Social Mobility and Education at Different Levels of Economic Development

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Introduction

Developr ent, social mobility, and education have been given much attention in separate analyses, l ut little in the integrated form. Little justificatio is required for the importance of exploring the inter-relationship among theses variables. f reliable relationship could be generalized con erning the flow of human resources, it would b greatly helpful for the purpose of planning.

Specifical y, the following questions will be explored: To what extent does social mobility differ acco ling to the level of economic development?; W hat is the role of education in different asp cts of social mobility?; Is there any difference i t the relationship between education and social mobility among different levels of developmen ?

In order o clarify the relationship, this study will adopt three countries at different levels of economic development: U.S.A., Brazil, and Ghana. Cross-country comparison will be attempted by reviewing relevant literatures and some case studies.

I. Theoretical Background

1. Concept of Social Mobility

Social mobility is an aspect of change. A gratifying degree of concensus seems to be exhibited in the conception of the meaning of the term social mobility. According to Barber, we have been using the term to mean movement, either upward or downward, between higher and lower social classes.(1) A common use of the term "social mobility" implies that there exist high intercorrelations among the several dimensions presumed to comprise the concept.(2)

Social mobility would be more multi-faceted in reality. It is closely related to geographic mobility and concerned not only with occupational change, but also with other aspects of changes

(1) Ber ard Barber, *Social Stratification*, New York: Harcourt Brace, 1957, pp. 356-357.
(2) Cha les F. Westcoff et al, "The Concept of Social Mobility: An Empirical Inquiry", *American Soci logical Review*, June. 1960.

in one's life. Many discussions of social mobility by sociologists have ignored this question of distinguishment.[3]

However, it has become common practice among sociologists to say "social mobility" when we mean "occupational mobility".[4] Social mobility usually refers to a change in income, power, social relations, or occupational prestige. A number of indicators can be employed, but our concern in this study is with vertical mobility, where class lines are crossed.

2. Types of Analysis

Three types of vertical social mobility are usually distinguished; inter-generational, intra-generational, and carreer or stratum mobility.[5] Intergenerational mobility refers to changes in the occupational standing of the son relative to his father. Intragenerational mobility indicates change in an individual's occupational position during his lifetime. Stratum mobility refers to the movement of an occupational class or stratum from a higher or lower position in the stratificational structure.

While research has been done on other aspects, the dominant interest in the study of social mobility has been with the investigation of intergenerational movement. Our concern will also be with similar area of interest: What is the difference in the prospects of an individual whose father has a particular occupation?

Two basic modes of analysis are inflow and outflow. The inflow type presents the distribution by social origins of the incumbents of a given occupation. This mode is very useful to analyze the effects of mobility or the difference in attitudes of those in the same occupational level but of different background. For the purposes of analyzing rates of mobility, however, inflow distributions are deficient. Particularly in comparisons over time and between nations, it would be necessary to adjust the relative differences.

Outflow analysis consists of presenting the distribution of the occupations of sons of fathers in given occupational positions. This type is particularly useful for analysis of intergenerational rates of mobility and is relied upon in this study with the complement of inflow analysis.

In analyzing outflow data, so-called standard methods will be adopted, by organizing each occupational stratum of fathers so as to present the percentage distribution into the various occupational strata. Specifically, the question will be what percentage of sons of non-manual fathers end up in non-manual occupations and what percentage in manual occupation.

Of itself, this type of analysis cannot be used to say that mobility is high or low, without resort to comprehensive data over time or between nations. The relative sizes of strata will be taken into account in the present study.

3. The Key Determinants Proposed

Several studies investigated a complex of comparative social mobility and attempted to specify the "crucial" inter-societal determinants of mobility. Fox and Miller selected five mobility determinants: gross domestic product per capita, education, political stability, urbanization, achievement motivation.[7]

(3) Neil J Smelser and Lipset, "Social Structure, Mobility, and Development", in Smelser and Lipset (eds), *Social Structure and Social Mobility in Economic Development*, Chicago, 1966, p.19

(4) S.M. Miller, "Comparative Social Mobility: A Trend Report and Bibliography," *Current Sociology*, IX (1960), p.4.

(5) Don Adams and Joseph P. Farrel, *Education and Social Development*, Syracuse University Press, 1967 (mimeo), chapter 2.

(6) Thomas G. Fox and S.M. Miller, "Economic, Political and Social Determinants of Mobility: An International Cross-sectional Analysis," *Acta Sociologica*, 1966, p. 76.

In general the level of economic development is dependent on technological progress, which is closely associated with the demand for different types of labor. Another important determinant is believed to be urbanization. One could expect levels of mobility to be higher in the more urbanized nations and lower in the less urbanized ones. Different types of national political system may exercise important effects upon mobility opportunities. Finally, it is often suggested that nations characterized by high achievement tivation have high levels of mobility.

According to the Miller's study, education shows the highest association with manual outflow. However, economic expansion by itself does not seem to be adequate to foster mobility.[7] The other variables, as shown in Table 1, appear to correlate with manual outflow mobility and also with non-manual outflow. It indicates that the variables might contribute to both directions of social mobility.

Table 1. Correlations among Social Mobility and Possible Determinants

	Manual outflow mobility	Non-manual outflow mobility
GNP per capita	.569	—.270
Enrollment at age 6-19	.803	—.149
Political Stability	.503	.385
Urban Population	.417	.475
Achievement Motivation	.451	.441

Source : Fox and Miller(1966, p. 89)

Adelman and Morris used the enrollment ratio in primary and secondary schools as one of three elements to represent the extent of social mobility. The other elements were the importance of indigeous middle class and the cultural or ethnic aspect of a society.[8]

I. Method of the Study

As the cases for analysis of the relationship between social mobility and education, this study adopt three countries at different levels of economic development: U.S.A., Brazil, and Ghana. Cross-country comparison will be made by reviewing relevant literatures and some case studies

1. Choice of the Cases

In spite of several well-known deficiencies of per capita GNP as a measure of economic development, it is still regarded as the best proxy.[9] Social mobility is a dynamic concept so that it would concern rather with the pace of economic development than with the absolute stock of national wealth. As typical samples respectively for the fast growing, the intermediate, and stagnant countries, this study chose the United States, Brazil, and Ghana. Annual average growth rates during the period 1960-1965 were the

(7) Ibid., p. 91.

(8) Irma Adelman and Cynthia T. Morris, *Society, Politics and Economic Development: A Quantitative Approach*, The Johns Hopkins Press, Baltimore, 1967, chapter II.

(9) For detailed explanation on the measurement problems of per capita GNP, see Charles P. Kindleberger, *Economic Development*, New York: McGraw-Hill Book Co., 1965, chapte 1.

followings: U S.A.: 3.5%, Brazil; 1.2%, Ghana; 0.4%.[10]

The other crucial reason for the choice was the availabil ty of previous studies on social mobility. It i open to question, however, whether the three cou ıtries properly represents respective categories in terms of structural change as well as of econom c growth.

2. Assı mptions and Data

In occupati nal classification, an implicit assumption is tha non-manual occupation is superior in skill, incoı ıe, and prestige to manual occupation, even th ıugh this is sometimes untrue. A further assun ption is that societies are "closed" so that there is no migration.

Many of di iculties of individual studies are compounded i making comparisons among nations. Time pe iods differ in various studies and occupational itles and ratings are not fully comparable. The following remarks will give some idea on he significance of each country's data. Any of hree countries adopted does not provide a syst matic national study devoted to intergeneratioı al mobility. For the United States, Miller relied r ainly on Richard Center's survey, which limited o sons of urban whites. Anderson's study also use the Center's data for international comparison.[11] In addition to re-quotation from the two stud es, this study refered to 1960 Census Repor for preparing an occupation/education mati ix.

The only di ta on Brazilian mobility seem to be Hutchinson s study. The study limited to Sao Paulo, an industrial center of Brazil.'[12] Havighurst's study partially explored the role of education in social mobilitu but did not add any nation-wide data.[13]

The coverage of data is more limited in the case of Ghana. No intergenerational comparison has been tried except several studies on secondary school students. Census data provide only a cross-tabulation on the static occupational distribution.

In common, what generalization about a country as a whole can be safely reached on the basis of partial data is unknown. Hopefully, however, the distortion might be cancelled out in comparison, since the data for all three countries would be equally overstated; urban white male for U.S.A., Sao Paulo for Brazil, and secondary school students for Ghana. It is obvious, of course, that this assumption could be justified by no way.

III. Comparative Social Mobility

1. Occupational Profiles

Occupational structure, the percentage distribution of labor force, reveals the relative importance of respective economic activities. Table 2 presents occupational distributions of three countries.

We can see that the majority of labor force in Ghana is composed of farmers, while the corresponding proportions in U.S.A. and Brazil are less than 10 percent. Another curious contrast is the relative weight between white collar wor-

(10) Frederi k H. Harbison et al, *Quantitative Analyses of Modernization and Develcpment*, New Jersey: Princeton University Press, 1970, pp. 187-188.

(11) Arnold Anderson, "Skeptical Note on the Relation of Vertical Mobility to Education," *The Americ n Journal* of Sociology, Vol. LXVI. No. 6 May 1961.

(12) Bertran Hutchison, "Urban Social Mobility Rates in Brazil Related to Migration and Changing Occupa ional Structure", *America Latina*, VI, No. 3, 1963.

(13) R.J. Ha vighurst and Robert Moreira, *Society and Education in Brazil*, University of Pittsburgh Press, 1965.

Table 2. Structure of occupational strata

	U.S.A.	Brazil	Ghana
Profe sional & managerial	16.9	17.0	6.9
White-collar workers	35.5	25.5	3.8
skille manual	19.5	33.4	11.8
Semi- r unskilled	20.3	14.0	13.4
Farme rs	7.8	10.0	62.8
Total	100.0	99.9	99.7

Sou ce: For U.S.A., Fox and Miller (1966, p. 576)
For Brazil, Hutchinson (1963, p. 54)
For Ghana, Hurd and Johnson (1968, p. 70)

kers and the skilled manual. In general, American occupati nal structure appears to skew upward and the structure in Ghana heavily downwards.

The differences in occupational distribution between wo generations are both the results and the causes of social mobility. The conventional profile of social mobility is projected by the manual/non-manual dichotomy. Table 3 shows relative changes in the proportions of two strata.

Table 3. Distribution of the Strata in Father's and Son's Generations

	U.S.A.		Brazil		Ghana	
	Father	Son	Father	Son	Father	Son
Non-ma ual	43.97	52.40	44.9	52.6	5.8	10.7
Manual	56.03	47.60	55.1	47.4	94.2	89.3

Sourc : See Table 2

A strik ng finding is that the United States and Brazi show very similar changes in occupational pat ern. Both countries have an expanding non-manu l stratum which absorbs many from manual ho nes. We may say that the rates of urban mar y from manual homes. We may say that the r tes of urban mobility are almost same between Brazil and the United States. The proportion of non manual workers in Ghana has doubled but it is still no more than one-tenth of the total.

The inter-country variation in social mobility raises a question: what factors are associated with the variation? Some crude indices of the

Table 4. Scaled Values of the Determinant Factors

	Per capita GNP	Enrollment ratio	Political stability	Urbanization
Brazil	70(B)	90(A)	40(C+)	70(B)
Ghana	70(B)	50(B)	90(A)	45(C−)

* Num rical scores are based on the different arbitrary scales in the study.
Sour e: Adelman and Morris (1967, chapter II)

key determinants, which were proposed by Fox and Miller, can be derived from Adelman's study. A comparison between Brazil and Ghana appears in Table 4; unfortunately the study excludes all developed countries.

Brazil appears to achieve much higher enrollment ratio and urbanization, to which the large proportion of non-manual stratum might be attributed. The level of economic development does not emerge as different, nor does the political stability as accountable. The crudeness of the scale does not permit further justification for the difference in the mobility.

2. Comparison with Developed Countries

Table 5 presents the occupational profiles of other developed countries. The data for Great Britain and Netherlands show little change in the contours of the occupatioal structure between generations. In Japan, 10 percent of manual stratum has shifted upward.

Table 5. Inter-generational changes of occupational distribution in developed countries (%)

	U.K.		Japan		Netherland	
	Father	Son	Father	Son	Father	Son
Non-manual	37.11	37.02	29.98	30.87	43.97	52.40
Manual	62.89	62.98	70.02	69.13	56.03	47.60

Source: Fox and Miller (1966, p. 576)

The increments of dichotomical distribution can be analyzed in terms of outflow and inflow. Manual outflow and non-manual inflow illustrate the upward mobility of sons of manual origin. The inverse case records the downward mobility.

Table 6. Comparative inflow and outflow mobility (%)

	Manual Mobility		Non-manual Mobility	
	Inflow	Outflow	Inflow	Outflow
United States	18.06	30.38	32.49	19.55
Brazil	18.5	28.3	29.4	20.5
Great Britain	24.83	24.73	42.01	42.14
Japan	12.43	23.70	48.00	29.66
Netherland	18.73	19.77	44.84	43.20

Source: Hutchinson (1963, p. 54) for Brazil
Fox and Miller (1966, p. 575) for others

Beginning with the data on outflow mobility, we see that upward movement is greater than downward movement in the United States and in Brazil. But this is not the case in Great Britain and in Netherland where downward mobility predominates. This finding is strange enough, considering the well-known argument that industrialization contributes to upward mobility. Furthermore, it may be contrary to popular opinion that the status of elite would be more stable in Great Britain than in the United States.

The inflow pattern, on the other hand, show

little difference in the direction of shift. All countries are characterized by more new-comers in the non-manual stratum than in the manual. It must be noted, however, that use of the manual/non-manual classification blankets considerable intra-stratum mobility due to structural change over time. Significant difference would appear, if we take into account the mobility within the strata. Table 7 pictures the changes in occupational structure between generations in greater detail.

Table 7. Occupational distribution between generations

		Professional & managerial	Clerical & commercial	Skilled workers	Semi or unskilled
U.S.A.	F	8.92	35.04	29.59	26.44
	S	16.86	35.54	19.50	28.10
Brazil	F	11.3	13.2	21.2	54.3
	S	17.0	17.8	17.7	47.4
U.K.	F	7.98	29.13	38.74	14.15
	S	7.49	29.53	33.91	19.07
Japan	F	11.15	15.59	8.53	64.74
	S	11.74	24.45	12.06	51.76
Netherland	F	7.18	22.80	32.65	37.37
	S	11.08	19.79	34.22	34.91

* F denotes father's generation and S son's generation
Source: See Appendix Table for U.S.A. and Brazil
Fox and Miller (1966, p. 576) for others

The professional stratum in the United States shows a large increase, but the clerical class little change. The skilled group declines sharply, while the semi-skilled and unskilled class have moderate increments. This description also applies to Great Britain, except little change in the size of professional occupations. We can see that the structure within the manual category has altered between generations; the relative size of the skilled workers has decreased while the other group has expanded in the son's generation.

In Brazil, the trends of sub-strata are identical to that of manual and non-manual category. Upward mobility is evident in general.

The middle class in Japan shows a large increase The distribution of the manual stratum has shifted upward. It is notable that Japan and Britain show little change in the relative size of elites between generations. The corresponding change within Dutch non-manual category is contrary to the Japanese case. The relative size of the elites increases, but the middle class shrinks negligibly.

It may be in order to examine the determinant factors accountable for some peculiar aspects of the mobility in the developed countries. For one thing, what could account for the high downward mobility in the two European countries? Fox and Miller pointed out that the level of education (primary and secondary) is the most important determinant for upward mobility but of little importance for downward mobility. However, as shown in Table 8, secondary and higher education would be closely related to downward mobility.

The shrinkage in secondary education might

be a cause of r on-manual outflow in Great Britain and Netherland The countries are also characterized by stag ant growth of the economy. The data above wou d throw some light on the justification for the remarkable change within non-manual stratum, like a large increase of professional workers in the united States.

Table 8. Annual average increase rates 1960-1965 (%)

	Per capita GNP	Enrollment ratios		
		Primary	Secondary	Higher
U. S. A.	3.5	5.8	7.2	16.0
Japan	10.11	−1.7	0.6	9.2
Netherland	2.8	−0.1	−2.0	4.7
U. K.	2.7	1.4	−2.6	9.1

Source: Ha bison et al (1970, p. 188)

IV. Educa ion and Social Mobility

Most studies concerning social mobility admit that education serves as a vechicle for upward mobility, but there is no agreement on the relative importa ce of education as a determinant. Several conflict ng observations were reported, leaving the con ribution of education to mobility unclear.

Anderson not s that a considerable amount of upward mobilit occurs independently of formal education. Fror an international comparison on education and mobility, he concludes that education is but o e of many factors influencing mobility, and t may be far from a dominant factor. Ability and associated motivation, he interprets, are the qualifications which are not easily provide by formal schooling but affect job success.(14)

Duncan, on he other hand, in his study of occupational m bility in Chicago, remarks that education was an appreciably more important determinant than was father's occupation; and the latter factor, moreover, was influential in large part because of its association with education. The results of regression analysis were consistent with the supposition that education is a main determinant of social mobility.(15) Lipset and Bendix also found that education is a crucial factor in the inter-generational mobility process.(16)

In general, we expect that upward mobility would be an increasing function of education and downward mobility a decreasing function. Higher level of education probably mean greater opportunity to gain credentials for occupational advance.

The relationship between education and occupational mobility might vary according to other factors. Several propositions could be reviewed in this relation: First, as education be progressively generalized, the correlation between schooling and later occupation would diminish over time. Secondly, the effects of schooling on mo-

(14) Arnold Anderson, op. cit., p. 569.
(15) Otis Du lley Duncan and Robert W. Hodge, "Education and Occupational Mobility: A Regression Analysi ", The *American Journal of Sociology* (May 1963), p. 644.
(16) Seymou M. Lipset and Richard Bendix, *Social Mobilily in Industrial Society*, Los Angeles: Univers ty of California Press, 1959, p. 197.

bility would depend upon the selective mechanism at school and upon the character of societal recruitment. Thirdly, the relationship would be associated with the initial heterogeneity of the occupational strata and their relative sizes.

These propositions implicate the possibility that the role of education in social mobility might vary as economic development proceeds, but they do not generate any spontaneous answer on the patterns of variation. For one thing, developed countries provide more generalized education which may loosen the correlation, but operate more formal recruitment system which will emphasize educational qualification. The patterns of association among development, mobility, and education will be examined with comparative data concerned.

1. Relationship between the Levels of Educa- tion and of Occupation

The static relationship between formal education and social mobility can be presented by educational charateristics of labor force in each occupation. Table 9 gives an overall picture of this relationship in Ghana.

Table 9. The Relationship between the educational and occupational characteristics in Ghana (Unit: %)

	Level of education							
	No education	Primary school 1-6	Middle school 1-4	Secondary school 1-6	University college	Technical school	No answer	Total
Professional and administrators	2.2	1.5	12.7	35.8	37.3	6.0	4.5	100.0
Clerical workers	0.8	1.6	48.8	41.7	—	1.2	5.9	100.0
Traders and businessmen	22.2	9.1	38.4	18.2	—	3.0	9.1	100.0
Skilled workers and artisans	21.4	12.8	41.9	12.8	—	6.8	4.3	100.0
Semiskilled and unskilled workers	50.0	—	42.9	—	—	—	7.1	100.0
Farmers and fishermen	64.6	16.6	13.7	1.6	—	—	3.5	100.0
Others including uniformed workers	14.3	—	71.4	—	—	—	14.3	100.0
Don't know and no answer	16.0	—	20.0	24.0	4.0	—	36.0	100.0

Source: Philip Foster, *Education and Social Change in Ghana*, University of Chicago Press, 1965, p.256

It is clear enough, as expected, that a consistently positive relationspship obtains between occupational status and the level of education. It is equally apparent, however, that many individuals achieved relatively high-status occupational roles with quite low levels of schooling. Over one sixth of professional, administrative group has a middle school education or less, while just over one-third has no more than a secondary education. The data illustrate the considerable rewards accruing to even limited levels of formal education.

In contrast, as shown in Table 10, Brazilian case shows much more tight relationship. Almost all of those in professional and administrative occupations are university graduates. The educational background of the managerial and executive level is more diverse, but mostly limited to persons with university education (41.4%) and to those with secondary education (54.9%).

Table 10. Occupational status and level of education in Brazil (%)

Occupation	Educational attainments				
	No educa.	1- 6 years	6-12 years	12-16 years	University graduate
Professional administors	1.1	0.0	4.2	2.1	92.6
Managerial executives	0.0	0.8	31.6	31.6	31.6
Upper-grade white collar	0.0	5.5	34.1	50.1	10.3
Lower-grade white collar	1.6	18.7	32.9	46.7	0.0
Skilled manual	4.8	32.1	41.9	20.8	0.4
Semi and no n-manual	23.3	48.4	22.0	60.0	0.3

Source: Hutchinson (1963, p.56)

White collar workers came predominantly from seconday education level, while 75.9% of the skilled manual vorkers had no more than primary education. Persons with little or no education formed most of the semi or unskilled manual labor force(93.2%).

Unlike our anticipation, the occupation-education matrix in the United Statesdoes not present as clear relationship as that of Brazil. One-third of professional workers were high school graduates and a large number of college graduates engaged in clerical jobs. However, the general direction of the distribution appears obviously positive; the more educational attainments, the higher the level of their occupations. In addition, it seems notable that the overall level of education is much higher than those of two other countries. The proportions of wokers with no education appear negligible even for unskilled laborers.

The relative loose correlation between occupational and educational levels might be attributed to different reasons respectively in the United States and Ghana. In Ghana, scarce of college graduates would make it inevitable to fill professional positions with secondary or even primary school graduates. Hurd and Johnson explain the rigidity of access to higher education in Ghana in terms of three reasons: legal control by elite group, high cost of the education, and parental illiteracy in the lower clases.[17] In addition, the

Table 11. Occupational status and educational level in U.S.A (%)

	No. educa.	1- 7 years	8-11 years	12-16 year	more than 16
Professiona	0.1	1.3	7.8	32.4	58.5
Managerial	0.5	7.5	28.3	46.8	17.0
Clerical	0.4	6.8	30.0	51.2	11.7
Craftsmen	0.7	17.8	46.1	33.3	2.0
Servicemen	1.3	25.7	48.1	24.1	0.7
Farmers	1.8	28.1	43.0	24.9	2.1
Laborers	4.1	40.0	40.0	14.9	0.6

Source: re abulated from 1960 Census of Population Report PC(2)-5B, male only

(17) G.E. Hurd and T.T. Johnson, "Education and Social Mobility in Ghana," *Sociology of Education* Vol. 40, 1968.

society n ight have not formalized minimal educationa l qualifications for recruitment. Similar findi gs could be expected inmost of developing countries where formal, objective criteria fc r employment are not popularized yet. On the ot ıer hand, the opposite description would apply to . ımerican situation. Generalized higher education resulted in the modification of the traditiona notion that college graduates are automatically the elite group. To join the top most occupatio al level, higher education is required but it doe s not guarantee the entrance; higher education would be a necessary condition but no longer the sufficient condition. It implies the decreasing effects of education as it is generalized.

2. Intergenerational Relationship between Education and Occupational Status

More elaborate information is required for analyzing dynamic features of the relationship. Table 12 shows son's education and occupational status in the United States, both stated relative to the po itions of father. Of sons whose education is be ter than the father's almost half also have posi ions better than the fathers, as compared to (nly 16 percent of sons whose education is poore but whose occupational status is superior t) the parents'. It appears evident that sons with better education than their fathers do more c mmonly have better occupational status. The relat onship seems rather striking, considering tha t education is only one of several factors in social levation. Similar relation ship is found in Brazil, as shown in Table 13. Though the data do not present relative changes in educational attainments, we can see that educationand occupational mobility are related but not tightly.

The significance of university education for mobility is revealed by the fact that the graduates have the highest percentage who are in higher strata than their fathers. The university graduates also have the smallest percentage of down ward mobility. The secondary education category shows an almost balanced amount of

Table 12. Son's status and education relative to their fathers in U.S.A. (%)

Son' education r lative to fathers	Son's status relative to fathers			
	Higher	Same	Lower	Total (cases)
Bette	46	33	21	100(291)
Same	29	41	30	100 (80)
Poore	16	35	49	100 (45)

Sourc ; calculated from the data in Anderson (1961, p. 562)

Table 13. Educational attainment and occupatioal mobility in Brazil (%)

Son's educationa attainment	Son's status relative to fathers			Total cases
	Higher	Same	Lower	
Prim ry ed.	40.6	43.2	16.2	426
Secor dary ed.	31.1	42.4	26.6	177
High r ed.	48.3	39.8	11.9	118

Sourc : Hutchinson(1963, p. 51)

rising and f: lling mobility.

Surprising y, however, primary educated group achieved hig ıer upward mobility than secondary school gradu ıtes. Does it indicate that secondary education is less contributive to upward mobility? It is difficult to conclude hastily, without more detailed infc :mation on intra-occupational flow. A paradoxic: l possibility would be that most of the upwardly mobile with primary education might have shifted within the low stratum, for instance, from the unskilled to the semiskilled.

The question could be explored further with more elaborated data by occupational classification. Table 13 presents three-dimensional cross--relationship in the United States; such data is not available in the case of Brazil.

Table 14. Relative occupational stations of sons to fathers from two different strata. (%)

	Son's status relative to fathers	Son's education relative to fathers		
		better	same	poorer
Non-mar ual	Higher	38	14	11
	Same	33	56	21
	Lower	29	30	68
Manual	Higher	53	42	23
	Same	33	28	59
	Lower	14	30	18

Source: Richard Center (1957, p. 144).

Among so: s whose schooling were superior to those of the r fathers, 38 percent of non-manual workers achi ved higher status than their fathers, while 53 pe cent of manual workers were in higher occup ıtions. When the son's schooling was inferior to hat of fathers, only 11 percent of the nonmant al held a superior position, but 23 percent of tl e manual had superior one. It is noteworthy hat regardless of son's education relative to f: thers the proportion of the upwardly mobile is hi her in the manual stratum than in the non-man ıal one. The findings suggest two hypotheses: irst, education would be less contributory to ıpward mobility in lower level of occupations; secondly, education might not be a crucial facto · for short-range mobility.

C ɔnculding Remarks

It was ex] ected for this comparative analysis to give a conclusive explanation on the variation in social mobilty among the countries. But the comparison suffered from the incomparability of the data. Furthermore, the partial coverage of the mobility data restricts general interpretation. The following fragmentary observations are substitutes for all compassing generalization or any decisive theorems.

First, social mobility would not be a direct function of the level of economic delelopment. Rather the pace of economic growth seems more relevant to the extent of the mobility. High level of downward mobility could be partially attributed to stagnant growth of the economy.

Secondly, a well-known proposition was clearly confirmed; the level of education is positively associated with the degree of upward mobility. In addition, contrary to Miller's conclusion, it appears advocatable that secondary and higher education would be a important determinant of

downv ard mobility. The decrease of secondary school enrollment and the restricted accessibility to hig ıer education, like in British educational systen , could promote the downward mobility.

Thi: dly, the contribution of education to social mobili y would vary according to the degree of genera ized education. In the countries with restric ed educational opportunity or with highly genera ized education, the extent of correlation between the levels of education and of occupation is relatively loose, while the country in the intermediate stage shows clearly tight relationship. However, the interpretation should be accompanied by the consideration of the society's recruitment system.

Finally, it was observed that education might not be crucial for short-range mobility and nor the sufficient condition for upward mobility.