimately the constitution of the society had to be changed in 1898. To quote the *History of the Deccan Education*

* *History of the Deccan Education Society.*

Society, "while accepting the control of the governing body (composed of a majority of non-life members) the society successfully resisted the introduction of government nominees on it..." But they had to accept the condition that no life-member shall bear office in any political association, nor shall he be connected with the management, conduct or publication of any political paper, and that he should keep away from "political movements directed against the government, or likely to create disturbance or to embarrass the administration". This was perhaps inevitable in the circumstances; although the society was till then free from any restrictions an alien government was bound to try and impose them some time or the other.

Under the influence of Gokhale the college and the D. E. Society came to be increasingly associated with 'liberal political traditions'. After him, in the subsequent generations, there started a general drift away from the mainstream of political life of the country, and when the political movement spread to wider strata of people and assumed a militant character, the society and its institutions became inert islands of indifference or of ineffectual liberalism and they hardly bore any resemblance to their former selves of the first decade of their life.

6

Let us now consider Gokhale's other educational contributions. His insistence on the retention of British history in the B.A. syllabus of the Bombay University was no doubt a valiant attempt to resist governmental interference in the university affairs and is understandable as a part of his political convictions. But it is doubtful whether it was academically sound then and it looks incongruous now at this distance of time.

In Gokhale's attack against the 'officialisation' of the university during the Curzon regime, one can not only see his opposition to the government attempt to pack the senates with its nominees and to the exofficio membership of the director of public instruction on the Syndicate, but it also shows his anxiety that the European officials and the missionary elements may together try to hinder the growth of private colleges run by Indians. We have already traced the origin of this feeling. In actual fact the senates

did not become mere tools of the government, and the Indian-managed private colleges continued to grow in number and in strength. But this was largely due to other factors on account of which the missionary colleges also dwindled in number and in influence. The university organisation also became more efficient in general although they did not assume teaching responsibilities to any great extent for lack of funds until after independence. And the director of education continues to sit in the Syndicate even now! Before we leave this topic we should like to quote a passage from Gokhale's speech on this bill which illuminates clearly his line of thinking in this connection:

"I think—and this is a matter of deep conviction with me—that, in the present circumstances of India, all western education is valuable and useful. If it is the highest that under the circumstances is possible, so much the better. But even if it is not the highest, it must not on that account be rejected. . . .

"To my mind the greatest work of western education in the present state of India is not so much the encouragement of learning as the liberation of the Indian mind from the thralldom of old-world ideas, and the assimilation of all that is highest and best in the life and thought and character of the West."

No comment is necessary.

The cause of universal elementary education was dear to Gokhale because according to his liberal creed education was of intrinsic human value and it was the key to the nation's progress. Perhaps Curzon's initial concern for primary education and the Compulsory Education Acts of 1870 and 1876 in Britain encouraged him to believe that at least its principle would be accepted in India. That brave battle brings out very clearly his beliefs and his methods and the whole story reads like some epic fight inexorably leading to the hero's inevitable defeat. And the tragedy is complete when it is remembered that some of his own compatriots in the Council opposed him on the score that compulsory education was not beneficial to their own people! The fight was later taken up by Vithalbhai Patel and others and soon the principle was universally accepted, but its practice was severely limited by the lack of funds for implementing it. The provincial ministries took up the issue in the twenties and thirties and made some little progress. The real pace was however set only after

independence; but now, nineteen years after, the goal is still to be achieved.

7

Gokhale's role in education does not end with his work in the academic field nor with his advocacy of education in the legislative field. Actually it transcends these narrow confines and pervades all his public life. Early during his apprenticeship under Ranade, for whom he had started drafting memorials to the government, it is said, Gokhale once became very despondent and doubtful about these futile exercises. The master smiled, so the story goes, and said to his disciple, "You don't realise our place in the history of our country. These memorials are nominally addressed to the government; in reality, they are addressed to the people, so that they may learn how to think in these matters."* Gokhale fully accepted that role in history, the role of an educator, an educator par excellence of his people. He used his silver tongue for a twofold purpose. His approach was to persuade and win over the rulers and his opponents rather than to attack and defeat them, and to educate and convince his countrymen of the rightness of their cause rather than to rouse and goad them. His audience was the English-knowing educated class, a natural extension over the country of his audience in the college.

In the organisational sphere too he carried over the idea and the ideals of missionary zeal and selfhelp from the educational field to the field of public service. Immediately after his retirement he founded the Servants of India Society whose constitution reads like that of a religious order. It lays down that the members will devote their lives to the cause of the country, "in a religious spirit", with "service and selfsacrifice". Their tasks include the work of "political education" and they specifically mention the work of "assisting educational movements, especially those for the education of women, the education of backward classes, and industrial and scientific education". Many great and noble minds felt attracted to this society and many organisations continue to emulate it and be inspired by it. One may as well say without hesitation that Gokhale was first and foremost an educator of his people.

* T. V. Parvate, *Gopal Krishna Gokhale*, Navajivan Publishing House, Ahmedabad, 1959.

PRIVATE INSTITUTIONS OF EDUCATION

A large number of institutions of secondary and higher education in India are run by private effort. According to an estimate of 1960-61 about two-thirds of the enrolment at the secondary stage and four-fifths of the enrolment at the college stage take place in private institutions. Private enterprise will continue to remain an important factor in these sectors of education for a considerable time to come. Serious thought must be given, therefore, to the role they are expected to play in the educational development of the country.

The private educational institutions may be classified into two broad categories: those which represent or cater for certain well-defined sectional interests and those which serve all sections of population. A large number of the institutions run by private enterprise belong to the second category. Most of these are secondary schools and colleges of liberal education; they do not belong to any specific community or section, religious or linguistic, and are essentially secular in character. Their management may be in the hands of nonprofit-making educational associations like the Deccan Education Society, Poona, which runs the Fergusson College, or in the hands of profit-motivated groups or individuals. The first category although much smaller in dimension is important otherwise. It consists of three main types of institutions: (A) institutions primarily established to provide religious instruction, (B) institutions of the public school type intended to provide education to the children of the well-to-do classes, and (C) institutions established as a privilege of religious or linguistic minorities. In this paper it is proposed to consider the private educational institutions of this first category.

It will perhaps be useful to visualise more clearly each of these types, if necessary, by taking illustrations. Type A should properly include institutions which go under the name of *pathashalas* and *madrasahs* where the main aim is to impart religious instruc-

tion and to train for priesthood. Institutions like convent and missionary schools or missionary colleges which had compulsory religious instruction in earlier periods, but where it is now voluntary or nonexistent because of the conscience clause, are of a different character.

Institutions of Type B are the counterpart of public schools (in England) and will cover institutions like the Scindia School in Gwalior or the Doon School at Dehra Dun or the new English-medium public schools which are being started in many other places. Colleges like the former Raj Kumar College, where they still exist, will also come under this category.

There is some difficulty of classification in Type C. Institutions of the proper linguistic minorities in a state such as Gujarati or Bengali schools in Poona or Bombay or Tamil schools in Bombay or Calcutta should be considered along with those in the second category mentioned in the beginning because they are essentially similar to them in all other respects except the medium of instruction or special study of the language of the particular linguistic minority but which is nonetheless one of the regional Indian languages and is not associated or presumed to be associated with any particular religion or religious community. When they are excluded, Type C will essentially consist of institutions run by the religious minorities such as the Muslim, Parsi or Christian schools and colleges.

Then there is an important and influential class of institutions, the convent schools and the missionary schools and colleges. They may or may not strictly fall under Type C but it is convenient to consider them in this category as they have a clear sectional or denominational association and a part of their funds as well as the policy at the highest level may have its source and inspiration in foreign countries and/or in the hands of non-secular agencies.

2

The starting premises of this essay are that the national system of education will be completely secular in its character, will cultivate a scientific outlook among the educated in order to achieve the country's general advancement, and economic and industrial advance in particular, and will further the objective of a socialistic

pattern of society. By national system is meant much more than a nationwide system of education; it means education which, while keeping its eyes and ears receptive to the advanced thought and knowledge in other countries of the world outside, is nonetheless oriented essentially to the conditions and problems of the Indian society and its transformation from its present backward state to the modern industrialised and egalitarian society. Such a system will increasingly provide educational opportunities at various levels to all deserving children without privileges of class, caste or community. By secular we mean that the educational system, while respecting all religions of India, will not propagate for, or associate itself with or against, any of them and leave religion as a matter of conscience to be pursued according to one's beliefs outside the educational institutions. Another premise from which we shall proceed is that there is no necessary connection between religion and language and the present linking of a religion with a particular language has to be given up in the secular system of education.

From this point of view institutions included under Type A of the type of *pathashalas* and *madrassahs* do not really come under the purview of the national system of education because there is very little content of modern education in these institutions. The state may continue to aid them if this is being done at the moment and on grounds other than that of education. It is clear that the state should not undertake any obligation for their expansion (or continuation if they are gradually disappearing) which is clearly the responsibility of the particular religious community if it feels that this is absolutely necessary. (There does not seem to be any constitutional obligation in this respect either.) Other institutions falling under Type A but which impart substantial contents of modern education will have to be considered along with Type C.

3

Public schools of Type B and institutions of Type C which are run like public schools and institutions like the convents and missionary schools will be considered together. Public schools provide a good quality education, invariably in the English medium (a few of them in Hindi as well), by having well-qualified

teachers, smaller classes, good equipment and an efficient school administration. For this they charge high fees and in the process become exclusive institutions of the well-to-do classes. Many convent and missionary schools have most of these features and therefore to that extent are like public schools. There are two additional factors in the case of the latter, the particular denominational bias and the control of funds and high-level policy by a nonsecular (and often a foreign) agency. It is true that the number of these institutions is small in comparison with the institutions belonging to the second category, but their enrolment has rapidly increased during the last fifteen years. Their prestige and popularity have grown tremendously in the postindependence era and they wield considerable influence in the present educational situation. It is, therefore, necessary to have a closer look at these institutions and their product.

The exclusive atmosphere of these institutions gives them a kind of hot-house character isolating them completely from the common people, their thoughts and their aspirations, their problems and their solution. The adoption of the English medium from early stages of education and the consequent neglect of the Indian languages including the mother-tongue sever their alumni from the main stream of Indian thought, literature and culture both past and present and thus move them further away from the life of the people. The teaching in these schools is frankly oriented towards the West and in particular towards the UK and the USA. It is not uncommon to come across convent schools where the British royal family and leaders of the western countries are held in far greater esteem and respect than the national leadership, and where anniversaries of national heroes and leaders like Shivaji and Tilak often go by default to accommodate minor christian festivals. These schools do provide good education thanks to their smaller classes, well-qualified teachers, liberal supply of amenities and equipment and personal supervision which are possible mainly due to their affluence. The general emphasis in these institutions is on acquiring a good mastery over the English language and general smartness and the emphasis in class room is on learning the techniques rather than on thinking or cultivating a spirit of enquiry. The idea is to turn out a smart young man who can compete successfully for the jobs in the

higher echelons of the armed forces, civil services, managerial services in industry and trade or technological services in industry. It is hardly surprising that very few of their alumni have made any important original contribution to academic thought whether in scientific research or in philosophy or in the humanities or in literature (except perhaps in the 'Indo-Anglian' literature). But there is no doubt that this kind of education has a far greater job-securing potential in the sense mentioned above and that it also facilitates entry into upper social circles. In the prevailing conditions of selection, it is rapidly becoming a counterpart of the 'old school tie' in England.

But this situation is far from satisfactory. Members of this new elite manning the important key places in the country, in spite of their acquisition of routine efficiency and technological knowhow, are thoroughly alienated from the common people and on account of their school environment and atmosphere are completely out of sympathy with them or their aspirations. The well-known British 'gentleman' from the public school had roots at least in the traditional upper-class tory culture in Britain; but the new Indian 'gentleman' vaguely oriented towards the West is rootless in his own culture. He is only concerned with his skill and his prospects, his smart society and its so-called modern culture. He has no reason to feel any allegiance to the society at large and will have loyalty to no one except himself and perhaps his immediate employer. The concept of a socialistic pattern of society is hardly a part of his mental make-up and he is not likely to be moved by the great challenge of social change in this country except perhaps for the sake of rhetoric. This class is thus a most vulnerable section in the Indian intelligentsia so far as planning for a socialistic society is concerned and in a crisis caused by an attempt for a political shift to the right or to the extreme right including a dictatorship he will not hesitate to transfer his loyalty to his new masters provided they keep intact his pay-pocket and relatively privileged social position.

This section of the rising intelligentsia should not be ignored because of its numerical smallness. It is occupying positions of strategic importance in the economic, social and administrative structure. It is closely linked with the emergent industrialists on the one side and with civil and military bureaucracy on the

other. Moreover, it is being held as an ideal to the new generation of students.

It was inevitable that a new class of administrators and technologists should emerge after independence and as a result of rapid industrialisation. It was also understandable that the children of the civil servants and the rising rich should try to monopolise these new jobs and manage to have the necessary type of education. The political leadership of the country which was supposed to curb this process, instead of doing so, is lining itself behind it to claim its share. Indecision on the question of language has helped this process. There is a characteristic double-think about the educational policy in this country in this respect. While public men go on making loud proclamations about the development of regional languages and Hindi, little is done to implement them. This has resulted in an ever greater stress on the use of English than ever before and a greater premium on English-medium education; and the same leaders who continue to talk about education through the regional languages, and about socialism and egalitarian society are careful enough to send their own children to English-medium public schools or convent or mission schools. It is therefore not surprising that even the middle and lower middle class families are trying anyhow to send their children to these expensive schools by tightening the belts if necessary. It is necessary to devise measures which will halt this process and adopt a policy which will curb at least the most undesirable features of the existing institutions of this category.

4

It is true that the Constitution has given rights to linguistic and religious minorities to establish their educational institutions and it is also true that any section of the people can start the educational institutions which they desire to have (such as the public schools). It is for the constitutional experts to suggest how the policy decisions in education can be devised to carry forward the objectives mentioned above at the beginning of section 2 so that they do not conflict with these constitutional provisions. If this is found impossible there is no reason why the Constitution should not be suitably amended in this respect. And in any case the policy

of grant-in-aid, recognition and general exercise of control on all public institutions can and should always be utilised to the fullest extent to further the educational objectives.

Let us first consider the schools conducted by religious minorities. While recognising the right of religious minorities to establish institutions for religious instruction there is no reason why this should be mixed up with educational instruction. Any religious minority (or majority) can arrange for religious instruction by establishing institutions like the Sunday schools and it is not necessary nor desirable to mix it up with general education. In fact there should be a complete severance of modern secular education from traditional religious beliefs. It is high time that the linking of religion with language is also broken. It is perhaps understandable that purely religious instruction should be associated with languages of the scriptures like Sanskrit, Arabic, Latin or Hebrew. But one fails to see why there should be secular schools with Urdu medium for the Maharashtra Muslims whose mother-tongue is Marathi or have Christian or convent schools in English when Christianity as a religion has as such nothing to do with the English language. The situation borders on becoming ridiculous at present when the large majority of children in convent schools in Poona or Bombay speak the regional languages—Marathi or Gujarati and not English.

Along with the separation of religious instruction and secular education and of religion of a minority and a language, two other important principles should also be laid down to govern the educational institutions of private educational effort. The management of every school or college should be in the hands of a public body (registered under the Public Charitable Trusts Act) and the control of funds and policy should be entirely in the hands of Indian nationals. These principles should be operative in the case of all institutions of education whether they receive government grants or not. Finally institutions like public schools catering exclusively to the children of the well-to-do classes and/or which charge fees higher than the limit prescribed by government for other institutions in the region should receive no grant from the government irrespective of whether they provide elementary, secondary or higher education.

other. Moreover, it is being held as an ideal to the new generation of students.

It was inevitable that a new class of administrators and technologists should emerge after independence and as a result of rapid industrialisation. It was also understandable that the children of the civil servants and the rising rich should try to monopolise these new jobs and manage to have the necessary type of education. The political leadership of the country which was supposed to curb this process, instead of doing so, is lining itself behind it to claim its share. Indecision on the question of language has helped this process. There is a characteristic double-think about the educational policy in this country in this respect. While public men go on making loud proclamations about the development of regional languages and Hindi, little is done to implement them. This has resulted in an ever greater stress on the use of English than ever before and a greater premium on English-medium education; and the same leaders who continue to talk about education through the regional languages, and about socialism and egalitarian society are careful enough to send their own children to English-medium public schools or convent or mission schools. It is therefore not surprising that even the middle and lower middle class families are trying anyhow to send their children to these expensive schools by tightening the belts if necessary. It is necessary to devise measures which will halt this process and adopt a policy which will curb at least the most undesirable features of the existing institutions of this category.

4

It is true that the Constitution has given rights to linguistic and religious minorities to establish their educational institutions and it is also true that any section of the people can start the educational institutions which they desire to have (such as the public schools). It is for the constitutional experts to suggest how the policy decisions in education can be devised to carry forward the objectives mentioned above at the beginning of section 2 so that they do not conflict with these constitutional provisions. If this is found impossible there is no reason why the Constitution should not be suitably amended in this respect. And in any case the policy

of grant-in-aid, recognition and general exercise of control on all public institutions can and should always be utilised to the fullest extent to further the educational objectives.

Let us first consider the schools conducted by religious minorities. While recognising the right of religious minorities to establish institutions for religious instruction there is no reason why this should be mixed up with educational instruction. Any religious minority (or majority) can arrange for religious instruction by establishing institutions like the Sunday schools and it is not necessary nor desirable to mix it up with general education. In fact there should be a complete severance of modern secular education from traditional religious beliefs. It is high time that the linking of religion with language is also broken. It is perhaps understandable that purely religious instruction should be associated with languages of the scriptures like Sanskrit, Arabic, Latin or Hebrew. But one fails to see why there should be secular schools with Urdu medium for the Maharashtra Muslims whose mother-tongue is Marathi or have Christian or convent schools in English when Christianity as a religion has as such nothing to do with the English language. The situation borders on becoming ridiculous at present when the large majority of children in convent schools in Poona or Bombay speak the regional languages—Marathi or Gujarati and not English.

Along with the separation of religious instruction and secular education and of religion of a minority and a language, two other important principles should also be laid down to govern the educational institutions of private educational effort. The management of every school or college should be in the hands of a public body (registered under the Public Charitable Trusts Act) and the control of funds and policy should be entirely in the hands of Indian nationals. These principles should be operative in the case of all institutions of education whether they receive government grants or not. Finally institutions like public schools catering exclusively to the children of the well-to-do classes and/or which charge fees higher than the limit prescribed by government for other institutions in the region should receive no grant from the government irrespective of whether they provide elementary, secondary or higher education.

The present government policy about public schools is another example of double-think. While professing the egalitarian and socialistic objectives the education ministry has not hesitated to start public schools and extol their so-called virtues. A former education minister once gave a most amazing defence of public schools in parliament by saying that they cultivate the quality of leadership. So the Indian political leaders continue to accept the old British outlook of the Victorian era when it is no longer seriously professed even in Britain. To meet the obvious criticism that the public schools are exclusive schools of the well-to-do classes the education ministry came out with a sop that a few children of the not-so-rich parents will be given merit scholarships so as to enable them to have education in the public schools and thus allow them graciously to elevate themselves to the class of the 'old school tie'. It is quite clear that the government policy of running and/or supporting public schools (whether as *sainik* schools or under some other name) goes entirely against its proclaimed aims about the direction of social change.

We may consider at this stage the provision of special facilities for talented children. As implied in the preceding paragraph it is not in their best interests to award them merit scholarships and send them to public schools which may succeed in transforming them into the 'gentleman' elite but which are hardly the place to develop or channel their talents into creative activity. The best way in which talent can be fostered is to make adequate special provision for it in some of the common schools and/or by founding special schools for talented children under the direction of national or state councils of education. Educational thinking in this respect is still not crystallised and experience in other countries like the USSR and the USA may provide valuable guidelines in this connection.

The problem of encouraging the children from the under-privileged classes has to be tackled in a different and more comprehensive manner. At present a liberal number of scholarships, free places and other concessions are made available to them in some states. But there is a prevailing feeling that the returns to this expenditure are far from satisfactory. The reasons are not far to seek. The main handicap from which these students suffer is the lack of educational background at home and this cannot

be overcome merely by giving them monetary assistance. They must also be provided with close personal guidance both educational and general. A better plan would be to provide the talented children of these classes with all educational expenses (not merely fees), good hostel facilities including close supervision of their work; and there should also be a method of elimination, at definite academic stages, of those who are found wanting in spite of all these facilities.

A word about the new schools which the government has established some time back for the children of the central government servants (who are liable to be transferred from place to place) for preparing them for the Indian school certificate examination. While some such provision is no doubt necessary it is to be hoped that they do not become another set of government-run public schools for the perpetuation of the present upper classes. This is a real possibility, if it has not already taken place, because with the present language policy of the government the medium in these schools will be inevitably English (and perhaps Hindi in some schools) for a long time to come and both the political and administrative thinking is heavily biased towards the public school type of teaching and management. Incidentally it was possible to introduce an innovation in these schools of charging fees according to the income of the parent instead of at a flat rate at present. Clearly this has not been done.

5

We conclude this paper by briefly stating the principles which in our opinion should be the basis of state policy towards the private educational institutions of this category, i.e. those associated with sectional interests. The state can and should influence the educational institutions of private enterprise by means of adopting suitable policies in respect of financial support, recognition and general administrative control. This is desirable not only to help them play their rightful role in the national system of education but also to see that their activity is consistent with and in furtherance of the educational objectives described above in section 2. As stated earlier all education should be secular, even in the institutions of the religious minorities like

Muslim schools or in missionary schools and convent schools. The right to establish such institutions should never be so interpreted as to create doctrinal exclusiveness for particular caste, community or religion. The right may be exercised by minority groups which feel that it is necessary for the protection of their (secular) educational interests to establish their own schools and which feel that they would otherwise be swamped or neglected. In these schools they may reserve a certain percentage of seats for their children and encourage them otherwise by providing other facilities strictly out of nongovernment funds. Secondly, as mentioned earlier, the management of every educational institution (whether minority school or otherwise) must vest in a non-profit public society and must be registered under the Public Charitable Trusts Act. A model constitution giving ample latitude for variation but which does not contravene the principles enumerated above may be prepared for this purpose. Thirdly, all matters of policy, management and control must be in the hands of Indian nationals. This is especially applicable in the case of institutions like missionary schools and colleges where a part of the funds comes from foreign sources. All financial contributions obtained in India or abroad should be in the form of plain charity with no strings attached (except perhaps the trivial ones such as giving the names of the donor). A comprehensive policy incorporating these principles is urgently needed in the present educational situation.

As mentioned in the introduction, this paper deals with only one category of privately managed educational institutions. The other category needs to be separately dealt with.

HIGHER EDUCATION : MYTHS OLD AND NEW

In its monumental report the Education Commission has devoted three fairly extensive chapters to higher education. Having decided to be exhaustive it has touched on almost every aspect of higher education. Here we shall select for comment its recommendations on three aspects which we consider to be of immediate relevance : major universities (chapter 11), enrolment policy (chapter 12) and university autonomy (chapter 13).

The Education Commission's report displays, perhaps inevitably, three general characteristics common to most expert reports produced nowadays in this country : a fairly comprehensive and often an admirable assessment of the present situation, an attempt to include and accommodate every point of view when it comes to making proposals, and an inordinate love for words and catch-phrases in which the real points at issue often get enmeshed. As a result, the conclusions and recommendations often add up to one more impressive and ponderous contribution to the confused situation and the current policy of drift. However, as will be observed at the end, when those proposals which for one reason or the other are likely to remain in the realm of hope and wishful thinking are excluded, a shape may emerge, a shape which was perhaps never intended by the authors of the report or which may not be to the liking of many educationists in this country.

1. MAJOR UNIVERSITIES

One important recommendation of the Education Commission is the development of five or six 'major' universities in India (see paragraphs 11. 12 onwards). In fact the commission envisages this as "the most important reform" in its "new strategy" to meet the present situation in higher education which is "unsatisfactory and even alarming" on account of "falling standards"

and deteriorating "quality", and the continuously widening gap between this country and the advanced countries of the world. They have admirably summed up the ills of higher education in paragraphs 11.12 to 11.14. These briefly stated are: "mechanical and listless" teaching by teachers who suffer from "financial worries", unsatisfactory working conditions, "hierarchical concentration of authority" and an "atmosphere of distrust and intrigues"; and an "ill-prepared" and apathetic student body which suffers from unsatisfactory conditions at home and from financial worries, and which is obliged to learn through a foreign medium. The principal remedy which the commission proposes to improve this situation is the development of five or six existing universities into 'major' universities, including one of the IIT's and one agricultural university, within the next ten years. In these major universities there will be collected the best of talent in teachers and students and they will be provided with all material facilities ("equipment and atmosphere", attractive salaries and a liberal scholarship system, etc). It will not be simply a postgraduate institution but will have degree students as well and the medium will be "as a rule English" because their students and teachers will be drawn on an all-India basis. The Education Commission hopes that by bringing such "a critical mass" together the major universities will in the course of ten years develop into centres of learning and research comparable to Oxbridge or 'Hamichic' (our abbreviation for Harvard, MIT and Chicago). The Education Commission feels that this will prevent the present flow of students for training to foreign countries and will restore to India the "centre of gravity" of Indian academic life which is at present outside India.

Let us examine the issues involved in this proposal. The picture of the present academic situation drawn by the commission is certainly not exaggerated and the ills on which they have put their fingers prevail in many university centres and more so in the weaker institutions. The assertion about falling standards is not easily verifiable because of the difficulty in making valid comparison but this is not to deny that the present standards of our undergraduate and postgraduate work are very low when compared with those in advanced countries. So far as research work is concerned the activity and effort have undoubtedly increased

substantially during the postindependence period; a number of new centres have come up or are in the process of coming up. Academic work in many fields has gained both in quantity and quality. It should be readily admitted, however, that all this does not add up to much and is far from anything commensurate with the size of our country or the problems which it faces. There is, without doubt, an ever-widening gap in this respect between this country and the advanced countries.

Wide Gap

One may ask, however, whether this ever-widening gap is confined to academic performance alone. Is it not true of almost all spheres of activity? The basic factor in all this is the ever-widening gap between the economic resources of underdeveloped India and the developed economies. Can the academic problem be considered in isolation? The commission is certainly entitled to suggest an academic solution without waiting for the narrowing down of the gap in resources. The question is: will the concentration of resources, or accumulation of a "critical mass" according to the commission, in a few major universities produce (to carry further the analogy implied in their metaphor) the required academic explosion and raise them to the eminence of Oxbridge or Hamichic?

If the experience of the last few years, during which many national institutes and laboratories have been set up all over India, is any guide, it is at least debatable whether the setting up of a few 'major' universities would produce the terrific acceleration visualised by the commission, i.e. something very much more than the present pace of advance registered in the existing national institutes and laboratories. It will no doubt be argued that they suffer from the ills and defects of organisation mentioned by the commission. It is well known that these ills arise in the stifling conditions that prevail in all underdeveloped economies which are stagnating, which are not vigorously pushing ahead. What guarantee is there that they will not beset the 'major' universities?

It may be argued that the national institutes and the advanced centres are postgraduate or postdoctoral centres; they do not have their own undergraduates; in short they do not catch them

young. But what about the IIT's who catch them young? With their facilities, equipment and the talent drawn on an all-India basis they project an image which is perhaps the closest to the idea of 'major' universities. And yet the commission has not only not tested their "critical mass" theory in terms of the IIT's performance but has suggested that one of them be further elevated to the 'major' status! Does it imply that the idea has not worked with the IIT's? The proposal, therefore, does not appear to be well thought out.

The experience in this country and other developing as well as developed countries indicates that the process of academic progress is perhaps by its very nature a slow process. It is a process in which eminence begins to show and accumulate at certain points. It is a function of the general academic level in the country and natural peaks emerge with a general rise in the academic level. The academic process cannot be isolated from other spheres of life. The academic process will accelerate only in a climate of vigorous social and economic change in society. In the absence of such a climate, artificial concentration of resources at a few points is not likely to produce the expected miracle. It may at best create a few exotic centres of affluence in the educational sphere but is unlikely to make a material difference to the general situation.

Harmful Effects

On the other hand the creation of the 'major' universities in the manner suggested by the commission will have some extremely deleterious effects on academic life in this country. It is obvious that to the extent that the 'major' universities are financed with munificence the other universities will be deprived of the finances they would otherwise receive. But that is not the only nor the most important of the harmful effects of the scheme. In the process of their collecting the "critical mass" of the best amongst teachers and students the 'major' universities will seriously impoverish the other university centres, especially the weaker amongst them, with disastrous consequences for their incipient academic life. Those amongst the 'minor' universities that have achieved some eminence will be considerably weakened

and those that have just made a beginning will be completely shattered.

The commission hopes that after ten years, when the 'major' universities have reached the desired eminence, they will help the other universities by acting as a source of supply of young well-trained teachers. This is likely to remain a pious hope. It is well known that the best of the alumni prefer to stay in their own eminent institution, migrate to other eminent institutions or explore the top jobs in public and private sectors. Consequently the minor institutions will in all probability receive only the rest who are forced to turn to these institutions because they are relatively less accomplished than their compeers. Besides if the present policy about emigration remains unchanged many of them will become part of the brain drain to the affluent countries.

On the contrary this artificial face-lift of the major universities will inevitably bring about invidious stratification among the universities without gaining much of the desired results in academic eminence. In the first place, the faculty in a 'major' university will soon acquire the distinguishing class marks of a superior and condescending attitude towards those of the lower order in the minor universities. One has only to think of the superciliousness, often bordering on arrogance and contempt, displayed by the academics of some of the all-India research institutes towards the universities and by those of the university departments towards their colleagues in the colleges. So far as the student body is concerned the selection procedures as they operate at present with their accent on accomplishment than talent and on fluency of language (English) than knowledge will be heavily biased in favour of the more affluent sections of the society. In the result the major universities will become prototypes of some of our expensive public schools in the sphere of university education, a sphere which has so far been spared an atmosphere of exclusiveness and snobbery to a very large extent. Unlike the public schools, however, this development will be financed through public funds. In a sense it is a logical development of the present government policy (e.g. in Maharashtra state) of starting exclusive schools on the public-school model on the plea of providing first-rate secondary education to the 'common people'. The Oxbridge snobbery

is slowly dying out in England as a result of the vigorous academic life in the newer Redbrick universities. Here in India in the name of excellence the commission wishes to create entirely new islands of snobbery and exclusiveness by giving an artificial boost to a handful of universities.

The other two issues, preventing the outflow of students to foreign (western) countries for higher education and bringing to India the centre of gravity of Indian academic life (which is at present outside India in the West), hang together. There is no doubt that academics in India look to foreign countries, mainly the UK and the USA, for inspiration, recognition and approbation, and that their areas of research are often unrelated to the problems directly relevant to the Indian situation. During the preindependence period the higher echelons of bureaucracy and academic life were inevitably manned by the "England-returned" elite. This situation has continued unabated after independence thanks to the selection procedure for government and for university jobs which is heavily weighted in favour of the "foreign-returned" so that a mediocre amongst them is often preferred to a first-rate indigenous scholar. The result is the continued flow of students to western countries on a much larger scale. The big change that has occurred in the situation is that the centre of gravity is moving and perhaps has already moved from the UK to the USA, from Oxbridge to Hamichic. The situation is thus a carry-over of the preindependence period. Only a determined policy of encouraging Indian scholarship coupled with the creation of more and better facilities for advanced research in the country and a careful selection and strict control of research students sent abroad for training could eventually break this unhealthy grip of the "foreign-returned" elite on the academic life of the country. What we need is an Indian cultural revolution.

The Basic Issue

Those who controlled the destiny of this country after independence were expected to adopt selection procedures which would encourage indigenous academic life. But they soon discovered that their interests are better served, not by loosening the hold of the foreign-educated but by continuing it so that their own off-springs could also join the select group of "foreign-train-

cd". The way in which industrialisation has taken place in this country during the last two decades has further strengthened the status quo by creating in industry and business a powerful counterpart of the westward looking elite in the government services.

The basic issue is, therefore, the policy to be adopted towards the present unrestricted flow of students to foreign countries. It is well known that a large number of these students are not first-rate. They are going out because they have the wherewithal to do so and because they are sure that when they return, even if they have worked on an esoteric piece of research entirely unrelated to the needs of the country, they will be preferred to their more talented native contemporaries. Many of them go abroad for courses and training for which there are ample facilities in the country. A remedial policy must therefore start from the principle of selfreliance, an emphasis on indigenous academic effort. It is true it will even then be necessary to send our young men abroad for training for quite some time to come. But it cannot be, it must not be, an open-door affair. There will have to be a deliberate and careful selection of trainees, their specific fields of training and research, their places of training and their placements after their return; and all this will have to be decided strictly in accordance with the felt national needs. Such a policy alone, together with development of research and training in the country will put the scarce resources to proper use in our own country and prevent the frittering away of hard-earned foreign exchange. In the absence of a firm policy it is futile to hope that the centre of gravity of academic work can be brought back to this country. Here, the gimmick of setting up a few 'major' universities will not work. They will only develop artificial islands of affluent academics, isolated from their environments and incapable of creating an indigenous academic tradition, with the eyes of the island-dwellers for ever turned towards Oxbridge or Hamichic for emulation and for a nod of approval.

If the super universities are unlikely to achieve what is intended by the Education Commission they will certainly provide many things for the convenience, comfort and vanity of the dominant elite group in India. Firstly, they will then have these show-pieces in the academic sphere to flaunt before the world, corresponding to some of the giant enterprises in the industrial and

other spheres. Secondly, the major universities will provide the elite group with the sources for constant replenishment and replacement. After all, devaluation and other factors have made it very difficult for the less affluent among them to send their children abroad; a three-year course in England costs a handsome sum of Rs 60,000 (£3,000) and may cost much more with the recent rise in fees. They will have erected their ivory towers so as to maintain the channel of communication with their counterparts in the West whom they admire and draw upon. Finally, they will have built for the top layer of English-educated western-oriented intelligentsia in this country island-citadels where they can take refuge for peace and comfort, and alternately preach to and sneer at the rising tide of 'barbarism' which they fear will engulf the academic life of the country. For there is nothing that they fear more than the change in the medium of instruction at the university stage and they are shrewd enough to realise that the process of change cannot be arrested for long. The creation of the 'major' universities will be for them a sort of successful rearguard action. Perhaps they may succeed in creating these citadels for themselves. The question is: will they help to promote a vigorous academic life in this country, an academic life not suspended over but organically connected with Indian society and its pressing problems?

2. SELECTIVE ENROLMENT

The commission discusses the future enrolment policy in higher education in chapter 12 in paragraphs 12.05 to 12.20. Their main conclusion is "to link broadly the total enrolment in higher education to manpower needs", and (since the demand for higher education will be greater than the number of available places) "to bridge the gap by adopting a system of selective admissions". At present "there is an over-production of graduates in arts and commerce", and "a growing incidence of unemployment amongst them" while "there is a shortage of professional specialists and postgraduates in science and arts". The commission asserts that the selective enrolment "can also be supported on academic grounds" and that "public opinion is now largely in favour of making admissions to higher education selective".

For a programme of selective admission it is necessary to ascer-

tain the number of places which are available or will be available in the proposed plan of expansion, to prescribe eligibility for particular courses in the universities, and to make a selection of the best students among those who seek and are eligible for admission. About the eligibility requirements, the commission would like to revise the present norms and make them "more stringent", and in deciding upon the eligibility conditions they advocate "a measure of elasticity so as to permit the admission of all really promising students". About the method of selection for admission they "recommend that each institution should decide its own procedure for selecting the best students from among eligible applicants". The commission is aware that "even in advanced countries, satisfactory techniques of selection have not been developed as yet". It suggests that "in selecting students for admission, the institution should take into consideration the examination marks, the school record, the proficiency of the student in fields not tested in the examination, and such other relevant factors. If necessary there should be an interview and a written examination specially designed" for the purpose. The commission recognises that to secure social justice it is necessary to make some allowance for the handicaps from which students coming from unprivileged classes and from the rural areas suffer. For this purpose it suggests a selection procedure based on "school clusters" which it has also advocated for the award of scholarships (in chapter 6). On the organisational side it is proposed that University Boards of Admissions be set up. The commission also suggests setting up of a Central Testing Organisation to develop appropriate selection procedures for different courses.

Main Issues

Let us now consider the main issues arising out of these recommendations. When the seats in institutions of higher education are limited it is inevitable that admissions become selective on some basis or the other. Even in advanced countries the number of seats is limited because even there the resources available to education are limited (in their context). So it is all the more necessary that in the developing economies the scarce resources should be put to the best possible use in every sphere, including

higher education. It follows that the programme of expansion and development of higher education requires careful planning and it has to be related to the manpower needs of the developing economy.

In a centrally planned economy the overall manpower needs of the country during the next plan period are estimated from the requirements of the socio-economic plan, and they are broken down by sectors, specialisations and regions. The question is: in a country like India, with the sort of planned development she has had and is likely to have, is it possible to work out meaningful estimates of manpower needs? The commission proposes expansion of engineering and technological institutions, but in Kerala the engineers turned out last year were, it seems, experiencing difficulties in finding suitable employment. The commission is itself aware that the present estimates of manpower needs are neither precise, nor detailed enough (see chapter 14 on "Education for Agriculture").

Many will agree that manpower needs should largely guide the expansion of institutions of professional education even while arguing that the problem of estimating the needs is not very easy. In this sphere the principle of selection as basis of admission has long been accepted and is being already followed in most of the institutions (subject to the pressures of the powers that be, and the recent innovation of "voluntary donations" for securing seats in some institutions). The next problem is therefore whether estimates of manpower needs should be taken as a guide for the expansion programme of higher education in arts and commerce (and the first degree in science), whether good enough estimates are available or can at all be constructed in these sectors, and whether the selective principle (over and above the eligibility principle) should be introduced in these institutions.

In the present situation, for a large number of jobs in government and private offices the aspirants must possess a first degree and for some of them even a master's degree. Even when there is no such formal requirement a degree-holder is always preferred to and is paid more than a man without a degree. The training implied by the degree may not have any specific relationship with the job-requirement beyond a certain level of general education and, hopefully, a corresponding competence. In fact the

requirement for the same job in terms of university education appears to have been stepped up over a period of years. Then there is the large sector of self-employed persons who may like to get some general college education. Finally, there are women students who take a degree for the same purposes as above or as insurance against an emergency. So unless this tie between the job and the degree is broken and alternative arrangements are made for training young men specifically for office jobs and unless it is decided that college education will not be available except for specified functional purposes, it is not easy to build reliable estimates of manpower needs and use them fruitfully to evolve a development programme for arts and commerce (and science) colleges.

Every one will agree that in the interests of efficiency and improvement of standards appropriate norms about the places provided must be laid down for the institutions of higher education and that they must be enforced more strictly. Academicians may also approve of the selection principle on academic grounds if valid and reliable techniques of selection were available. But it is doubtful whether the hurdle of selective admission over and above the eligibility condition, which virtually amounts to a competitive examination, even for admission to general degree courses in arts, commerce (and science), will be acceptable to large vocal sections of society. The Education Commission thinks that 'public opinion' is in favour of selective enrolment; it seems to be grievously misinformed in this respect.

The commission is concerned, and rightly so, about the indiscriminate expansion in arts and commerce colleges and the consequences of the resulting unemployment among the university-trained persons. (One may incidentally point out that if the present trends continue a similar situation is likely to overtake the professional and technological spheres as well, spheres where the commission is advocating expansion, and this may happen much sooner than is generally believed.) But everyone knows that there are very few alternative avenues of employment or alternative training facilities after secondary school certificate examination leading to reasonably remunerative employment. The problem is thus vitally related to the pace and method of econo-

mic development, and it is futile to seek its solution in the academic sphere alone.

There is also another side to the problem in the present context of our social development. Many sections in society, way down on the socio-economic ladder, are sending their children for the first time to secondary schools. In spite of the 'elasticity' and the 'cluster principle', etc., will not any selection procedures in practice prove to be heavily weighted against them when, as the Education Commission itself admits, satisfactory techniques of selection have not yet been evolved? Because the professional and technological courses are so highly expensive to run, it may be justifiable to insist on competitive selection for admission to these courses. But will it be reasonable to adopt it in arts and commerce colleges as well and thus virtually deny even liberal college education to a large number of students who have completed their secondary education? Will it not amount to denying them their only chance of securing a better job and improve their social position?

3. ACADEMIC FREEDOM AND UNIVERSITY AUTONOMY

The autonomy of the university is discussed by the Education Commission in chapter 13 (in paragraphs 13.01 to 13.15). It is difficult to summarise this part of the report because the points made here often get lost in words and phrases, and become vague or mixed up in an attempt to say everything. We shall nonetheless attempt a summary and hope that we are not unfair to the original.

The commission first distinguishes between university autonomy and the academic freedom of its members and spells out the latter in respect of an individual member's personal beliefs, and his academic work, in the context of the university and of society. University autonomy is described as autonomy in respect of selection of students, appointment and promotion of teachers, and decisions about teaching and research. While recognising that association of lay (nonacademic) elements with the university provides vital and useful links between the university and society as a whole the commission insists that the final authority in all academic matters must lie with the academic elements. It is pointed out that university autonomy also implies autonomy at

various levels within the university and a style of work which will maintain an unfettered upward flow of ideas. (It is in this context that the commission recommends association of student representatives with academic councils and courts.)

The commission then discusses what is perhaps the most important question in respect of the university autonomy, viz its relationship with outside agencies, in particular with the government. Here the report discusses how university autonomy should be interpreted in the context of the university's obligations towards society and its needs, and how it should be upheld in the situations where legitimate as well as improper claims are made by outside agencies (and in particular by the government) on the universities. (This is perhaps the weakest exposition in this part of the report.) The commission quotes several instances where state governments have sought to curtail the autonomy and interfere with the academic life of the universities during the last few years. It still maintains however that there is a 'general trend' in the direction of acknowledging the proper sphere of university freedom and autonomy. Finally it concludes by observing that the real custodian of university autonomy is a vigilant public opinion convinced about the necessity of such autonomy and that this will ultimately depend to a large extent on how the academics themselves discharge their functions.

The issues involved here demand careful thought on the part of all academics, because they are of vital concern to their very life and work as academics. Firstly, let us take the freedom of every academic to hold his beliefs and opinions and the right to examine and criticise the theories and practices over the entire field of knowledge including the social processes. It is heartening to note that the report exhorts the teachers to exercise this freedom more vigorously. We would only add a small rider that this freedom and this right are linked up with intellectual and academic integrity. Secondly, the commission does not say whether its concept of academic freedom includes the freedom and right of every academic to take active part in social and political activities, parties and organisations (the freedom and right conferred on every citizen by the Constitution) in a manner not inconsistent with his academic obligations.

The second issue to be considered is university autonomy. Here

we find the commission's thinking rather unclear and would therefore like to offer an alternative exposition. First, it is necessary to consider the role of a university in modern society, for the matter of that, in any society. A university exists because there are a body of people who believe that "it is good to inquire into and discover the nature of things". At the same time it should be remembered that a university has no existence apart from the society which sustains it, not only because it provides the university with physical sustenance but also because it is a part of the larger society and consequently many of its problems of inquiry into knowledge have direct relevance to the society in which the university works. So the university has, like all other functional groups in society, corresponding obligations towards the society which, it has to be assumed, on its part believes that it is both necessary and desirable to have such a body of people. If this mutual relationship is not recognised the academics will be no different and no better than parasites on the body of society. The functions of a university flow from its inherent nature and its obligations towards society. They may be briefly described as : (a) to conserve and enrich the fund of human knowledge, and (b) to help the society to maintain and continue its material and cultural advance (i) by accepting to provide appropriate higher education to its young men and women and (ii) by accepting as their own such problems of inquiry which face society. Viewed in this way it is clear that the universities have both privileges and obligations.

Need for Academic Freedom

The very nature of the social group which is the university and the very nature of its activities demand for its effective functioning autonomy in its working and academic freedom for its members. From them also follows the necessity of adopting an appropriate internal system of working within the university, a system which shares this autonomy with its different subgroups, which leaves the maximum possible initiative to its members and facilitates the upward flow of ideas.

The dual nature of the obligations, towards itself as a group of inquirers and towards the society as a vital part of it, also explains why lay elements must be associated with the organisation of the

university and why these elements, in their turn, must respect the autonomy of the university and the academic freedom of its members. The association of students with the university organisation on an appropriate level then also becomes meaningful although it is debatable whether the present academic councils and courts are the appropriate bodies for such association. At the same time the peculiar nature of the group (the university) and its functions also make it clear why they must jealously safeguard their academic freedom and autonomous functioning, why they must create public opinion in their support and why enlightened public opinion on its part must give them this support.

These principles should be generally acceptable. The real issue is to translate them into reality in our academic life. The question is to lay down proper norms, to devise suitable forms of working both in the internal organisation of the university and in its external relationship with the society. On these questions the Education Commission has made only general, well-meaning observations. Perhaps it thought that the norms and the forms should be left to vigilant academic opinion to work out and it may be right having done so. **But** in this connection it was surprising that the commission **does** not deal with or even mention the factional quarrels, cliques **and** the activities of teacher-politicians (teachers who behave **not** like scholars but like politicians, bureaucrats or autocrats) which are so rampant in many universities and how they are often inspired and actively encouraged by outside agencies like political parties or other powerful groups. We find it difficult to share the commission's view that there is a general trend in the political life of the country towards acknowledging university autonomy and freedom. The happenings of the last few years hardly justify such optimism.

4. CONCLUSION

We have discussed so far the Education Commission's thinking and recommendations on three vital problems in the field of higher education. A legitimate question may be asked: what developments do we visualise in future concerning these problems? All speculations carry with them an element of hazard; nonetheless we shall indicate briefly what is likely to happen. The shake-

up due to the recent general elections may delay the decisions and may also modify them in details.

The proposal of creating 'major' universities will be implemented much to the satisfaction of certain sections of academicians in the four metropolitan cities. For it coincides with the interests of the powers that be and their love for the spectacular rather than for the substantial. Most other proposals of college and university reforms and improvements will be shelved for want of funds. Money for the creation of super universities and similar sky-scrapers will be found from the hard-pressed national exchequer or from the Indo-US foundation. Selective enrolment in arts and commerce colleges will not be accepted. In certain states pressures will mount for whittling down the current selective enrolment even for professional and technical courses. Educated unemployment will reach new heights in the next ten years and in all branches of higher education. The extent of interference in university autonomy will depend from time to time on the complexion of the government temporarily in power in a particular state but interference will continue and is likely to increase. This is perhaps not what the Education Commission hoped for but we can hardly hold it responsible if such is the shape of things to come.

REORGANISING THE NCERT

The Government of India has appointed a committee to review the working of the National Council of Educational Research and Training (NCERT), to lay down broad guidelines for the future development of the council in relation to the educational needs, and to recommend an appropriate reorganisation of the administrative and academic structure of the council. The National Council was set up as an autonomous organisation in September 1961. It is engaged in research, training and extension service in education. The estimated expenditure on the council's activities was a little less than Rs 4 crores last year (1967); the gazetted staff in the different departments and institutions of the council is reported to run into four figures. It is now seven years since the council was instituted and a fresh look at the objectives with which the council was started and its progress over the years should do a lot of good to its functioning.

The three main objectives for which the council was established, according to the Memorandum of Association and Rules, are: (a) educational research, its promotion and coordination, (b) preservice and inservice training mainly at an advanced level, (c) organisation of its extension programmes. These objectives are certainly unexceptionable and the other objectives mentioned in the memorandum are incidental to these three. For fulfilling the first objective NCERT is running eleven departments in the National Institute of Education (NIE) which undertake research on their own or in collaboration with other bodies and individuals. NCERT also farms out or sanctions research projects to other agencies on the advice of its Standing Research Committee (SRC). The third objective is carried out in a similar manner by undertaking and encouraging extension programmes which are based on the established or confirmed research findings. As for the second objective, training at an advanced level, it has to be carried out in the NIE departments.

Besides, there are the Central Institute of Education (CIE) at Delhi and four regional colleges of education at Ajmer, Bhopal, Bhubaneshwar and Mysore.

1. TRAINING PROGRAMME

Considering first the training programmes of NCERT, it is clear from the annual reports for the years 1965-66 and 1966-67 that the activities of NIE in this respect are only marginal; they provided only a few short-term courses. (We shall ignore for the present the workshop and seminar activities which will be dealt with later.) It is reported that the associate programme undertaken in 1967-68 has bogged down in difficulties. In short, so far as the training at an advanced level is concerned, there has been no serious effort to organise it in NIE.

Thus, the major programmes of the council in educational training proper appear to be located in CIE and the four regional colleges. If we leave aside CIE, which existed before the establishment of NCERT and consider only the four regional colleges which were established much later, we find that NCERT incurs an expenditure of Rs 133.35 lakhs annually on these four colleges and it forms one-third of the total budget of NCERT. No significant research work (except, perhaps some doctoral work) appears to be undertaken in these colleges. Analysing their activities for 1966-67, for instance, the four colleges had altogether 1,436 regular trainees and 482 in summer school-cum-correspondence courses. Of the former, 985 were undergoing four-year courses in science (485), technology (369), English (93) and commerce (38). The one-year training courses had 331 trainees, and the remaining 120 trainees were enrolled either for two-year or three-year courses. These courses are not at an advanced level at all; they are all at the first degree level in education.

If it is assumed that at least two-thirds of the estimated expenditure of Rs 133 lakhs is current expenditure, i.e. about Rs 88 lakhs, the annual institutional cost per trainee (assuming again the same cost for full-time and correspondence and other types of course) is of the order of Rs 4,700. This is almost seven times the figure given in a recent investigation for the annual cost of training secondary teachers in a Poona college. The

failure rate as given in the annual report for 1966-67 is about 75 per cent. So the current institutional cost of producing a secondary teacher in a four-year course in a regional college of NCERT is as high as Rs 25,000 !

There is also another aspect to this. The regional colleges were specifically started in order to serve the needs of the surrounding states. For instance, the college at Bhopal is supposed to serve Maharashtra, Madhya Pradesh, Gujarat, and Dadra and Nagar Haveli. It is well known that in all these states, secondary education is almost entirely given in the regional languages. But the regional colleges train their teachers mostly for the English-medium schools. The pertinent question is, therefore, in what sense do these colleges really serve the actual needs of secondary education in their regions? It is, therefore, imperative to consider whether NCERT is justified in spending large amounts of money on such institutions when the same money can be utilised much more fruitfully and effectively by ordinary colleges of education in the universities of the surrounding states.

Perhaps it may be argued that the regional colleges meet a real need, viz a continued supply of teachers to English-medium schools, particularly the central schools which are being started all over India. (One aspect of this policy of meeting the needs of a microscopic section of the community will be considered below.) But then it is clear that the regional colleges are not likely to provide the necessary leadership to the vast majority of the secondary schools because they are not likely to evolve new teaching methods suitable for them. If the idea is to establish model training institutions in the states, the best course would be to select one or more training colleges in each state and provide them with substantial funds and facilities. The regional colleges are sometimes referred to in some quarters as the white elephants of the NCERT. This is serious criticism and the Review Committee will have to give it its serious consideration. The same criticism can, perhaps, also be levelled at the training programmes in the CIE and it should therefore receive similar consideration at the hands of the Review Committee. On the other hand, it should be insisted that, according to one of the main objectives of setting up of NCERT, arrangements should be made for advanced training facilities in the NIE. This is

desirable not only in itself but also because every research institute worth the name must include some training programme as a part of its activities.

2. RESEARCH ACTIVITIES

Let us now consider the research activities of NCERT. They are carried out (1) by its own departments, or (2) by other institutions with the financial support from NCERT and with or without a guiding hand of its departments. There is no doubt that some commendable work has been done under the auspices of NCERT during the last seven years. We may list in this connection such projects as the Second All-India Educational Survey, Achievement Motivation in High School Boys, Development Norms Project, Wastage and Stagnation in Primary and Secondary Schools, Programmed Learning Studies, Survey of Secondary Schools and Teachers' Education at the Secondary Level, Sociology of Education Project and preparation and publication of several textbooks at the elementary and secondary stages. While acknowledging the good work, however, one should not ignore the areas and aspects which have received scant attention at the hands of NCERT. When one welcomes, for instance, the starting of the excellent journal, *Indian Educational Review*, the fact that the other journals of NCERT leave much to be desired should not be glossed over. The contemplated series of year-books and volumes on educational studies and investigations have fallen hopelessly in arrears.

If an outsider takes an overall view of the research projects of NCERT he will feel that the output is certainly not commensurate with the large staff and the large budget of NCERT. In fact, it is rather low. Only two or three departments of NCERT are really pulling their weight. The rest of them give one an impression of a slow-moving outfit lacking any sense of buoyancy or urgency. For instance hardly any work worth the name has been done in adult education or basic education during the last so many years. No doubt there are difficulties or obstacles in activating these departments. But then the best course would be to give serious thought to them and remove them. If one considers the collaborative or farmed-out research the situation is

not very different. Hardly any work of national significance seems to have been undertaken or carried out except the project on the sociology of education. The present procedure of asking for research proposals from all and sundry should therefore be replaced by another by which well-known research workers elsewhere in the country are invited to participate in, or to undertake on their own, well-formulated research schemes of national significance. If the present rules and procedures need any relaxation or modification for such a change, NCERT should be prepared to do so in specific particular cases. It is important to remember that the total pool of able research workers in the country at the moment is not very large and NCERT must, therefore, evolve a policy which would be flexible enough to garner them and extract the maximum out of them.

If the research projects of NCERT are analysed by their subjects it is found that a few of the projects are of fundamental or immediate national or regional importance. But this cannot be said about many others. There is a built-in complex among a large number of research workers in India, in all branches of learning including educational research, whether they are trained abroad or otherwise. They all look for recognition to the countries in the West. Thus, the problems that they select are either a continuation of the problems on which they worked in foreign countries, or problems which are relevant to the advanced countries. They do not try to seek what is of immediate or pressing importance to India. To give a recent instance, it is reported that one of the proposals of a department of the NCERT was to study the social and psychological aspects of the postearthquake situation in Koyananagar. Such a proposal had hardly any relevance to education—regional or national; the money would be better spent on rehabilitation in the valley! (It is fair to state that the proposal was not approved.) Again, there is a general tendency to propose and repeat status studies based on regional or national surveys. There is no doubt that such studies are important, but repeating them again and again does not tell us a great deal more than what is already known unless the surveys are diagnostic and can point out definite remedial measures.

If NCERT is to make further progress, these tendencies must be curbed and overcome. It has to interest and encourage re-

search workers in its own departments or elsewhere to face live issues relevant to the Indian situation. For instance, we have not yet developed efficient methods for adult literacy in different language groups. The same is also true of evolving cheaper and functional designs for school buildings suited to different regions of India or producing standardised cheap educational aids in schools. Teaching of several languages in elementary and secondary schools has been a living problem with us for the last several decades and it has assumed even greater significance during the last decade. It is obvious that educationists must take it up and tackle it with the help of the latest linguistic research in this context. But hardly anything was proposed by NCERT till last year either on its own or in collaboration. (NCERT launched such a project only last year.) Many other important problem areas can be mentioned. NCERT should make a list of problems of educational research which are of pressing importance in the present circumstances and assign priorities so that they are taken up by the departments of NCERT or other agencies in collaboration or otherwise. This should not, of course, rule out other research projects which may be considered on their own merits. But the bulk of the funds and efforts of NCERT must be devoted to the priority projects.

There is another undesirable feature of the research studies of NCERT. Many of NCERT projects are based on schools in Delhi, or in the surrounding areas. This is no doubt convenient to the research workers of NCERT departments in Delhi, but it is objectionable for, at least, two important reasons. First, no research projects in school education could be considered to yield decisive results of national importance for the purpose of estimation, diagnosis or prediction unless they are put in the field in one or more language areas other than Hindi-speaking areas. Second, Delhi is not representative even of the urban areas in India. It is at most a very artificial conglomeration of people. NCERT must therefore try to spread out its activities all over the country.

3. OTHER ACTIVITIES

One important continuing activity of NCERT is the preparation and publication of model textbooks. It has prepared a number of textbooks in science, mathematics, geography, history and social sciences, and also in Hindi, written around modernised syllabuses. Teachers' handbooks have also been prepared in most cases. This is, no doubt, important and useful work, but it is limited in scope and effectiveness. Most of the books so far published are in English, and some in Hindi. The objective of modernising the syllabus content and textbooks cannot be said to have made a real progress unless a corresponding change is effected in the elementary and secondary schools in the different linguistic regions of the states. For this, it is necessary to draw in state education departments to participate in this effort. Again, whenever a syllabus content is revised, or a new approach is adopted, simple expository guidebooks explaining the new content or the approach, which could be understood by the large majority of teachers by themselves, without outside help, must also be prepared. This type of work cannot have the desired impact unless there is a corresponding agency at the state level to do the relay work.

Let us now consider the group activities of NCERT, viz seminars and workshops. Some of the workshops are no doubt necessary and desirable, but some others may not achieve their full operational effect unless they are followed up at the state and substate levels, e.g. workshops which aim to give new orientation to the majority of teachers and teacher educators in the states. As regards seminars, it seems from the annual reports of NCERT that this body has also succumbed to the seminar mania prevalent in other fields of learning. Whenever there are big projects with large-enough funds and the project directors are stuck up for ideas, or are not confident about what they are doing, they immediately convene a seminar. It is often forgotten that much careful planning, including preparation of really good working papers, must precede a seminar if something worthwhile is to emerge from the discussions. Otherwise, the participants in the seminar tend to include everything conceivable in the area in the project and the project becomes shapeless, un-

manageable and impracticable. Seminars cannot be a substitute for serious thinking effort on the part of the person or persons who are directing a project. It is often pleaded that the expenditure on seminar activities is not more than ten per cent of the total expenditure. Although in terms of percentage the amount may appear to be small, the actual amounts spent on seminars may add up to quite a substantial part of NCERT budget especially when the time and the efforts of its own staff are also added to it. Work in carefully selected functional groups should be much more effective in terms of end results than the rambling and often pointless discussions in large groups which the seminars essentially tend to become.

There is another important aspect of the research and training activities of NCERT which ought to receive careful consideration by the Review Committee. Most of the activities of NCERT tend to bring about improvement in the instruction programme of only a select group at the top or near about the top of the population pyramid. Whether it is CIE or the regional colleges, the writing of textbooks in science and mathematics or talent search in science, most of them are aimed at this microscopic section of the population. It may be that this is, perhaps, not deliberately intended. But there is no doubt that these improvements become available only to the children of the higher middle class and upwards, and in the institutions which serve them. A large majority of other children and their schools remain outside the sphere of their influence. It is clear that the main activities of NCERT must be directed towards bringing about improvement at the mass basis and not merely at the top, although it may be readily conceded that this latter may also have a useful part to play. For this purpose again, along with a conscious reorientation of the activities by NCERT in that direction, there must also exist relay organisations at the state level to push them forward.

4. ORGANISATION AND FUNCTIONING

Considering the functioning and the organisational set-up of NCERT, one finds that there is the general body of the council at the apex. This is a very large body with about 35 or 40

members. It is the parent body and therefore one should normally expect it to take broad policy decisions. But, in fact, this is not so and a careful perusal of the constitution of NCERT shows that perhaps it was not intended to discuss matters of policy at all. (The seriousness with which the council is taken by NCERT office may be gauged by the fact that the recent change in the joint director, an important qualitative change, was intimated to the members many months after the appointment.) The council meets once a year, for hardly an hour or a half, to transact business which mainly consists of listening to the minister's speech and receiving the annual report. At the meeting itself, there is an exchange of pleasantries, expression of good sentiments, patting NCERT on the back for its work during the year and the inevitable sipping of tea. A member who dares to take his business seriously is looked upon as crankish and cantankerous. In any case he is a spoil-sport who disturbs the goody-goody atmosphere of the meeting. It is clear that the general body of the council will serve no useful purpose at all unless its meetings are held more frequently, and at least for one full day, to consider matters of broad policy, and opinions are allowed to clash freely on a carefully planned agenda.

The main controlling body of the council both as regards policy and administration appears to be the Governing Body (GB) since "the affairs of the council shall be administered, directed and controlled" by the GB. If the present composition of the GB is any indication, its membership is mostly drawn from Delhi, although one does not know why. Only one member last year was from outside Delhi, and that also from Jaipur which is, perhaps, looked upon as a suburb of Delhi. The GB is supposed to meet according to the constitution at least four times a year at an interval of not more than four months. This is eminently desirable if one takes into account its functions, powers and responsibilities and yet one finds that, during 1966-67, the GB met only once in July and carried on without meeting for the rest of the year. This cannot be said to be a satisfactory state of affairs by any standard. There is no doubt that there is an urgent need of reviewing the composition, powers and functioning of both the council and the GB and make them more active and more business-like in their functioning.

Other committees of the council probably function more or less satisfactorily. The academic bodies of the NIE perhaps function like similar other academic bodies elsewhere, as for instance in the universities. Coming to the offices of the director and the joint director, it is clear that they must provide the requisite leadership if NCERT is to make a serious impact on the educational situation in the country. Till very recently both these offices were part-time and were held by senior officials in the union education ministry. It is clear that these offices must be manned, not by the ministry officials working part-time on them, but full-time competent educationists working in the NIE and they should not be burdened with administrative chores in the ministry of education. One, therefore, welcomes the recent appointment in the office of the joint director of a really competent research worker in education. This should be pressed forward so that the office of the director is also held by a full-time academic person. Moreover, such a full-time director must be given the requisite powers over finance and autonomy of functioning in the affairs of the council. He must not be fettered at every step by the overriding powers of the ministry of education or ministry of finance. When the general policy and the budgets are laid down the director and the joint director should be left more or less free to manage their own affairs. NCERT is often compared with CSIR. The director of the CSIR is mainly a scientist and can function autonomously without having to look to the officials of the ministry every now and then. If this is so, there is no reason why the director of NCERT should not be mainly an academician and should not have similar autonomy and freedom to operate.

Finally, for the activities of NCERT to make a real impact on the educational situation in India, they must be supplemented and carried forward at the state level. For this purpose it is necessary to establish state councils of educational research and training and strengthen the state institutes of education. One must remember that education, especially school education, is mainly a state subject and that education at the school level (and soon at all levels) is carried on in the regional languages and is greatly influenced by the local tradition and local conditions in the states. The education ministry at the centre has to

persuade the state ministries to initiate such developments without which we cannot hope for more than a surface churning at the top without its effects ever reaching the base.

POSTSCRIPT

This was written in May 1968; it is now January 1971 and some further comments are in order.

The report of the Review Committee, submitted in August 1968, together with the government resolution of August 1969 on it and the action (of reorganisation) taken, was placed before the meeting of the council in December 1969 for adopting the consequential changes in the constitution of NCERT. Meanwhile everybody who was somebody in NCERT had an opportunity to see and comment on it, but not the council members, although this could have easily been done at the annual meeting in October 1968. This confirms, if confirmation was at all needed, what we have said about the scant respect in which its membership is held.

In fairness to the Review Committee it must be said that it had accepted, directly or indirectly, most of the points made in our main article. But the reorganisation of NCERT, as will be seen from its main measures given below, has not even touched the basic issues raised in the article.

The principal function of NCERT now, according to the government resolution, is "to assist the ministry of education in the formation and implementation of its policies in the field of school education", and to devote "special attention to preprimary and primary education". It has "to maintain close liaison with the ministry" and "function in close and continuous collaboration with them". Moreover, the government may, from time to time, issue "directions on important matters of policy and programmes" to the council. Regional colleges will now aim at becoming "centres of excellence in teacher education" (shades of Education Commission's report!) and will undertake "pioneering and experimental work in the field of training of preprimary and primary teachers". In NCERT itself, the departments were regrouped; the posts of the director and joint director were made whole-time posts; and an additional post of the

dean was created. A few school teachers were to be nominated to the council and to the Executive Committee which is the new incarnation of the former GB (all quotes are from the government resolution).

Perhaps it is still too early to comment on the shape of things to come. But the facts mentioned above and the developments over the last one year make us feel concerned about the future of NCERT with its newly-forged closer bonds with the ministry. With the exception of one towering personality, who really does not belong to them, the ministry of education, as every other ministry, consists mostly of the usual run of people who can mouth with facility glib and high-sounding expressions on education, changing with a new education minister, but who are often devoid of ideas or a sense of purpose. Sooner or later NCERT, in its new role of "service" to the ministry, is likely to find itself choked of even the limited initiative and innovative enterprise it had in the past.

While the creation of whole-time posts of the director and joint director is to be welcomed, the government has in its wisdom selected for the former post a sixty-plus person who may, perhaps, be eminent as a scientist but who can hardly claim more than a nodding acquaintance with, or to have ever given serious thought to, the problems of school education. Many senior positions including those of the joint director and dean remain unfilled and work is being carried on in an ad hoc manner. We will not be surprised if, as a result, the research staff in NCERT feels alienated. In fact in the new conceptual and organisational set-up of NCERT many of them may find themselves largely out of place. Under the new dispensation NCERT also appears to be in a hurry to damage its former reputation for good textbooks; it has 'revised' its former history textbooks under the open communal pressure of the present Delhi administration and is reported to have written a history of Delhi in which the Moghuls are just ignored!

The regional colleges may now merrily plod their expensive way to become centres of excellence, and will now also produce preprimary and primary teachers for the elite society, but are hardly likely to come to grips with the real problems of mass education at these levels. The association of a few teachers with

NCERT' is not expected to make much impact on the thinking in NCERT, because, like poor relations in a clan gathering, they are likely to be mute in the august presence of the central and state ministers, vicechancellors and secretaries of government.

So the prognostication for NCERT, and for educational research and training, is anything but cheerful. Here is another organisation, originally conceived to become a pace-setter in its field, completely 'officialised' to become an ineffective line-toor of the ministry.

PRIORITIES IN EDUCATIONAL RESEARCH

1. STATE OF PRESENT RESEARCH IN EDUCATION

A seminar on educational research was held last year (1968) under the auspices of the National Council of Educational Research and Training (NCERT). In a preliminary review of educational research taken on that occasion it was pointed out that only 85 doctoral theses and 114 M.Ed. theses were produced in India during the period 1939 to 1961.¹ Even if the solitary research efforts outside the university departments of education and colleges of education are added to this contribution the total amount of educational research in the country of our dimensions is undoubtedly very small. Moreover, it was a general consensus among the participants in the NCERT seminar that the quality of the present research in education left much to be desired. The *Report of the Education Commission* sums up this situation as follows : "Educational research is still in its infancy. Its quantity is small and its quality, mediocre or poor" (chapter 12, page 322, paragraph 12.60). The educationists need not feel sore that they are being singled out for adverse criticism in this respect. The situation is no better in some other branches, of the humanities or even in some of the natural sciences.

During the last few years the pace has quickened and research activities have increased considerably. New institutions like state institutes of education are coming up. The Education Commission's recommendations are also expected to accelerate the pace of progress. It is therefore time to think about the selection of topics for educational research. A review of the topics undertaken during the period 1939-61 (according to the publication mentioned above) shows that they often consist of historical accounts,

¹ Also see, *Educational Investigation in Indian Universities 1939-61*, published by NCERT, New Delhi.

or surveys about some small unimportant problems carried out in small geographical areas, or repetitious achievement or mental tests constructed on very small and sometimes indiscriminately selected samples. Altogether the themes of research are far removed from the immediate or pressing problems of education in this country. In spite of the increase in educational research during the last few years the problems that interest our research workers are in many cases not of immediate relevance to the country's educational needs in the present period. Many of them are just pale and anaemic emulations of problems proposed and dealt with elsewhere, in other countries. Formerly the country to which our educational research workers looked for inspiration or emulation was the UK; for the last few years it is the USA.

2. NEED FOR PLANNING AND PRIORITIES

One has therefore to think in terms of an increase in the quantum of educational research in the forthcoming years, together with a substantial improvement in its quality and a proper orientation as regards the subjects of research. In other words it is necessary to have a plan, a plan chalked out for the next few years, say a ten-year period. The plan need not be rigid, it must not be rigid; it should be a broad outline with many details unfilled and ample room for adjustment. With planning, even in the case of a broad plan, there naturally comes the problem of fixing the priorities.

A question may be raised at this stage: If the educational research in this country is as yet meagre in quantity and mediocre in quality, is it not desirable to allow it to grow both in volume and stature before priorities are fixed? In our opinion the answer is emphatically in the negative. This country cannot afford to enjoy this luxury in the particular position of history (and also of geography,) in which it is situated at the present juncture. The very pace of economic development, i.e. the pace of agricultural and industrial development which we must adopt to sustain us in the rapidly changing modern world, implies a rapid progress in science and technology and therefore in education. While the process of industrial advance and economic development is interrelated with the process of social change, education

has to play an important role in bringing about the social transformation. The problems that confront us hardly leave us any choice in this respect; we just cannot do without exercising choice and fixing priorities.

It should be realised that vast changes are taking place in the educational scene around us. The number of learners has grown tremendously during the last few years and will continue to grow during the next two decades. The enrolment in standards I-IV was 174 lakhs in 1955-56; it increased to 371 lakhs in 1965-66; and it is expected to reach the figure of 762 lakhs in 1985-86. In the state of Maharashtra, for instance, primary schools have now been opened in remote villages with a population of less than 500, secondary schools are opening in villages of size 2,000 and colleges in towns of size 10,000. The type of the learner has changed beyond all recognition in all these schools. What needs to be taught and the number, and the type of learners, to whom it is to be taught, have both created and will continue to create pressing problems crying out for immediate and workable solutions. These solutions of course cannot suffice for all time to come; they will also have to change and evolve over years.

Thus the educational problems confronting us are vast and complex. The resources of both money and personnel at our disposal are, however, rather scarce. Unlike the affluent countries in the West this country cannot afford to fritter away time and resources over research problems of peripheral or remote interest. Again, the affluent societies of the West with totally different conditions cannot provide us with readymade models or solutions for our educational problems. We must pose our problems in our own way and seek our own solutions for them. The principle of selfreliance is valid not only for industrial and economic development; it is all the more valid for educational development and educational research. With problems of such magnitude, and in view of the paucity of resources and the need for selfreliance, it is clear that a set of priorities is absolutely necessary.

3. CRITERIA FOR FIXING PRIORITIES

What should be the criteria for fixing priorities in educational research? In the present situation we can lay down the following

three : (i) the needs of rapid economic development, (ii) the needs of social change and social integration, and (iii) the needs of mass education. First, rapid industrialisation and modernisation of agriculture imply formulation of suitable courses and curricula of education, preparation of suitable textbooks, evolving appropriate teaching methods and devising teaching aids and materials for the teaching of science and technology at various levels of school education. Second, the needs of social change and social integration pose similar problems in the teaching of the humanities (e.g. history and social studies). Finally, we can no longer think in terms of small sequestered classes. Large numbers of pupils in schools have not only given rise to problems of teaching methods and material aids for the education of the learners but also to similar problems for the education of the teachers. Whole new sections of society are coming to education for the first time and this creates problems for the teaching of even the mother-tongue. The needs of mass education also raise the question of devising new examination techniques and appropriate selection procedures.

When these and other problems are knocking insistently at our doors a number of research projects, not excluding the NCERT level projects, make a curious reading. One finds several sincere and serious research scholars spending their time, energies and abilities on themes of esoteric interest, themes no doubt interesting and, perhaps, also important in themselves, but which are largely unrelated to the immediate problems of the day. In all this one misses a sense of urgency, a sense of awareness of massive changes which are overtaking us in the educational situation.

4. SOME PRIORITY AREAS

It is incumbent on the educationists, especially those amongst them who are socially aware, to give their earnest thought to this question of fixing priorities. They may use the criteria of priority mentioned above, or devise their own or have a debate (short and to a finish) on them. Whatever the criteria which are ultimately agreed upon they should be applied to decide the main priority areas in educational research. Let our educationists formulate the pressing problems, spell them out and attack them

vigorously and in a big way, and not merely tinker with them as is being done at present. Below are listed some areas in primary and secondary education which, in our opinion, deserve high priority. Many more can be added.

I. Improvements in the working of one-teacher rural primary schools.

II. Measures for reducing wastage and stagnation in primary and secondary schools.

III. Curriculum content and teaching methods in mathematics and science.

IV. Use of modern methods in the teaching of languages.

V. Curriculum content of the courses in the humanities, especially in history and social studies.

VI. Determining the workload on learners at various levels.

VII. Training of teachers and raising the level of those already trained.

VIII. Developing new techniques of examination and selection at different levels.

IX. Production of low-cost teaching aids and material, including books for teachers.

No attempt will be made here to discuss them in detail. Brief comments which follow mention only some points of importance. In I and II it is no longer necessary to have surveys to assess the present situation. It is well known that the situation is very bad in one-teacher schools and wastage and stagnation both at the primary and secondary stages are appalling. What is urgently needed now is the formulation and practice of remedial measures. In III one question is that of introducing new mathematics and new ideas in science from an early stage. This will require ruthless cutting down of old topics, which clutter the present syllabus, without impairing the acquisition of basic skills that are needed in everyday life. When we consider IV, the teaching of languages, there is no reason why we should not utilise the latest research in linguistics for devising new teaching methods. If the pundits in that discipline are living in too much of a rarefied atmosphere they should be persuaded to step down and accept this challenge. While considering VI, the workloads at various levels, a thought should be given to the curious spectacle in our education that as the student progresses from the school to the university his

workload (at least in arts and commerce) becomes lighter and lighter! (It is also incomprehensible why an eight- or ten-year old youngster has to carry such a big load of books and notebooks with him to the school!) The areas I to V will pose problems of the same magnitude and seriousness as in area VII, in the training of teachers. In considering VIII a serious thought should be given why we cannot introduce short oral and written tests on the Soviet model at shorter intervals and thus relieve the pressure of examination on both the teachers and students and yet keep them on the alert throughout the year. It is regrettable to note that the area IX has not been so far given the serious attention it deserves by our educationists. But its importance to a poor country like ours is so obvious that it hardly needs any elaboration.

Finally, it should be added that while some of these problems may have to be tackled at an all-India level many others will have to be attempted at the state or regional level. In fact it is only there that they will yield meaningful solutions.

FINANCING OF EDUCATION IN INDIA

I. AN OVERVIEW OF TRENDS

Every attempt to deal with the financing of education in India has to face two problems inherent in the situation. First, there is the great variety of patterns in the financing of institutions of education between different states, between different types and stages of education and, even in the same state, between different institutions of the same type such as secondary schools or colleges of general education. For a country as vast as ours, with diversities of geography, history, tradition and socio-economic development these differences constitute a part of the situation. A brief discussion like the present one tends to ignore them and can hope to focus attention only on some generalised aspects of financing.¹ Second, unless one takes it as a full-time occupation and has liberal financial support, one has to rely for facts and figures mainly on the annual reports of the Ministry of Education which takes almost five years to produce them in print. The data-base for the present paper is mainly that for the period 1950-51 to 1965-66.² This time-lag, however, should not matter a great deal as more or less the same trends are believed to have continued with further accentuation during the last few years.

Let us first take a general dimensional view of the problem. The total enrolment in all education increased from 2.4 crores in 1950-51 to over 7.4 crores in 1968-69 and is over 8 crores by now. During this period it increased approximately four times in

¹ It is our belief a real good analysis of financing of education can be attempted only at the state level.

² The figures are taken from (i) the *Report of the Education Commission (1964-66)* and (ii) materials available in the Planning Commission, particularly the papers prepared by Dr J. L. Azad of the Education Division.

primary education, five times in secondary education and almost seven times in higher education. The total expenditure on education, at current prices, which was Rs 114 crores in 1950-51, increased to Rs 622 crores in 1965-66 and to Rs 1,000 crores in 1970-71. In terms of the national income the expenditure on all education which was about 1.2 per cent of the national income in 1950-51 increased in 1965-66 to 3.0 per cent and in 1970-71 to 3.1 per cent. (The Education Commission had suggested that it should be 6 per cent of the national income by 1985-86.) This may be presented in yet another and perhaps more expressive manner. The expenditure on education at current prices, per capita of population, was Rs 3.2 in 1950-51, Rs 12.7 in 1965-66 and is now Rs 18.2 in 1970-71. Expenditure per student rose from Rs 45 to Rs 88 in the period 1950-51 to 1965-66; this means that it has doubled at current prices, but in real terms, i.e. at constant prices, it increased by only about one-third. International comparisons are not always meaningful; but for the sake of record it may be stated that many developed countries and a few developing countries spend 6 to 8 per cent of their national income on education and the per capita expenditure is of the order of 100 times more than that in India.

To view this expenditure on education in proper perspective the total educational expenditure may be broken up into the following broad categories devised by the Ministry of Education : (i) primary education, (ii) middle level education, (iii) high-school level education (including vocational schools), (iv) higher education including universities, colleges, etc., and (v) other heads of expenditure, described as 'indirect' expenditure which includes direction and inspection, buildings, equipment, hostels, scholarships and other unspecified programmes. It is useful to remember that while the first two categories roughly cover elementary education (6 to 14 age-group), together with (iii) they make up all school education. The percentage shares of these categories in the total expenditure on education at the two points of time are given below :

PERCENTAGE SHARES OF EDUCATIONAL EXPENDITURE IN
1950-51 AND 1965-66

Year	<i>Institutional or direct expenditure</i>				<i>Indirect expenditure (other programmes)</i>
	Primary	Middle	High school	Higher	
1950-51	32.0	6.7	25.9	15.0	20.4
1965-66	20.9	13.6	24.5	20.4	20.6

A few observations are in order. While the share of higher education has risen considerably that of elementary education has fallen, and the fall is particularly great at the primary stage. In higher education, again, it is the professional colleges including engineering colleges and technological institutes which have doubled their percentage share of expenditure (from 3.7 per cent to 7.6 per cent). In the last seven years this trend is believed to have further continued and it would be a reasonable 'guesstimate' that the share of all higher education is now about a quarter of the total expenditure on education. In other words excluding 'other heads', i.e. indirect expenditure, it claims only a little less than one-third of the total current or direct institutional expenditure. It will be only fair to state that the trend of an increasing share to higher education including research is to be found in many developed countries, and in some other developing countries as well.

It is customary to classify the sources of educational finance as follows : (1) central government, (2) state government, (3) local bodies, (4) fees, (5) endowments, and (6) others. Clearly the first three categories make up the total public expenditure component and the second and third together may be taken as the effort by states as distinguished from the central contribution. (In the sequel the second and third are combined because much of the money at the disposal of local bodies comes from the state exchequer.) First, to give some idea about the dimension : the GDP (gross domestic product) at current prices in 1965-66 was Rs 24,052 crores and the total government expenditure was Rs 5,770 crores (Rs 2,915 crores by the centre and Rs 2,855 crores by states), about 24 per cent of the GDP. The government expend-

diture on education was Rs 470 crores, Rs 62 crores by the centre and Rs 408 by states ; which means that the centre and the states spent about 2.1 and 14 per cent of their budgets on education, and together the share of education was between 6 and 7 per cent of the total government expenditure. Looking at it another way it means that out of the total spending on education of Rs 622 crores, Rs 470 crores (or about three-fourths) was public expenditure and Rs 152 crores was private expenditure of which fees contributed about Rs 100 crores.

Having observed the broad dimensions of the public and private shares of educational financing let us analyse further the institutional expenditures at the three levels of education—primary, secondary and higher. The following table gives the percentage shares by three broad sources : (i) government (central, state, local bodies etc.), (ii) fees, and (iii) other sources (mainly endowments).

SOURCEWISE CONTRIBUTION TO CURRENT INSTITUTIONAL
EXPENDITURE AT DIFFERENT LEVELS

	<i>Primary</i>		<i>Secondary</i>		<i>Higher</i>	
	1956- 57	1965- 66	1956- 57	1965- 66	1956- 57	1965- 66
Government	94.2	96.2	55.4	61.8	49.0	63.0
Fees	3.1	2.2	35.5	30.3	38.4	28.6
Other sources	2.7	1.6	9.1	7.9	12.6	8.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

It is only proper that primary education should be free, that the expenditure on it should mostly come from public funds. The important trend to note is that at the two other levels, and particularly in higher education, an increasing share is borne by the governmental funds and the contributions of both fees and private endowments has substantially decreased. It should be mentioned here that a large part of the central government expenditure of Rs 62 crores in 1965-66 has gone to universities and colleges through the UGC channel. (An approximate estimate of this share for 1963-64 was 86 per cent.)

It was observed above that an overwhelming part of the educational expenditure is borne by the state exchequers. This is

natural because education is primarily the concern of the states. How do the states compare among themselves in this respect? One way of looking at the differences in the states' effort would be to compare the share of education in the total state budget. The Kher Committee had recommended in 1951 an expenditure of 20 per cent of state budgets and 10 per cent of central budget on education. We have noted above the average figures of 14 and 2.1 per cent respectively for 1965-66. Another index, not unreasonable, is the percentage ratio of per capita expenditure on education in each state to the per capita national income (net domestic product) in the state. Two such sets of figures (not given here) for the years 1956-57 and 1965-66 are available. Some idea of the variation among the states, measured by this index, can be had from the following figures. In 1956-57 Rajasthan (1.1), Orissa (1.4), Madhya Pradesh (1.6) and Assam (1.6) were at the lower end while Kerala (3.2), West Bengal (3.0) and Maharashtra (2.3) were at the higher end. In 1965-66 the indices had all gone up and the relative position of states had changed considerably. The variation among the states had somewhat reduced but was still quite considerable. In that year, for instance, the lowest figures were for Bihar (1.9), Orissa (2.3) and Uttar Pradesh (2.4) and the three states with high figures were Kerala (4.8), Tamilnadu (3.8) and West Bengal (3.7). (Jammu and Kashmir and union territories are excluded from this analysis because of their special position.)

The pattern of educational finance is determined by each state's policy in respect of education and what it proposes to do at different levels of education and for different types of institutions at a given level. Thus it differs from state to state and it may show large variation in the financing of educational institutions even at the same level in the same states. At the secondary and collegiate levels, where a large number of institutions are run by private management, the financing pattern depends on the government grant-in-aid codes which are known for their vagueness, inconsistencies and ad-hocism. If one starts from higher education, broadly speaking, the elite group consisting of the IITs, institutes of management, research institutes, departments of central universities, etc. has a very large part of its finances coming from the central grants, and depends only marginally on state grants or

on fees. Next in order will be the professional (medical, engineering, etc.) colleges and university departments in the states, and on the lowest rung of the ladder are colleges of liberal education which have to meet a large part of their expenditure through fees. It is estimated that more than half of the colleges and universities have to depend for 20 per cent to 60 per cent of their income on fees. In the case of colleges of liberal education (arts, science and commerce), although the government grants increased in 1965-66 to share a little more than 40 per cent of their expenditure, these institutions were dependent on fees to the extent of more than 50 per cent. In Maharashtra some of the well-known colleges in Bombay and Poona have to meet more than 80 per cent of their needs through fees.

The situation at the secondary level, as suggested above, will also show large variation in the financing of schools, particularly between elite English-medium schools run by missionaries and other agencies, government-run schools on the one hand and ordinary schools run by private bodies on the other. Unlike higher education they depend for grants on the state exchequer and private resources—mostly fees and a little from donations. At the primary level, and in some states even at the middle school level, education is free although it is surprising to see that in a few states (like West Bengal?) even primary education was not free for all classes until very recently. It is also worth noting that there are elite fee-paying schools even at the primary level in most states—particularly in urban areas.

Some idea about the annual institutional cost of education per student at different levels can be had from the Education Commission's Report which has given the following estimates for 1965-66 : lower primary Rs 30, higher primary Rs 45, secondary Rs 107, vocational secondary Rs 417, colleges of arts and science Rs 328 and professional colleges Rs 1,167. A varying part of this is due to teacher cost, of the order of 90 per cent at the primary level and 70 per cent at the secondary to 60 per cent in the colleges of liberal education and 50 per cent in professional colleges. Again a variable part of this unit cost is borne by the public exchequer. The figures given in the table on sourcewise contribution above show that almost all the cost at the primary level is borne by the public exchequer. At the secondary and the higher

levels, however, a little less than two-thirds of the student cost comes from public funds. (These are averages and conceal the variations within. For instance more than 90 per cent of the expenditure on residential universities, IITs and institutes of management is borne by the tax payer.)

A student (his guardian) has to bear, in addition to the fees, his living expenses and sundry educational expenses such as examination fees, books, etc. It is not easy to estimate this individual or private expenditure with any precision, particularly at the primary and secondary levels. In higher education it has been estimated that this private cost may vary from Rs 900 to Rs 3,000 annually depending on his educational institution and his mode of living. Having thus estimated the private and social investments on a student in education it is natural for economists of education to speak about the rates of return. Since however the ground here does not appear to be very firm we shall merely quote the figures given by Blaug and others³: 15 per cent for primary education over illiteracy, 14 per cent for middle school over primary education, 10.5 per cent for secondary over middle school, and 9 per cent for a bachelor's degree in liberal education and 12 to 15 per cent for a professional degree over the SSC. These are 'social' rates of return, 'private' returns being 2 to 3 per cent higher in each case.

For the sake of completeness a few trends in the financing of education may be mentioned without details. First, the indirect expenditure on education (mentioned earlier, see also table on percentage shares of expenditure) includes, in addition to administrative expenditure, two other important items: capital expenditure (e.g. buildings etc.), and scholarships. The figures for 1950-51 and 1965-66 show that the share of the first has remained constant at about one twelfth or a little over 8 per cent, while the share of the second has doubled, from 3 to over 6 per cent. It may be mentioned in connection with the second item—scholarships—that many states have introduced substantial scholarship schemes during the last ten years or so for economically backward class students at the secondary and higher education stages. Again, it will be noted

³ M. Blaug, P. R. G. Layard and M. Woodhall, *The Causes of Graduate Unemployment in India*, London, The Penguin Press, 1969.

that we have not mentioned separately the plan expenditures in education. An appreciable increase in state budgets on education is due to the plan schemes for which finances are provided by the Centre in the initial stages (the plan period of five years) and which are then transferred to the states. An analysis of such schemes shows that the states are more prone to undertake programmes in higher education than to those in secondary and primary education where sanctioned funds often remain substantially unspent at the end of the plan period. Finally, as is inevitable, finances come to education through various channels, the most important of them being state departments of education, central Ministry of Education and the UGC. Small trickles also come through other government agencies. This poses the problem of coordination, especially in respect of the first three.

II : DISCUSSION

As mentioned above a detailed analysis of the financing of education in India with a bearing on policy changes can be fruitful only at the level of individual state. But the broad trends, observed in the first part, that have emerged from the educational policies and their financial implications, with certain variations from state to state, are more or less common to all of them for the twenty-five years of independence. As such in discussing them we are discussing a common all-India phenomenon. In this part the main problems of financing of education which emerge from these all India trends will be briefly formulated and commented upon.

The Indian educational system has expanded considerably, partly due to the rapid increase in population, and correspondingly the expenditure on education has also grown considerably. In terms of national income it has increased from 1.2 per cent of the GNP to 3.1 per cent, in the twenty years from 1950-51 to 1970-71. In fact the per capita expenditure on education has increased at the rate of 9 per cent while the national income per capita shows a growth rate of only 3.9 per cent during this period. Although many developed countries and a few developing countries devote a larger portion of their resources to education the present share in India, although modest, is not very small. Even

the Education Commission, that body of inveterate optimists, had hoped for 6 to 7 per cent of the GNP for education only by 1985-86. A more pertinent question is therefore: Is the present educational budget reasonably well-spent? Does the educational system in its present form and way of working utilise efficiently the large resources spent on it? The answer to this question is clearly in the negative. The appalling proportion of drop-outs and the indifferent quality of the product from primary schools right up to the collegiate institutions are enough to demonstrate that the system is working at very low efficiency; moreover, the trend is not at all towards improvement (except in a few cases on the margin). In fact during the more recent years the educational system seems to be breaking down at several points. It has to be admitted therefore that a substantial portion of the educational expenditure is unproductive and wasteful in terms of the end results.

Another trend which stands out is that high school education and college and university education are claiming an expanding and a disproportionately large share of the educational funds which implies a high public subsidy in the financing of these levels of education. Moreover this subsidy is to the institutions and not necessarily to (deserving) individual students. Even the economically backward class (EBC) scholarship schemes started ten or fifteen years back by some states go towards bolstering up the interests of the private managements which run the institutions. The high schools and colleges are more often started and run for economic, social and political benefits than for love of learning. The entrepreneurial interest thus lies principally in large numbers of students and maximum governmental assistance and not as much in maintaining or raising the quality of education.

This trend in the financing of education has attracted considerable critical attention from economists and economists of education in India and abroad during the last few years.⁴ As mentioned before a large and growing share of the cake for the higher levels of education and a high public subsidy for them characterise the

4. See e.g.: Amartya Sen, *The Crisis in Indian Education*, 1970; K. N. Raj, *The Crisis of Higher Education in India*, 1971; M. Blaug et al, *op. cit.*, etc.

financing of education in other countries as well and for the same reasons, viz phenomenal expansion in student enrolment at these levels and relatively high costs of higher education, particularly in science and technology. But there this is happening against the background of full, or almost full, literacy and/or adequate provision for (elementary) school education. Here in India it is taking place in a largely illiterate country which has not been able to provide even universal free primary education (for 6 to 11 age-group) let alone fulfil the constitutional obligation to provide, before 1960, free universal elementary education (for the age-group 6 to 14). Even the formal enrolment at the primary stage is not more than 80 per cent and it is known that about two-thirds of them drop out before completing the stage. Again, high school education in India, unlike in other countries, is mostly nonvocational. Moreover, although the enrolment percentage (of the relevant age-group) in higher education in India is low when compared to advanced countries it is nonetheless disproportionately high, almost 50 per cent, of the secondary school-leavers. The present educational development in India is therefore clearly unbalanced and lopsided and leads to large-scale unemployment, underemployment and mismatching of high school and university outturn. Clearly this calls for remedial measures including a possible reduction or at least for calling a halt to the expansion of higher education and diversion of the resources so saved towards the expansion and improvement of primary education, and vocationalisation of secondary education.

To control the runaway expansion of collegiate education a number of policy changes have been proposed on a number of occasions, viz selective admission to colleges and/or increase in fees (backed by scholarships for deserving poor students), productive work by students, etc. We have discussed these measures and the likelihood of their acceptance and effective enforcement⁵ at least at two places before in the context of the socio-economic and political situation in the country. Many eminent persons have also considered them in their writings. We have also pointed out elsewhere the close parallel between what is hap-

5. See: "Higher Education: Myths Old and New", *Economic and Political Weekly*, 15 April 1967; "The Educational Situation", *Economic and Political Weekly*, 24 June 1972 (also included in this volume).

pening in the economy and in education.⁶ It is not necessary to repeat all that discussion here.

If one looks at the educational finance in different states one is struck by the great unevenness of the efforts that they are making in this vital sphere. The budgets of some states—those in the Gangetic heartland and on its periphery—provide a much lower proportion of their resources for education. This affects adversely the spread of literacy and primary education as will be observed from the 1971 census figures. As mentioned above the plan assistance for primary education offered by the centre remains underutilised to a large extent in these states. Nonetheless the assistance for schemes and programmes in high school and university education is overutilised. Thus the accent on high school and higher education at the expense of primary education is a common feature in all the states in India irrespective of their literacy level. Everywhere one finds the starting of (not only new high schools, colleges and universities but also of) new elite expensive institutions for which the entire expenditure is underwritten by the central and/or state governments.

The trends in educational finance, so far discussed in this part of the paper, along with their consequences in the educational system can be comprehended only if they are looked upon as arising from the socio-economic situation and the underlying social order in India. They are hardly capable of being reversed and replaced by means of radically new educational measures unless there is simultaneously a corresponding change in the socio-economic and political structure. The repeatedly advocated radical changes in educational financing thus appear to be beyond the realm of possibility in the near future. But it may perhaps be possible to adopt such financial policies as will effect fairly substantial, although marginal, improvements. These are discussed in the next few paragraphs.

For instance, it should be possible for the centre with the assistance of the Planning Commission so to distribute the plan funds during the Fifth Plan as to induce the state governments, particularly of those states that are woefully lagging behind in literacy

6. See the next essay in this volume, "Education, Social Change and Political Development in India".

and primary education, to take up massive programmes in this area and wipe out their relative backwardness. Simultaneously, effective measures could be undertaken for improving the quality of primary and middle school education. The same could also be attempted at all levels of education in the preparation of good standard textbooks, ancillary reading material and teachers' handbooks in regional languages. Such book-writing programmes are also important in the context of the part-time and correspondence instruction which is being advocated at the higher secondary and collegiate levels.

A few universities have already been trying part-time courses, evening courses and correspondence courses at the collegiate level to relieve the excessive pressure of numbers on colleges of liberal education. Their experience should provide guidelines for streamlining these programmes and the UGC should be able to use a substantial portion of the funds at its disposal to induce many more universities to run such courses. The centre and the Planning Commission can perhaps also use financial inducement for similar programmes at the secondary school certificate (SSC) level. Whatever funds they can spare for the secondary level a part of them may also be diverted for starting vocational courses in secondary schools. A good course in secretarial practice (office work) at the higher secondary level could and should be introduced. And why not introduce a B.A. degree with secretarial bias? After all the majority of the SSC holders or degree-holders in liberal education are absorbed in office work in public or private sector. Such secretarial courses and degrees should provide useful alternatives to meet the pressure of numbers and may lead to considerable improvement in both office work and university education.

The UGC and the centre can also rearrange their financial allocations to discourage the expansion of expensive institutions of higher education and research. It is time that they evaluate the performance of elite institutions like of IITs, institutes of management, regional colleges of engineering, etc. and take stringent measures to prune their funds. (Years back we had suggested that the regional colleges of education should be immediately closed down and the resources so saved be diverted to improve the ordinary colleges of education in the states.) It is well known

that they are all working at low efficiency. It is also time that one halts the unwieldy overgrowth in research organisations like the IARI. A gradual healthy growth from below is always to be preferred to hurried artificial growth through massive pouring of funds from above. Active reappraisal, redirection and intervention of this nature by the centre starting from its own institutions will provide a useful lead to states to reconsider and prune their flamboyant programmes of this type. (For instance a new institute is being planned in one of the state capitals with a capital expense of Rs 2 crores and a running expenditure of Rs 75 lakhs to support a faculty of 100 members!) This does not mean a blanket stoppage of all new institutions. Some of the states which are lagging behind in their educational development at this level will no doubt need encouragement and financial assistance. But this should be done in a discriminating manner and in any case all such new efforts should start on a reasonably modest level.

Some new sources of finance may also be explored for educational expenditure. At the top it is only fair that the burden of financing the institutions whose product is primarily meant for industry and business should be transferred to them. At the lower end of the educational pyramid the proposed massive effort in primary education should claim a substantial part of its finances from the proposed agricultural (income) tax and taxes on property intended to curb incomes. We have also suggested elsewhere that industrial and business enterprises should be persuaded to adopt educational institutions, to look after their capital needs and also to assist them in improving their performance. The public sector enterprises are expected to give a lead in this respect. It is possible to develop these ideas further.

Finally, a word about the grant-in-aid codes of the state departments of education. It is admitted on all hands that they need a thorough revision if not redrafting. Briefly, the new codes should be such as will prevent the starting and continuation of substandard institutions, the mushrooming of educational slums in the form of high schools and arts colleges without libraries, agricultural colleges without land and medical colleges without hospitals.

These and many other improvements of a similar nature should be possible if those who control the finances can use them with firmness, tact and imagination.

EDUCATION, SOCIAL CHANGE AND POLITICAL DEVELOPMENT

The first three sections of the paper discuss some questions of general approach to the main theme of the conference, viz education and politics. The remaining sections deal with India indicating briefly the broad trends in educational development and the resulting social change and point out their social and political implications.

I

In dealing with education, social change and political development it is necessary to understand the peculiar nature of the interrelationship between education and educational development in a country, and its polity and political development.) Moreover this has to be done in the context of the twentieth century, and particularly of the period after the end of the second world war, when most countries in the world have become free from foreign rule and almost every country has become or is in the process of becoming a modern nation-state.

In this connection it is useful to remember that the nation-state which is now the prevailing state form in the world is a relatively recent phenomenon (not more than three centuries old) which transformed loosely connected segments of population, living in specific geographical areas under one or more kingdoms into more or less wellknit economic communities each having well-defined geographical frontiers, bound together by industry, trade, commerce and a common communication system, and claiming to have a common linguistic-cultural base. Whether the state so formed has a participative or nonparticipative or partially participative form of polity is immaterial for its emergence as a nation-state. From its early origins in Western Europe this state form extended to North America and the rest of Europe and

during the present century, after most of the subject countries under imperialist rule have become politically free, it has become the universal polity type in the world. The development of the nation-state should be viewed, however, not in isolation, but in the context of the other accompanying developments which generally take place simultaneously: the rise of capitalism, development of industry and commerce and advance of science and technology. The politics of the nation-state and a minimum acceptance of modern learning have therefore to be assumed as concomitant happenings.

(In the modern nation-state, the educational system is largely dependent on the polity of the country. The state is not only the main source of funds for running the educational system but it also can and does wield considerable direct influence on how it is run, the relative importance given to and the expansion or strengthening of different levels and types of education, the organisation and administration of the educational institutions and even the contents of education.

The inverse relationship from education to political development, however, is not so straightforward although some of its aspects are more direct than others. For instance, for a fairly smooth and efficient running of the state machine the educational system is expected to provide suitably trained personnel in adequate number and of differing specialisations and provide the political leadership at various levels. The educational system is also supposed to create political proneness of the right kind in the minds of the oncoming young generation, to give them such education which will make them more or less acquiescent (if not enthusiastic) receivers of the political ideas of the ruling political elite. These are relatively more direct political objectives and expectations from the educational system. But the larger and more basic function of the educational system is carried out in an indirect manner. This is to preserve and maintain the existing socio-economic order in society, sometimes with minor modifications if and when they become necessary for its very preservation, by providing trained or trainable manpower to carry out the necessary social and economic chores at different levels. This latter is also no doubt a political objective in a larger sense; in fact it is the most vital political objective, except in those

exceptional periods when its opposite is true. When a revolutionary political leadership captures the state power it tries to smash the old socio-economic structure and replace it by a new structure visualised by its political philosophy. In such case the state will also create a new educational system precisely for this purpose. The main influence of education on politics, therefore, operates via the socio-economic infrastructure. Even the two much more direct influences mentioned above, the supply of political elite and administrative personnel and the inducement of the right kind of political proneness in the minds of the educated, which may be described as political socialisation as a part of the general process of socialisation, work through the medium of the existing socio-economic structure.

The point which we are trying to emphasise here is that it will therefore not at all be fruitful to study, as many western social scientists have done,¹ the interrelation between education and political development without taking into account the socio-economic structure and the developing socio-economic situation. The former two cannot be treated as two poles of an isolable or more or less isolable pair. They should rather be considered as just two faces of the multifaced social reality of which the socio-economic structure, and particularly the economic structure, is the material base. In accepting thus the primacy of the socio-economic system, however, one should not lose sight of the fact that each subsystem like the educational system also develops a logic, a dynamic and also an inertia of its own which react on the socio-economic base as well as on other subsystems and its stress and strains are very often transmitted to the socio-economic base and other subsystems. The polity may belong to the many varieties of participative or nonparticipative character, but as a subsystem it also works and reacts in a similar manner. There are, however, differences between the working of the educational system and political system in that (a) the political system may assume several variations, through violent upheavals or otherwise, but leave the socio-economic structure basically unchanged, and (b) the political power which is the crux of a political system can be

¹ See, e.g., *Education and Political Development*, Ed. James S. Coleman, Princeton, 1965.

captured by a new political elite by overthrowing the old power structure and it may seek to alter fundamentally the old socio-economic structure or it may introduce such changes in it as may suit the new power elite yet leaving the structure essentially intact.)

II

When one starts considering the interrelation between education, resource potential, social structure, economic development, countries one is faced, along with certain similarities, tremendous differences amongst them as regards their historic past, population, resource potential, social structure, economic development, cultural tradition, etc. To lump together for consideration countries as diverse as India, Malawi, Brazil and Lebanon will be, to say the least, dangerously simplistic. But this is exactly how some social scientists from the West approach the problem. This is not to suggest that one should not attempt to hypothesise common propositions for all or most of the developing countries; but this is best done after taking into account the great diversities amongst them. A classificatory approach using some broad characteristics should help not only in enhancing our understanding of the situation in these countries in these respects but also in ultimately discerning what is common to them.

In this connection the following characters may be suggested for such classificatory analysis. Some others may be added to them and some of those suggested here may be abandoned after a preliminary trial analysis if they are found to be of trivial significance to the understanding of the situation. For the sake of brevity the proposed classificatory characters are listed below with minimum explanation and with just enough illustrations. (The explanations and illustrations are more or less obvious and can be extended if necessary.)

(a) Population size : small, medium, large or extralarge (like India or China).

(b) Population density, land-man ratio, resource potential per unit of population.

(c) Population origin: indigenous stock (as in China, India or Arab countries) or of largely European or mixed descent (as in Latin America).

(d) Settled (agricultural) economy with old civilisation and culture, semisettled seminomadic economy with ancient traditions, semisettled or nomadic tribal economy and culture, etc.

(c) Social structure, its hierarchy, caste system, etc.

(f) Colonial past (under direct imperialist rule), semicolonial past (formally independent but under imperialist influence), length of imperialist rule and degree of imperialist penetration, etc., also the character of the imperialist country in question.

(g) Level of education including the extent of literacy and spread of higher education.

(h) Level of living.

(i) Present polity: socialist, bourgeois, bourgeois-feudal, feudal-bourgeois, etc.; democratic, authoritarian, semiauthoritarian, etc.

It is possible to object to such an approach on the score that this kind of cross-classification will fragment the developing world to such an extent that one will ultimately be left with a single country as a unit of study. We feel, however, that it is only after such classificatory analysis that the results of analysis can be synthesised to yield worthwhile and workable hypotheses. Otherwise one is likely to accept as hypotheses the obvious yet superficial generalities which are incapable of giving a deeper insight for further analysis.

It is also our belief that a similar approach can be profitably adopted while studying the problem of education and political development even in the developed countries. For instance a classification of primary importance for this purpose is clearly that between capitalist countries on the one hand and the socialist countries on the other. But this may not carry us very far unless one uses additional characters for further classification. This may, as observed above, almost amount to studying each one of the developed countries separately and then piecing together the common features which may arise as a result of this analysis.

This emphasis on a classificatory approach should not be interpreted as a denial of common elements or common trends in the social, economic, educational or political developments in the world as a whole in the modern period. Rapid advance in science and technology, phenomenal increase in industrial and agricultural production, rapid increase in population, development of means of transport, realisation (or expectation) of a higher level

of living, mass literacy, education encompassing almost all population serving as the main instrument in the division of labour, urbanisation, increasing use of mass communications media, emergence of nation-states, well stocked arsenals of sophisticated weaponry, and many other aspects including their ideological counterparts are features common to many societies in the world of today. It should be specifically mentioned here, however, that the acceptance of these common trends is not the same as accepting the concept of common 'world culture' as spelt out by Coleman,² nor the implicit underlying assumption about the development of world culture being continuous with the West European or North American thought. The latter formulations, in our opinion, suffer from fundamental defects. They are not only not applicable to the socialist segment of the world but are also incapable of explaining the many aberrations including large credibility-gaps of the politics of the past and the present of the western world as well.

III

(The emergent nation-state of the developing world, whatever its economic base and its political form, has to fulfil, broadly speaking, two tasks which are essentially political and which are inherent in the formation of the nation-state. The new nation-state must be able to defend its national sovereignty against external aggression and internally, it must continue to consolidate its rule. The state must therefore possess the wherewithals to do so, viz the armed forces, the police force and civilian administration, a reasonably well-oiled transport system, mass media of communications, a judicial system, etc., in fact all the paraphernalia of the modern nation-state. This necessarily needs at least a minimum of education, science and technology and therefore the corresponding educational institutions at various levels financially supported or directly run by the state.)

This is the minimum but clearly not all that the emergence of the developing nation-state implies. As the qualifying adjective implies the country must develop, develop at least economically. All political leaders in a developing nation-state have therefore

² James S. Coleman, *op. cit.*, p. 14.

to pledge themselves to rapid economic progress, a rapid rise in the standard of living of their people. Economic development in the modern period implies development of science and technology which in turn implies development of education. Again, whether through conviction or borrowing from the former imperialist country or from a desire to be with the advanced nations of the world, they have to promise (and appear to follow it in practice) equality of educational opportunity to the broad masses and therefore at least its minimum requirement, viz compulsory primary education for all children. So economic development, technological progress, educational development, mass literacy—all these are objectives which naturally emerge from the given situation of backwardness.

The faith put in education by the political leadership of the developing countries is best illustrated by the following opening sentence on the chapter on education in India's Third Five Year Plan :

“Education is the most important single factor in achieving rapid economic development and technological progress and in creating a social order founded on the values of freedom, social justice and equal opportunity.”³

And its reciprocation by the leading educationists in India is clear from the first chapter of the Kothari Commission's Report on Education (1964-66) which asserts education to be “the main instrument of change”.⁴

It is necessary to note that these objectives of national development are asserted by almost every political leadership irrespective of the political system that obtains in the country. It is another matter how seriously the different politicians and political parties mean to work for these aims. While some of them may be prepared for the radical changes in the socio-economic structure that may be necessary for the realisation of these objectives, others may sincerely wish to realise them but may not be willing to touch the social framework to any great extent, and some

³ *The Third Five Year Plan*, Chapter on education, The Planning Commission, New Delhi.

⁴ *Educational and National Development*: Report of the Education Commission 1964-66. National Council of Educational Research and Training, Ministry of Education, New Delhi.

others may be voicing these objectives merely as convenient slogans to ingratiate themselves with the people in order to keep themselves in power without any intention of carrying them out or even working for them.

It is here that the study of the interrelationship of education and political development may get bogged down unless it takes into account the developing socio-economic situation (which includes the developing political situation). In other words the existing class structure of the society, the character of the state, the developing socio-economic and socio-political situation with its balance of class forces are of fundamental relevance to our problem. To ignore them is to miss or avoid an essential element in our analysis. This holds whether one is considering the problem in the context of the developed or the developing countries. Moreover it is only if this kind of analysis is attempted that one realises that it is not so much the political form of the state as its class support in the embedding social structure that is relevant to the problem under study.

If one surveys the post-second-world-war period it is found that in most of the developing countries the educational system has entered a crisis within a short period of the formation of the independent nation-state. While they are still far from fulfilling their proclaimed objectives of universal primary education and equality of opportunity at various educational levels they are suffering from 'over education' in the sense that there is considerable unemployment among the educated. In several countries of the developing world there are signs that the educational system is breaking down under the pressure of numbers. Clearly there is an imbalance between relatively rapid educational expansion and rather slow economic development giving rise to a situation of instability with consequent social and political repercussions. In such a situation some political scientists tend to characterise education as a destabilising force thus opting themselves indirectly for stability, i.e. for the preservation of the existing economic and political structure. Moreover, this means taking a static view of what is essentially a developing situation. The correct approach is to look upon the educational crisis as a part of the developing socio-economic crisis and try to trace the instability to the basic contradictions in the stagnant socio-economic

conomic order and to look for the signs of fundamental change.)
 The following sections which deal with the Indian situation adopt the second approach.

IV

In the rest of the paper are discussed the developments in the Indian educational situation during and at the end of a quarter of century of independence. We have written on it elsewhere in some detail.⁵ What will be done here is to discuss further the important elements of the resulting social change which have a bearing on political developments.

(Many of the educational developments in India are clearly a continuation of the broad trends which have their origin in the preindependence period. For instance, it is well known that in most states of the Indian union literacy and education has been permeating in the social structure from the higher strata downwards: first the Brahman and the other advanced castes, then the middle castes and finally the lowest castes. This trend which started with the introduction of western education in India more than a century ago is still continuing. (A caution is necessary that this should not be interpreted in a mechanical manner. At a given point of time there always were at least a few educated individuals in all communities.) The social awakening, social mobility, rise in income and status, and also in political prestige followed education. With the broadening of franchise in the colonial days and ultimately with adult franchise after independence different sections of society became conscious of the use of political power for improving their lot. The role of education in climbing to positions of economic, social and political status on the one hand and the use of the latter for spreading education among one's own community on the other were well recognised and are being utilised by the respective sections of society. It is now the middle castes who, because of their numerical strength, are in political ascendance in many parts of India and they are trying to push themselves to positions of educational, economic and social ascendance.

⁵ See *infra*, "The Educational Situation".

The process, however, cannot go much further downwards to reach the lowest sections in society and bring them to or near the top of the pyramid. The middle castes who are entrenched in the (rural) social structure and trying to establish themselves in the urban society, and who hold the reins of political power at the state level because of their numerical superiority, are hardly likely to help this process further to any great extent. While the privileged positions of the upper castes were and are consistently being wrested by the educated sections of the middle castes, the segments of the population which occupy the lowest rungs of traditional hierarchy and/or are insignificant in numerical strength will not be able to improve their positions to the same extent howsoever hard they may try to do so. As individuals they may rise, but as sections of population they cannot hope to play more than a secondary, an inferior role in economy, society or politics.

V

A problem of considerable importance arising from the spread of modern learning is the ideological adjustment of the old cultural thought stream to the new currents of thought brought in by western education. The conceptual transition from a status-bound society to a society of free and equal individuals, from more or less selfsufficient village based economy to monetised capitalist economy, from a feudal kingly rule to a modern nation-state, from a religious traditional culture to a culture of science and technology is long and arduous and is full of conflicts and contradictions. Very often an old society is ready to accept the immediate benefits of modern learning, the benefits of modern science and technology, but it has a difficult time in accepting the corresponding new ideological values. It may readily accept the form but will make only ad hoc adjustments with the core which it finds difficult to accept or assimilate. This is a problem faced by every traditional society and particularly if it is loaded with the heritage of a fairly developed sophisticated ancient culture. Indian society has been confronted with this problem of adjustment since more than a century ago and it has still to get over the social schizophrenia which it involves.

Moreover, each one of the great religious communities, the Hindus and the Muslims, and among the Hindus each one of its hierarchical caste segments, has to make its own separate ideological adjustment; in a sense it has to discover itself anew as a result of the social awakening generated by the spread of modern learning.

This process, started in the beginning of the nineteenth century, still continues. A further complication in this process of ideological adjustment is brought in by the very period in which it has been taking place. Before the social and political thinking in India could come to terms with the bourgeois economy and its culture, and with the concept of nationalism and a modern nation-state, it was exposed to further winds of thought, after the twenties of the present century, the winds of socialist thought. The new thought-currents enter the social mind as further extension and enrichment of the concepts of freedom, equality and social justice. Thus even before the attainment of political freedom socialist thinking carved out a nook for itself in the social mind as well as in the political (national) movement for carrying out the tasks of social and political emancipation.

What is the present situation? It may be safely concluded that in spite of the loud periodic pronouncements of vague and noncommittal socialist phrasology on the part of almost everyone of consequence in the political leadership it is the bourgeois mode of thought, with the necessary ideological adjustment with the old tradition, which has more or less established itself in the social and political thinking. This is in line with the fact that the capitalist mode of production has strengthened itself in the economy and the big business and the rich peasantry along with the surviving feudal interests have joined hands to monopolise the corridors of economic and political power. At the same time most of the political leadership, whether ruling or in opposition, is aware of the slow-moving near-stagnant state of the economy, the rapidly increasing pressure of population and the creaky socio-economic structure with its crass inequalities.) This is reflected in the fact that almost every political group flaunts on its banner some kind of socialism. (The resulting confused ideological mixup, partly genuine partly affected, has be-

come a part of the Indian political consciousness and this has also transferred itself to the educational thought in India as can be evidenced from the formulations in the opening chapter of the Education Commission's report mentioned above. What is of importance for future developments is the fact that the necessity of a radical overhaul in the existing socio-economic set-up is once again impinging itself on the uneasy minds of both educationists and political thinkers.⁶

VI

(The ideal of national education of the preindependence days stood mainly on two planks: expansion of education to make it mass education and a basic change in the imbalanced, lopsided colonial educational system.⁶) During the twenty-five years of independence the first objective has been steadily if slowly pursued. But the second, often repeated by the policy makers, has not even been seriously attempted. Of course suitable innovations were introduced in the educational system in the interests of industrial advance and economic development including agriculture and for the consolidation of the bourgeois state apparatus. But on the whole the same old imbalanced and lopsided educational system continues with the result that the secondary and higher education are expanding at a disproportionately rapid pace.

What is happening in the sphere of education has in fact an amazing parallel in the developments in the national economy. The large mass of about 38 crores (70 per cent of the population) of illiterates and the sluggish substandard spread of elementary education are matched by the slow economic growth where 40 per cent of the people live below the bare subsistence level and another 30 per cent near it. The accent on higher education in a largely illiterate society is not very different from the economic priorities where terylene, cosmetics and private cars have a preference over cheap coarse cloth and means of mass transport. The high subsidisation of secondary and higher education in the present socio-economic order helps the same relatively well-off sections of society as are helped by most public investments in the cities and the countryside, in industry and

⁶ See, "The Educational Situation", *ibid.*

agriculture. Like high-cost public-sector investments essential for the development of private capital the state is also running high-cost elite institutions like institutes of technology and institutes of management to meet the need of the same (private) sector. There is also the use of foreign aid and foreign know-how in education in starting and running these elite educational institutions and there is also the export of dividends on these 'foreign investments' in the form of the (cheaper) finished product, made in India, consisting of well-trained engineers, scientists and doctors. Even the recent *garibi hatao* slogan finds its echo in the renewed slogans for the enforcement of compulsory primary education and removal of illiteracy.

The expansion of education without the removal of its lopsided character referred to above has given rise to two burning problems with inevitable social and political consequences. First, under the tremendous pressure of numbers the quality of education is deteriorating and in some respects the educational system appears to be in fact breaking down as is evidenced by a number of campus troubles during the last few years. Second, the rather slow pace of economic development in relation to the pace of secondary and higher education cannot appropriately absorb their products and is causing massive unemployment among the educated. The remedies suggested to meet the problem of numbers in educational institutions and increasing educated unemployment, such as selective admission, substantial increase in fees and a consequent desubsidisation of secondary and higher education, will not be acceptable to the political leadership whether in the seats of power or in the opposition. In fact it will be a suicidal policy for them to adopt such measures because this will cut the privileges of their own following. They will be strongly opposed by the present educated middle and upper strata of society which are the most vocal and politically most influential sections of society.

Thus the educational crisis which India is facing is a part of the more fundamental crisis of its socio-economic development and is rooted in the contradictions of its socio-economic structure. The educational development and the economic development which started from their respective positions at the advent of political freedom have relentlessly pursued their own develop-

mental logic and have now come into confrontation with each other. The question is: Can this confrontation be resolved without a basic change in the socio-economic order?

VII

The dominant position which the English language occupies in education and many other spheres of life in India, even after a quarter century of political freedom, has important social and political aspects and consequences. English is not the language of any indigenous section of the Indian population nor is it linguistically related to any of the Indian languages. Had India one common language (like Japan) or a culturally dominant and a much better-developed language of the majority of the people (like Russian in the USSR) or a language of the overwhelming majority of the people (as in China), a gradual replacement of English could have taken place in course of time, according it at the same time the status of a compulsory second language in secondary and higher education.

It has to be recognised, although this is not yet clearly accepted by large sections of the Indian elite, that India is a multi-national country consisting of several well-defined nationalities each having a well-developed and often a vigorous language of its own. (The situation in Pakistan is somewhat similar but is different in Bangladesh.) This fact has been admitted indirectly in the formation of linguistic states in which the state language is being increasingly used in schools, colleges, legislature, and at the lower and middle levels of administration. And yet in most spheres (civil administration, defence forces, industry, commerce, science, technology, law, etc.) at the higher or all-India level English still occupies a key place and it looks as though it will continue to do so for the foreseeable future.

In the preindependence period it was inevitable that English, the language of the foreign rulers, assumed the reigning position in all walks of life. Undoubtedly this arrested greatly the natural growth of Indian languages and did considerable damage to the cultural life in India. At the same time it had three important consequences for future development in that there evolved a unified administrative and legal structure, it was the lan-

guage of new learning including science and technology, and it was the medium through which the new western-educated Indian intelligentsia discovered their selfidentity, thought of India as a future nation-state, and evolved the political philosophy of Indian nationalism. So far the Indian situation bears likeness to some other conquered regions (e.g. parts of Africa) but the similarity ends there, because most Indian languages had already attained a high level of development. (The similarity with tribal Africa could perhaps be extended to tribal regions of India but no further.) After independence the dominant position of English continues partly because of inertia and want of a painless alternative, partly because of the requirements of the ruling class for the consolidation and strengthening of the nation-state, and also because of the selfinterests of the educated elite at the top.

At the same time the continuation of the predominant position of English in the Indian national life gives rise to serious educational and social strains. First, English exercises a heavy dampening influence on all the linguistic and cultural life everywhere in India; second, it has made the transition to Indian languages in higher education more intractable; third, it has widened disproportionately the gulf (which exists in most societies) between the mass of common people and the intelligentsia at the top; and finally, it seriously affects the creativity of the Indian intelligentsia who find that they can neither do with or without English. Clearly all these affect the Indian social and political development.

VIII

A discussion about educating social change and political development cannot be complete without considering the elite (the educated sections) in Indian society. Summarising what we have discussed elsewhere the current educational situation, in terms of social differentiation, can be briefly described as follows.⁷ At the top there has emerged and consolidated a kind of 'super' elite, mostly from the stock of old urban intelligentsia belonging to the advanced castes, with a sprinkling of the more enterprising elements from middle castes and the rural stock, often educated

⁷ See: "The Educational Situation", *ibid.*

in elite English-medium institutions and occupying higher echelons of bureaucracy, defence services, industry, commerce, technology, etc. Below this is the 'common' or 'regional' elite fairly large in number, coming from the old urban, semiurban as well as the rural stock, educated in common regional-language schools and common colleges, who occupy middle and lower positions in the salariat, or serve as skilled and semiskilled technicians and professionals in urban and semiurban areas or constitute the emerging new elite in rural areas. At the bottom of the social pyramid lies the vast mass of semiliterates and illiterates, with sections of them moving up sluggishly towards literacy and rudiments of education, who are employed in the lowest jobs in rural and urban areas or are semiemployed and unemployed.

This social situation, which is the counterpart of the slow-moving stagnant economy, is obviously full of strains, contradictions and confrontations. The 'super' elite of the present period is even more alienated from the common people and more indifferent to their lot than its counterpart of the pre-independence period. They feel no social commitment, concentrate their attention on narrow personal or professional interests and lead a life of affluence and pseudowesternised 'high society'. A large section of the 'super' elite, coming as it does from the now politically dispossessed but culturally dominant minority communities, lives in resentful reconciliation with the newly emerged political leadership from the rural stock. They also harbour a sort of contempt for the political leadership which lacks their knowledge, technical-cum-administrative skills and finesse. The very nature of division between the 'super' elite and 'common' elite is a source of contradiction, and sometimes confrontation, between them. The vast lower salariat in the 'common' or 'regional' elite finds it difficult to maintain, in the face of rising prices and rising educated unemployment, its exclusive lower-middle-class mode of living and values, and it lives a life of increasing indigence and frustration. There is also an internal contradiction in this 'common' elite, between those belonging to the traditionally literate higher castes, now having no social links with the levers of political power, and the newly emerged elite belonging to the middle castes who have such links. Cultural distance and traditional hierarchical caste distance often aggra-

vate this contradiction. But objectively the most basic contradiction is between the entire elite on the one hand and the vast sections of common people deprived of all the good things of life including education on the other.

IX

In the latter part of this paper we have briefly described the important aspects of the developing educational situation in India and the social changes that it is bringing about. Their significance for actual and potential political developments is obvious, although the latter are more difficult to assess. That the educational system is ailing, particularly at the higher level, is clear from the reports of only 80 days of academic work in a year, the mass copying, gheraoing of vicechancellors and more violent campus disturbances including burning of public transport. The educational discontent also provides ready material for carrying on linguistic, regional and economic agitations or even communal riots. At the other end of the spectrum it is well known that extreme radical (Naxalite) movement which flared up in India three years back had educated youth as its leading element. These developments cannot be considered except as symptoms of the all-enveloping crisis of the economy and social structure. Prediction is a risky business. But one can hardly describe the present situation as near-stable or approaching towards stability; and it is almost certain that it will not substantially improve unless there is fundamental reorganisation of the social order; when, how and by whom are questions which the present author would also like to ask.

THE EDUCATIONAL SITUATION

The educational development of a country is vitally connected to all other aspects of development and the educational situation in a given period is an inseparable part of the general socio-economic situation in that period. An overall view of the educational progress in India during the postindependence period and an analysis of the present educational situation will, therefore, add to the knowledge of the socio-economic situation. Such an analysis also helps towards a better understanding of the present phase of social transformation in India.

There are, of course, many difficulties in such an attempt. The available data are not always classified in a manner which can be conveniently used for this purpose. Then, one is faced with wide discrepancies between the aggregative data from different publications such as the annual reports of the ministry of education and the reports of the decennial population censuses. Moreover, since education is mostly a state subject there are differences in its organisation in different states, and consequently variations in classification. The figures are therefore not strictly comparable as between the states except for broad purposes. Even so, an attempt will be made here to piece together the available material—the figures from government sources, the *Report of the Education Commission (1964-68)*, information culled from sample surveys, books and publications on the subject and a general feel of the situation—and to arrive at some general formulations. They are believed to be broadly valid for the country as a whole. It should be stated at the outset, however, that this is an exercise in social analysis of the educational situation and it does not discuss the issues which have a bearing on educational technology.

Surveying the educational progress since independence it is clear that there is a great deal of expansion of education at all

stages : primary education, secondary education, higher education—both undergraduate and postgraduate, engineering and technology and other professional education, and also research in science and humanities. Enrolment has increased considerably at all stages not only in absolute numbers but also relatively to the rapidly increasing population. During the eighteen years from 1950-51 to 1968-69 the enrolment has increased by three times in primary education (classes I to V), four times in middle-school education (classes VI to VIII), five times in higher secondary education (classes IX to XI) and almost six times in higher education (see Table at the end). At all these stages there is a rise in enrolment in the corresponding age-groups : from 43 to 77 per cent in the age-group 6-11, from 13 to 33 per cent in the age-group 14-17, and from 1.1 per cent to 4.2 per cent in the 17-24 age-group. There is a corresponding growth in the number of schools, colleges, universities and other educational institutions including institutions of research, and in the number of teachers at all levels. The total public expenditure on education rose from Rs 1,444 million in 1950-51 to about Rs 6,000 million in 1965-66. If it is expressed as a percentage of national income to remove the effect of inflation, it rose from 1.2 per cent of the national income in 1950-51 to 2.9 per cent in 1965-66 and was estimated to be over 3 per cent of the national income in 1968-69.

The educational progress during the postindependence period is quite impressive by any standards. It may well be said that in contrast to most other sectors of development the country has indeed done better in the educational sector, and in fact has overfulfilled the targets of enrolment and turnout in certain of the subsectors like higher education including engineering and technology. During this period new agencies and institutions have come up to serve specialised fields, such as the University Grants Commission and the National Council of Educational Research and Training.

There has also taken place a great deal of deliberation and discussion on the educational development of the country as is evidenced in the number of committees and commissions that have worked during the last twenty-five years. Apart from the Sargent Committee with its *Report on Post-War Educational Development in India* prepared in 1944, there was the Radha-

krishnan Commission on University Education (1948-49), followed by the Kher Committee (1951) concentrating mainly on the administrative aspects of primary education, and the Secondary Education Commission which reported in 1953. But the most comprehensive effort in this respect is that of the Education Commission (1964-66) under the chairmanship of Professor D. S. Kothari. *The Report of the Education Commission* has considered in great detail almost every aspect of Indian education at all stages and has made a string of recommendations for the educational development of the country. That there is general awareness of the crucial importance of educational development for the country's socio-economic progress is clear from the deliberations of these committees, as well as from the documents of the Planning Commission. For instance the chapter on education in *The Third Five Year Plan* opens with the following preamble :¹

"Education is the most important single factor in achieving rapid economic development and technological progress and in creating a social order founded on the values of freedom, social justice and equal opportunity. Programmes of education lie at the base of the effort to forge the bonds of common citizenship, to harness the energies of the people, and to develop the natural and human resources of every part of the country."

2

In spite of this recognition of the central role of education in national development and the substantial growth in education during the era of independence the situation in education is far from being either satisfactory or hopeful. It is not merely that the oft-repeated aims and objectives have not been achieved and the targets set for such important sectors as literacy and elementary education have not been fulfilled. But the whole structure betrays serious weaknesses of a fundamental character which appear to be more or less inherent to the system.

The universal elementary education for everyone in the age-

¹ *The Third Five Year Plan*, The Planning Commission, New Delhi,

group 6-14 which the Constitution had stipulated for fulfilment before 1960 is far from being realised even now in 1971. Even the age-group 6-11 of primary education is not yet fully covered; the near-eighty per cent enrolment in primary schools is believed to be inflated by at least about twenty points.² No significant dent has been made into adult illiteracy as is clear from the fact that the overall literacy including those in schools was 17 per cent in 1950-51 and is believed to be 30 per cent in 1970. So on the one hand India has over 70 million learners at different levels of schooling, perhaps the largest in the world excluding China. On the other hand we have also the distinction of having the largest number of illiterate people, almost 350 millions of the present estimated population of 550 millions; and this number is not decreasing but increasing with years, thanks to a rapidly growing population.

Apart from the sluggish pace of the progress of literacy and primary education, whatever advance that has been made during the last twenty years is extremely uneven as between regions, sexes and different social strata. Against the general average of 75 to 80 per cent enrolment in the 6-11 age-group, even if we ignore the inflation in figures referred to before, the corresponding average is as low as 30 to 40 per cent for Madhya Pradesh, Bihar, Eastern Uttar Pradesh, Rajasthan, Kashmir and also for Orissa which appears to be in this respect an extension of the 'heartland' of India. The status of illiteracy in the different states more or less corresponds with the rate of enrolment in primary schools. And the regions where the two are lowest appear to be marked out by low economic growth and unsatisfactory land relations.

Then there are great disparities, as regards both literacy and primary-school enrolment, between urban and rural areas, and between different regions in the same state such as the Eastern

² This is the order of difference usually found between the number of pupils on roll and those who more or less regularly attend school. See Amartya Sen, *The Crisis in Indian Education*, Shastri Memorial Lectures, 1970. This need not be deliberate, as Sen suggests, for getting grants, since primary schools are mostly run by the government or local bodies. It is well known, pupils once enrolled remain often on the roll till the end of the year, even when they have actually stopped attending school.

UP and Western UP, and Western Maharashtra and Marathwada. It is well known that literacy is very low amongst women as compared with men, particularly in the rural areas. The ratio of girls' enrolment to the total enrolment from the 6-11 age-group is considerably lower than 50 per cent in many states and this disparity between the sexes is even greater in the rural areas, and in the educationally backward states and regions. The fight against female illiteracy can hardly be said to have begun in these areas.

The socio-economic analysis of the educational advance of the postindependence period is available from a number of village surveys. From this it is clear that the spread of literacy and education is much more in evidence among the more affluent and socially advanced sections of society than among the poorer and more backward sections. In terms of caste, the traditionally advanced castes like the Brahmins are almost all literate and have progressed much further in higher education; the 'middle' castes have registered significant educational progress; but the scheduled castes and the scheduled tribes and other backward sections of population are lagging considerably behind. Among the latter, literacy is crawling at a snail's pace and female education has not even touched these sections of society, particularly in the rural areas. The same sort of conclusions are thrown up by analysis according to occupations, which shows that the so-called literate occupations have registered a more rapid progress in education than others. Among the agricultural population, which constitutes the overwhelming majority of rural population, it is the richer and middle sections of peasantry that are advancing in education while the poor peasants and landless labour are still largely illiterate and uneducated. Analysis in terms of income classifications tells the same story. Thus the backwardness in literacy and education is closely related to the economic and social backwardness and bears the same hallmarks of a society divided against itself.³

It is not as though these disparities in development are not

³ For more details of the disparities in the spread of literacy and education the reader is referred to the essay "Some Features of the Growth of Education in Rural Maharashtra" included in this book

known to those who are in charge of planning education. Shukla sums up the position in this respect admirably.

"All past experience shows that at the point of planning policy, greatest stress is laid on universal mass education, education of women, rural areas, scheduled castes and tribes. At the point of fixing quantitative targets, proportionate expansion of all sectors is provided for. At the point of actual execution, highest achievements are all in the field of urban education, secondary and college education, men's education, upper caste education and so on. 'The policywise 'priority' sectors, including adult literacy, fall much behind target.'"⁴

The other ills and shortcomings of the present educational situation will now be mentioned briefly; the omission of details does not mean, however, that they are unimportant. They are in fact the symptoms, displayed in the educational sphere, of the same stalemate which is being experienced in other spheres, and particularly, in the socio-economic situation in the country.

It is well known that there is considerable wastage and stagnation at all levels of education. It is especially high at the primary stage where, it is estimated, that more than fifty per cent of the children enrolled in class I drop out before reaching class IV. This has significance for the attainment of functional literacy which is the aim of primary education, since it is generally believed that children who fail to reach class IV often lapse into illiteracy in later life. By any standards this is an appalling waste of human effort and also of the resources devoted to primary education. It should also be mentioned in this connection that the incidence of wastage is the highest precisely in those regions of the country and in those sections of the population where the spread of education and literacy are the lowest.

In spite of repeated resolutions and recommendations by committees and commissions there is no fundamental change in the organisational structure, the curriculum content, the teaching methods or the examination system (except for some valiant attempts at some peripheral points in the system). For instance, basic education, first initiated by the Congress ministries in some

4 Suresh Chandra Shukla, "Notes on the Educational Situation", *Mainstream*, 6 February 1971.

parts of India in 1937, was sought to be further developed and expanded after 1947 (for instance, in Maharashtra). After fitful progress it soon entered a blind alley; the so-called basic schools or multipurpose schools failed to progress and after a while they became no different than ordinary elementary schools. Moreover, there is not much of a hope of its revival or even resurrection in the form of 'education with work-experience' recently advocated by the Education Commission.

The languages to be taught and the medium of instruction at different stages of education constitute another important issue which is getting more and more vexed with years. While official thinking at the centre still clings to the three-language formula it was, in fact, never accepted in practice by the Hindi-speaking states in the north and has now been unceremoniously rejected in Tamilnadu in the south. There is no firm policy or practice on the teaching of English in schools and its role in higher education. Consequently the medium of instruction in the universities is shifting to the regional language through sheer pressure of circumstances and therefore in a most unplanned, haphazard manner.

An expanding educational system is always confronted with the problem of maintaining and raising the quality of education. This demands conscious efforts for the improvement of the teaching material and teaching methods, and measures to attract qualified personnel in adequate numbers to the teaching profession. While the educational standards at the microscopic top, i.e. in elite institutions, are maintained and perhaps even improved, there is a universal feeling, both in the academic as well as the outside world, that the standard of the average product turned out by our educational institutions has been falling in the postindependence era. The atmosphere in many of our institutions is marked by a lack of interest in teaching and learning, and by frustration and apathy on the part of teachers and students. To quote the *Report of the Education Commission* on the situation in higher education :⁵

"The existing situation in higher education broadly alternates

between slackness and strain—slackness during the session, strain at the time of examinations. In many of the weaker colleges and universities, a majority of teachers teach mechanically and listlessly.”

‘The lowering of standards is matched by the growing corruption in examination practices, and misbehaviour on the part of the candidates at the time of examination. The Bihar medical examination scandal which reverberated in the newspapers over the last year is just one instance of the evil which is believed to be fairly widespread.

For the mass of students who pass out from secondary schools and colleges, however, the trials and tribulations do not terminate with the successful completion of the course and acquisition of a certificate or a degree. They have to wait through an indefinite period of unemployment until they can land themselves into a suitable job. It is estimated that fifteen per cent of the matriculates and ten per cent of the graduates are unemployed at any given point of time and the average waiting period is about one-and-a-half years and half a year respectively.⁶ The plight of the nonprofessional graduates—those in arts, science and commerce—is of course much worse than the professional ones. It should be noted, however, that in 1968 tens of thousands of fresh engineers discovered that they could not get employment. It is clear from the successive five-year plan documents and from the many speeches and writings on the problem that the educated unemployment has been a continuing problem with us for all these years and with each passing year it is becoming more and more serious.

4

If what is described above is a more or less faithful picture of the present educational situation one is naturally faced with the questions : What has led to the present situation in education? How is to be explained this paradox of expansion, development and progress on the one hand, and deterioration, failure and

⁶ M. Blaug, P. R. G. Layard and M. Woodhall, *The Causes of Graduate Unemployment in India*, Allan Lane, The Penguin Press, London (1969).

frustration on the other? What are the social forces that have resulted in the present crisis of education? From the beginning of this century, and more so after the national movement assumed a mass character, one of the oft-proclaimed national objectives was a radical transformation of the educational system. And yet twenty-five years after independence one finds that the problems are nowhere near their solution; if at all the situation is in some respects even more critical.

Before we probe further into the present it is necessary and pertinent to look into the past, for two reasons. First, every social system or subsystem like the educational system has within itself an inertia and a movement of its own; they have to be taken into account and overcome, if necessary, when it is sought to be transformed into the desired ideal. It is necessary to do so even when it is desired to achieve a radical transformation and a complete break with the past. Second, a proper understanding and a realistic assessment of the development of the educational situation during the postindependence period is possible only against the background of the historical past and the educational situation on the eve of independence in particular.

(Soon after conquering the Indian empire the British rulers decided to introduce in India the so-called English education, i.e. education based on the advance of knowledge and science in England, and through the medium of English at the secondary and higher levels. The main idea was to create a class of Indian elite who could serve in subordinate positions in administration and who would generally look up to them and support them to rule the vast Indian empire. This opportunity was eagerly grasped by sections of the former elite of the Indian society for their own reasons: first, it enabled them to establish themselves in positions of power, pelf and prestige under the new dispensation; second, it was only through acquisition of western knowledge that they could hope to revive and regenerate their prostrated society, and build up pressure of public opinion to make a bid for political rights and selfrule. That the British imperial rulers were not at all interested in mass education of the Indians is clear from the fact that they decided against Indian languages as vehicles of education beyond the elementary stage and they did not concede for over hundred years, even in principle, the

idea of universal primary education. The number of secondary schools, colleges and universities started by the government was so small that the initial efforts in the educational sphere on the part of the newly-formed English-educated Indian elite were for establishing their own educational institutions for the 'cheapening and spread' of English education. Through their own schools and newspapers they started an indigenous thought-process of selfregeneration against the alien thought-process of abject surrender propagated by the government and missionary institutions. They successfully used western thought and ideas for the linguistic, religious and cultural revival in India. In the process they discovered a new sense of national identity and thus laid the foundation for the Indian national movement.)

Modern education in India which thus began its career in the earlier part of the nineteenth century went on at a slow pace for almost a hundred years. A substantial part of it developed outside government institutions, through private effort, financed mainly through fees and supplemented by a government aid on a modest scale. The educational developments of this long period are an important part of our social history; but we shall not go into them here. For our purpose, however, it is useful to view the educational situation in India, as it obtained in 1921-22, at the end of the first world war, but before the advent of Montford reforms according to which much of the responsibility for education in the provinces was transferred to the Indian ministers.

In 1921-22 there were 61 lakh pupils in primary schools, 11 lakh in secondary schools and 66 thousand in colleges in the whole of British India (excluding Burma), in a population of about 23 crores.⁷ It is clear that there was no mass education. According to the Hartog Committee's report, during the period from 1892 to 1922 literacy in India increased from 13.0 to 14.4 per cent for males and from 0.7 to 2.0 per cent for females. Gokhale's insistence on universal primary education was a cry in wilderness; even many of his Indian contemporaries did not approve of it. About 20 per cent of the students in colleges were training for professions—lawyers, doctors, engineers etc.; while

⁷ Syed Nurullah and J. P. Naik, *History of Education in India (during the British Period)*, MacMillan, Bombay (1943).

most others were pursuing an arts degree. The whole of secondary education was mostly nonvocational. In any case vocational education had hardly any job-potential in the conditions of industrial backwardness forced on the country by its masters.

Viewed from another angle the spread of education until then was confined, to a large extent, to the advanced castes and social groups in society, and in the case of higher education, and particularly in professional higher education, to the more affluent sections among them. They filled all available professional and white-collared positions in society; the civil service high and low became the most prestigious and important amongst them, in the absence of any sizable economic development in the country. (It is true that under the British rule the doors of education opened, at least formally, to all castes; and this enabled a small number from the middle castes, and a still smaller number from amongst the lowest castes, including the former untouchables (the scheduled castes), to rise and be absorbed in the literate occupations and particularly in government service. But they were a rather small proportion of the new elite. Since even a modestly comfortable or lucrative job required at least secondary education, and preferably a degree, and since the British rulers had systematically avoided assuming responsibility beyond the absolute minimum, especially in the early period, the starting of new high schools and colleges with private management met an unfulfilled social demand. The 'cheapening and spread' of liberal education, the running of schools and colleges, initiated by the pioneers of political and social awakening in India, had, over the years, imperceptibly but inevitably become a professional interest of a section of the intelligentsia.

5

The period from 1921 onwards up to the eve of independence, the last quarter of a century of the British rule, is fundamentally different from the earlier period. Firstly, the national movement took on a mass character bringing into its sweep wider sections of population including the industrial workers in towns and the peasantry in the countryside. Secondly, the realisation of a socialist revolution in the USSR gave a new dimension to

our thinking not only in the political field, but also in the social field and therefore in the educational field. Finally, after the introduction of diarchy in 1921 and provincial autonomy in 1937, there came a new political awareness of what a widened franchise can imply for different social strata in the population in terms of effectively using even limited political power to forward the general as well as sectional social interests. It was becoming evident by the beginning of the second world war that political power in India would soon change hands either by transfer or through capture. This gave rise to an altogether new perspective, that of an independent India, in all spheres including education.

Under the diarchy, from 1921, education was transferred in the provinces to Indian ministers belonging to the elected element in the legislatures; but their powers of raising resources were severely limited. The situation somewhat improved with the popular ministries assuming power in the provinces in 1937 for a short period and again in 1946 when they resumed their working. The ideal of full literacy and universal primary education was hardly realisable under these conditions. Even so, education was spreading to wider sections of people and was assuming for the first time a mass character, raising the expectations of the people to still higher levels. Such was the enthusiasm generated by the developing national movement in this period that there were popular mass campaigns for adult literacy in cities like Bombay the like of which have yet to be seen in the postindependence decades.

During this period rapid increase was taking place in enrolment at all stages—primary and secondary schools, and colleges and universities. An analysis of this expansion shows that the increase was proportionately much more in the secondary and higher education than in primary education.⁵ However, there was not much of vocational education or diversification at the secondary stage reflecting the arrested economic and industrial development of the country. The educated unemployment of the matriculates and graduates reached alarming figures during the depression period of the mid-thirties, comparable or perhaps

⁵ Syed Nurullah and J. P. Naik, *op. cit.*,

even worse than what it is today, as is attested by the reports of Sapru and other inquiry committees; and it was relieved only with the availability of ad hoc war-time jobs during the early forties. An important consequence of the mass character of education and of the demands of the growing national movement was the introduction of regional languages as media of instruction at the secondary stage in many provinces and a beginning of modernisation of textbooks used at primary and secondary levels.

Education was spreading to new social strata who looked upon it as the sure, and perhaps the only means, of improving their condition, of acquiring economic status and social prestige. A small but significant nucleus of a new elite was now forming in the socially 'middle' castes and to a lesser extent in the castes still lower on the social ladder including the scheduled castes. This elite was becoming conscious of the power which the adult franchise would give them after the capture of power and which could be effectively used for building social and political pressures to realise their objectives.

At the same time the question of radically changing the entire educational system and replacing it by national system of education befitting an independent nation state was coming to the forefront. National education was not a new slogan but its content was different when it was first raised with the slogan of swaraj in the first decade of the twentieth century and again in the days of the noncooperation movement in the twenties. Now it meant education for all and its structure and contents so devised as to achieve a rapid social and economic transformation of the entire people. The lopsidedness and 'bookish' character of the colonial educational system under the British rule had long become targets of severe criticism. The insistence on diversification, the experiment in Wardha scheme of basic education, the demands for the qualitative improvement of secondary and higher education, and for the provision of adequate facilities for scientific research, all these expressed the same common objective.

All this is clearly evident from the many writings on education of this period, and is reflected in the many plans for national reconstruction. It was also the subject of the Report of the

Sargent Committee on education appointed by the then British government.⁹

Thus the problems in education with which India was faced at the time of the transfer of power in 1947 were, as in every other sphere, the problems arising from the extremely retarded and lopsided development under the long colonial rule. On the other hand the mass political awakening had kindled high expectations in the minds of the people. The ideal was therefore nothing short of a complete overhaul which would usher in and rapidly develop a system of national education in tune with the modern age and independent national status. Naturally it meant, among other things, universal free elementary education, removal of adult illiteracy, adoption of Indian languages as media of instruction at all stages, a rational policy on languages to facilitate interstate and international communication, restructuring secondary and higher education by introducing vocationalisation and diversification, raising standards at all levels, modernisation of the contents and the methods of teaching and examination, development of research facilities and raising its level, and devoting special attention to the educational advance of the retarded sections of society such as women, the scheduled castes and the scheduled tribes. The popular urge for mass education was duly recognised in the Constitution which directed the state by article 45 to provide education to all children up to the age of 14 before 1960. The other demands of the national ideal in education find their echo in some of the developments of the initial period, in the founding of a number of national laboratories and other institutes of research, the starting of the Indian Institutes of Technology and other institutions of higher learning, the establishing of the University Grants Commission and National Council of Educational Research and Training, and the appointment of several committees and commissions to investigate and report on different stages of education including the most comprehensive effort of the Education Commission of 1964-66. The actual achievements of the last twenty odd years, described in the beginning of this paper, however fall far short of the popular expectations. Instead of removing the lopsided character of the educa-

⁹ *The Plan for Post-War Educational Development in India*, better known as Sargent Report. Government of India, New Delhi, 1944.

tional system inherited from the British rulers it has been accentuated. We have a situation where

“...primary education receives less resources than it should in a largely illiterate society; secondary education is nonvocational, pushing its products into higher education for improving employment prospects; and university education is indiscriminately subsidised and of low, decelerating standards.”¹⁰

As a consequence the ills of the educational situation have grown and have assumed the proportions of an all-pervading crisis.

It will be useful at this stage to have a closer look at the educational developments of the postindependence period. It is clear that even this limited spread of education has brought about fundamental changes in the social situation, particularly in the rural areas. In the old days education, especially that beyond the mere acquisition of literacy, was mostly confined to the traditionally advanced castes like the Brahmins. It has now spread to the ‘middle’ castes, to the more affluent sections of the farming communities; they have now acquired literacy and are pressing forward to the higher stages of education. The rural elite now consists of the newly educated young men from these communities; the sons of rich peasants now dominate the political, social and cultural life in villages and small towns. These middle strata are occupying positions of strength in political and social life at all levels, acquired through the adult franchise. They reinforce these positions through educational progress, and use these positions to advance their interests in the sphere of education as in all other spheres. The acquisition of secondary and higher education helps them to improve their income and occupational status. The fee concessions for the ‘economically backward classes’ (e.g. in Maharashtra), more favourable grant-in-aid conditions for newly started secondary schools and colleges, and other similar legislative actions, as also their actual operation, clearly illustrate this process. The other relatively affluent sections of village society, like the trading community, have allied themselves with the upper stratum of the peasantry in this respect.

¹⁰ Book review of the Report of the Committee of Experts on Unemployment Estimates (Planning Commission) by S. R. in *Shankar's Weekly*, 17 February 1971.

It is true the benefits flowing from this policy of 'democratisation' of education trickle down, to some extent, to the lower and also to the lowest strata of rural population like the scheduled castes, the scheduled tribes and other backward communities. But as pointed out earlier the pace of progress of education amongst them is so slow that except perhaps in regions like Maharashtra and Kerala they have not been able to form a sizable elite of their own ; nor are they able to join on socially equal terms the main elite which has emerged in the villages. Consequently they do not count for much in terms of political, social or cultural prestige or influence. Being in a minority the adult franchise also does not help them in this respect except in a marginal manner.

7

A relevant question is, what is happening to the old elite of the advanced castes which had a much longer start in western education and which was already entrenched in strategic positions in society, both urban and rural, during the preindependence period? In the first place, numerically, they were in a small minority in urban as well as rural society and, with the formation of the new rural elite with a much superior numerical strength, they have lost most of their political, social and cultural prestige and influence in the rural areas. This was further accelerated by a considerable migration from amongst them to the cities and larger towns ; a contributory factor for this movement was the enactment of tenancy reforms. Because of their tradition of learning and social positions they still manage to occupy most of the literate occupations including the government and private white-collar jobs which are mostly urban or semiurban. But their former monopoly of these occupations and services is being systematically eroded by the emerging new elite both because of the newly acquired educational advance and the reins of political power. For the more ambitious amongst them there were, after independence, and especially after the industrial advance during the second and third five year plans, new opportunities of highly-paid situations in the form of senior positions in technology,

industry, business and trade, the professions, the defence services, and even in civil service which has considerably expanded during this period. This has brought about a fundamental change in the educational outlook of the top layer of the old elite; they now send their children to expensive English-medium schools since this type of education helps the entry to elite institutions of higher education and thus to the better-paid positions mentioned above. The advanced elements of the hitherto educational backward 'middle' castes which have their base in the affluent peasantry have not been slow in realising these new job-opportunities. They have become aware of the job-potential of the expensive English-medium education. The recently started 'public schools' under government auspices or private auspices (like the sugar factories in Maharashtra) illustrate this trend.

The large less-affluent section of the old elite, however, has inevitably to be satisfied with the cheaper education of the indigenous variety, imparted through regional media in average and below-average secondary schools and collegiate institutions. Their lot is to enter the lower jobs in the salariat, from technical and skilled to clerical and semiskilled. A large section of this old elite at the lower levels feels frustrated and resentful as they find it difficult to adjust themselves to the position where they have lost much of their former social prestige and social leadership, where they are no longer socially related to those in positions of political power and government authority, and where they have to jostle for positions with the new elite emerging from the 'middle' castes and of rustic origin but which is well-connected with the new ruling class.

The elite formation during the postindependence period is so important for assessing the educational situation that it deserves further analysis. The elite of the preindependence era, coming from a few, numerically small advanced social strata, was more or less homogeneous; although there was differentiation amongst them from low to high positions, except for the microscopic anglicised section at the top it formed, so to say, a continuous spectrum. (This situation was slowly altering during the last two decades before independence but this need not stop us in our general formulation.) Although belonging to the same society there was social distance, unbridgeable in many respects, between

vertical sections among them and between them and the rest of the society. But the traditional common social bonds, and the anti-imperialist national sentiment, loud but mostly ineffective except at the peak periods of the mass movements, bound this elite together, and also acted like a connecting link between them and the mass of common people.

The situation has qualitatively changed during the last twenty years; the elite spectrum is no longer continuous. Now one can clearly identify two distinct developing sections in the elite with a growing gap between them. On the one hand there is the 'super' elite consisting of the top sections of bureaucrats, the defence personnel, and the entrepreneurs, technocrats and managerial personnel in industry and business. They are, in a sense, a continuation of the top layer of the older all-India elite and are now educated mostly in selective, and expensive English-medium schools and later on in the better-type institutions of higher learning, institutes of technology, schools of business management, etc. in India and abroad. Although they do not have direct political power, placed in strategic positions, they exercise considerable influence in the actual exercise of that power and also on social and political thinking. On the other hand there is the rest of the elite, whom we may call the 'regional' or 'common' elite, drawn partly from the older elite from its lower orders and the emergent new elite from the 'middle' castes, or rural peasant origin, the latter including among them those wielding most political power and deriving social influence. They come mostly from the ordinary, cheaper, regional-language institutions. In spite of the democratic, egalitarian protestations about education, the constitutional right to have schools of one's own choice for children is being utilised by the bureaucracy and the affluent sections of the society to have select exclusive schools of the expensive variety and corresponding institutions of higher learning, not of course without liberal aid from the government. The educational system thus gets divided and provides for more or less two distinct channels, one producing and perpetuating the 'super' elite and the other augmenting the ranks of the 'common' or 'regional' elite. This division is aided, abetted and sharpened by the present policy (or the lack of it) about languages and about the medium of instruction. The political leadership, even the section of it

belonging to the 'common' elite, has to connive at this division because it has hitched its stars, if not in this generation at least in the next, to the wagon of the 'super' elite. How else does one explain the crying contradiction that the same leaders who lose no occasion to plead vociferously the cause of regional languages are careful enough to send their children to exclusive English-medium schools?

In sum, the resulting educational situation, in terms of social differentiation, can be briefly described as follows: (i) emergence and consolidation of a 'super' elite at the top consisting of the old urban intelligentsia, along with a sprinkling of the more enterprising elements from the rural stock, in technology, industry, business, and higher echelons of bureaucracy and defence services; (ii) formation of a fairly large 'common' or 'regional' elite consisting of the urban middle and lower salariat, skilled and semiskilled technicians and professionals, and the newly emerging rural elite; and (iii) continuance of stark illiteracy in the rest of the society at the base of the pyramid with a slow and sluggish movement in a section of them towards literacy and rudiments of education. It is obvious this situation is full of strains, full of contradictions and confrontations. For instance, the 'super' elite of the present day is even more alienated from and indifferent to the lot of the common people than its counterpart of the preindependence period. Having no social commitment it is concentrating attention on its narrow selfish interests and is living a life of affluence and pseudowesternised 'high society'. A large section of the 'super' elite, coming as it does from the now politically dispossessed but culturally dominant minority communities, lives in resentful reconciliation with the newly emerged political leadership from the rural stock. There is also a feeling of contempt for the political leadership who lacks knowledge and technical skills possessed by the 'super' elite. The contradiction and confrontation in relation to the 'common' elite is already mentioned above. In the 'common' elite there is the vast lower salariat which finds it difficult to maintain, in the face of rising unemployment and rising prices, exclusive lower-middle-class mode of life and values, and lives a life of relative indigence and frustration. Then there is the internal contradiction within it between those belonging to the tradition-

ally literate minority castes, now having no social links with those in political power, and the newly emerged elite belonging to the 'middle' castes having social connections with them; cultural distance aggravates this contradiction. Finally, there is the contradiction arising from the conflicting interests of the entire elite on the one hand and the mass of common people deprived of all the good things of life including education, on the other.

8

No discussion of the present situation in education can be even tentatively adequate unless it discusses the problem of growing educated unemployment and the related questions of the imbalance in the educational system and the surfeit of secondary and higher education. Apart from the Education Commission which made a pointed reference to these problems they have aroused considerable interest recently among economist-educationists.¹¹ As observed earlier, the problems are not new. The educated unemployment, and the imbalance, the lopsidedness and the low quality of higher education in general have been with us ever since the early part of this century. The educated unemployment was also very acute in India during the depression period of the thirties. The creation of war-time jobs, the expansion of governmental activity after independence and the industrialisation under the Second and Third Plans had reduced its severity to a certain extent in the early postindependence period. But now it has again reached a new high and given a rude jolt to everybody concerned, setting him think about it seriously.

The basic underlying cause of widespread unemployment in India is the incapacity of the national economy to provide the necessary number of jobs to employ the entire or at least most of the working force, whether educated or uneducated. Superimposed on this is the imbalance built in the present educational

¹¹ Amartya Sen, *The Crisis in Indian Education*, Lal Bahadur Shastri Memorial Lectures, March 1970 (mimeographed); K. N. Raj, *Crisis of Higher Education in India*, Patel Memorial Lectures (of the All India Radio), 1970 (mimeographed), also, M. Blaug et al. *op. cit.*

system which allows and encourages the secondary and higher education to expand at a rate much faster than the requirements of the economy, and thus creates a surfeit of high school and college graduates relative to the available jobs. Moreover, there is not much of diversification and vocationalisation of education at the secondary stage which will channel high-school-leavers to fruitful careers, with the result, that many of them swell the stream of liberal arts education in colleges to improve their prospects of employment.

It will be remembered that an almost similar characterisation of the problem of the educated unemployed was made during the preindependence period. But then the blame could be squarely, and rightly, laid on the colonial rulers. The significance of the similarity between the two situations is, however, quite clear. In spite of the many developments that have taken place in economy and education during the last twenty years no basic change has occurred in the situation in regard to the problem of the educated unemployed.

There is by now a growing realisation that the problem of full or near-full employment cannot be solved unless we adopt an altogether different strategy of economic development and the latter cannot be initiated in the framework of the existing social-economic structure. Leaving these fundamental economic issues to the economists we shall confine our attention mainly to the educational issues. The vocational diversification at the secondary stages is no doubt necessary to prevent a large mass of students blindly taking to and hopefully continuing liberal education. But let us not delude ourselves in believing that it will substantially alter the situation unless jobs are available in the economy for the vocationally trained young men at the end of the high school stage. Otherwise the incidence of unemployment will be merely transferred from one type of educated youth to another. This should be clear from what has happened at the higher level of education to the engineers during the past few years. The success of vocationalisation and diversification thus ultimately depends on basic issue, viz the rapid growth of national economy.

A more fundamental proposal to meet the problem of educated unemployment, advocated by a number of eminent economists, is to limit drastically the runaway expansion of higher (and also secondary) education, reduce the number of admissions at those levels and divert substantial funds saved from this sector towards primary education. The rationale behind it is, briefly, that the outturn of higher education already exceeds any reasonable estimates of manpower; that the uncontrolled expansion has led to a considerable deterioration of standards; that the higher (and secondary) education is heavily subsidised by the state and consequently claims an altogether disproportionate share of the total public funds available for education; that this liberal subsidy actually serves the interests of the relatively affluent middle class, the top decile of the population, whose children seek and benefit from higher education and who can afford to pay much more for it; that students who join colleges do so because higher education has high economic returns on the private costs which they incur and which are low because of the high subsidy; that because of it the educated or graduates can afford to wait in unemployment until they land a suitable job; and that this subsidisation is therefore neither socially equitable nor economically efficient; etc.

The reasoning has no doubt a certain force in it; and therefore it deserves closer examination. Such control of and relative reduction in enrolment in higher (and secondary) education, if enforceable, will only transfer the incidence of unemployment to the lower level unless ways are found to create jobs at that level. Perhaps it is felt that educated unemployment, being more vocal, is much more dangerous and destabilizing than the relatively mute uneducated unemployment. (This may well be true in the short run. Lord Curzon also thought the same way at the turn of the century.) A high subsidy to higher education is not a feature of India alone; it also prevails in other countries (e.g. the UK, the USSR). But there, the subsidy is coupled with limiting the number of places, and this necessarily implies a selection procedure. If we start controlling the numbers (with or without subsidy), the selection procedure has to be fair, not only in the

formal sense, but as between the different sections of society. This implies a radical change in the present selection procedure. On the other hand the removal of subsidy and limiting the numbers by making secondary and higher education more expensive must also be coupled with an equitable selection procedure and a graded scholarship scheme and/or a graded levy of fees in the reverse direction. In their absence all higher education will be entirely a monopoly of the 'super' elite and the affluent; the less affluent sections cannot, in general, hope to enter the charmed circle. Such a policy will perpetuate the present elite in its present socially privileged positions.

The proposal of diverting substantial funds from higher (and even secondary) education to primary education, especially its variation of keeping the present expenditure on nonprimary education constant and allowing that on primary education to increase, has much to commend it on grounds of equity, if it could be practicable. The programme of primary education is lagging far behind and its actual operation results in large wastage; consequently there is a tendency on the part of the policy-makers to reconcile themselves to the existence of substantial illiteracy in society; a kind of vested interest in illiteracy seems to have developed. Educationists are also succumbing or adjusting themselves to it, devising an appropriate new slogan of 'consolidation rather than further expansion of primary education' (why not both!). A change in the present policy, a sustained interest in the spread of primary education and a vigorous drive against adult illiteracy, merits consideration for its own sake; if this indirectly helps to control the numbers at the secondary and higher stages that is an additional consideration. Moreover, any expansion and improvement programme at the primary level will also provide additional employment to the secondary school-leavers.

There is, however, little likelihood of the proposed policy-change being accepted by the political leadership of the country, whether in the government or in the opposition. It is remarked by those who propose this policy-change that the present subsidisation, and the consequent uncontrolled spread of secondary and higher education, is in response to the political pressures genera-

ted by the vocal top section of society.¹² A bland statement of this kind without examining the composition and development of this section, however, does not tell us much, nor does it pose clearly the issues involved. We have analysed above the process of cheapening and 'democratisation' of (secondary and higher) education in its historical context. Although the 'super' elite may not vigorously resist the policy of making secondary and higher education expensive—since many of them are already buying expensive education (which, by the way, is also extensively subsidised) and may welcome the 'cleansing' operation which the new policy will perform—the 'common' elite, both the less affluent sections of the older elite and the newer regional elite from the rural stock, will oppose it tooth and nail. The reason is quite clear. It will deny them their continuance in the elite or bar them from entry to the elite class even at the 'common' level and an opportunity to rise up to join the 'super' elite, a dream which many of them entertain. The interests of the present political leadership are identical with those of the 'common' elite and one can hardly expect them to divest themselves of their interests. As mentioned above the vocal or effective public pressure at the moment is overwhelmingly on the side of subsidising secondary and higher education. No state or central government of the day can hope to survive very long if it drastically reverses the policy of 'democratising' (i.e. subsidising and free access to) education. Moreover, they can quote history in their justification and say that if the national stalwarts of yesterday actively worked for the 'cheapening and spread' of western education from the times of the early British period, they are today following and carrying forward the same tradition; while the former had to do it at self-sacrifice and in a spirit of service, their present-day descendants are doing it with the help of state power and thus taking it to people even further down the social ladder—and so what is wrong? And the vested interests of those who run the schools and collegiate institutions, including the teachers, formed during the preindependence era and grown much stronger after independence, will range themselves against such policy reversal. This is a common interest of all the upper and middle

12 See Amartya Sen and K. N. Raj, *op. cit.* For a more penetrating analysis the reader is referred to Suresh Chandra Shukla, *op. cit.*

classes; the political leadership, whether of the left or the right, all hails from this class. This is absolutely clear from the unqualified stand taken by the parliamentary committee representing all sections of the house. Rejecting even the gradualist approach of the Education Commission advocating selective admissions to control numbers, particularly in higher secondary schools and in arts and science colleges, it says :¹³

“But we believe that every effort should be made to provide admissions to institutions of higher education to all eligible students who desire to study further” (emphasis ours).

The proposed restructuring of education on these lines may have to wait for the day when those who are really dispossessed in all the good things of life including education can make their voice and strength decisively felt in public affairs. Fine exercises in rates of economic returns, and appeals to the wisdom and foresight of the leadership are not going to induce a change of heart in this as well as many other vital issues.

10

We have dealt in this essay what we consider to be the main social features of the present educational situation. It is not proposed to go into its other aspects and problems, mainly belonging to educational technology. But from the foregoing analysis two things clearly stand out. Firstly, the national system of education visualised during the final stages of national movement is still miles out of our reach and, with modification appropriate to the need of the present times, it can be still looked upon as providing guidelines for the solution of our educational problems. Secondly, the crisis in education cannot be discussed or dealt with in isolation from the general crisis of the socio-economic-political situation. It is too much to hope for a satisfactory solution of our educational problems in the absence of thoroughgoing changes in the socio-economic situation. In the absence of a

13 Foreword of the Report of the Committee of Members of Parliament on Education, 1967, (entitled) *National Policy on Education*, Ministry of Education, New Delhi.

social revolution in India it is utopian to think of a really national system of education.

This does not mean, however, that partial solutions or solutions to specific problems should not be suggested and cannot be tried. In devising such solutions, however, educationists often lose the context of the Indian situation and tend to base them on the western models, the models borrowed from the European and particularly the British or American system of education. It is not realised that these models can hardly serve us situated as we are in totally different circumstances, historically (and also geographically). If the general Indian perspective is clearly kept in view, and one is prepared for the nonfulfilment and even distortions of the proposed measures in practice, and also prepared to learn from such experience, such solutions are always helpful; they help to clarify issues.¹⁴

Before ending this discussion a question about future may perhaps be in order; how will the educational situation develop in the next few years? Prediction is an interesting but risky game. But the logic of the situation is such that it can be safely predicted that the development in education will continue along the same, none too cheerful, path which it has taken during the last twenty odd years. Both the 'super' elite and the 'common' elite will continue to grow side by side with a large mass of illiteracy. Their internal contradictions will also continue and at times they may produce acute tensions but they will not assume the form of a direct confrontation since the 'super' elite has to bow down before the political power of the regional elite and the latter has to concede to the technical competence and superior knowledge and skills of the former. (This is in fact the reflection in the educational sphere of the contradictory yet complementary relationship between the big bourgeoisie and the technocrat-bureaucrats on the one hand and the affluent peasantry and emergent 'middle' castes on the other; both need each other to keep themselves in the saddle.) There will no doubt be attempts to tackle piecemeal one or the other of the more glaring inequities or inefficiencies in the educational system; but no radical transformation will be undertaken. The Educa-

14 For a thought-provoking attempt in this direction, see Suresh Chandra Shukla, *op. cit.*

tion Commission's report will be left on the shelf to gather dust like all the preceding reports.

Meanwhile, with the growing crisis in economic development, the problem of educated unemployment will worsen. The continued expansion of secondary and higher education in rural areas will turn out growing numbers of educated rural youth who will further swell the ranks of the educated unemployed. This will create new tensions in the countryside in addition to the existing urban discontent. During the period of national movement in the twenties and thirties the educated unemployed often brought added strength and radicalisation to the freedom and socialist movements. This was in a sense natural and inevitable in the anti-imperialist phase of the struggle for freedom. In the present phase of the struggle for emancipation the 'super' elite will mostly be on the side of the protagonists of the status quo, although a section may detach itself in sheer disgust of the acquisitive society, and take radical positions (e.g. the Naxalites and other radical youth formations of the present day). The unemployed from 'common' elite may not necessarily join the radical or progressive movements. While some sections may join the people's movement for social and economic emancipation, others may join the forces of regional and communal chauvinism. This also is already in evidence in many parts in India today. Even during the days of the freedom movement sizable sections of the educated youth were attracted to communal and neofascist formations. So the path will not be straight or unbroken. While in the long run one hopes and strives, in the educational as in all other spheres, for a solution in favour of the common people, in the short run, one must be realistic enough to be prepared for setbacks. For the situation does sometimes become much worse before it begins to take a turn for the better.

GROWTH OF EDUCATION IN INDIA FROM 1950-51 TO 1968-69

(Enrolment figures in millions)					
1950-51			1960-61		1968-69
	Enrol- ment	Percen- tage	Enrol- ment	Percen- tage	Enrol- ment
<i>Primary (6-11)</i>					
Classes I-V					
Total	19.15	42.6	34.99	62.4	55.49
Boys	13.77	59.8	23.59	82.6	34.92
Girls	5.38	24.6	11.40	41.4	20.57
<i>Middle (11-14)</i>					
Classes VI-VIII					
Total	3.12	12.7	6.70	22.5	12.27
Boys	2.59	20.7	5.07	33.2	8.76
Girls	0.53	4.5	1.63	11.3	3.51
<i>Elementary (6-14)</i>					
Classes I-VIII					
Total	22.27	32.1	41.69	48.7	67.76
Boys	16.36	45.9	28.66	65.2	43.68
Girls	5.91	17.5	13.03	30.9	24.08
					44.7

GROWTH OF EDUCATION IN INDIA FROM 1950-51 TO 1968-69 (CONTD.)

	1950-51		1960-61		1965-66		1968-69	
	Enrol- ment	Percen- tage	Enrol- ment	Percen- tage	Enrol- ment	Percen- tage	Enrol- ment	Percen- tage
<i>Secondary (14-17)</i>								
<i>Classes IX-XI</i>								
Total	1.22	5.3	3.03	11.1	5.28	17.0	6.58	19.3
Boys	1.02	8.7	2.47	17.5	4.08	25.6	4.95	28.5
Girls	0.20	1.8	0.56	4.3	1.20	7.9	1.63	9.8
<i>Higher (17-24)</i>								
Total	0.39	1.0	1.03	2.1	1.73	—	2.47	4.2
<i>Total Expenditure on Education</i>								
(million rupees)	1444		3444		6000 (estimated)		—	
Percentage of national income	1.2		2.4		2.9		—	

Sources: (i) Enrolment in school education from the *Third and Fourth Five Year Plans*.
(ii) Enrolment in higher education from the *Annual Reports of the University Grants Commission*.
(iii) Expenditure figures from the *Report of the Education Commission (1964-66)*.

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