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CONFERENCES GIVEN BY MR. C. ARNOLD ANDERSEN \*

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CONFERENCES GIVEN BY MR. C. ARNOLD ANDERSEN TO THE EDUCATIONAL PLANNING  
COURSE IN 1962

October 31, 1962.

I am professor of sociology and of education and also Director of an institute called the Comparative Education Center of the University of Chicago. I am joint author of Education, Economy and Society. I represent a group which is rapidly growing in number in my country, represented also by you, of people interested in the development of education. Three of us have recently published a symposium, as written above, which represents some of the positions of the sociologists with respect to education.

You are familiar with the point of view which considers education as a means to develop human resources. In the U.S. the political scientists also have become interested in education from two points of view particularly:

1. The role of education as a builder of national consensus.
2. The role of education in the building of elites.

The sociologists have three interests in education:

1. The relation of education to the social mobility.
2. The influence of education upon social changes.
3. All various functions which education plays in a particular society.

These problems are very complex and when we began this Center at Chicago, staff from four fields was appointed: a) Sociologist (Anderson); b) Professor of history; c) Anthropologist, and d) Economist (this latter happens to be in Santiago because we have a grant from the Carnegie Foundation to make a study in Chile and other countries in Latin America on the costs of education). We have many projects in the Center: a project in ten countries which consists of the measurement of the achievement of school pupils by the use of uniform tests. Also the recruitment of students and the occupation aspirations of students in universities. We have made a large study of the students in secondary schools and their occupational aspirations in Ghana, as well as in Turkey. There are other studies, many of them concerned in different ways with the influence of education upon economic development.

/(Here Mr. Anderson

(Here Mr. Anderson said that Mr. Harbison will be giving conferences also, and that he will represent essentially the manpower point of view and he thinks that many questions of Professor Harbison and his are opposite, but it will be good to discuss these differences).

#### Chart

This is an abstract scheme with the purpose of explaining the changes in the relation of education and certain social characteristics. The point is that as a society changes from being simple to being complex (i.e. in the U.S. from 1800 to 1950, or Chile 1950 to 2000), there are also changes in the way in which education is related to the society:

1. As changes occur, the relation between the social status of a man's father and the social prestige of the son become less evident. As a society becomes more complex, one becomes less able to predict the education, social position, income or wealth of the son; in the case of the son's intelligence there is probably no change.

2. As a society becomes more complex the relation between an individual's social status and his occupational status, education, intelligence, income, becomes more close. Also there is lower relation between an individual's prestige and his own wealth.

3. As society becomes more complex, the relation between an individual's occupational status and his social prestige, etc. becomes closer. Also it is more difficult to predict his wealth, income, etc.

Regarding the line on education, my argument is: As a society becomes more complex or developed, or industrialized - then knowing the education of an individual, you will be less able to infer what the paternal social status was. Educational opportunities becomes as we say more democratic. On the other hand, with such a change, there is a closer relation between an individual's occupational status and his own personal prestige. If education is better distributed or more people can go to school, you will expect there will be a closer relation between their education and degree of intelligence. A complex society makes more complete or fuller use of the human resources in that society.

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When describing these changes as a society becomes more complex, I have at the same time been giving you the characteristics of an open or fluid society; one of the most important ways to look at education is to view it in relation to the tendencies which work towards or against the development of an open or fluid society.

If you were to take a census of all individuals of 18 years of age in a country, you will find that the number of people who have achieved, let us say 12 years of schooling by the age of 18 would reflect many factors. We know that in every country more people who live in cities will have a good education than those in rural places. Those people living in these economic centers will have more schooling. Also the children of families of good social position and what is more important, children of educated parents will have a good education. In some countries and, unfortunately this has been specially true of my country, one will find differences between ethnic and race groups and religious groups. In some parts of the country parents are more interested in schooling, and their children have better schools than those found in other districts. You will find that some schools in the center are better than others 10 or 20 Kms. out of town. Also the children in some classrooms will stay longer in a school because of a good teacher and others, with identical factors will learn more because they are more intelligent.

If you have statistics of your own country you can make a factor analysis taking into account all of those factors. You will expect that the relative influence of any one factor such as suburban or urban residence will be greater in some countries than in others. For instance in the U.S. the difference between urban and rural education is relatively small, because we have consolidated schools and bring the children in buses to the schools. On the other hand, in Russia, until 5 or 6 years, the policy was not to pay much attention to children in the country.

In the U.S. race has been important in some districts, but you will also find that Negro children living in cities may have more schooling than white children living in the country. Of course the children of negro teachers or professionals will have better schooling than white farm families in some parts of the country.

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1. The social conditions and social factors are many and they interact in many complex ways;
2. If one is interested in educational plans, one will have to develop a different plan depending on the country or zone.

It is today the fashion among many people to say that education is the most important activity of a government which wants to achieve economic development. I would suggest you put in your mind this statement: Education is necessary but not sufficient for development. If one is to be an educational planner, the main problem in a determined period of time is to know how much should be spent on education and what would be the marginal benefits or profits. If the people of a country are willing to get development in the XXI Century, then they should spend today as much on education as they can find, but I suggest if a country is interested in economic development between 1965-1970 or 1975, that they must be careful not to spend too much on schools. I will also point out that many studies say that education is very profitable for a country, but none of these studies has been made on a developing country . i.e. The configuration of factors in education is different in a developed country to that of a developing country. The kind of influence of education upon development differs according to the stage of development. Of course the importance you will give to education will depend upon whether you are interested in economic development, social development, or political development. But it is my impression that in most underdeveloped countries the leaders are interested almost exclusively in the economic development. (A comment was made that economic development brought social development. Prof. A Andersen said that he lived in Chicago and could not say this was always so).

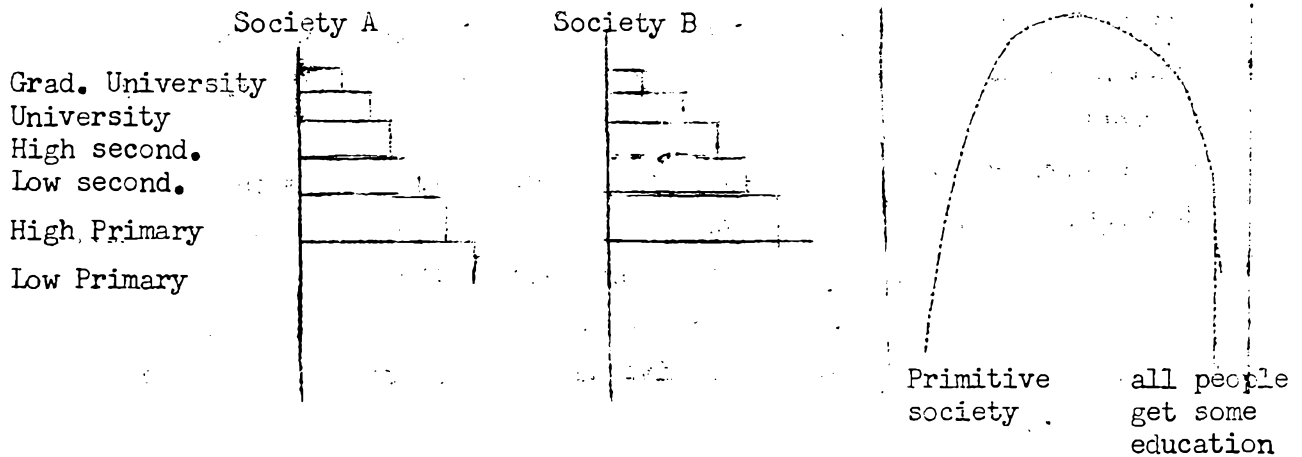
If you are interested in economic development, education is not sufficient. The most important thing to have is a population who are interested in development and who are enterprising economically. There is evidence on this in history. But it is a quality which is not very much developed in most schools. This attitude of enterprise is very complex psychologically and we know very little of its origin. If you

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take a list of the countries called "developed" today, these are all European or settled by Europeans (except Japan). No other country can be called developed today.

Therefore we have to ask ourselves: Is Economic Development a cultural trait which spreads like other cultural traits, such as Christianity? Christianity has not developed very successfully in Asia or Africa and I am merely suggesting that development is not something you can pick up like furniture, automobile, or TV set and put anywhere: it must grow out of a society. So we must consider carefully the kinds of conditions which bring development and particularly the part which education can play among those conditions. The conclusion I will give you may be wrong, but I come to you as one who is particularly interested in education; when I take a skeptical position about education I am talking against my own interests.

November 2, 1962.



We are all familiar with identical types of pyramids and I will ask a fundamental question about the relationship of education to social mobility:

1. Society which has no formal education
2. All persons have the same type of education

What is the percentage of influence or proportionate influence of education among all of the factors which cause social mobility ?

/We know

We know that even in primitive societies there is social mobility and in democratic societies we expect to find people improving their social position and other people going down in social status. Among the factors determining mobility there are such things as the intelligence of the individual, his health, his ambition, luck.

One of the reasons always given for increasing educational opportunities is that it will make the social mobility operate more efficiently so that individuals will reach the positions to which they are qualified.

If we are interested in the relative influence of education upon mobility in both extreme cases, of course this will be zero. The logical principle is that you cannot explain a variable, i.e. mobility, by a constant. In between these two extreme points the influence of schooling on education will vary in a curvilinear relationship. One of the reasons always given for making education more widely distributed is that it will increase the amount of mobility because you will have children from proletariat families who get a good education and will be qualified to rise to higher positions than their parents have.

We know that education is one of the principal factors in determining the rate of economic development of a country. We know that those men who receive more schooling than others will on the average be paid more income than the others. In other words those people who stay in school longer will receive an individual gain or profit from their education.

We can all realize that people in Societies A and B who receive a similar type of education, the difference in income will larger in Society A in general. The reason is that there are relatively fewer of these educated people in Society A than in Society B and, therefore, in this Society A they will receive a higher income. In those countries at an early stage of economic development the differences in income between people in high occupations and low occupations will increase, but in developed countries this difference will decrease. If you take

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statistics from any country and take the ratio incomes of professional and skilled laborers, in general this ratio will be higher the less developed is the country. Nevertheless, most of us would rather live in Society B than in Society A, even though we will not receive a larger relative income. The reason for this is that in Society B the aggregate gain from increasing the level of average education is very great (a developed society is where there are no servants in the home).

The distribution of income from Low to High looks like this in most countries: if you think of years of schooling as dollars of income or wealth, in Society A you would have a very uneven distribution, but in a more developed society this tends to be more even. I have made computations for the U.S. and the distribution of years of schooling in the U.S. is much more equal than is the distribution of income. In fact the distribution of years of schooling is more equal than any item of consumption, except perhaps food. I would therefore argue that one of the signs of a developed society is where the distribution of schooling is like in Society B. A society which is beginning to develop would be very unwise to try to achieve equal educational opportunities at an early stage.

Education as wealth or income:

One of the most important things about education is that a very little amount can give an individual start to improve his skills and position in society, whereas a little income or wealth will not help him that much. One reason is that if you have only 4 or 5 years of good schooling you will have open a whole world of learning and technical knowledge if you are intelligent and you are desirous to teach yourself. It has been estimated that the average individual in the U.S. one hundred years ago, received only about 200 or 250 days of schooling in his whole life and yet the U.S. was already one of the most developed countries in that time. The point is that if other conditions are favorable (stimulating social conditions), you do not need a very formal educational level to reach economic development. Of course it would take more schooling today for a country beginning to develop to reach the level of the U.S. 100 years ago, because technology is more complex.

/Another characteristic

Another characteristic of formal education or schooling in contrast to the usual forms of wealth, is that it is very difficult for an upper class to monopolize education. One of the reasons is that if the custom of having schools has been planted in countries and ordinary people are interested in educating their children, nobody can oppose their wishes. Another very important characteristic of education is that it opens the door for people to ideas about social change, social equality, democracy, progress and so forth. As you know in the Western world, since the 13th Century, there have been religious groups which believed that their people should learn how to read in order to read the Bible and this in a way was a sort of revolution and if Christian education is related to the Bible, then we could say that this is the most revolutionary book. The knowledge of reading has been used everywhere for people to learn more skills and improve their economic position. Thus we have stories or examples from the 14th Century of craftsmen working in a shop with 7 workers, were only 6 of these would work and the latter would be paid by the others to read them technical literature, stories, etc. which helped to the progress of all the group. The most important form of wealth in our kind of society is skill, Knowledge is a kind of wealth you cannot take away from a man. This is also one reason why it is important to be sure that the educated classes in developing countries do not become too privileged. Otherwise you will have merely substituted an aristocracy of brain by an aristocracy of land.

We know that on the average any individuals who receive more schooling than their fellows will get more income. We also know that if you increase the average of schooling even though everybody had the same schooling you will increase the gross product of a nation. There is an aggregate benefit in increasing schooling even if such individuals cannot receive much private benefit.

There are several reasons why education in the U.R.S.S. has been very important for the economic development in that country. I would like to remind that Russia in 1910 was more developed in education and

/in economy

in economy than almost any underdeveloped country in the world today.

In the Soviet period certain things were done:

1. A large amount of education was provided;
2. Great effort was made by the government to be sure that everybody knew that if he got more education he would get a better job.
3. Wage scales were manipulated by the Government in order to supply the needed kind of skills.

There were no legal distinctions between workers and white collar people and in fact workers were paid more money than employees because they were needed. May I ask, is there any underdeveloped country today which is willing to pay workers more money than white collar and government employees? I remind you that new countries such as Australia, New Zealand, Canada, South Africa are also countries which follow the same three conditions that the Soviet followed. These are three conditions why these countries have attained economic development and given education great importance. Besides Soviet Russia had one more thing: they used force. People who could not work where they were told were put in prison or their food cards were taken away or their children would not get into the University.

You then have in underdeveloped countries some hard points:

1. Will you follow the above three conditions?
2. Can you avoid being forced by politics to use force?

Since almost no underdeveloped country is today as developed as Russia in 1910, the question then is can you get rapid economic development without force? This, I believe, is a great question for underdeveloped countries.

/November 6, 1962.

November 6, 1962.

Let us talk now about our charts. You experts know better than I that analysis of these problems must be done with very imperfect data. This statistical exercise was done in order to try to find some light on a very important problem: that is How does education help development?

From the problems illustrated we can gather that you can predict education from income better than you can predict income from education. For a large number of countries, the correlation between income in 1930 and education in 1950 was greater than the correlation between education in 1930 and income in 1950. We also find that the amount of population pressure does not seem to be an important factor in the level of development. On the other hand countries that one can describe as satellites or colonies seem to be better developed both economically and in education than other similar countries in a region. For example British East Africa is considerably better than Ethiopia.

If you look at Charts 1, A, B, and C. (I should say that we believe that the official figures for income in Chile were too low). Looking at these three charts and particularly the second one, you notice that there is a kind of S pattern.

One notices also that countries that have less than 30 or 40% adult literacy seem to have low income. One notices also that countries with very high income have a high literacy rate. However between about 30 to 70% literacy there seems to be almost no relation with income.

Charts 2, A, B and C refer to post primary education. In general there seems to be less relation between post primary education and income level of the countries than was the case for literacy. I would say then that these charts on post primary education therefore raise the important question as to the kind of education received by the elite in the various countries. From other knowledge one can infer that in some countries there may be a considerable number of people who receive post primary education but that education has very little relation to productivity. If one could obtain qualitative information about the education

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received by people who go beyond primary school, we could then correct these charts, (#2 ABC) and probably find a closer relation between the kind of education and the level of income in the different countries.

Chart 6 (plus list of countries in following page): Here we use as the index of education the percentage of children who were enrolled in primary schools in 1930 and the income in 1955. I think you can infer from the three sets of charts that the best correlation indicator was the enrollment of children in primary school.

These data suggest that the consumption element in education is a very large part of the total. It also suggests that it would be unwise to hope that to merely build a large education system would build economic development. I will repeat what I said before: education is necessary but not sufficient.

Charts 3, A,B and C: Countries in Latin America and West Indies: The best predictor of income for these countries was the degree of literacy; the poorest predictor for these countries was primary school enrollment. Why the result for Latin America should be different to that shown on Chart 6, I do not know. If you look at these countries you will see that there are some countries with economic levels not up to their educational level. For instance on Chart 3A Paraguay seems not to have as much income as its education would suggest. Or on Chart 3B Uruguay seems to have more income than its educational level would suggest. As to Venezuela we all know why its income is very high. Charts 4, A,B, and C - Countries of Asia: The computations show that the enrollment of children in primary school was the most closely related factor to income. You will note also that in the countries marked with an "X" (for the Far East) Japan has a very good economic situation. I think we can explain the case of Borneo and Malaya as special circumstances. It is an interesting question when looking at these charts on Asia to ask: If Japan were located where Denmark is, how much higher would its income be with nothing else changed?

We can also see that Near East countries seem to have a better income with the same level of schooling than Far East countries. I would suggest that this is due in part to market location.

Charts 5, A, B and C: Africa. For Africa and for Latin American, adult literacy seems to give the best correlation with income. (Of course South Africa is a special case).

Chart 7 is for Europe, the U.S., and the dominions. For this we made only one chart for the index giving the best correlation: primary enrollment.

In resume, for Latin America and Africa the best predictor was adult literacy. For Asia, Europe, the U.S., etc., it was the enrollment of primary schools. I do not know the reason for this difference in predictors.

Kenya: I was in Kenya as a specialist for the World Bank last year, for a period of three months. It is an impressive country from many points of view even though Europeans have been living there for about 65 years only. It has an excellent infrastructure, roads, railroads, etc. It is also a country with a large number of European settlers. This as you know creates a serious political problem but it has been of enormous economic benefit to the country. For instance Kenya has the best system of agricultural services in Africa. These were introduced first in Kenya because the European settlers wanted them. It has a good system of local government in most parts of the country. Originally the schools were all provided by religious missions. For some 10 to 20 years, it was difficult to persuade African children to go to school and sometimes they even had to be paid for this. Now the problem is to find money to open new schools fast enough. In many parts of Kenya nearly all boys go to school and  $\frac{1}{2}$  or  $\frac{2}{3}$  of the girls. Until recently most of them did not stay in school even for four years, but in recent years they have been remaining in school longer, my prediction is that by 1967, 75% of the children of Kenya will have 7 years of schooling. Even if only  $\frac{2}{3}$  of the children did this, this is a remarkable situation for a country which had no schools 60 years ago.

At present about 1% of African children go to secondary school, but it is quite possible that by 1967, 10% of Africans in Kenya will go to secondary school. There is a complicated problem in connection with education in Kenya. If the new government next year pushes out all the

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Europeans (as they seem to wish) this means that most of the people with university education and experience in business administration will have to leave the country. Also a large group of Asians, who have finished secondary school and junior college would have to leave Kenya (this comprises mainly Indians and Pakistanies). This would remove the high and the middle skills out of the country.

This kind of problems exists in many parts of Africa and the Far East. Fortunately you do not have much of this problem in Latin America. Nevertheless it is interesting to ask why have African children and their parents show so much interest in schools. Their problem now is to hold down school attendance because there is not enough money. Kenya now spends US\$4.50 for every resident in the country on education, which is about 5% of national income and about 22% of government expenditure. Also one half of the cost of primary schools is paid by fees. The plan which I recommended for Kenya would take 8% of the income and 40% of government expenditure.

But there are special circumstances for countries such as Kenya: nearly all the teachers in secondary schools and in universities must come from outside. So imagine what your problem would be if the same situation happened in Latin America.

Now we could ask ourselves, does Kenya need to put 2/3 of its children in elementary school or 10% of their young people through secondary school. Is not that too much education? What is the cost to Kenya on spending so much money in education. What will they have to give up? Would they get more economic development if they spent that money on other things. The budgetary decision is difficult.

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November 7, 1962.

I would point out to you that to transfer or transplant schools on one society or one civilization to another is relatively easy. But of course in a new setting, schools will function differently than in the countries of their origin. That fact illustrates what we know but often forget that what the schools teach is a very small part of what children learn. If you look at your own, you will realize I think that those traits which mark you out as a civilized person and make you capable of being productive are in large part acquired from agencies outside the school. Among these influences are of course religion, newspapers, movies, radio, play groups, family life and in particular the whole complex structure of the developed society. Even if one thinks only of what goes on in the school, I think we should remember that most of the influence of the school is not what is in the books but the climate of the classroom. For example children learn in school to live by objective rules, that there is a correct and an incorrect answer. They learn to test themselves by impersonal standards. One of the important things children learn in schools is the spirit of competition, that is to compare oneself with other people in achievement. Let me suggest to you an hypothesis: Suppose in the schools of your country for the first eight years children were taught only to memorize nonsense. How much difference would it make in the life of your country? I am not entirely serious about this question but the point I want to make is that a very large part of what the school does is to select those children who can survive in the schools and be ready for further education.

My point in mentioning the way in which the work of the school is supplemented by other agencies is to underline the statement that one should not expect school to carry the whole load of making a society.

It is often said that the schools in one country are not adjusted to the life of the people in that country. But now I ask you: How would you determine whether the schools of your countries are adjusted or maladjusted to the life of that country? I think if you will reflect upon this question you will find that many problems will be revealed to you. There are I suggest five things which the schools are supposed to do:

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1. The schools are supposed to indoctrinate children. Ex. Give them a civic conscience of their nation, moral norms.

2. The schools are supposed to make children have a conception of themselves as persons who share a culture.

3. The schools are supposed to perpetuate an intellectual system and the cultural system of the country, and specially are supposed to preserve and continue the schools - this indicates why it is so difficult in most countries to change or reform an educational system: most teachers are interested above all in not changing anything.

4. Education has a very important part in the developing of elites in a nation

5. Most schools have also something to do with making people ready to earn a living.

There are other agents besides the schools to perform the above five tasks (newspapers, radio, etc.) and we must again ask the question: What is the special or particular contribution which the schools make to perform each of those five functions? On the first point, I think we now know from the long history of the USSR that it is very difficult for any society to deliberately indoctrinate its youth. For example in the U.S. every year the younger generation becomes more socialistic and every year in the Soviet Union the younger generation becomes more capitalists. It seems to me that these brief observations lead to the same question: What particularly can we ask schools to do? I would suggest then it is no chance that in all societies called civilized the basic thing to do is to teach children to read, write, do some arithmetics and observe certain social habits and essentially what these schools are doing is prepare the children to be absorbed by the culture and live in that society. It is assumed that they can write a letter, read newspapers, follow directions in a book on the job, listen comprehensively to what he hears on the radio and so forth. (We are talking of primary schools).

The secondary schools are supposed to do more of course, but I would suggest that this more consists mainly in doing the same things as the elementary school but at a higher level. I think you will find very few

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cases where secondary schools give people vocational preparation except to be clerks. There are very few successful examples of vocational training at the secondary level and as you know in most countries people who go to secondary vocational schools are believed to be stupid. If vocational training at secondary level is so important, then why don't we send our most brilliant pupils to those schools?

I would summarize these remarks by saying that a country should not expect the schools to supply the principal means for remarking the country. If you have an homogeneous community, a school with very good teachers and very good equipment and you provide the best conditions in that school, then of course it can change the children more than a typical school does. But not even the wealthiest countries have this type of school.

It seems to me that a change in society is always one in which many things happen at the same time. You have the development of cities with all of the intense interaction of city life. You have people travelling from one part of the country to another. Influences coming in from other countries. You have the development of new desires for consumption on the part of the population and, therefore, all of the influences of advertising are at work. You have the press, movies, radio, TV and other mass communication influences. You have children learning different things to those their parents learnt and this interaction between generations brings change. You have labour unions, political parties and other groups which influence people. You also have the stimulation of dealing with a complex environment. This is what makes schools in the secondary level not to be an all powerful agent.

The conflict between politics and economic aims as concerned to education:

You have political pressures in underdeveloped countries for what we call a quick pay off of development. You have political pressure for pushing up wages, or social security, which make it difficult for the nation to save sufficient money. You have the pressure in most developing

/countries to

countries to spread primary education rapidly to the whole population and yet as you know, the result often is that schools and teachers are poor and most of the children drop out after 2 or 3 years of schooling. For most children this money is wasted, in such conditions the money spent in those children is thrown away. It would have been better to limit the schools to certain areas which are already beginning to develop, where people are more interested in education and where children would remain 6 or 8 years in school. My point is that the conflict between political and economical goals makes it very difficult to develop a wide educational policy. In some countries the government, for political reasons, is forced to build a big steel plant or invest in some other expensive program which brings very little economical progress, but people are very proud to have such a steel plant and if the money had been spent in schools, there would have been more development in the long-run.

I ask you whether political factors do not make countries to spend too much money on health and little on education, if your aim is economical development. Most of European countries accomplished industrial revolution with people who suffered from many diseases and were under-nourished.

The conflict between political and economical goals when making a decision on education: You probably know that many African countries now have built fine universities, much better than anything you or we have. This is a political position but as a result of this the children in the elementary schools have no books and as a result they come to the U.N. or to England, to say Please give us teachers. But my main point is should a poor country put its students in a building of marble and then ask the rest of the countries to pay the cost of development.

Every country in Africa can train its university people in Europe and Europe or the U.S. will pay the bill. I think economically then the building of universities in Africa has been too soon but the Africans made a political choice to have universities. Almost every university in Africa stands half empty. Meanwhile they cannot find money to build enough secondary schools.

/You can

You can think of many other examples and if you are working in a ministry you must observe political pressures but if you will be an educational planner, you must be self conscious between the conflict of political and other goals when you plan education. I notice from recent studies that even in Latin America nearly everybody thinks that university education should be free. Do you realize that university free education is a tax on the poor to pay the rich? But university policy is made by university graduates who are the rich.

November 8, 1962.

I will talk now about the relation of education to social class and begin by describing three kinds of situations:

1. The schools are the only source of people for positions of responsibility.

2. The school gives mostly a final polish to people who would in any event inherit their position. The schooling is essentially an automatic privilege of this small group and I suppose the best illustration of this situation would be the 19th Century's England. I suspect that most Latin American countries, though not all, are in the second group.

3. The schools supply part of the training to part of the men who enter the elite. In this type some men reach high positions by other routes than the schools and they may reach high positions with rather small amounts of formal schooling. This situation was true in the U.S. through most of the 19th Century. It was also true in the Soviet Union before World War II.

I think you can see that in types 1 and 3 people will regard the schools as having more importance than in type 2, but of course it is more important in type 1 than in 3. In the U.S. we have always believed that it was possible to reach important positions even though you had no special training. We have believed that an individual should prove by what he can do his right to a high position, rather than by having some piece of paper to prove how important he is. I think it is easy

/to see

to see why in a continent which has not had schools like Africa, the schools should be very important for preparing the new elite. I would suggest that development would come faster in Latin America if Latin American countries should become more like Type 3 than they now are. For example in the U.S. most of the leaders of economics business until about War I were men who had not gone to college. Also a large proportion of men in legislation were not college graduates. However, I would say that the goal of a so called democratic educational system is a political and not an economic goal. For example England which was the first country to develop reached its climax of development in the late 1900 or early XX century and yet it was a country with one of the most aristocratic school systems in the world. As you know there was no real public educational system in England until later. In fact all European countries, except Finland, have had very exclusive or selective educational systems until the last years. Of course for development you must have a moderate amount of schooling given to the masses (maybe 1/2 of the people), but you do not need to supply those people with advanced education in order to obtain economical development.

I would also say that in the political field there is not much evidence that the best educated countries are those with the best political systems. I would also point out that in many Latin American countries, and some others like India or France, it seems to me that the political wisdom of the university students does not seem to be very great.

Let us speak again of the conflict between political and economical goals: For example, in large parts of the world the educated people believe that their countries have been exploited by the advanced countries economically. 1) I think evidence will show that almost no European country has made money out of its colonies. 2) The question to ask however is not: Did England made money from Nigeria or Ghana? but; Would Nigeria or Ghana be further ahead now if England had not rouled it? (For instance recent research indicates that England's long history of commercial relations with the Argentina was a loss). But the point is that the educated people in underdeveloped countries have absorbed foreign ideas about colonialism and exploitation and then are lead to favour policies which restrict the

/development of

development of their countries. Yesterday I gave an example of the tendency in underdeveloped countries to push out Europeans as being exploiters and yet these Europeans are the only source in the near future for technical and high level skills. In Africa one sees another thing: the African elites in government expect to be paid the same money as the Europeans who were formerly running those government positions, but the result of this policy is the absorption of enormous amount of money that would be better spent in other ways. Also there is the tendency of many of these countries to build very fine public buildings, as good as those in France or England, as a mark of prestige, which again absorbs scarce capital.

Another tendency is to assume that an African who has taken a degree at Oxford is as skilled as an Englishman who has taken a degree at Oxford. The Europeans recognize, just as I think you will, that the Oxford certificate obtained by an Englishman is only part of the total knowledge which he has: he has learned many things by growing up in England, things which a person who has spent only 4 years of his life in England at Oxford will never learn. My opinion is that if the new officials in Africa were primarily interested in economical development, they would wish to keep as many European managers, technicians, officials as they could manage to hire. It is simple logic that the total experience of a trained Englishman, which may cost, let us say £4,000 a year to an African country, is worth much more to that country than £2,000 or £3,000 spent on material capital. Then we say sometimes that human capital is the most important factor in development, but under the pressure of political arguments, the leaders in any new nations forget this when it comes to consider the services that Europeans could give them. I do not say that the Africans should place economic goals first. These are some of the situations where economic sacrifices are brought about by putting political things first.

The most rare of scarce form of human capital, from the economical point of view, is the enterpriser. The business enterpriser is the most important factor from the economical point of view. The difficulty in many countries of Africa and India, etc., is that they have studied in England in the days when socialism was popular and they acquired a hatred against businessmen. So you then have the problem in many countries of encouraging

/business enterprisers

business enterprises and not chocking off their efforts for political reasons, that is if you want first of all economical development.

If a country wishes to increase as rapidly as possible the number of secondary and university graduates, then it must avoid trying to make its educational system too democratic. I say, if it wishes to do this quickly because at any time at any country there are certain districts or communities with certain social groups which are more interested in education and who have children with educational aspirations than other districts or groups. It is then good policy to draw your secondary and university students from the former districts or groups first. However you should not make that school free as we were saying before. But in order to look towards the next generation you should at the same time begin to push schools out to the other districts which show less interest. Then in the development of human resources just as in the development of physical resources you take into account the accessibility or ease of development.

Now it may be that in Latin America most secondary and higher education is too aristocratic; I suspect this is the case but I am not an expert on Latin America. However, a complete reversal of this policy by scattering the money equally among all parts of the countries would prove uneconomic. When one reads that there are too many educated people, particularly in countries like India, it seems that this can never be true and that you really have too many university graduates but you may have, as in India, most university graduates coming from well to do families and these graduates live off from their families until someone offers them the job which they want to have. Clearly then the difficulty is the lack of spirit of enterprise among those college graduates. Also one suspects that because education was free and because the tax system is not very efficient that these people have a lot of money so that their children can do nothing after they finish their education. Therefore the answer might be for poeple to pay for the university education and to have an efficient tax system. Another answer is to prepare so many university students that the supply becomes very much in excess of the so called demand and eventually they will have to go to work. (If there is a so called excess of educated people, I suspect the cure is not to educate fewer but make them pay for the education and have the rich pay the taxes).

/November 9

November 9, 1962.

Regarding yesterday's lecture I will repeat one point in a new way: In planning educational investments a ministry must choose between two alternatives:

Shall money be spent where it is most needed or shall it be spent where it will bring the biggest return on education programs? If one chooses solely economic ends or if one is concerned only with short run results he will put investments where the return will be the largest and quickest. If one is interested also in non economical results, or interested in longrun results, he will put the money where it is most needed, that is where the educational progress up to now has been least.

Now in fact all countries may take compromise between these two principles, but it is of interest that no country spends most of its money on the most backward areas. One reason of course is that people living in educationally more backward areas will not respond to a program of development quickly and so in practice in most countries two policies can be developed:

1. What we in the U.S. call "foundation program", i.e. a minimum amount of money is distributed everywhere and other money is distributed above that foundation in proportion to the capacity of an area to make use of that money. Of course one usually finds that the more advanced areas in education will spend local public money or private money to further develop their educational system, and therefore one recognizes that there is no country in the world which has in the full sense of the word equal opportunities of education in all parts of its territory. One might say that the tragedy of educational development planning or economic development planning is that the areas now already advanced will be given further help. In fact one can say that in most underdeveloped countries today the desire for rapid economic development leads to the systematic use of a non equalitarian educational policy.

/From the

From the stand point of the policy of an educational ministry there are certain things which are sometimes done. For example, sometimes a ministry will give money to local districts in proportion to the speed in which they increase attendances to schools. Sometimes they will give money in proportion to the speed in which they increase attendances to schools. Sometimes they will give money in proportion to the ratio of attendance of girls to boys. Sometimes in order to reduce wastage, a ministry will pay more money to a local district per pupil in the third year of school than in the second, more in the fourth than in the third. In some places a ministry will pay money to local districts not in relation to enrollment of pupils but in relation to attendance of pupils. In the U.S. we have found that if you shift payments from enrollment to attendance, you may get in one year a 20% increase in attendance. My own judgement is that in most parts of the world today money from central government should never be used for elementary schools but only for middle or secondary schools. In summary, that so far as possible, the money from the central government should be used as incentive.

#### Vocational education

I would make the general statement that for the most part a country cannot depend upon the schools to bring about the adjustment of the supply of trained people to the demand. I think in most countries all that the primary and secondary schools can do is to make people ready to learn a vocation. I would say also that if one wishes to adjust the supply of trained people to the needs, the training should be moved as near to the job as possible. i.e. one should emphasize primarily training on the job or in other words training given by the employers, whether public or private. As you know, training in vocational school tends always to get out of date and in most countries many people will attend vocational schools as a backdoor way to get into the higher schools. I would suggest that skills in a population will be increased perhaps most rapidly if the schools, primary and secondary, concentrate upon science and teaching people to solve problems rather than trying to teach them vocational skills. For example, all over the world there is a tendency to try to

/teach agriculture

teach agriculture in primary schools and yet we all know an index of economic development is people leaving agriculture. So far as the children are concerned, it would be better to wait and find out which one of them wants to be a farmer and then teach him agriculture.

Quantity and Quality.

In every country when it is proposed to rapidly increase the number of children in schools, primary and secondary, the ministries and teachers' associations say: "But this will reduce the quality of the students! I would offer two arguments on the other side:

1. The problem is not to produce the largest number of highly skilled individuals but the largest quantity of skills in the population.

2. If you rapidly increase the enrollment in secondary schools for example, it is true that the average level of performance of the pupils will decrease (like in their bachelor's degree). But even if the average decreases, the number of pupils who will perform at a high level will increase, or one can say the variability among the pupils will increase. I would also point out that the two most dynamic industrial countries, the U.S. and the Soviet Union, are the countries which have never really worried about the qualities of schools. We believe that it is important to give a little schooling, more each year, to many people, than very good schooling to a few. Which leads to my next topic, i.e. we should be more concerned in teaching pupils to learn than concerned about teaching them. If you gather children in large numbers in schools and provide them with materials to study and give them some stimulation, a large proportion will learn a lot even if they have poor teachers. Of course good teachers will teach more than poor teachers. But if one wishes to rapidly increase the skills of a population one should be primarily concerned to assist pupils to learn. Professional educators are always too much impressed by teachers and too little impressed by the capacity of children to learn. For example, I think a country will get more benefit not by introducing TV in the schools but by using self teaching manuals by which the children can teach themselves. The most important kind of teaching machine is a book which is organized in such a way that it leads the pupil to think.

/Now I

Now I will coment briefly on certain things about teachers:

In every country the ministry says "If we could pay teachers more money we would have better teachers". But every other ministry would say: "If we could pay more money we can obtain better people", but there are not enough good people to go around. I know of no formula by which one can decide how much more money could be paid to teachers than to other people with similar education. A developed country is where you have a realtively good supply of all kinds of trained people and it is therefore relatively easy to find good teachers, but in underdeveloped countries there are not enough trained people to go around. For example, perhaps in Chile one would get more economic development if one puts the best trained people in the income tax office or in the agricultural expansion services. In short I know of no principle to decide how much a teacher should be paid except the market. (I will point you that in U.S. until World War I most Americans went to one room schools in which the teachers were farmers' daughters who had one or two more years of schooling than their pupils). Another difficulty is that the teachers are the largest personal group in most countries. This means that it is difficult to find enough teachers and also means that if you increase their salaries you create a serious economical problem to government. Also the problems of teachers supply is one of the most powerful tool for encouraging attendance of girls to schools, at least for the elementary schools, the most practical supply of teachers is women who are waiting to get married. I would say that a country which has a large proportion of men among the elementary teachers is making a mistake in planning. In Kenya I gave a questionnaire to all teachers. I asked this: Is there some other job that you would rather have than to teach in school?, and I found that the better trained are the teachers they said "yes, I would rather do something else than teach". There are two reasons for this: The better prepared is the teacher, the wider are his mental horizons and the wider his possibilities of other jobs. The other reason is that objectively better trained people do have more chances of other kinds of jobs. By using women as elementary school teachers you are able to

/employ people

employ people who are only in the labour force temporarily and will therefore have a lower supply price for their services. This leads me to raise the question for which I really have no answer: Should women teachers be paid the same as men?

You all know that to train teachers of high quality takes a long time and if you wish to expand the schools rapidly you cannot wait until you have all the teachers well trained. Therefore it seems to me that in a developing country every ministry should give more attention and money to upgrade the present category of teachers. There are many ways to do this: short courses, summer courses and so forth, and salary scales should be arranged so that teachers can get an increase only if they have taken a further training in a summer or short course. Also in setting salary scales for teachers, I think it would be important to emphasize not the salary of beginning teachers but the arrangement of salary so that you will persuade people to remain as teachers if they are good. As you know in many countries where teachers are well organized, the elementary teachers make up most of the profession. If the elementary and secondary teachers are in the same professional association, the emphasis of policy in the association will tend to be on what helps the elementary teachers and beginners. But the improvement of education means that you must select the good teachers from those you begin and keep these teachers in service. The way to reduce turn over of teachers is not to set high beginning salaries but to have rapid increment in salaries for good teachers who remain and to pay increments of salary to those teachers who show that are interested in improving their skills.

Experience shows that if people see that when they receive more education they will get more money, they will then want more education, but it is also true that there are strata and districts in every country where people do not see that education brings development. There are two solutions in this case:

1. Compulsory education (I do not agree with this)
2. Try to bring some economic development in that district and then people will change their perception.

/In most

In most countries elementary teachers are sons of farmers and workers. I do not think any country can find a sufficient supply of teachers if the teachers come only from middle or upper classes. If you cannot persuade enough people to become teachers from the group of artisans, farmers and clerks, then you cannot get educational development. The middle and upper classes do not have enough children to provide teachers for the elementary and secondary schooling. Those countries which are catholic, where priests do not have children and where women do not go to school, have special problems in finding a sufficient supply of teachers. A developing educational system will be where a large part of the teachers are the children of teachers.

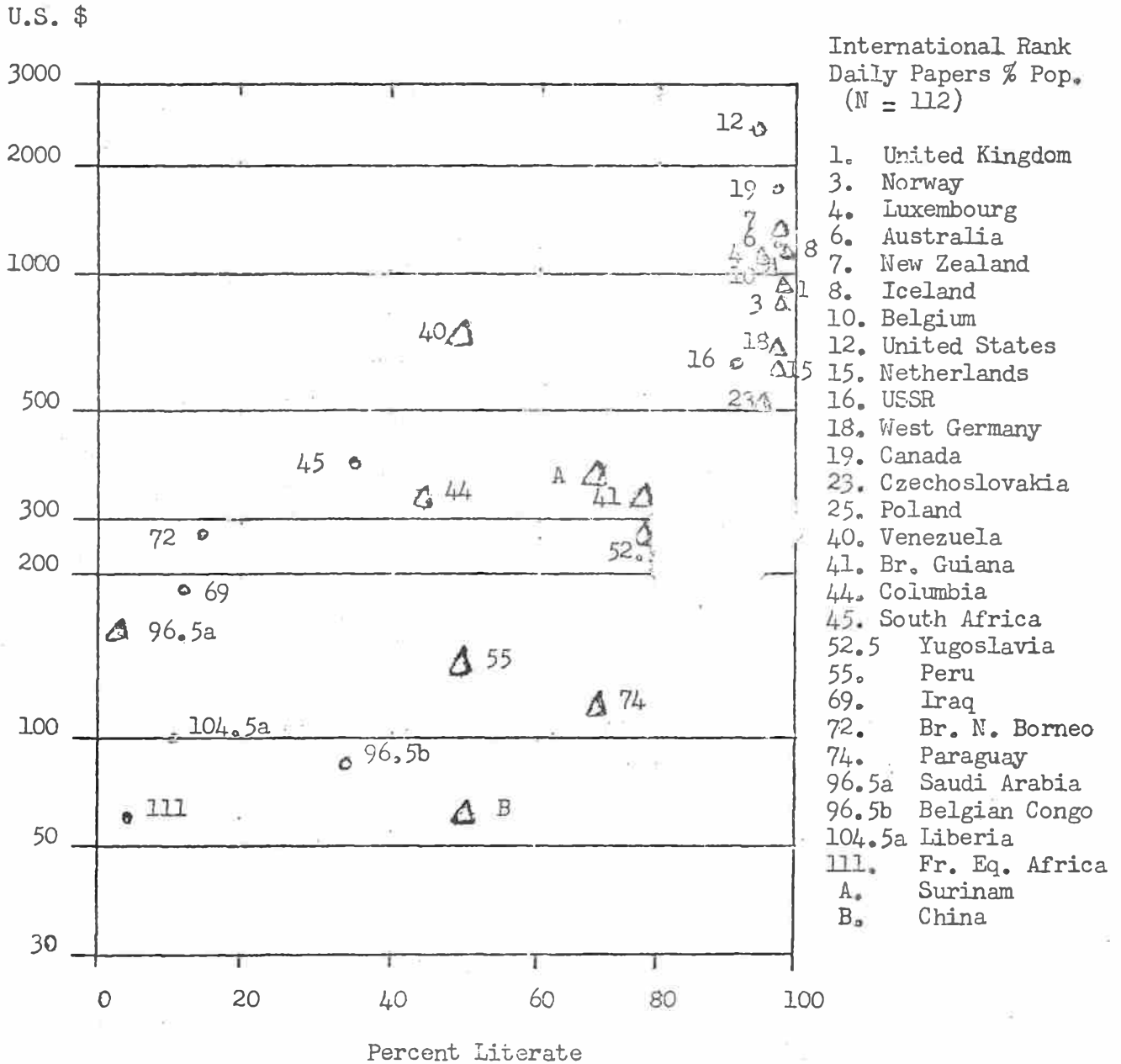
Chile is in a comparatively favorable position in education. You will of course have to watch from year to year what effect this salary scale will have on the supply of necessary teachers. But you have in Chile a census of people in different occupations in relation to the amount of schooling they have had. By the use of your 1962 census and by sample studies you can see whether people of a given educational level are moving towards teaching or away from teaching and then because of your good census, you can see what your salary scale will have on the recruiting of teachers. Countries which do not collect census information on schooling will have more difficulty in studying this problem accurately. If you have a good census such as in Chile, there is relatively little need for special manpower surveys. A good census provides most of the information needed for investigations.

I. Gross National Product per Capita, 1955 (U.S. Dollars)  
by Percent of Adults Literate, 1950

A. Top Third of countries in energy potential

Mean and over in cultivated land per capita

Below mean in cultivated land per capita



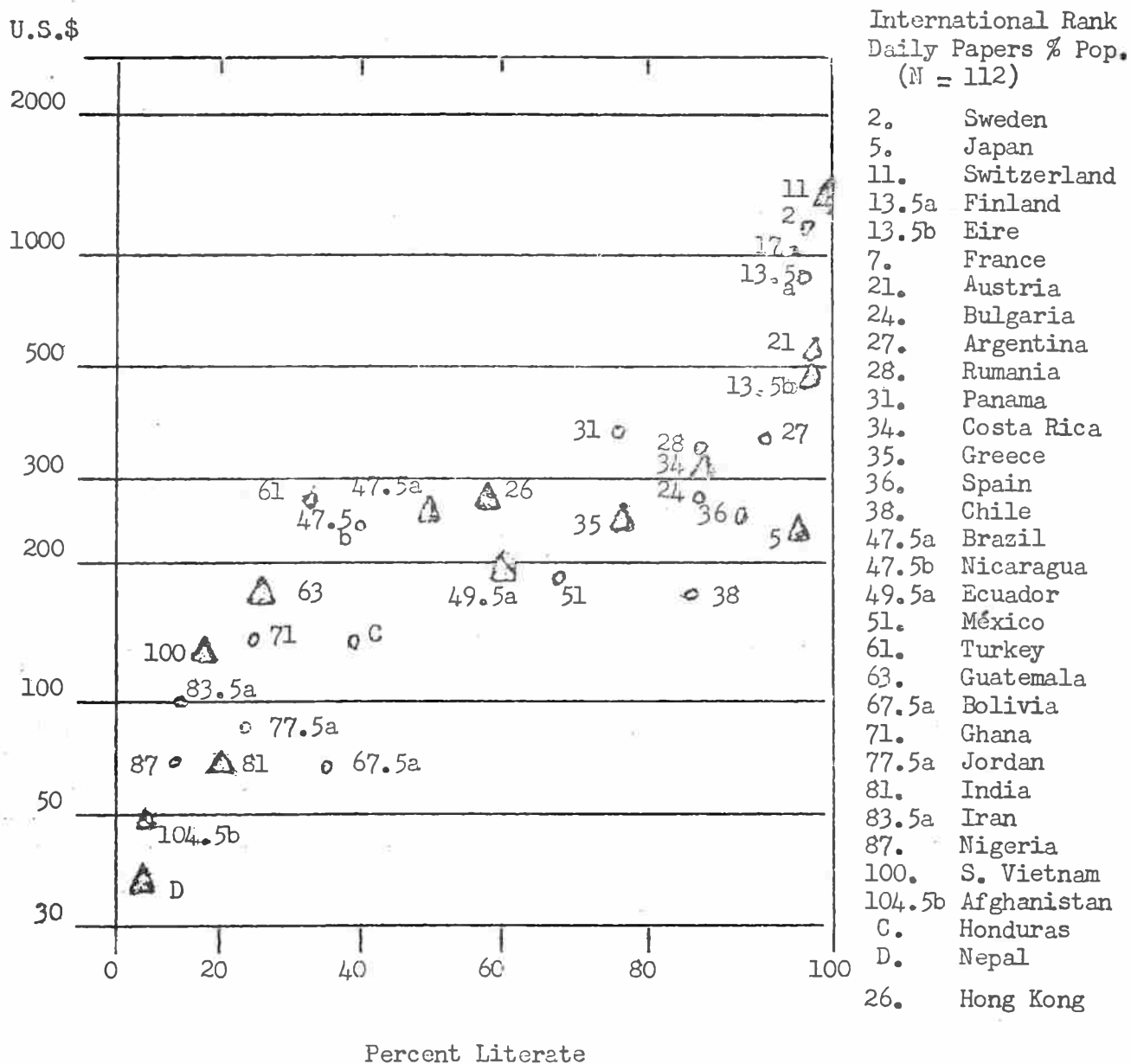
Source: Ginsburg and Berry, Atlas of Economic Development

I. Gross National Product per Capita, 1955 (U.S. Dollars)  
by Percent of Adults Literate, 1950

B. Middle Third of countries in energy potential

• Mean and over in cultivated land per capita

△ Below mean in cultivated land per capita

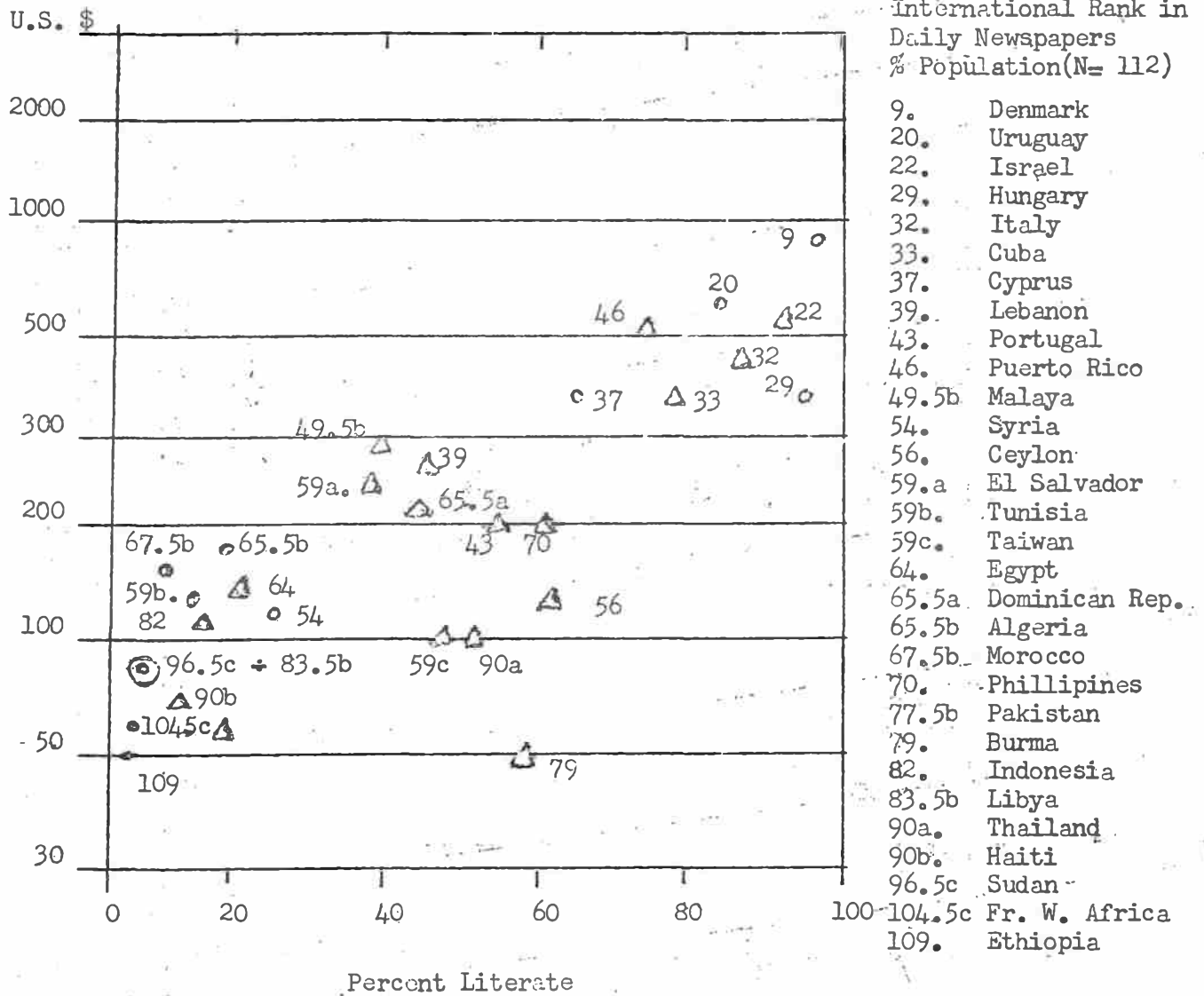


I. Gross National Product per Capita, 1955 (U.S. Dollars)  
by Percent of Adults Literate, 1950

C. Lowest Third of countries in energy potential

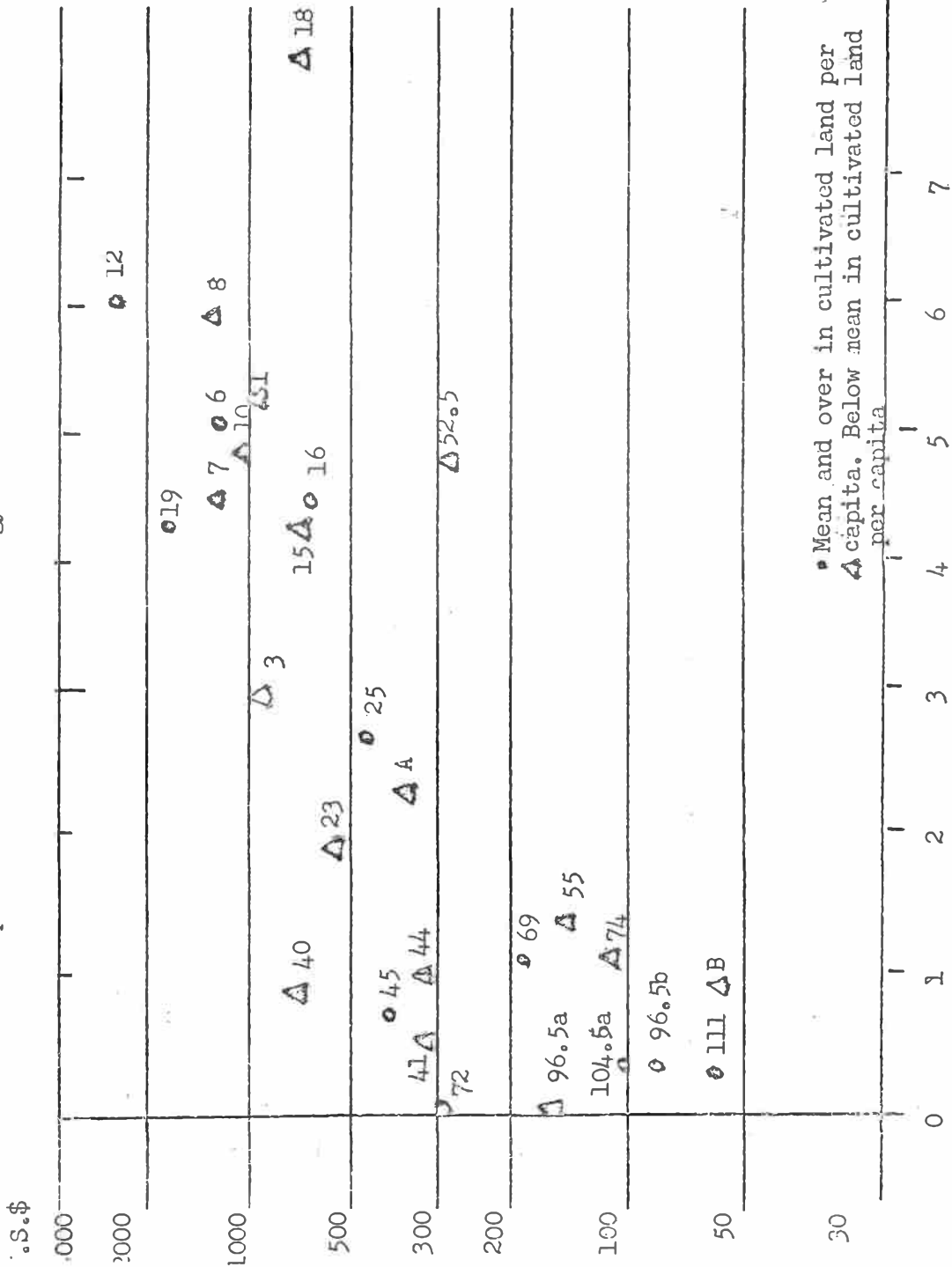
Mean and over in cultivated land per capita

Below mean in cultivated land per capita



II. Gross National Product Per Capita 1955 (U.S. Dollars)  
by percent of Total Population in Post-Primary Schools, 1950

A. Top Third of Countries in Energy Potential



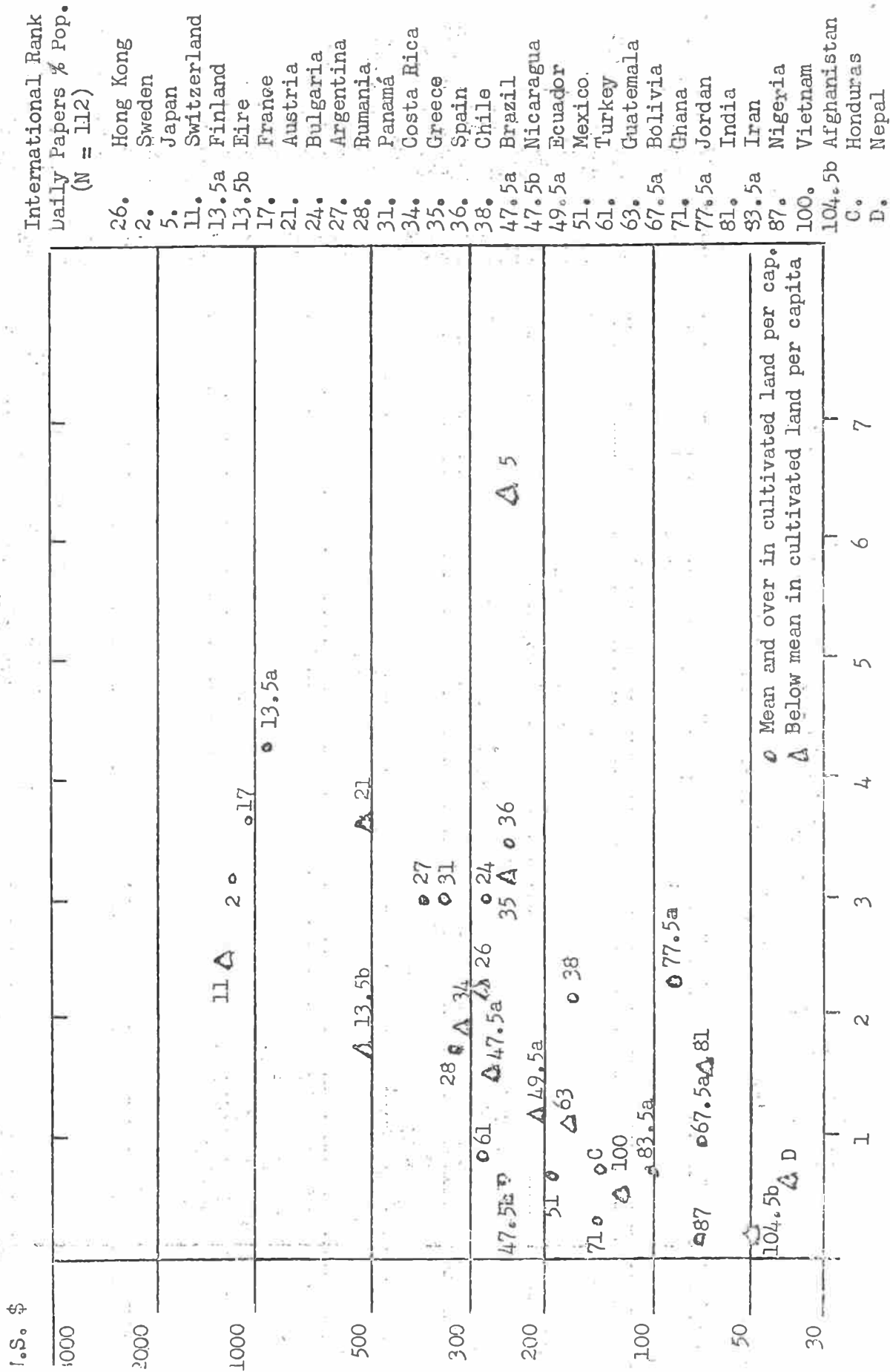
Percent in Post Primary Schools

International Rank in Daily Papers % Pop. (N = 112)

1.	United Kingdom
3.	Norway
4.	Luxembourg
6.	Australia
7.	New Zealand
8.	Iceland
10.	Belgium
12.	United States
15.	Netherlands
16.	USSR
18.	West Germany
19.	Canada
23.	Czechoslovakia
25.	Poland
40.	Venezuela
41.	Br. Guiana
44.	Columbia
45.	South Africa
52.5	Yugoslavia
55.	Peru
69.	Iraq
72.	Br. N. Borneo
74.	Paraguay
96.5a	Saudi Arabia
96.5b	Belgian Congo
104.5a	Liberia
111.	Fr. Eq. Africa
A.	Surinam
B.	China

II. Gross National Product Per Capita 1955 (U.S. Dollars)  
by percent of Total Population in Post-Primary Schools, 1950

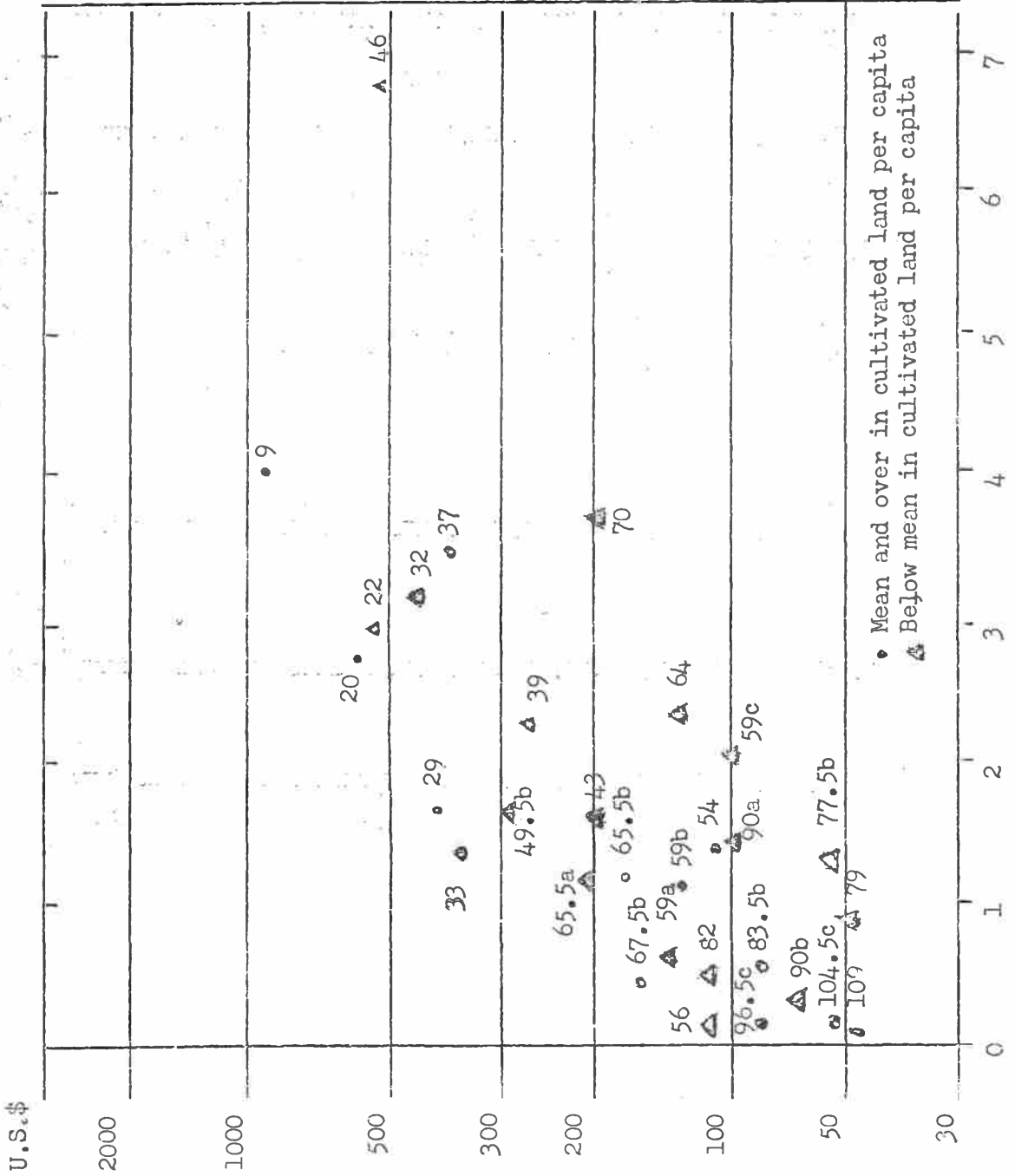
B. Middle Third of Countries in Energy Potential



Percent in post-primary schools.

II. Gross National Product Per Capita 1955 (U.S. Dollars)  
by Percent of Total Population in Post-Primary Schools, 1950

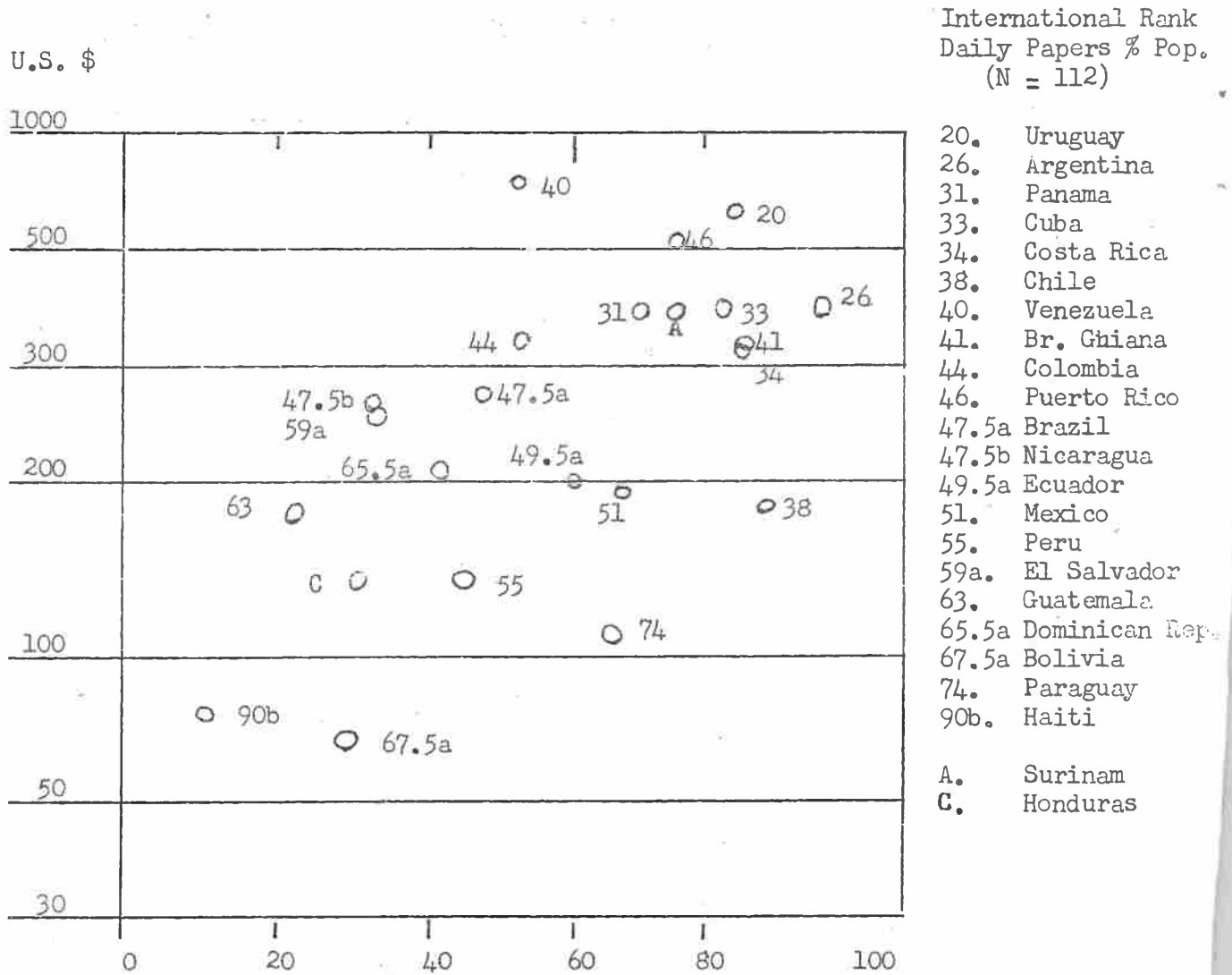
C. Low Third of Countries in Energy Potential



Precent in Post-Primary Schools

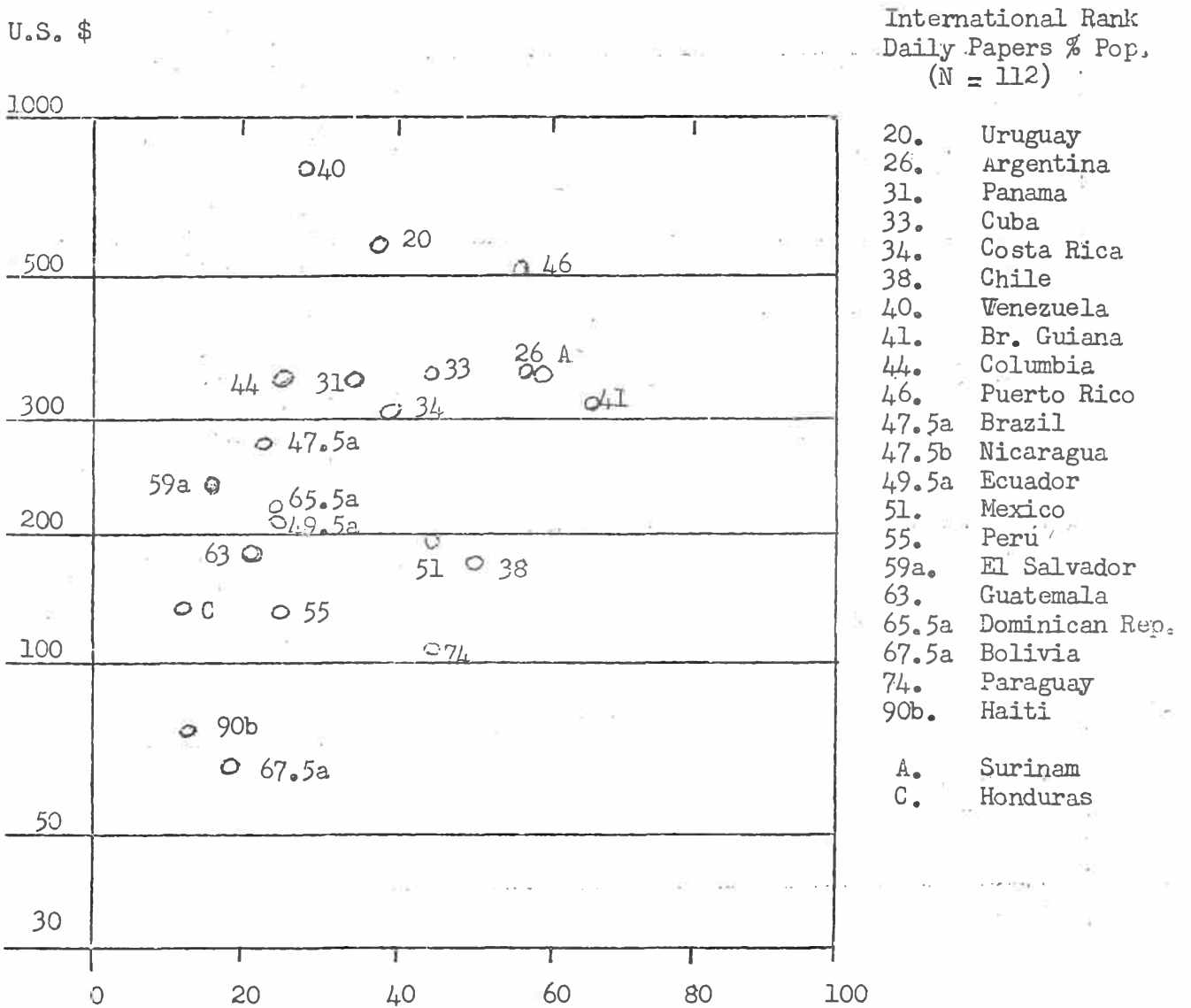
III. Countries of South and Central America: Gross National Product per Capita, 1955 and Education.

A. Percent of Adults literate, 1950.



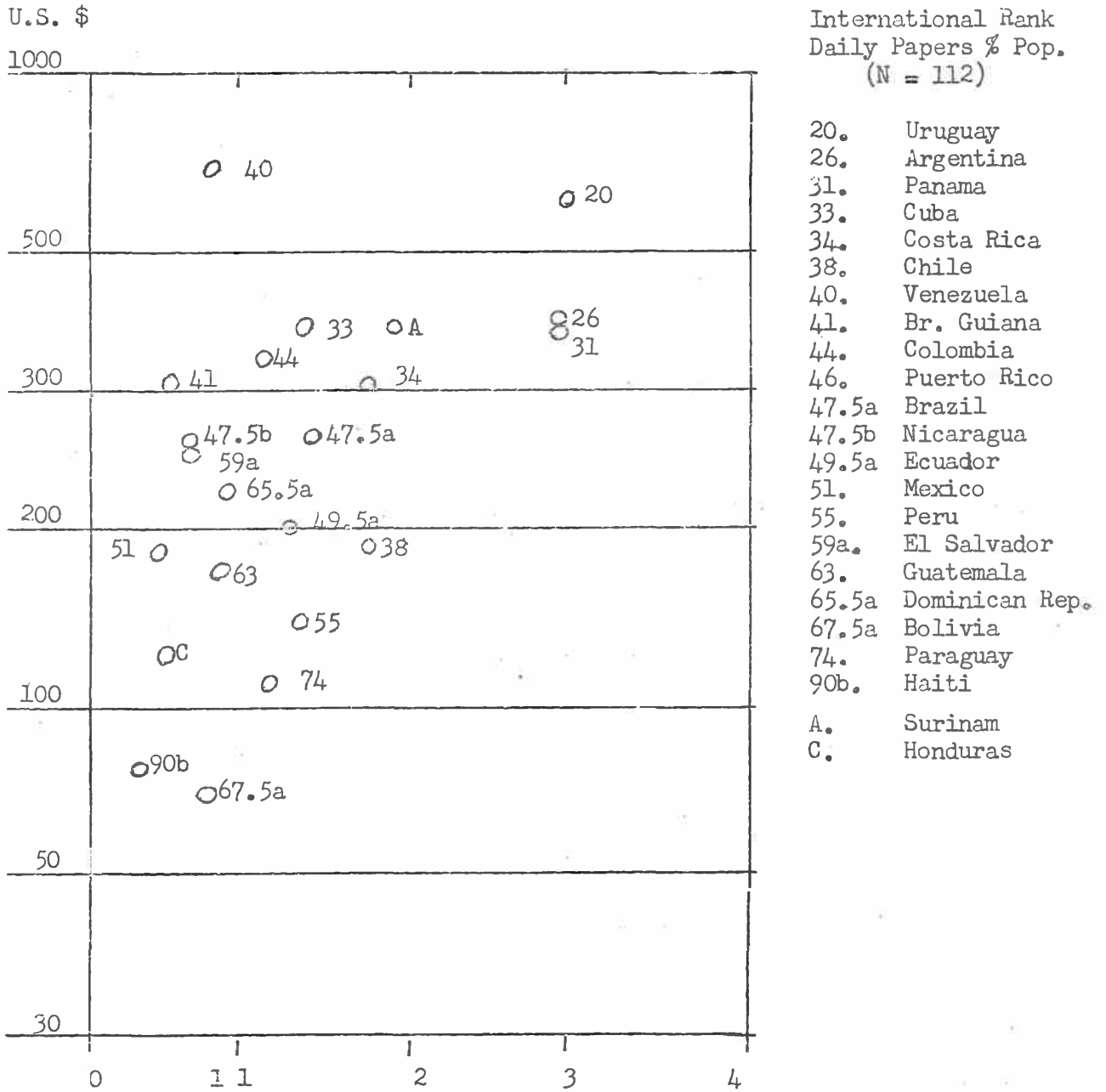
III. Countries of South and Central America: Gross National Product per Capita, 1955 and Education

B. Percent of Population Age 5-14 in School, 1930.



III. Countries of South and Central America: Gross National Product per Capita, 1955 and Education

C. Percent of Population in Post-Primary Schools, 1950

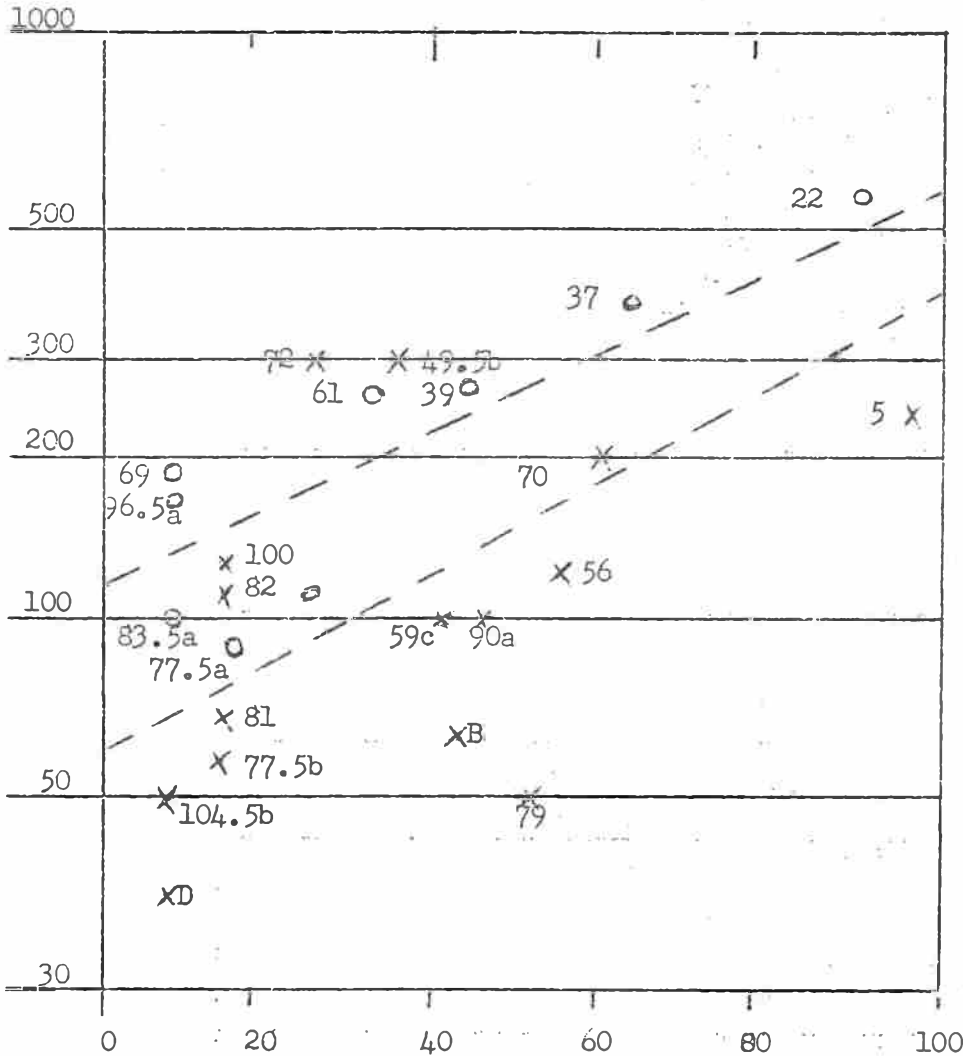


IV. Asian Countries: Gross National Product per Capita, 1955 and Education

A. Percent of Adults Literate, 1950

- o. Near East
- x. Far East

U.S. \$



International Rank  
Daily Papers % Pop.  
(N = 112)

Near East

- 22. Israel
- 37. Cyprus
- 39. Lebanon
- 54. Syria
- 61. Turkey
- 69. Iraq
- 77.5a Jordan
- 83.5a Iran
- 96.5a Saudi Arabia

Far East

- 5. Japan
- 49.5b Malaya
- 56. Ceylon
- 59c. Taiwan
- 70. Phillipines
- 72. Br. N. Borneo
- 77.5 Pakistan
- 79. Burma
- 81. India
- 82. Indonesia
- 90a. Thailand
- 100. S. Vietnam
- 104.5b Afghanistan
- B. China
- D. Nepal

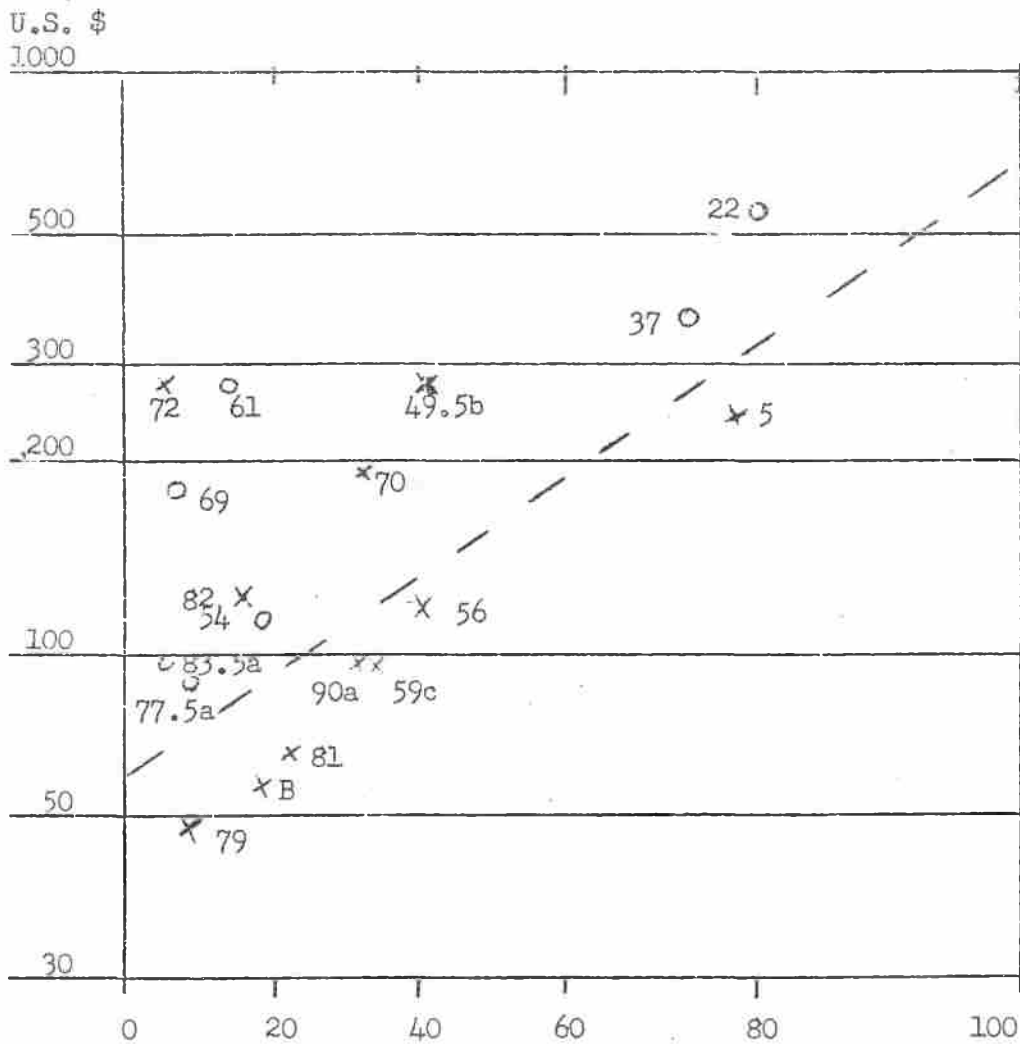
IV. Asian Countries

B. Percent of Population Age 5-14 in School, 1930

x Near East  
o Far East

International Rank Daily Papers % Population (N = 112)

Near East		Far East		
22.	Israel	5.	Japan	B. China
37.	Cyprus	49.5b	Malaya	D. Nepal
39.	Lebanon	56.	Ceylon	
54.	Syria	59c.	Taiwan	
61.	Turkey	70.	Phillipines	
69.	Iraq	72.	Br. N. Borneo	
77.5a	Jordan	77.5	Pakistan	
		79.	Burma	
		81.	India	
		82.	Indonesia	
		90a.	Thailand	
		100.	S. Vietnam	
		104.5b	Afghanistan	



IV. Asian Countries

C. Percent of Population in Post Primary Schools, 1950

o. Near East

x. Far East

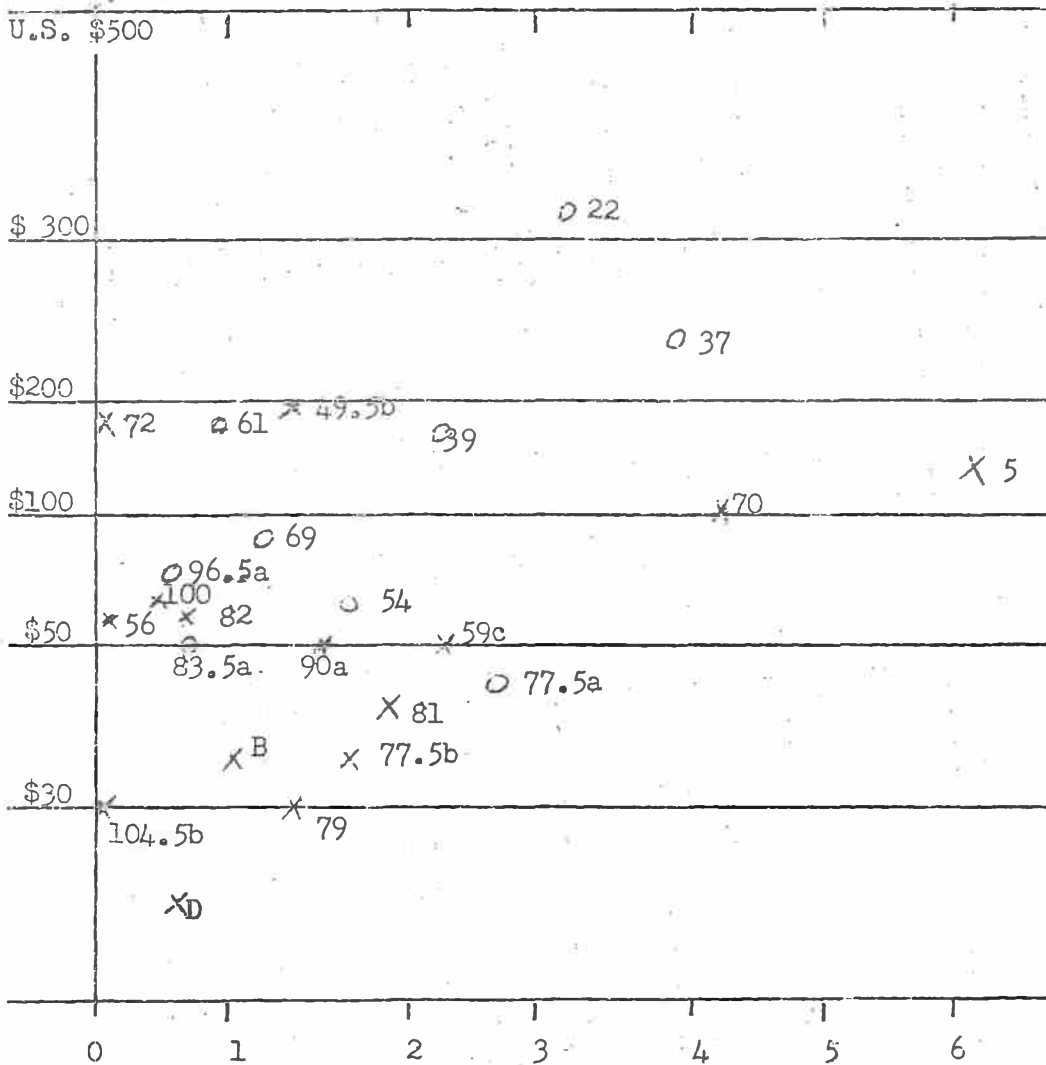
International Rank Daily Papers % Population (N = 112)

Near East

22. Israel	61. Turkey
37. Cyprus	69. Iraq
39. Lebanon	77.5a Jordan
54. Syria	83.5a Iran
	96.5a Saudi Arabia

Far East

5. Japan	70. Phillipines	81. India
49.5b Malaya	72. Br. N. Borneo	82. Indonesia
56. Ceylon	77.5 Pakistan	90a. Thailand
59c. Taiwan	79. Burma	100. S. Vietnam
		104.5b Afghanistan
		B. China
		D. Nepal

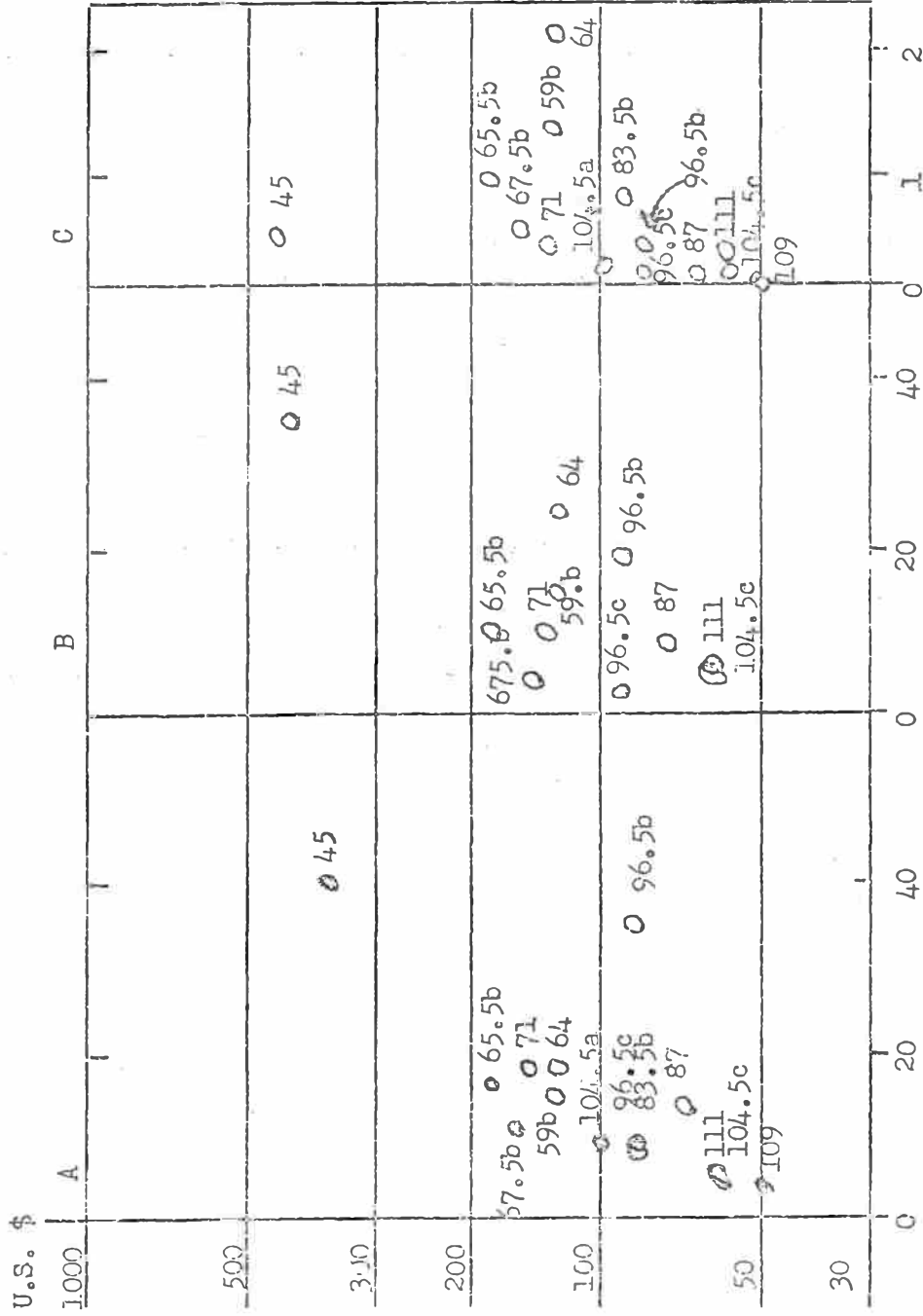


V. African Countries: Gross National Product per Capita, 1955, and Education

A. Percent of Adults literate, 1950

B. Percent of Population Age 5-14 in School, 1930

C. Percent of Population in Post-Primary Schools, 1950

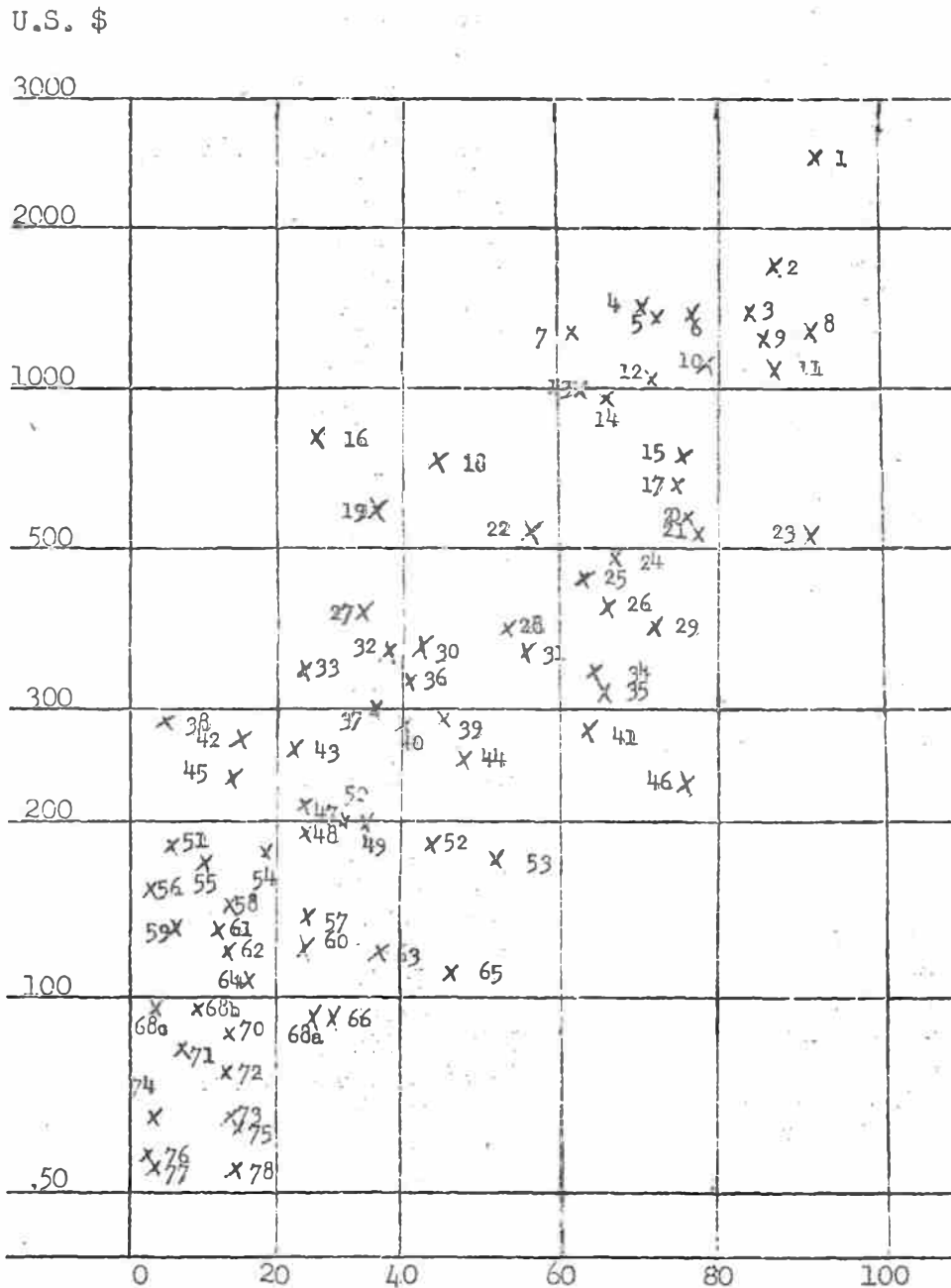


International Bank  
Daily Papers % Pop.  
(N = 112)

45. South Africa  
59b. Tunisia  
64. Egypt  
65.5b Algeria  
67.5b Morocco  
71. Ghana  
83.5b Libya  
87. Nigeria  
96.5b Belgian Congo  
96.5c Sudan  
104.5c Fr. W. Africa  
109. Ethiopia  
111. Fr. Eq. Africa  
104.5a Liberia

VH. Gross National Product per Capita, 1955 and Percent of Population Age 5-14 in Primary School, 1930 \*

(Countries numbered by 1955 rank in Gross National Product per Capita)



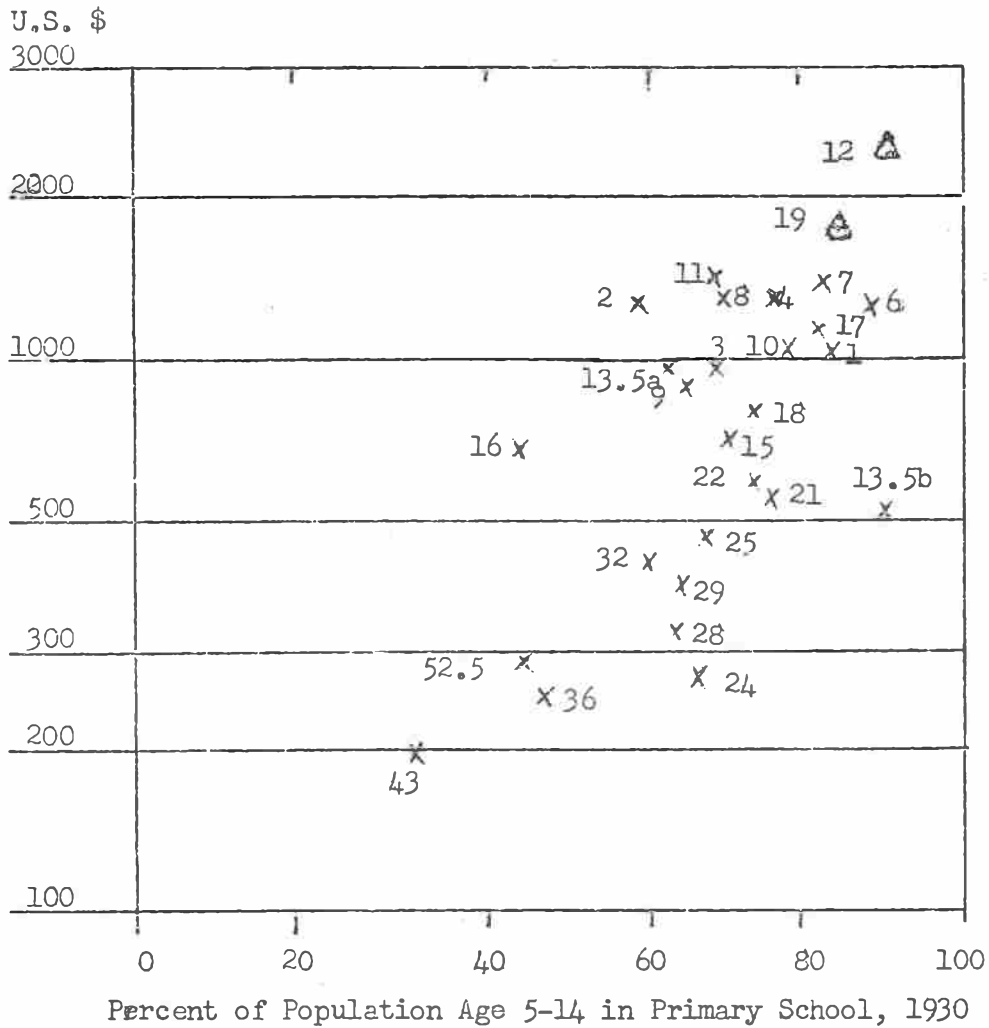
Percent of Population Age 5-14 in Primary School, 1930

\* Data on primary school enrollment rates are from UNESCO, World Survey of Education, Volume II, Primary Education, 1958, pp. 58-60

Figure VI. Identification of countries:

- |     |                       |       |  |
|-----|-----------------------|-------|--|
| 1.  | United States         | 40.   | Hong Kong  |
| 2.  | Canada                | 41.   | Bulgaria   |
| 3.  | New Zealand           | 42.   | Turkey   |
| 4.  | Switzerland           | 43.   | Brazil   |
| 5.  | Australia             | 44.   | Spain  |
| 6.  | Luxembourg            | 45.   | El Salvador  |
| 7.  | Sweden                | 46.   | Japan  |
| 8.  | Iceland               | 47.   | Dominican Republic                                 |
| 9.  | France                | 48.   | Ecuador  |
| 10. | Belgium               | 49.   | Portugal   |
| 11. | United Kingdom        | 50.   | Phillipines  |
| 12. | Norway                | 51.   | Iraq   |
| 13. | Finland               | 52.   | Mexico   |
| 14. | Denmark               | 53.   | Chile  |
| 15. | West Germany          | 54.   | Guatemala  |
| 16. | Venezuela             | 55.   | Algeria  |
| 17. | Netherlands           | 56.   | Morocco  |
| 18. | U.S.S.R.              | 57.   | Peru   |
| 19. | Uruguay               | 58.   | Honduras   |
| 20. | Israel                | 59.   | Ghana  |
| 21. | Austria               | 60.   | Egypt  |
| 22. | Puerto Rico           | 61.   | Tunisia  |
| 23. | Ireland               | 62.   | Indonesia  |
| 24. | Poland                | 63.   | Ceylon   |
| 25. | Italy                 | 64.   | Syria  |
| 26. | Hungary               | 65.   | Paraguay   |
| 27. | Union of South Africa | 66.   | Taiwan   |
| 28. | Argentina             | 68a.  | Thailand   |
| 29. | Cyprus                | 68b.  | Iran   |
| 30. | Cuba                  | 68c.  | Sudan  |
| 31. | Surinam               | 70.   | Belgian Congo                                      |
| 32. | Panama                | 71.   | Jordan   |
| 33. | Colombia              | 72.   | Haiti  |
| 34. | Rumania               | 73.   | India  |
| 35. | Br. Guiana            | 74.   | Nigeria  |
| 36. | Costa Rica            | 75.   | Bolivia  |
| 37. | Malaya                | 76,77 | French West Africa<br>and French Equatorial Africa |
| 38. | Br. N. Borneo         | 78.   | China  |
| 39. | Yugoslavia            |       |  |

VII. Countries of Europe, the United States, Canada, Australia and New Zealand; Gross National Product per Capita, 1955 and Primary School Enrollment Rates in 1930.



International Rank Daily Papers % Population (N = 112)

1. United Kingdom	16. U .S.S.R.
2. Sweden	17. France
3. Norway	18. West Germany
4. Luxembourg	19. Canada
6. Australia	21. Austria
7. New Zealand	22. Israel
8. Iceland	24. Bulgaria
9. Denmark	25. Poland
10. Belgium	28. Rumania
11. Switzerland	29. Hungary
12. United States	32. Italy
13.5aFinland	36. Spain
13.5bEire	43. Portugal
15. Netherlands	52.5 Yugoslavia

