

SOCIAL FOUNDATIONS OF ECONOMIC DEVELOPMENT

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INTRODUCTION

The work in this paper began in order to understand what might be expected from developing countries over the next twenty years. Two questions in particular were posed:

- 1- What accounts for variations in development and rates of economic growth?
- 2- How can development and growth rates be predicted?

To answer these questions, we have separated this paper into three parts. In Part I, we consider the developing countries and discuss the relationship between social and economic indicators of development as conceptualized by a Double-S Curve. In Part II, we examine the potential for shifts in the balance of the world economy due to the changing levels of development in Third World countries. In Part III, we imagine a second Double-S Curve facing mature societies and hypothesize some of its characteristics, which will be shaped in part by the change in developing countries.

PART I - THE DOUBLE-S CURVE

However, in order to account for variations in development, we needed first to establish the nature of the development process. What is it? How does it behave?

Obviously, these are questions that have been tackled by many writers and economists and researchers as one of the principal targets of basic research. There is an abundance of theory and mostly economic data that has been assembled to approach the issues. Here, however, we are not interested in the problem as basic research. Instead, we need only develop some understanding of what the development process might entail so that we can a) establish a vision of "expectable" development, b) identify the variations from the expected, and c) create ways of predicting both expectable and variable behavior.

#### Influencing the Development Process

In moving from an understanding of the nature of development to an ability to predict how it is going to behave in the future, we needed to know what factors are likely to be involved in the development progression. Eventually, we would like to examine some of the cultural and political factors in addition to purely economic considerations. What, for example, will be the effect of various political philosophies, how much might a hierarchial social structure valuing obedience affect economic development based on independent entrepreneurial talent? In short, can we, by understanding the social and cultural elements of development, anticipate the nature and extent of subsequent economic growth?

#### United Nations Research Institute for Social Development, Geneva

Approaching an understanding of development was made considerably simpler when we acquired the data base and all written research done by the

United Nations Research Institute for Social Development (UNRISD). Since the 1960s, UNRISD has supported a Statistical Unit that has been looking for social and economic indicators of development and has identified nineteen core indicators which are highly correlated with development, relatively "clean" data, and have fairly good coverage, i.e., are available for a fairly large number of countries.

This data base, which was developed for 120 countries for 1970 data, has been used in this study to present ideas on what is the expectable progression of development. The data have also been used to identify those countries which vary from the expected. In the course of that work, we have also been able to test several predictors of economic growth.

In the analysis that follows, we have relied heavily on the approaches developed by the UNRISD Statistical Unit. This reliance is justified for several important reasons. First, the UNRISD people have spent the past twenty years doing basic research on the nature of the development process and have acquired considerable expertise. Second, they have assumed that development was both a social and an economic phenomenon and have therefore operated with a more broadly-based perspective than one normally finds. Third, it was reasoned that if we wanted eventually to identify cultural factors in development, it seemed important to know what social indicators were most highly correlated with development and to learn how those social indicators behaved in the process.

### Early Findings

In the next few pages we have summarized the early findings drawn from the UNRISD data. The material falls into four sections. In the first we compare the behavior of social indicators to the behavior of economic indicators of development. In the second section we present the "Double-S Curve", a graphic conceptualization of how social and economic development work together. In the third section we look at the effect of various levels of development on the growth rate of the Gross Domestic Product. The fourth and final section examines selected social indicators in order to test the hypothesis that where social advances are greater than economic advances, they will serve to "pull up" economic development.

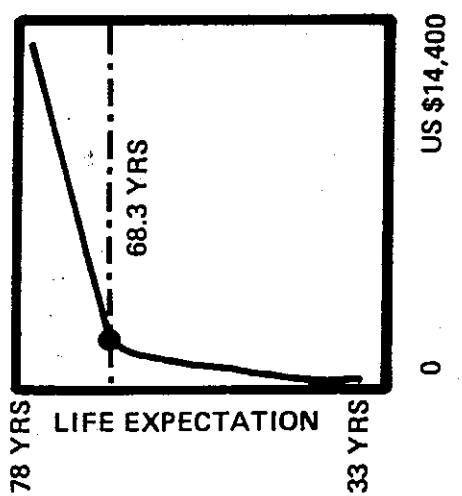
The findings presented in Part I of this paper are still somewhat speculative. In that sense they are more akin to hypotheses in need of further testing than they are firm and absolute conclusions. Still, the evidence is strong enough and sufficiently replicated from several different angles, to suggest that any understanding of economic progress is incomplete until it includes consideration of the social foundations.

### The Turning Point: 68 Years

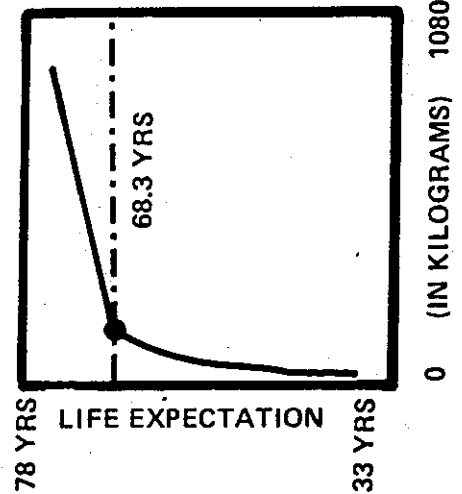
In Figures <sup>1</sup> ~~1~~ and <sup>2</sup> ~~2~~, sketches have been drawn of the Best-Fitting Lines that were generated by UNRISD when statistics for Life Expectation were plotted against statistics for six social and six economic indicators. Several interesting observations can be made from these graphs:

# LIFE EXPECTATION AND SIX ECONOMIC INDICATORS BEST FITTING LINES 1970 DISTRIBUTION DATA

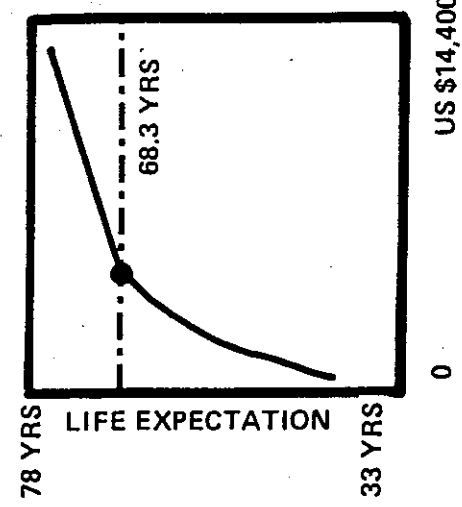
ALL US \$ ARE  
IN 1970 PRICES



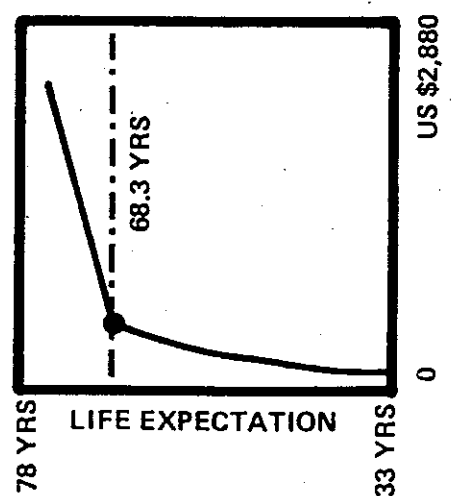
AGRICULTURAL PRODUCTION  
PER MALE WORKER



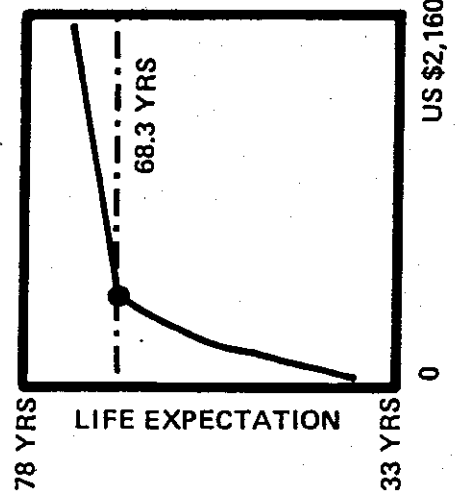
PER CAPITA  
STEEL CONSUMPTION



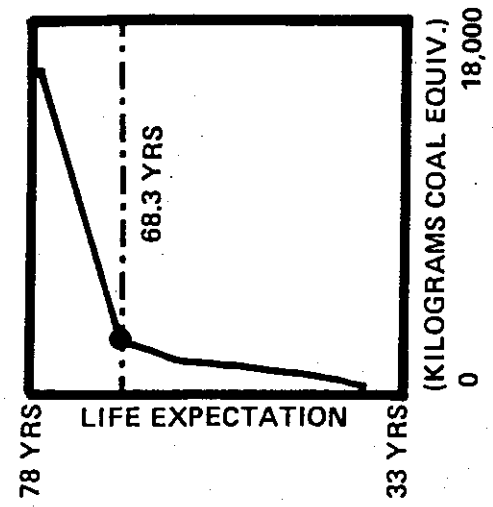
MANUFACTURING PRODUCTION  
PER PERSON



PER CAPITA  
FOREIGN TRADE



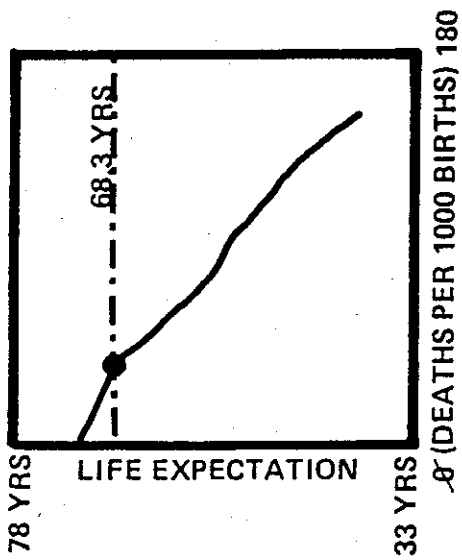
PER CAPITA  
INVESTMENT



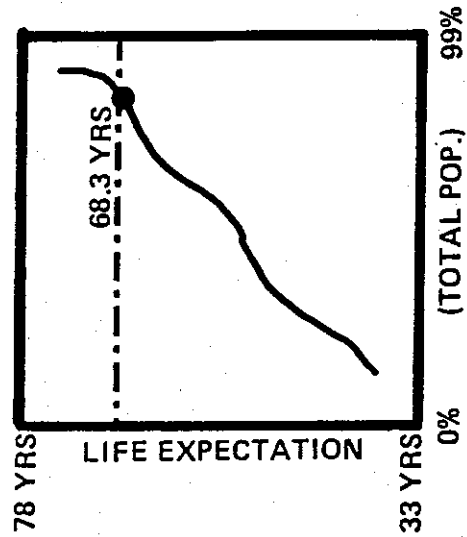
PER CAPITA ENERGY  
CONSUMPTION

# LIFE EXPECTATION AND SIX SOCIAL INDICATORS

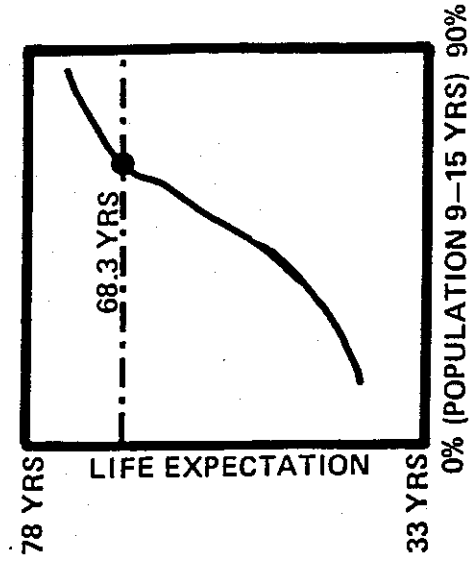
## BEST FITTING LINES 1970 DISTRIBUTION DATA



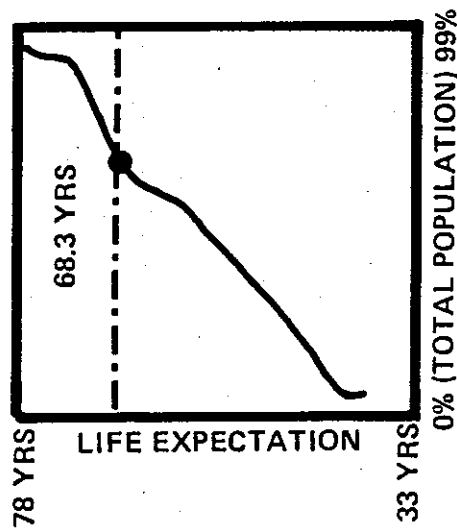
INFANT MORTALITY



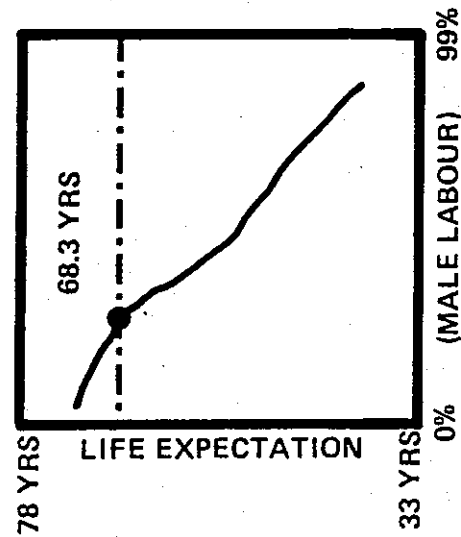
LITERATE POPULATION



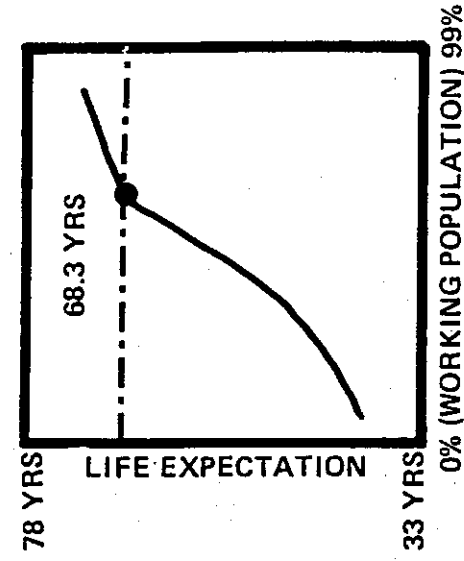
COMBINED SCHOOL ENROLLMENT



ACCESS TO A  
WATER SUPPLY



MEN IN  
AGRICULTURE



SALARIED &  
WAGE EARNERS

- 1- for all indicators, a noticeable turning point in the rate of development seems to occur when life expectation in a country reaches about 68 years;
- 2- social development proceeds gradually up to that point with at least two-thirds of all possible progress being made before the turning point at 68 years; and
- 3- economic development makes insignificant advances before the turning point, but grows thereafter at a much faster pace than any of the social indicators.

These three observations should mean that we can expect the most rapid increases in economic performance from those countries which have established a strong foundation of social development.

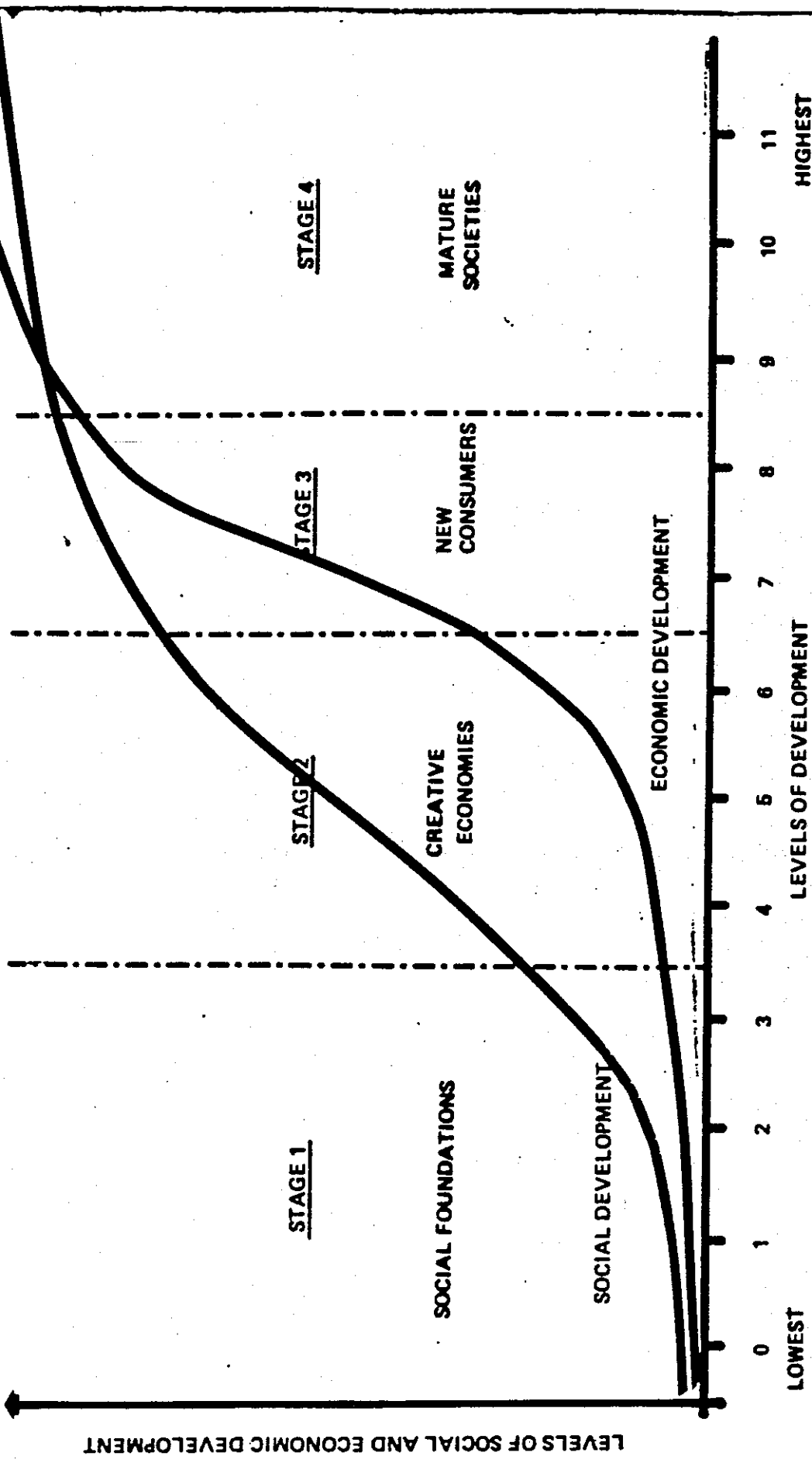
#### A Double-S Curve

This relationship between social development and economic development can be conceptualized with the Double-S Curve illustrated in Figure <sup>3</sup> ~~4~~. In this illustration, the curve for social development is shown to be preceding economic development and both curves have been marked off into four segments. Each segment represents a different stage in the overall development process.

- 1- Stage 1 is for basic foundations. Economic growth is fairly static and most creative energy goes to achieving minimum standards of health, education, general welfare and political stability.

3,

# DOUBLE - S CURVE



LEVELS OF SOCIAL AND ECONOMIC DEVELOPMENT

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- 2- Stage 2 is a creative society. Social progress is being steadily made and, as it increases, it pulls behind it key sectors of the economy, such as export manufacturing. This allows for more investment in the social base and the overall result is an increasingly strong, healthy society with a modestly diversified economy. Here there will be high reinvestment and low consumption.
- 3- Stage 3 is a period of increasing consumption. A solid social base has been established, but the economy is still not very large. At this stage, rapid growth is likely to be based on increasing consumption of established technologies.
- 4- Stage 4 is maturity and the technological frontier. In mature societies, the goods people choose to consume may change, but the high level of overall consumption will be relatively static. Theories about New Waves and High Tech Industries are likely to be most relevant here. Alternatively, "Growth", as usually defined, may not be the best measure of these societies.

The Double-S Curve is a simple paradigm and obviously many countries will deviate from this model. It is also important to remember that this model is based largely on distribution analysis, rather than time series analysis. However, an interesting confirmation of the Double-S Curve appears in Figure 4<sub>λ</sub>, which we discuss below.

### Growth Rates and the Development Index

One of the simplest tools developed by the UNRISD Statistical Unit is the Development Index. The Development Index is created by first converting all the data on the nineteen social and economic indicators to a uniform scale from 0-100. Then, from this data, each country's Development Index is the average of the transformed values of its indicators. Since the average reflects both social and economic progress, it is a reasonably strong indicator of a country's overall level of development on both frontiers.

4  
In Figure 4 we have taken all those countries for which there was sufficient data to create a Development Index and grouped them according to the Index. Within each Group, the countries are listed in rank order from the lowest to the highest Index, and each country is shown with its GDP Growth Rate for 1970-1980. These GDP Growth Rates were averaged for each grouping, and the average appears at the bottom of each column.

The Development Index is based on 1970 data, while the growth rates are for the following decade. We have, therefore, an opportunity to see whether there is any possible relation between the level of development and subsequent rates of growth. Here, it is useful to remember that the decade, 1970-1980, is widely viewed as a world-wide recession.

4  
In spite of the recession, Figure 4 tends to confirm the Double-S Curve. First, it should be noted that Groups 0-3 show fairly low growth rates, on average 3.0%. These Groups correspond to Stage 1, "Basic Foundations". In

**COUNTRY RANK ORDER BY 1970 DEVELOPMENT INDEX (DI)  
SHOWING AVERAGE ANNUAL GROWTH OF GDP PER CAPITA**

**1970 -- 1980**

GROUP 0	GROUP 1	GROUP 2	GROUP 3	GROUP 4	GROUP 5	GROUP 6	GROUP 7	GROUP 8	GROUP 9	GROUP 10	GROUP 11
DI < 0.00	DI < 10.00	DI < 20.00	DI < 30.00	DI < 40.00	DI < 50.00	DI < 60.00	DI < 70.00	DI < 80.00	DI < 90.00	DI < 100.00	DI > 100.00
MALI 4.90	YEMEN (A.R.) 9.20	CENT.-AFR. REP. 3.00	LIBERIA 1.70	MOROCCO 5.60	ZAMBIA 0.70	YEMEN (P.D.R.) N.D.	PORTUGAL 4.60	SINGAPORE 8.50	U.S.S.R.	FINLAND 3.10	CANADA 3.90
BURUNDI 2.80	NEPAL 2.50	TANZANIA 4.90	CAMEROON 5.60	BOLIVIA 4.80	DOMINICAN REP. 6.60	MONGOLIA N.D.	YUGOSLAVIA 5.90	KOREA (D.P.R.) N.D.	ITALY 3.00	FRANCE 3.50	U.S.A. 3.00
	RWANDA 4.10	HAITI 4.00	KENYA 6.50	PARAGUAY 8.60	IRAD 12.10	MEXICO 5.20	PANAMA 4.00	ARGENTINA 2.20	IRELAND 3.50	GERMANY (D.R.) 4.80	SWEDEN 1.70
	ETHIOPIA 2.00	LAOS N.D.	MAURITANIA 1.70	HONDURAS 3.60	KAMPUCHEA N.D.	LIBYA 2.20	COSTA RICA 5.90	SPAIN 4.00	JAPAN 5.00	UNITED KINGDOM 1.90	
	NIGER 2.70	PAKISTAN 4.70	SENEGAL 2.50	EGYPT 7.40	SYRIA 10.00		SOUTH AFRICA 3.60	BULGARIA 7.10	ISRAEL 4.10	GERMANY (F.R.) 2.60	
	MALAWI 6.30	MOZAMBIQUE -2.90	THAILAND 7.20	GUATEMALA 5.70	SAUDI ARABIA 10.60		CUBA N.D.	HONG KONG 9.00	CZECHOSLOVAKIA 5.10	BELGIUM 3.00	
	UPPER VOLTA 3.60	SOMALIA 3.40	ANGOLA -9.20	SRI LANKA 4.10	KOREA (REP.) 9.60		CHILE 2.40	POLAND 8.90	AUSTRIA 3.70	AUSTRALIA 3.00	
	GUINEA 3.30	TOGO 3.40	PAPUA-N. GUINEA 2.30	IRAN 2.50	NICARAGUA 0.90		JAMAICA -1.10	HUNGARY 9.40		DENMARK 2.50	
	BENIN 3.30	INDONESIA 7.80	GHANA -1.10	ALGERIA 7.00	MALAYSIA 7.80		ROMANIA 8.60			NETHERLANDS 2.90	
		ZAIRE 0.10	IVORY COAST 6.70	TURKEY 5.90	BRAZIL 8.40		GREECE 4.90			NEW ZEALAND 2.30	
		INDIA 3.60		TUNISIA 7.50	ALBANIA N.D.		VENEZUELA 5.00			SWITZERLAND 0.40	
		CHAD -2.00		JORDAN N.D.	PERU 3.00		URUGUAY 3.50			NORWAY 4.80	
		SIERRA LEONE 1.60		ZIMBABWE 1.80	COLOMBIA 5.90		LEBANON N.D.				
		SUDAN 4.40		ECUADOR 8.80							
		MADAGASCAR 0.30		PHILIPPINES 6.30							
		UGANDA -1.70		EL SALVADOR 4.10							
		NIGERIA 6.50		CHINA (EST)							
A = 3.85%	A = 4.10%	A = 2.66%	A = 2.49%	A = 5.56%	A = 5.86%	A = 3.70%	A = 4.28%	A = 6.44%	A = 4.05%	A = 2.90%	A = 2.86%
STAGE 1			STAGE 2			STAGE 3			STAGE 4		

A = GDP GROWTH RATE, AVERAGE FOR EACH GROUPING  
ND = NO DATA

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Groups 4, 5 and 6, however, one sees an average GDP Growth Rate of 5.9%, which makes these countries the "Creative Societies" of Stage 2. This higher rate of growth is repeated in Groups 7 and 8, averaging 5.1%, and identifies this group as the equivalent of Stage 3, "Increased Consumption". Groups 9, 10 and 11 look most like the hypothesized "Mature Societies" and again show a lower average annual growth rate at 3.2%.

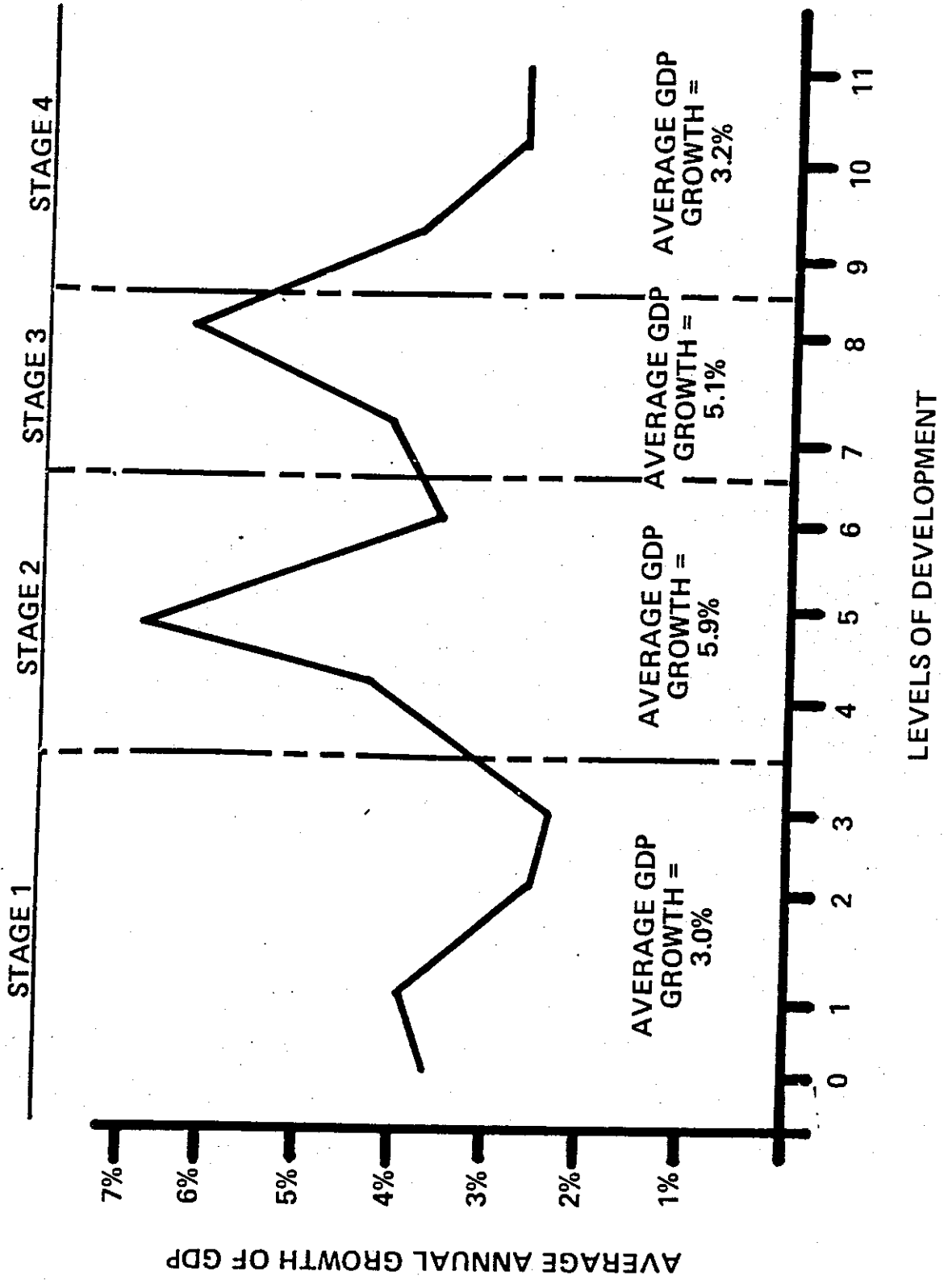
Figure <sup>4</sup> 4, therefore, offers a rough confirmation of the Double-S Curve. Tests of significance still need to be run, and several groups by Development Index fall outside the paradigm. Still, the data are generally supporting the Double-S Curve model, as can be seen in Figure <sup>5</sup> 5 which plots the 1970 Development Index against the 1970-1980 GDP Growth Rate.

#### Pull Factors - Predicting GDP Growth

The general credibility of the Double-S Curve model argues that it should be possible to predict economic development from the level of social development in a country. In particular, analysts at UNRISD had speculated that where social development was considerably more advanced than economic development, a high rate of economic growth would follow.

We then looked at those countries whose performance in 1970 on selected social indicators was higher than their performance on GDP per capita in 1970. Where, for example, a society in 1970 was stronger in health and education than in GDP per capita, health and education would act to "pull up" the level of GDP, as evidenced in the GDP Growth Rate from 1970-1980.

# 1970 DEVELOPMENT INDEX VS. 1970-1980 GDP GROWTH RATE



In this exercise, we looked at five different pull factors:

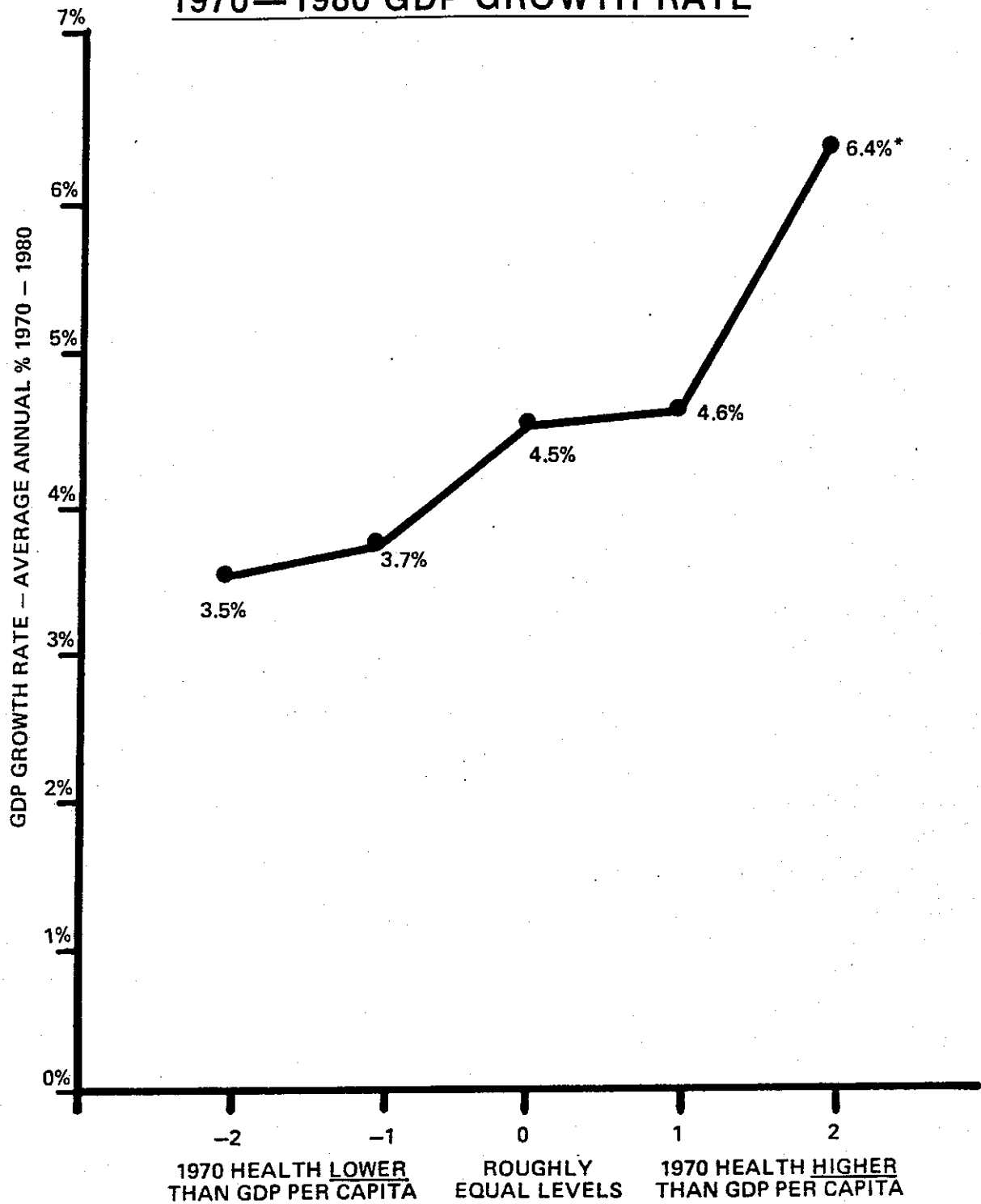
- 1- Health (as measured by infant mortality rates and life expectation);
- 2- Education (as measured by literacy rates, school enrollment and circulation of newspapers);
- 3- Access to Water Supply (per cent of population with reasonable access to a water supply);
- 4- Men in Agriculture (as per cent of working population);
- 5- Professional and Technical Workers (as per cent of working population).

We then ranked countries according to the degree of difference between the 1970 levels of GDP per capita and each of the pull factors. This difference was then plotted against the GDP Growth Rate for 1970-1980; the results can be seen in Figures ~~7-11~~<sup>6-10</sup>.

Of the five pull factors, Health and Education had been the strongest and clearest effect on GDP Growth Rates. Access to Water, which serves as an indicator of health and to some extent infrastructure, also had some influence on GDP Growth Rate. The two indicators with the weakest link to growth rate were Men in Agriculture and Professional and Technical Workers, both of which might be seen as indicating less the relative strength of the human capital base than simply indicating the deployment of the work force.

6.

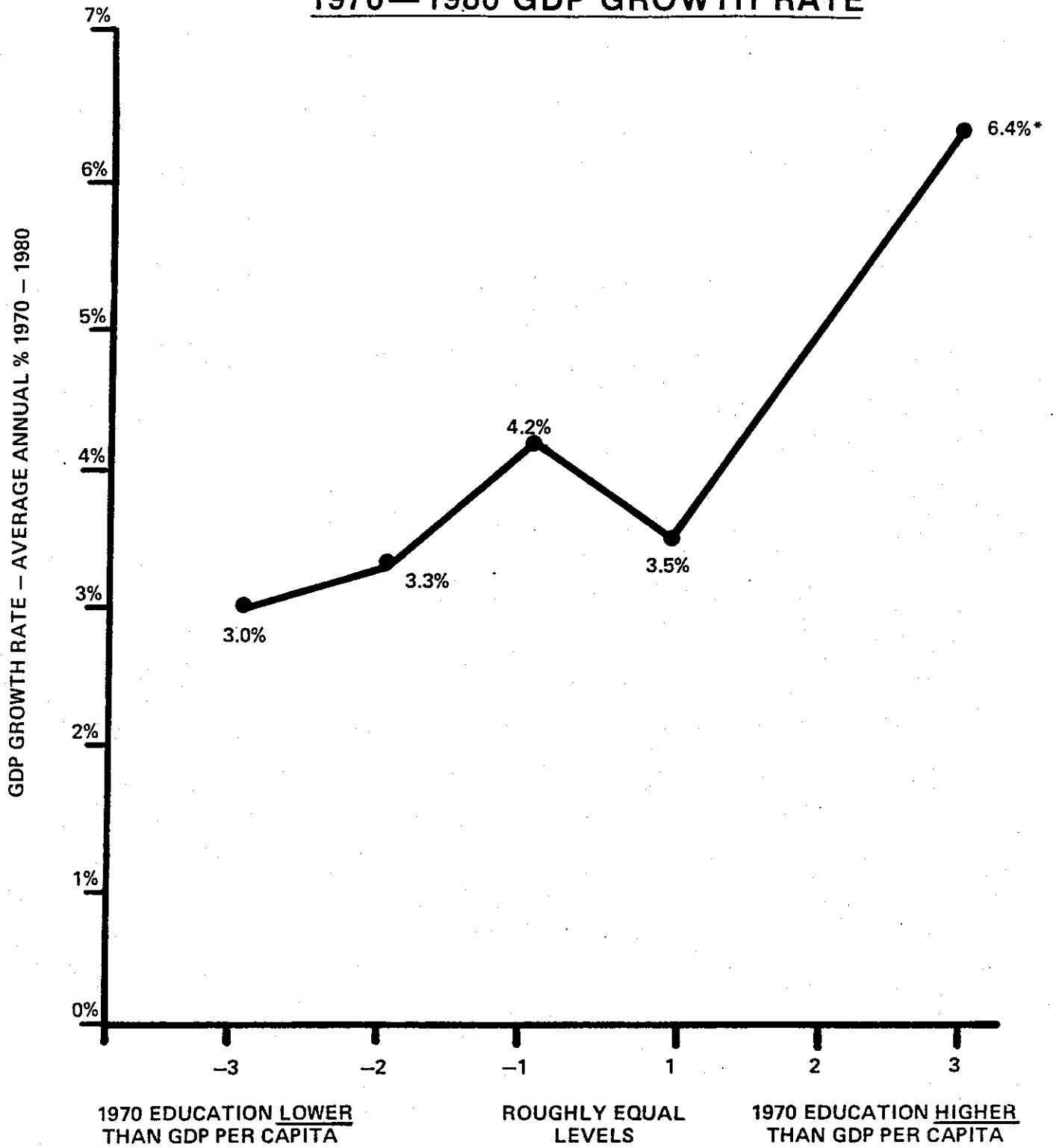
## 1970 HEALTH AS A PULL ON 1970—1980 GDP GROWTH RATE



\*EACH POINT REPRESENTS THE AVERAGE FOR A GROUP OF COUNTRIES, WITH ROUGHLY 15 COUNTRIES IN EACH GROUP.

7.

# 1970 EDUCATION AS A PULL ON 1970—1980 GDP GROWTH RATE



\* EACH POINT REPRESENTS THE AVERAGE FOR A GROUP OF COUNTRIES, WITH ROUGHLY 15 COUNTRIES IN EACH GROUP.

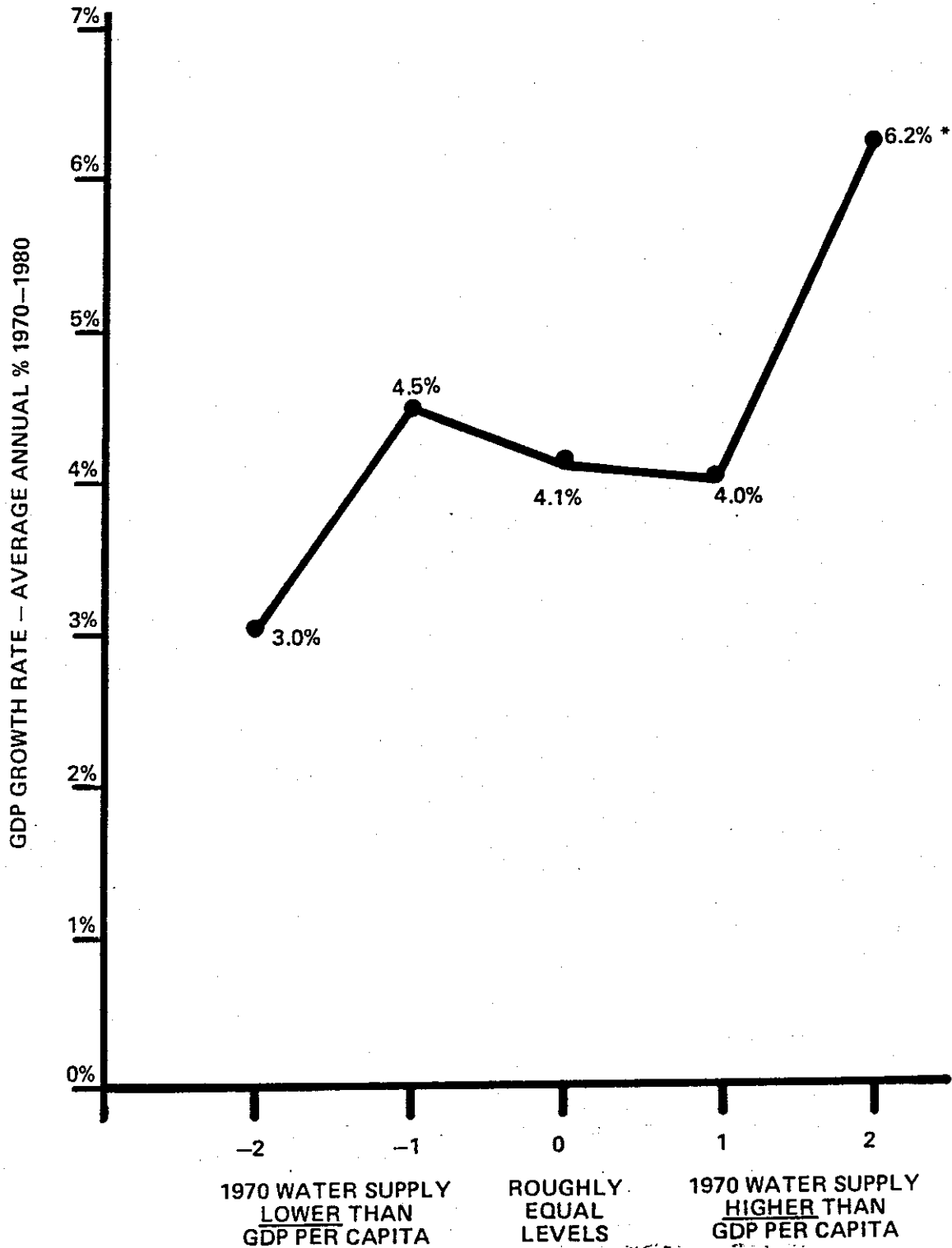
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6



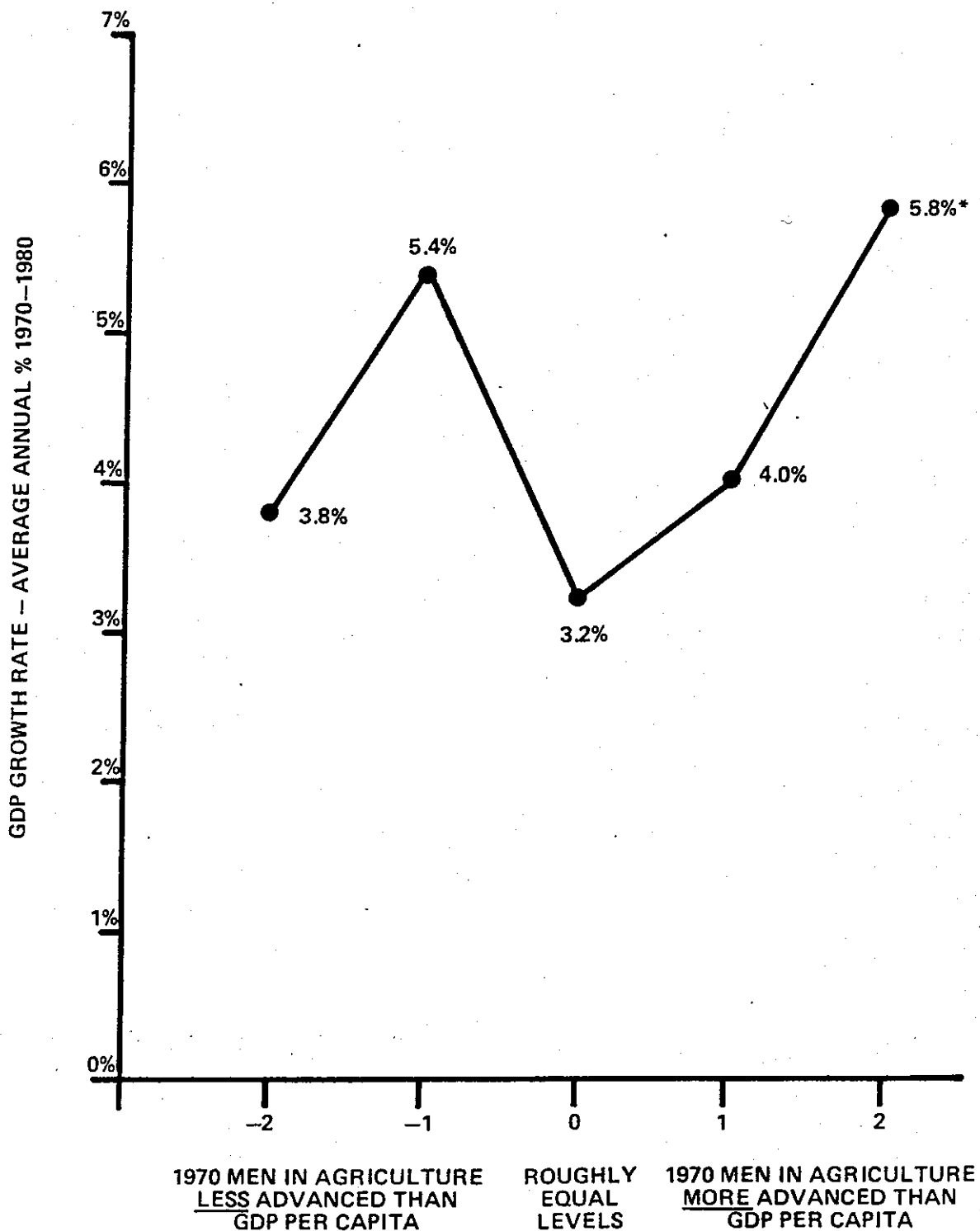
8.

## 1970 ACCESS TO WATER SUPPLY AS A PULL ON 1970—1980 GDP GROWTH RATE



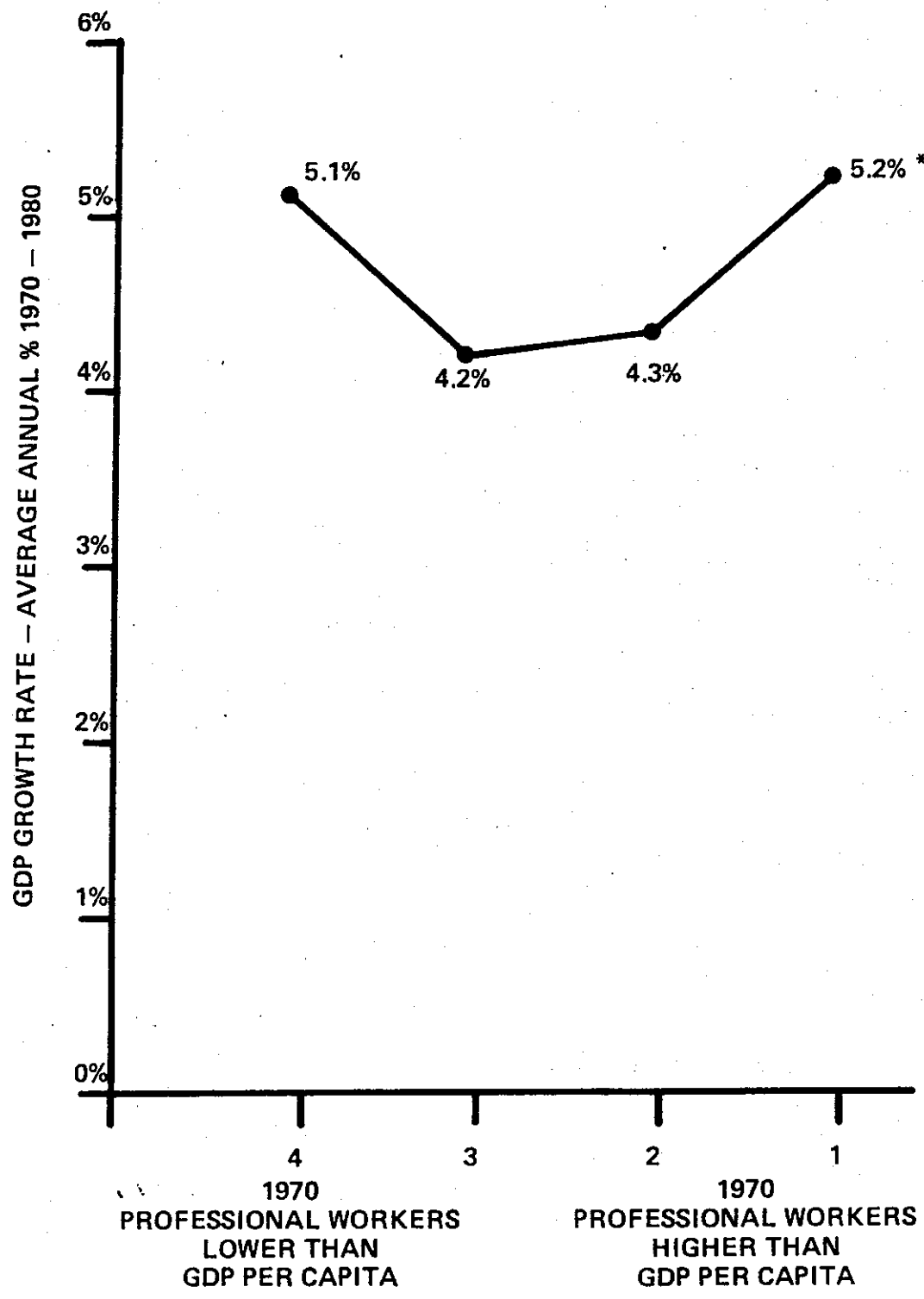
\*EACH POINT REPRESENTS THE AVERAGE FOR A GROUP OF COUNTRIES, WITH ROUGHLY 15 COUNTRIES IN EACH GROUP.

## 1970 MEN IN AGRICULTURE AS A PULL ON 1970—1980 GDP GROWTH RATE



\*EACH POINT REPRESENTS A GROUP OF COUNTRIES, WITH ROUGHLY 15 COUNTRIES IN EACH GROUP

# 1970 PROFESSIONAL & TECHNICAL WORKERS AS A PULL ON 1970—1980 GDP GROWTH RATE



\* EACH POINT REPRESENTS A GROUP OF COUNTRIES, WITH  
ROUGHLY 15 COUNTRIES IN EACH GROUP

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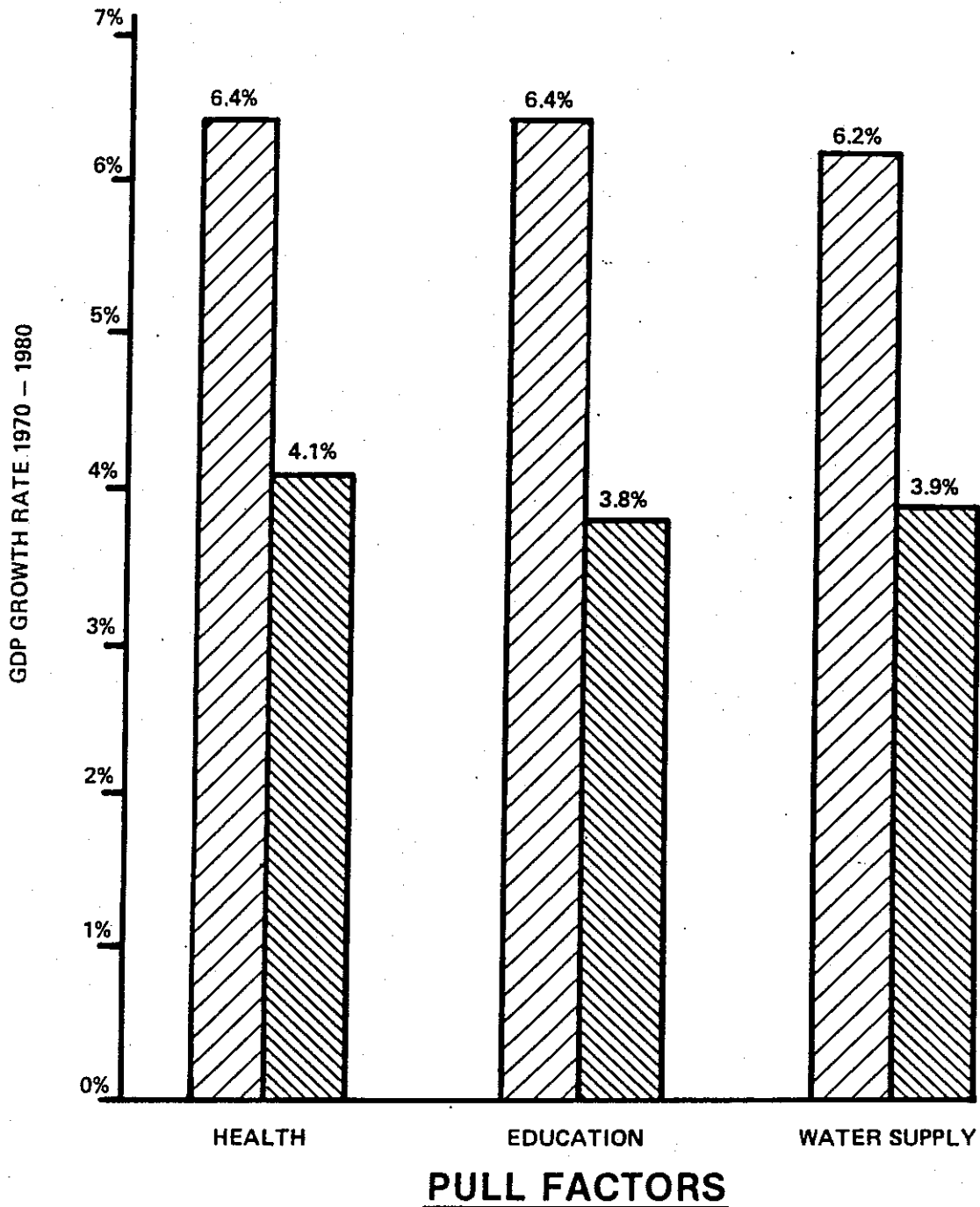
The theory that a strong human capital base will pull up a weak GDP is further strengthened by examining those countries with the greatest variance between health and education and GDP. The average growth rate for the fifteen countries with the greatest positive variance was 6.3%. For all others with lower or negative variances, the average growth rate was only 3.9%. This is illustrated in Figures <sup>11 and 12.</sup> ~~12~~.  
^

This work in pull factors is useful in several respects. First, it offers clear evidence on the importance of a strong human capital base to the process of development. Second, it suggests that we can begin to identify which countries are more likely to show high growth rates, since high GDP Growth is associated with the disparity between a relatively high level of health and education and a relatively low level of GDP. This also suggests that there might be as yet unidentified pull factors, and that there might also be particular pull factors that are associated with growth in particular areas of an economy. To the extent that pull factors can be discovered and their effects charted, our ability to forecast likely rates of development is enhanced.  
Figure 13.  
^

#### Conclusions to Part I

This work with the UNRISD data base is still fairly new. It does, however, point to the importance of social foundations for economic development, and in specifying the relation between social and economic growth, suggests ways of defining the potential of any country and anticipating its ability to meet that potential. The work also provides several ways of characterising

# EFFECT OF 1970 SOCIAL PULL FACTORS ON GDP GROWTH 1970-80




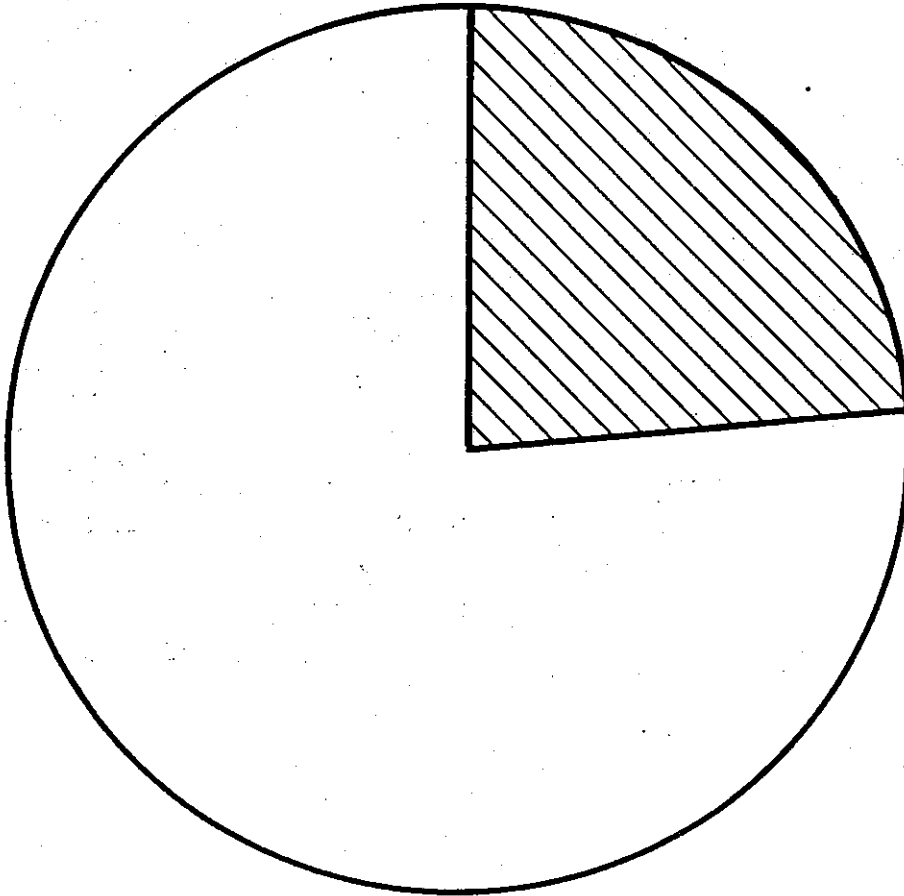
-  15 COUNTRIES WHERE 1970 LEVEL OF HEALTH, EDUCATION OR ACCESS TO WATER WAS HIGHER THAN GDP PER CAPITA IN 1970
-  ALL OTHER COUNTRIES IN EACH SAMPLE

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12.

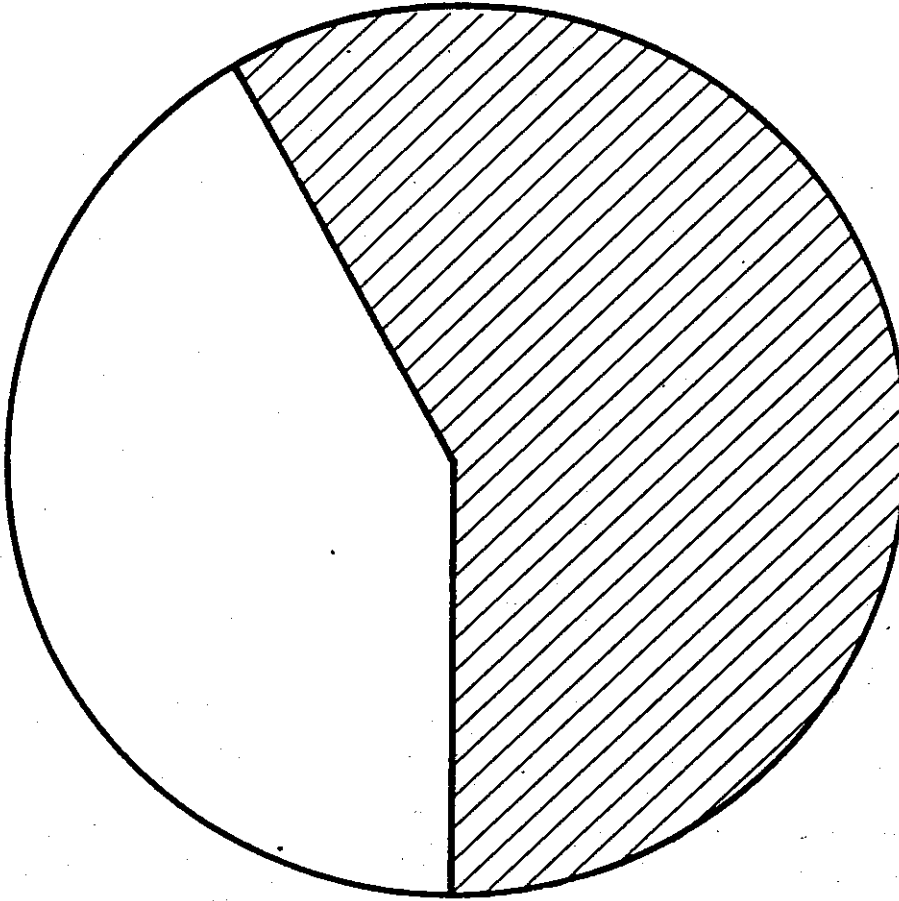
HEALTH AND EDUCATION AS A PULL  
ON GDP GROWTH RATE

 = PROPORTION OF COUNTRIES WITH 1970 - 1980 GDP GROWTH RATES GREATER THAN 6%



ALL COUNTRIES

N = 104



HIGH VARIANCE COUNTRIES

N = 22

COUNTRIES WITH  
HIGHER LEVELS OF HEALTH AND  
EDUCATION COMPARED TO GDP

# 1970 HEALTH AND EDUCATION AS PREDICTORS OF 1970/80 GDP GROWTH

## HIGH VARIANCE COUNTRIES

### GROWTH PREDICTED BUT NOT SEEN

ZAIRE	0.1%
PERU	3.0%
INDIA	3.6%
SPAIN	4.0%
EL SALVADOR	4.1%
SRI LANKA	4.1%
EAST GERMANY	4.8%
BOLIVIA	4.8%
GREECE	4.9%

TOTAL: 9 COUNTRIES  
AVERAGE GROWTH: 3.9%

### GROWTH PREDICTED AND SEEN

PHILIPPINES	6.3%
KENYA	6.5%
BULGARIA	7.1%
THAILAND	7.2%
INDONESIA	7.6%
MALAYSIA	7.8%
SINGAPORE	8.5%
PARAGUAY	8.6%
ROMANIA	8.6%
ECUADOR	8.8%
POLAND	8.9%
HONG KONG	9.0%
SOUTH KOREA	9.5%

TOTAL: 13 COUNTRIES  
AVERAGE GROWTH: 8.0%

### GROWTH SEEN, BUT NOT PREDICTED

MALAWI	6.3%
NIGERIA	6.5%
DOMINICAN REPUBLIC	6.6%
IVORY COAST	6.7%
ALGERIA	7.0%
EGYPT	7.4%
TUNISIA	7.5%
LESOTHO	7.9%
BRAZIL	8.4%
YEMEN ARAB REP.	9.2%
SYRIA	10.0%
SAUDI ARABIA	10.6%
IRAQ	12.1%

NO DATA, LOW POSITIVE VARIANCE  
NO DATA  
NO DATA, NEGATIVE VARIANCE  
NO DATA, NEGATIVE VARIANCE  
NEGATIVE VARIANCES  
LOW POSITIVE VARIANCES  
NEGATIVE VARIANCES  
NO DATA  
NO DATA, NEGATIVE VARIANCE  
NO DATA  
LOW POSITIVE VARIANCES  
NO DATA  
NEGATIVE VARIANCES

"expectable" development and, therefore, of identifying important variations from the expected.

## PART II - SHIFTING THE BALANCE

In this section we examine the Double-S Curve as a closed system within which more and more countries are competing as "developed" economies to achieve an advantageous position. For this analysis, we will eventually be drawing on the 1980 UNRISD data when it is available, and until then we will only suggest what might be found.

### Part I: As A Closed System

In looking at the Double-S Curve as a closed system, we are examining some of the implications of an observation made in Part I: namely, that Mature Societies grow more slowly than societies which can be classified as Creative Economies or New Consumers, i.e. at Stages 2 and 3 of the development process. Probably the major implication of these different rates of growth is that as the Mature Societies slow down, the Stage 2 and 3 societies catch up. This has already resulted in a global economic system that is more complex than any other the world has known. It is a complexity due in large part to the increased number of sophisticated participants and the changes in comparative advantages that has caused.

In the course of charting this transition and looking at some of its features, we will be looking at three subjects. First, we compare some of the



ideas of the Double-S Curve to the work in stages of economic growth by W. W. Rostow. Second, we show how the number of countries at different levels of development has changed since 1960, and suggest how that change has shifted the balance of economic power. Third, we examine the role of population size and growth in the development process and in the changing relationships between "developed" and "developing" countries.

W. W. Rostow

The Double-S Curve was based on distribution data from 1970, rather than any kind of time series data. Nonetheless, it shows some interesting parallels with W. W. Rostow's work, The Stages of Economic Growth. (Rostow, 1971, first published 1960.) In particular, the stages he describes have rough equivalences with the stages of the Double-S Curve, as show below.

	<u>Rostow</u>		<u>Double-S Curve</u>
Stages:	1. Traditional Society	=	1. Social Foundations
	2. Preconditions for Take-off		
	3. Take-off	=	2. Creative Economies
	4. Drive to Maturity		
	5. High Mass Consumption	=	3. New Consumers
			4. Mature Societies

Clearly, the language is different, yet the sense of what happens at each stage is quite similar. That Rostow places "maturity" at a different

point is largely due to the fact that he was writing thirty years ago, and since that time the development process has continued among all countries at every stage. Thus, from the perspective of 1984, maturity signals the completion of the process of moving from traditional society to saturated mass consumption. While for Rostow in the 1950s, maturity meant the economic ability to meet the demands of mass consumers.

One of the criticisms of applying Rostow's 1950s analysis to the developing countries of 1984 is that conditions have changed; the world facing the LDCs today bears no resemblance to the world in which Rostow's countries began the development process. It is a criticism with which I fully agree. Yet one needs to identify what exactly has altered and from that try to image the effect of those changes on the development process today. A suggestive list of those changes appears below:

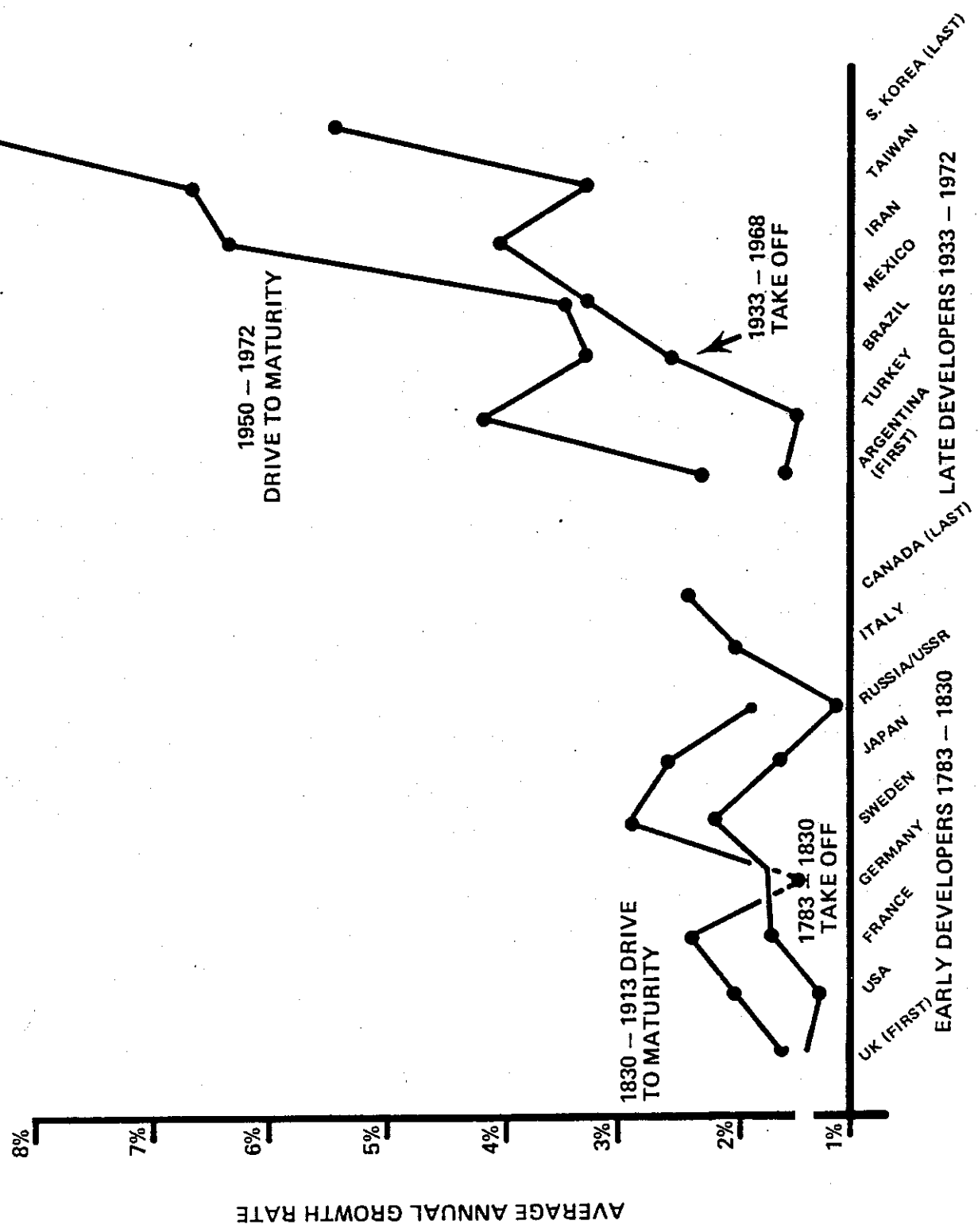
#### What is Different Today

- General level of technology
- Speed of travel and communications
- Increased amounts of international aid
- Increased international economic integration
- Growth of population; increased density
- Spread of mass education and university training.

What is significant about this list, and what cannot be emphasized too strongly, is that each one of these items serves to accelerate the development process. Thus, it is not surprising that those countries which Rostow calls the "Late-Comers to Industrialisation" show faster growth rates than countries which developed earlier. This is shown in a diagram derived from Rostow's 1980 book, Why the Poor Get Richer and the Rich Slow Down, p.266-269, Figure <sup>14</sup> 3 .

PER CAPITA GROWTH RATES AMONG EARLIER AND LATER DEVELOPING COUNTRIES

14.



(FROM ROSTOW, 1980)  
P266 - 269

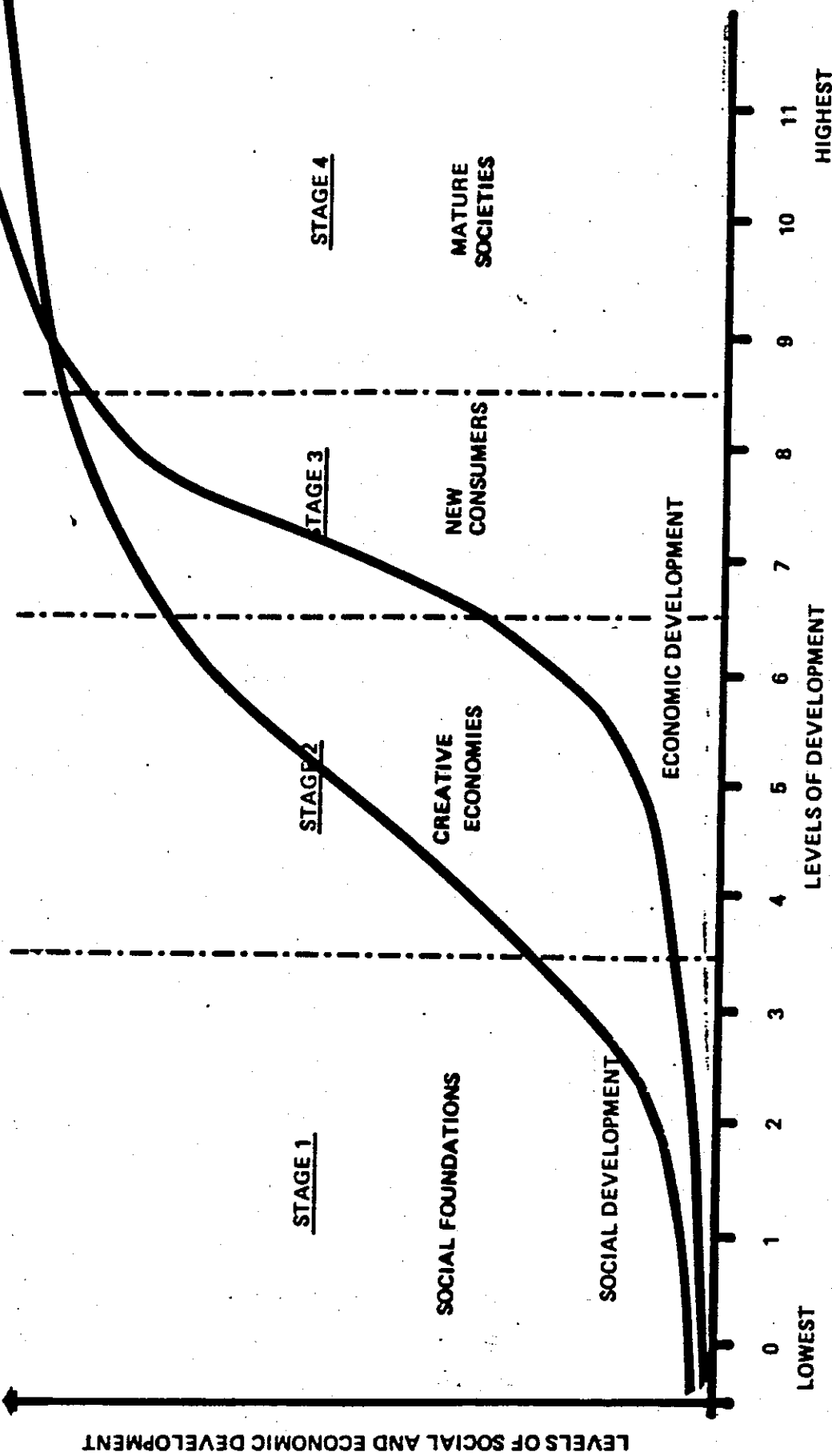
Shifting Economic Power

Obviously, Rostow's sample of countries in Figure <sup>14</sup> ~~λ~~ has been carefully selected and can be challenged on that basis. Yet it is useful to combine the idea of faster growth among late developers with the idea of faster growth in Stages 2 and 3 of the Double-S Curve, as shown in Figure <sup>15</sup> ~~λ~~. Both ideas lead us to our second point: that the OECD countries are coming under increasing pressure from the developing world, where a large number of countries are rapidly achieving "developed" status. In effect, the club of the developed countries is becoming less and less exclusive.

In Figures <sup>16-20</sup> ~~5-8~~, an attempt has been made to show how the number of "developed" countries has increased since 1960. Figures <sup>16-18</sup> ~~5-7~~ are based on the 1960 sample of UNRISD countries for which there was sufficient data to make a comparison from 1960, 1970 and 1982. Figures <sup>19 20</sup> ~~8~~ and ~~8~~ are based on the much larger UNRISD sample from 1970. In the absence of 1980 UNRISD data, life expectation figures for 1982 have been taken from the World Bank's World Development Report, 1984. These figures have then been transformed in order to find the development levels represented by life expectation figures (See UNRISD, Contents and Measurement of Socioeconomic Development, New York, 1972, for a discussion of methodology.), and to show thereby the increasing number of "developed" countries.

Significantly, whether one uses the 1960 sample of 57 countries, or the 1970 sample of 113 countries, the number of Stage 4 countries (Mature Societies)

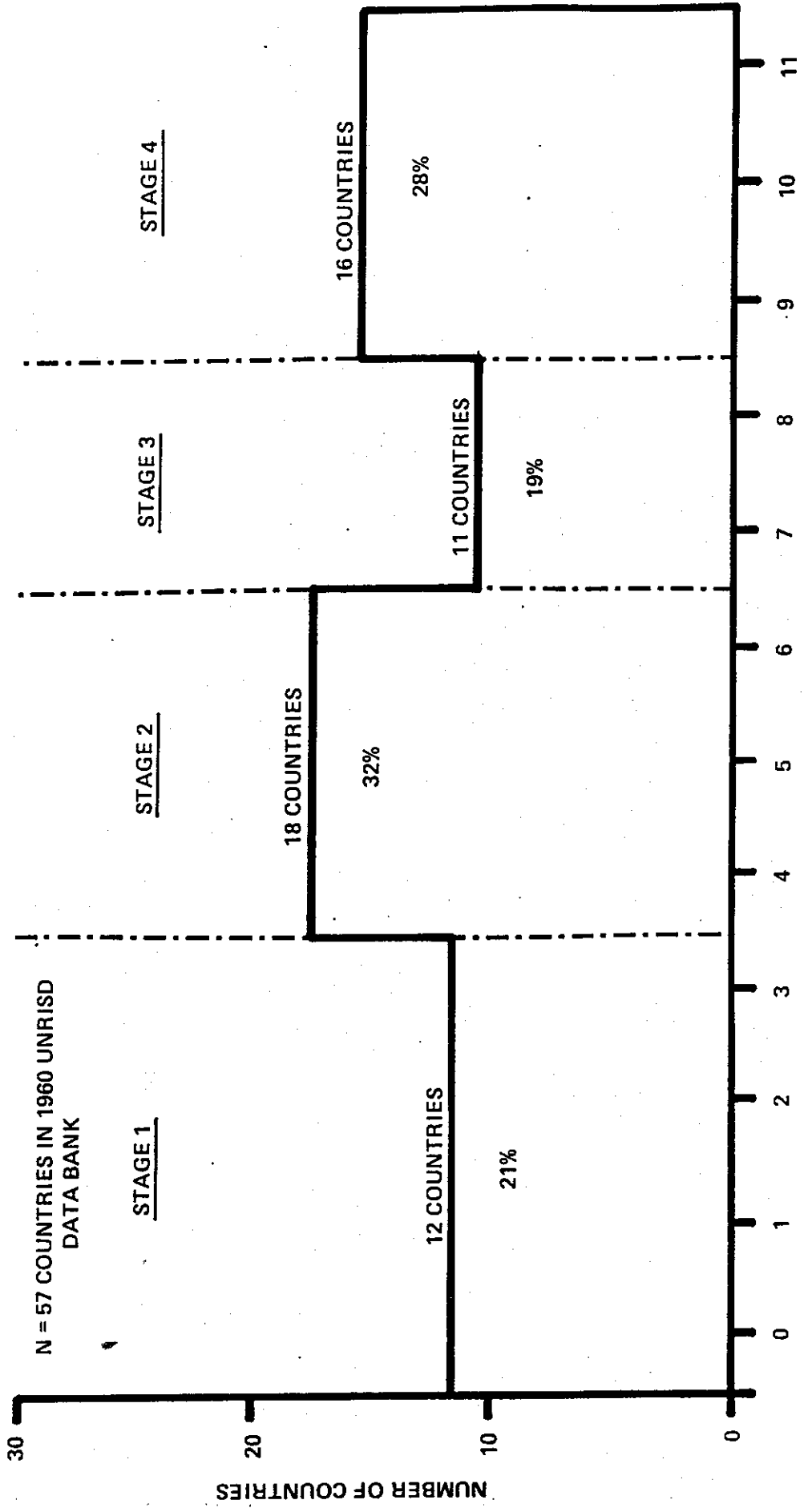
# DOUBLE - S CURVE



LEVELS OF SOCIAL AND ECONOMIC DEVELOPMENT

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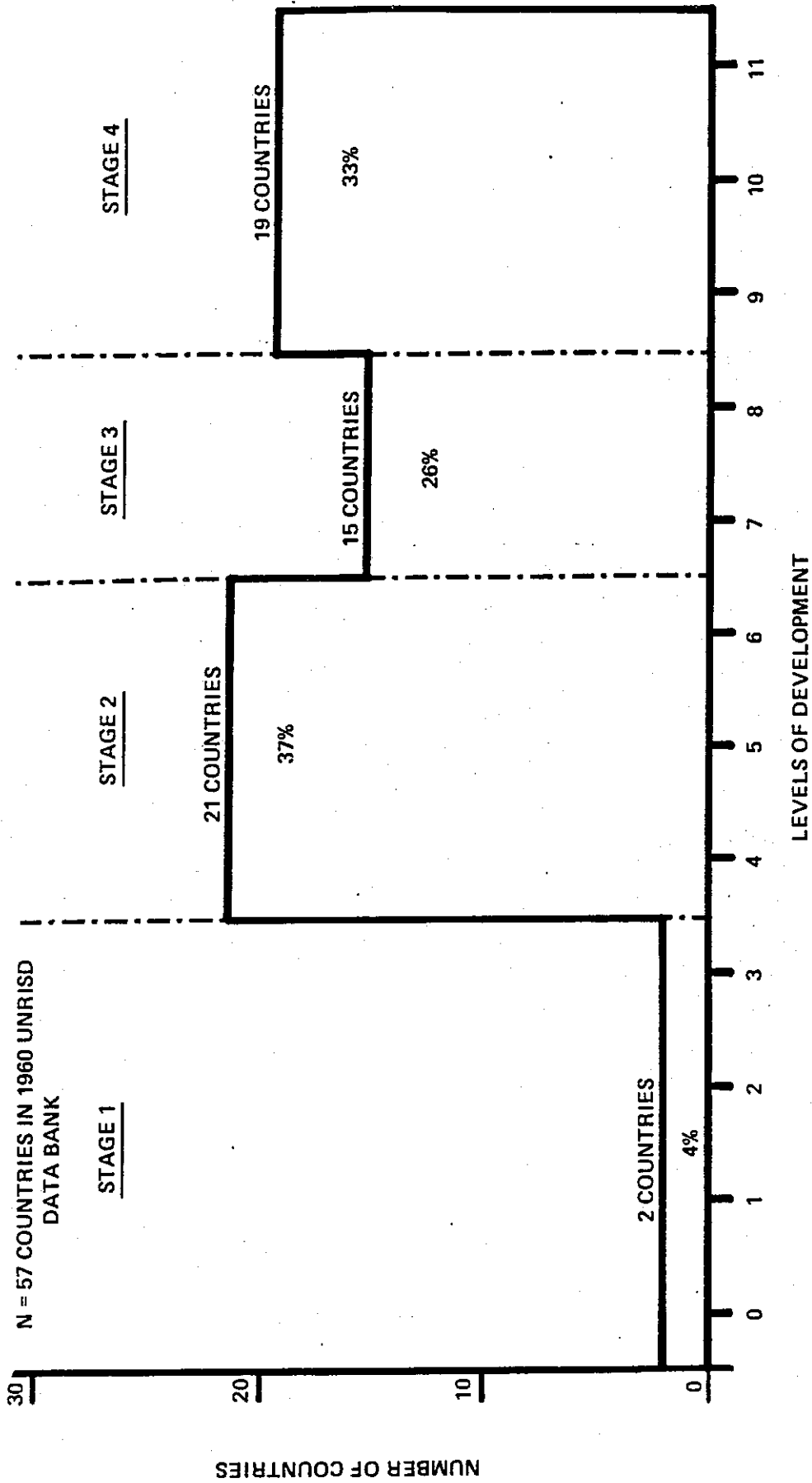
# 1960 DISTRIBUTION OF COUNTRIES BY DEVELOPMENT STAGES



LEVELS OF DEVELOPMENT

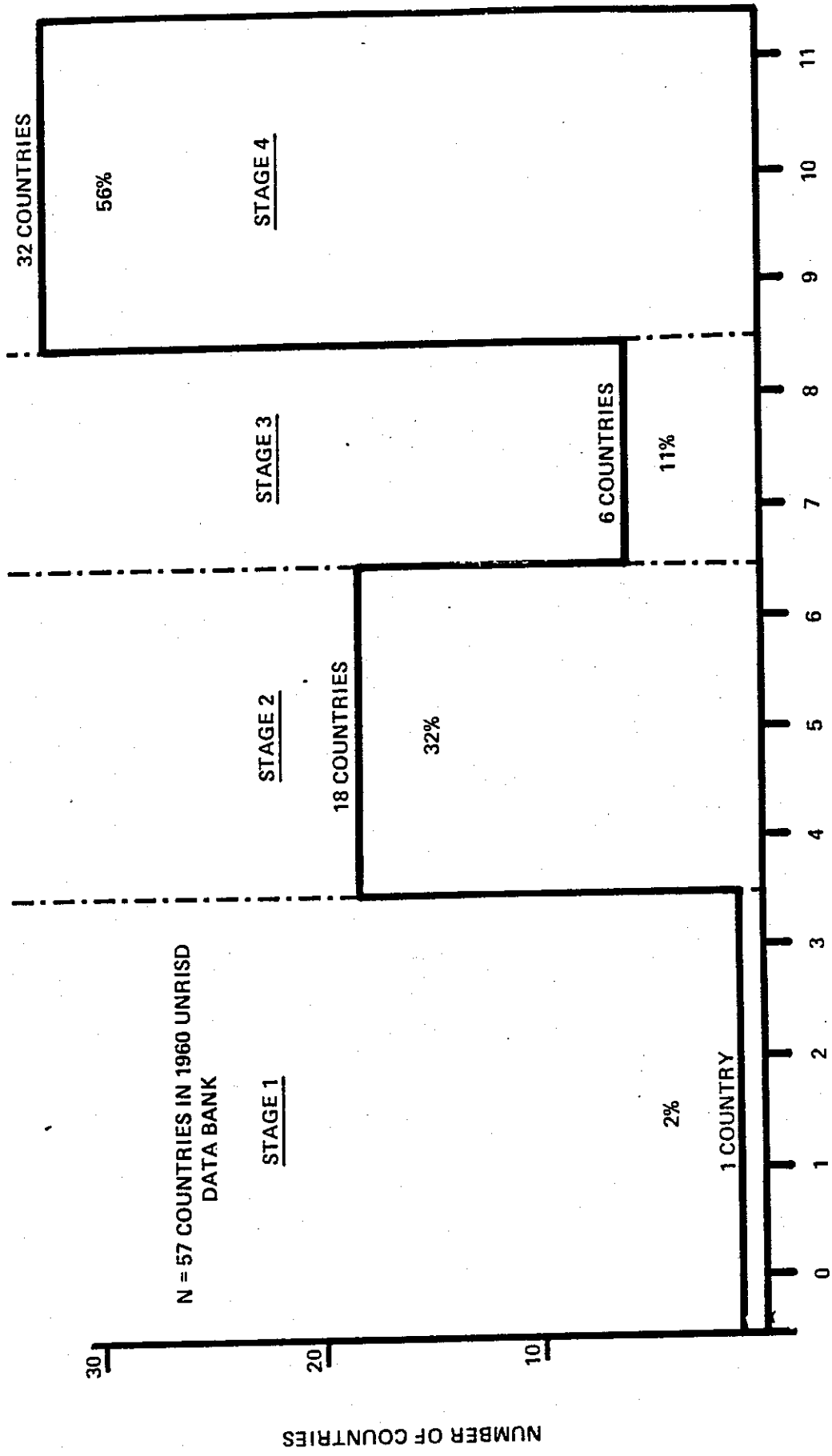
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# 1970 DISTRIBUTION OF COUNTRIES BY DEVELOPMENT STAGES



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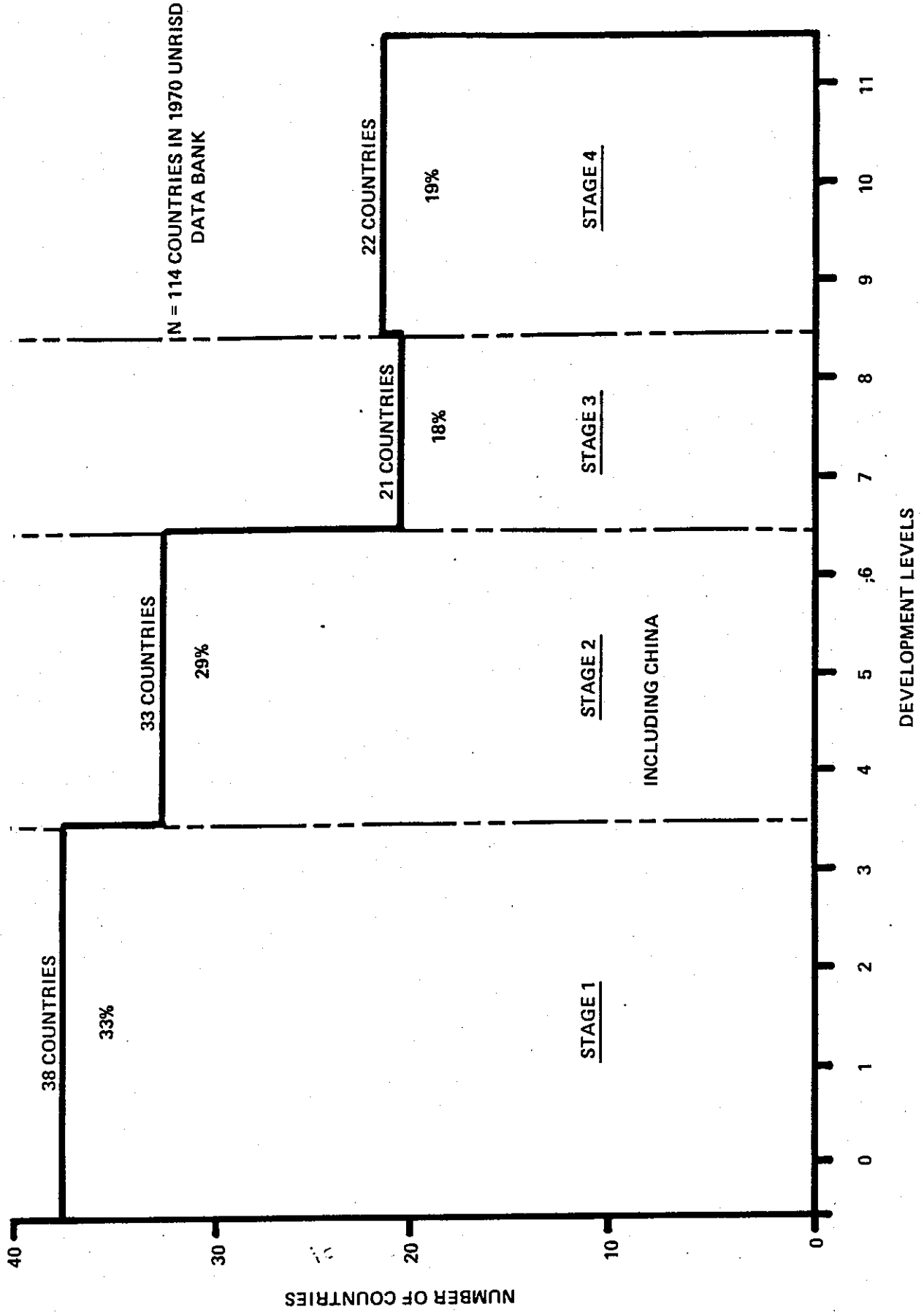
# 1982 DISTRIBUTION OF COUNTRIES BY LIFE EXPECTATION\*



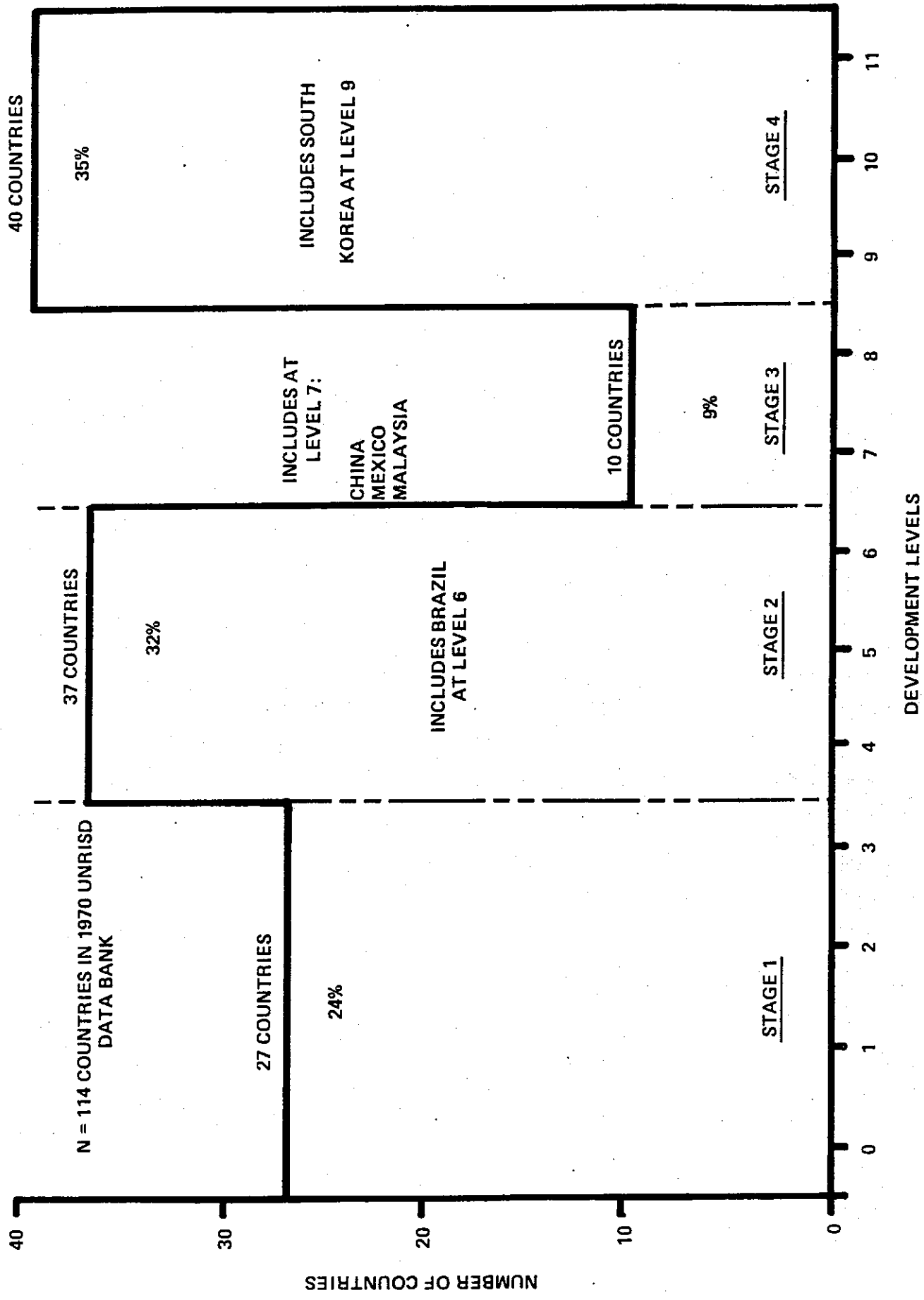
\* 1984 World Development Report, World Bank



19. 1970 DISTRIBUTION OF COUNTRIES  
BY DEVELOPMENT STAGES



# 1982 DISTRIBUTION OF COUNTRIES BY LIFE EXPECTATION\*



\* 1984 World Development Report, World Bank

20.  
34

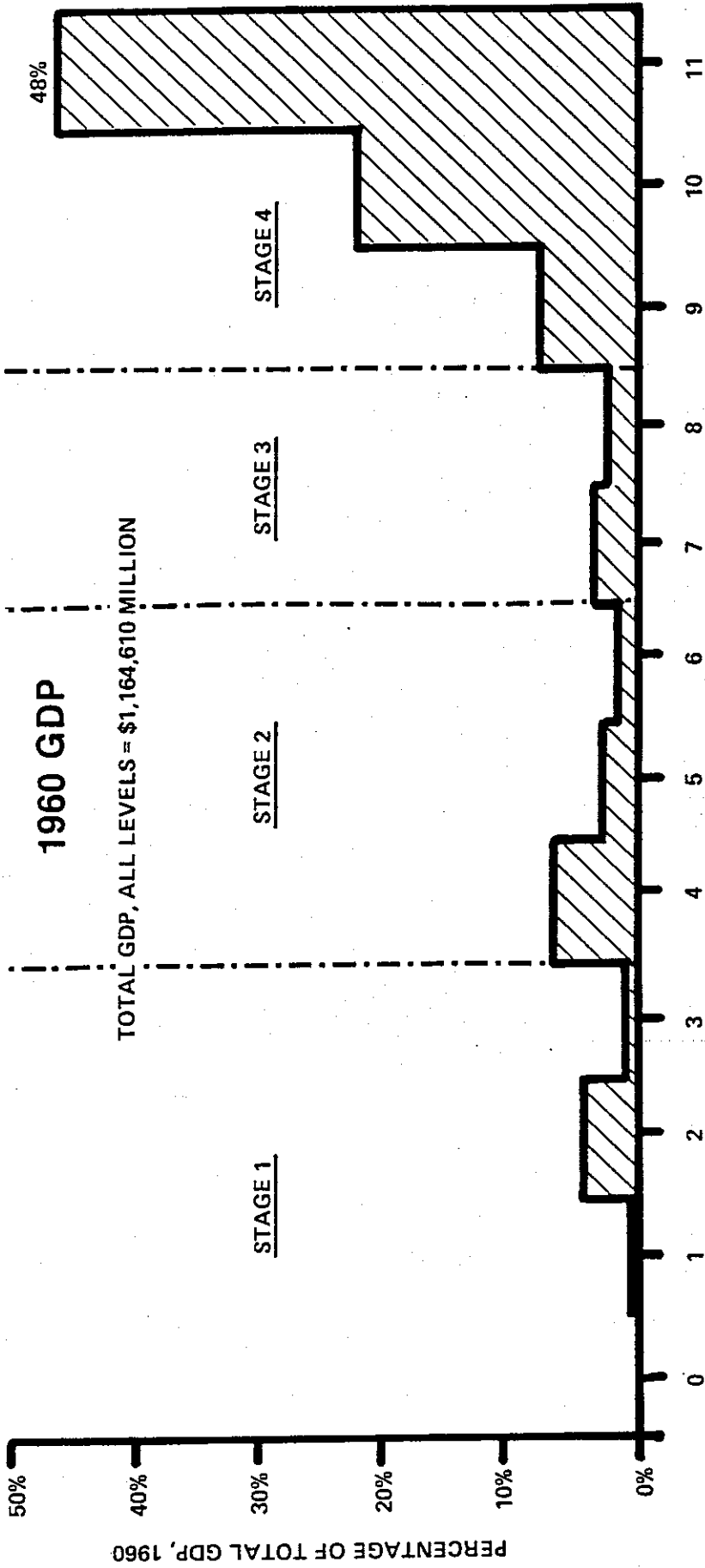
has doubled from 1960-1982. During the same period, the number of Stage 1 countries, which are at the beginning of the development process, has dropped significantly.

Two things are of immediate interest in these figures: first, the steady rise in the levels of development generally; and second, the startling expansion of the numbers of countries which can now be classified as "Mature Societies," based on life expectation figures. These changes are in large part responsible for a very different configuration of the world's economic and political power, and go a long way to explaining many of the strains in the world economic system.

This view tends to be confirmed when countries are grouped by their 1970 levels of development and then used to compare the distribution of world GDP in 1960 versus the 1981 distribution, as derived from figures in the World Development Report, 1983. (See Figures <sup>21</sup> 10 and <sup>22</sup> 11.) The most dramatic shifts in the proportions of world GDP are away from the most developed countries in level 11 (The USA, Canada and Sweden) to those countries in levels 5-10. In 1960, the USA, Canada and Sweden accounted for 48% of the world GDP. In 1981, their proportion was down to 33%.

Another way of looking at this shift between the 1960s and the 1980s is to suggest that by 1960 only these three countries (USA, Canada and Sweden) were well ensconced in Stage 4 of the development process when the saturation of mass consumption needs begins to be approached. In contrast, if the World Bank's

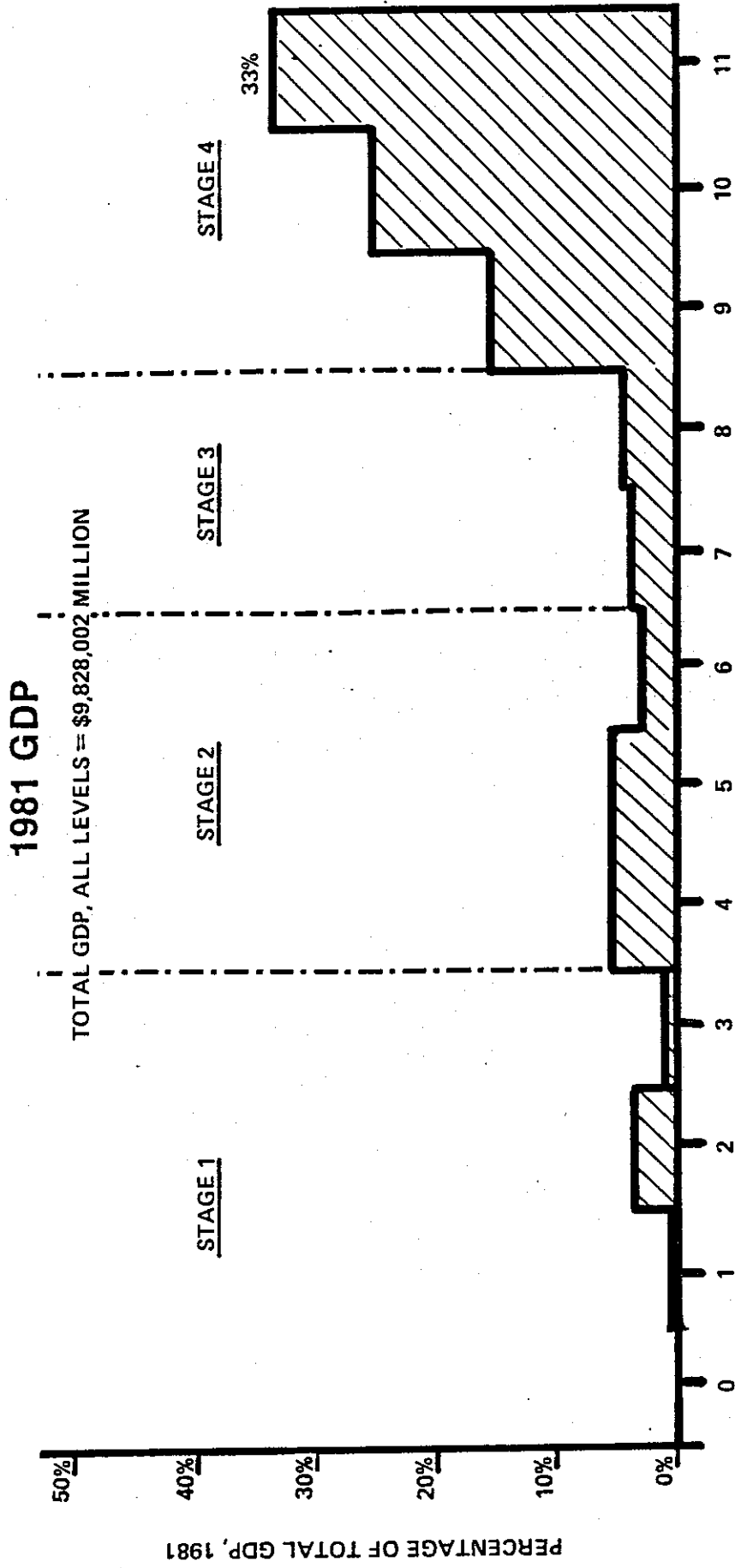
**PERCENTAGES OF TOTAL GDP  
BY 1970 DEVELOPMENT LEVELS**



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Note: Many Eastern European Countries Missing Data

PERCENTAGE OF TOTAL GDP BY 1970 DEVELOPMENT LEVELS



Note: Many Eastern European Countries Missing GDP Data

1970 LEVELS OF DEVELOPMENT

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22.

31

1982 Life Expectation figures are an adequate substitute for the 1980 UNRISD development indices, about forty countries will have entered or completed Stage 4 during the 1980s. Obviously, such a change cannot have taken place without having some noticeable effect on the relative strengths and weaknesses of all countries in the world economic system.

This view is supported by Michael Beenstock (1983) who argues in The World Economy in Transtion that

An important global factor in the OECD slowdown is the changing balance of world economic power, which has moved in favour of the developing countries. Economic expansion in the Third World has threatened the existing economic structures in the OECD countries, which in turn have been slow to adjust to these new circumstances. (p. 12)

In support of this argument, he presents the two tables below, from which he concludes:

. . . not only were LDCs competing directly in OECD domestic markets but . . . they were also making inroads into OECD external markets. (p. 66)

LDC Share of World Manufacturing Output and Trade, 1950-1980  
(% in 1975 dollars)

	<u>Output</u>	<u>Trade</u>
1950	8.4	N.A.
1960	10.3	4.4
1965	10.4	5.1
1970	11.75	5.6
1975	14.9	6.9
1980	15.5	9.8

Note: excludes centrally planned economies  
Source: Beenstock, 1983, p. 65

Growth of LDC Manufactured Exports by Destination, 1960-1978  
(% per annum at 1970 prices)

	<u>To Developed Countries</u>	<u>To LDCs</u>	<u>Total</u>
1960-8	9.7	9	9.2
1968-78	11.2	14.7	12.3

Source: Beenstock, 1983, p. 65

Obviously, if the speed of the development process over the past twenty years continues, particularly in the Stage 2 and 3 countries, there is every chance that this shift in favour of the LDCs will also continue. This will increasingly undermine the economic dominance of the OECD, and will have even greater impact as the more populous LDCs achieve higher levels of development.

Population

This brings us to the third aspect of the Double-S Curve as a closed system: the question of population size and growth. As has been previously

shown, those countries at Stages 2 and 3 of the development process in 1970 showed the highest rates of GDP growth in the period 1970-1980. (Figure <sup>15</sup> A.) In the case of the 1970 Stage 3 countries, only 7% of the 1981 population lived in those countries. Therefore, one might consider that the degree to which they threatened the economic predominance of the Mature (Stage 4) Societies of 1970, which had 23% of the world population, was necessarily limited.

The same cannot be said of the 1970 Stage 2 countries, the Creative Economies. They had the highest rate of GDP growth in the period 1970-1980 at 5.94% and, in 1981, they contained the largest proportion of the world's population at 38%. Much of this proportion was taken by China, yet Brazil, Malaysia, South Korea and Mexico are also included in the Stage 2 countries of 1970, and in 1981, these five countries contained almost 30% of the world's population. (See Figure <sup>23</sup> K.)

In the World Economic Outlook published by the IMF in 1983 ten countries were listed as major exporters of manufactures among developing countries. Of these ten countries, seven were Stage 3 countries in 1970:

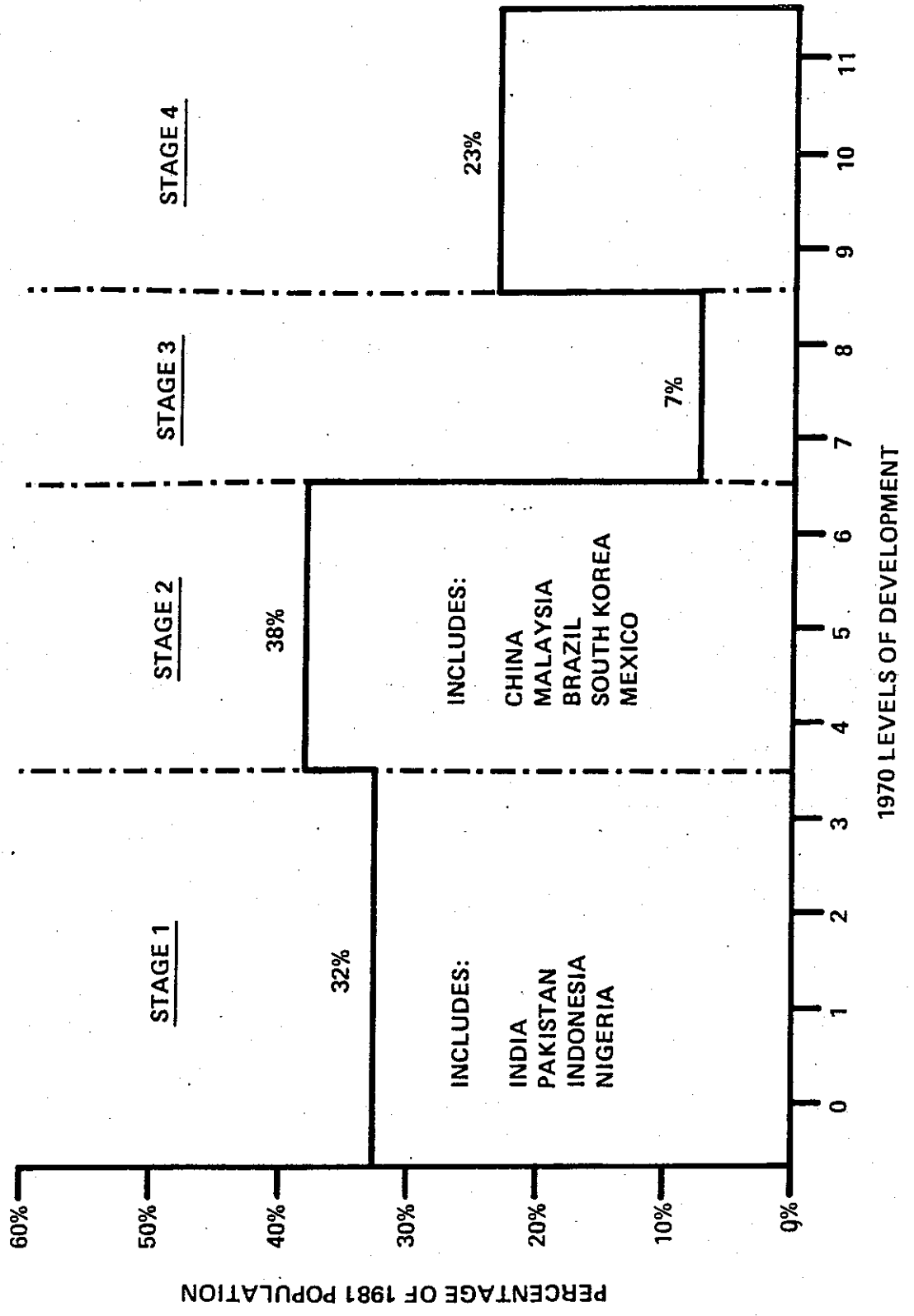
Hong Kong  
Singapore  
Argentina  
Greece  
Yugoslavia  
Portugal  
South Africa.

Of the remaining three, Israel would be classified under the Double-S Curve as an early Stage 4 country in 1970, and the other two, Brazil and South Korea, were, in 1970, Stage 2 countries with large populations.



23.

# 1981 POPULATION BY 1970 LEVELS OF DEVELOPMENT



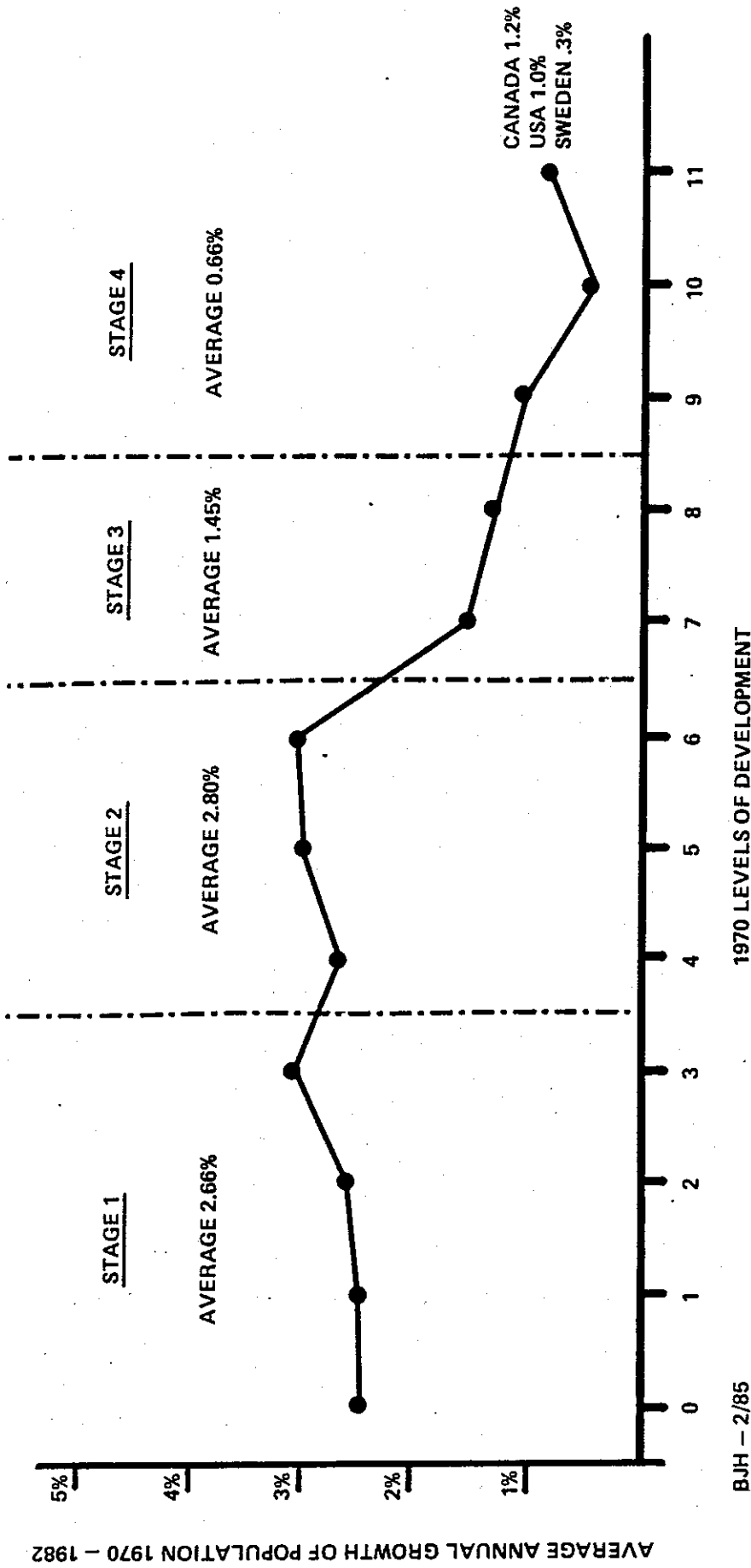
What this 1983 IMF list suggests, when studied against 1970 data, is that Stage 3 countries are most likely to become the Newly Industrialising Countries of subsequent decades. Thus, it is 1970's Stage 2 countries who (if they have progressed) are now, in 1984, likely to provide the next great economic challenge to the developed economies and provide large new markets for the whole world.

At this point, we look again at the most populous of 1970's Stage 2 countries: China, Brazil, Malaysia, Mexico and South Korea. When judged by 1982 life expectation, they were all, except Brazil, in or beyond Stage 3. Thus, these five countries will not simply be small newly industrialised city states like Hong Kong and Singapore, but are approaching industrialisation with 30% of the world's population, a fact which must alter what we can expect from them in terms of their domestic economies and their role in world trade.

There is one final aspect to this intertwined question of population and levels of development. So long as a country experiences rapid population growth, it has to keep expanding social expenditure just to provide extensive, basic coverage of health and education needs. When population growth slows, however, that increasing social investment can either be redirected to other areas of society or used to improve the quality of existing social services.

This idea has particular importance when we look at Figure 1<sup>24</sup> which examines 1970-82 population growth rates according to levels of development in 1970. Here it is interesting to note the clear dichotomy between the Stage 1

# 1970 — 1982 POPULATION GROWTH RATES BY 1970 DEVELOPMENT LEVELS



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and 2 countries, and the Stage 3 and 4 countries. Countries in the early stages of the development process in 1970 show population growth rates averaging 2.7% per year, 1970-1982. Countries in the latter two stages of development in 1970 show population growth rates averaging 1.05% from 1970-1982. Moreover, the first sign of a decline in population growth rate is seen in the Stage 3 countries and, from there population growth rates fall more or less steadily as the level of development rises.

Thus, we see that it is during Stage 3 that population growth begins to slow sufficiently for the quality of social services to start to improve. This general improvement in social services can in turn serve to enhance the economic growth potential of the Stage 3 countries.

#### Conclusion to Part II

As has been shown, the 1970s were a period of slow GDP growth in the developed countries even before the recession of the 1980s. At the same time growth and development continued in the less developed countries. This increased the overall complexity of the world economy, and began to shift the balances of the world economy in unforeseen ways, as the number of countries that could be classified as "developed" expanded.

If social development in fact precedes economic development, then the 1981 World Bank figures for life expectation suggest that a number of developing countries are likely to become even more important economically than previously imagined. Moreover, several of these countries are not just unusually strong in