## James G. Scoville (Ed.)

## Status Influences in Third World Labor Markets

Caste, Gender, and Custom



de Gruyter

# Status Influences in Third World Labor Markets Caste, Gender, and Custom

Editor: James G. Scoville

A Publication of the International Industrial Relations Association



Walter de Gruyter · Berlin · New York 1991

## James G. Scoville

## Professor of Industrial Relations, University of Minnesota, Minneapolis, USA

 $\otimes$  Printed on acid-free paper which falls within the guidelines of the ANSI to ensure permanence and durability.

Library of Congress Cataloging-in-Publication Data

Status influences in Third World labor markets : caste, gender, and custom / editor, James G. Scoville.

> p. cm. – (De Gruyter studies in organization ; 32) Includes bibliographical references and index.

ISBN 3-11-012647-8 (alk. paper)

1. Labor market – Developing countries. 2. Social status – Developing countries. 3. Caste – India. 4. Women – Employment – Developing countries. 5. Sex discrimination in employment – Developing countries. 6. Wages – Women – Developing countries. I. Scoville, James G., 1940 – II. Series. HD5852.S735 1991

331.11'43-dc20

91-27649 CIP

Die Deutsche Bibliothek – Cataloging-in-Publication Data

Status influences in Third World labor markets : caste, gender, and custom / ed.: James G. Scoville. — Berlin ; New York : de Gruyter, 1991

(De Gruyter studies in organization ; 32 : International management, organization and policy analysis) ISBN 3-11-012647-8

NE: Scoville, James G. [Hrsg.]; GT

© Copyright 1991 by Walter de Gruyter & Co., D-1000 Berlin 30.

All rights reserved, including those of translation into foreign languages. No part of this book may be reproduced in any form - by photoprint, microfilm, or any other means nor transmitted nor translated into a machine language without written permission from the publisher.

Typesetting: Knipp Textverarbeitungen, Wetter – Printing: Ratzlow Druck, Berlin. Binding: D. Mikolai, Berlin. – Cover Design: Johannes Rother, Berlin. – Printed in Germany.

Archibald O. Haller, Hélcio U. Saraiva

This paper has two related objectives: to locate research on ascription and achievement in the more comprehensive picture of present day theory of societal stratification and to present recent data on ascription and non-ascriptive status transmission in the status allocation processes of Brazilian workers.

Ascription and achievement are concepts deeply embedded in stratification theory, especially those aspects dealing with individual social mobility or, in more exact terminology, status allocation processes – the mechanisms by which persons or other small units of a society, such as families or households, move into and thenceforth follow their lifetime status courses. To understand ascription and achievement we must first understand how societal stratification phenomena are structured and how these structures may vary.<sup>1</sup>

## Stratification Phenomena

It is the hierarchical stratification structure of societies that provides the ordering principles by which all phenomena of social mobility are to be understood. This includes the special sets of phenomena called ascription and achievement. Marx and Weber are usually credited with providing the conceptual bases for understanding societal stratification, though in fact references to such phenomena go back as far as the written records can take us. Yet the earliest writing that clearly anticipates the major contemporary view of stratification phenomena appears in

1 The analyses reported herein were supported by a grant from the Spencer Foundation to the University of Wisconsin College of Agricultural and Life Sciences and were conducted while Dr. Saraiva was Visiting Professor of Rural Sociology at the University. We gratefully acknowledge the advice of Jose Pastore, Jonathan Kelley, Maria Camila Omegna Rocha and Phillip Fletcher, and the assistance of Rochelle Green, Shreeram Krishnaswami, Ann Lytton, Sarah Rudolph, and Mary Husby Schil. Copies of the original data tapes employed in these analyses may be obtained from the Data Programming and Library Service, 3313 Social Science Building, University of Wisconsin, Madison, WI 53706. Pitrim A. Sorokin's (1927) Social Mobility. It was he who first recognized that a full analysis of stratification phenomena requires specifying what later came to be called the *content* dimensions and *structural* dimensions of stratification (Haller, 1970). Content dimensions comprise the variables that describe "substances" of which stratification phenomena are composed. Structural dimensions comprise the variables that describe the variables that describe the variables that describe the variations the content dimensions and their indicators may undergo. To date, a full consensus concerning the essential content and structural dimensions does not exist. Nevertheless, the consistencies among the various writers are impressive and the inconsistencies are intelligible enough to be brought into a comprehensive scheme. In other words, in practice there exists a powerful consensual framework specifying which ones of all the variables of human behavior describe hierarchical stratification phenomena and which do not.

## Content dimensions

Concerning content dimensions, this consensus has its roots in two powerful thought traditions, classical stratification thinking and empirical stratification research. The former is mostly European, the latter mostly American. Classical thought basically holds that the content dimensions are power and privilege. When Marx, for example, divides the productive classes into two, capitalists and workers, we can see that he combined a power dimension and a privilege dimension. Capitalists monopolize both the power to gain their ends and the privileges this power bestows. However, he made little effort to elucidate the dimensions underlying classes. Weber came closer to doing this. He employed three basic concepts: classes, parties and status groups, although at times he also invokes authority and education. His classes are categories of people separated by unequal economic positions. His parties are collectivities that vary in their ability to exert control over the political process - political power. His status groups are collectivities varying in style of life and social prestige. Thus his key stratification concepts embody hierarchical dimensions - economic status, political power and social status. Underlying all these ways of organizing societal inequalities stands his concept of power - the ability of one to force his will on another "over and against" the will of the other. Sorokin is perhaps more precise. While it took several decades before stratification thinkers understood him, Sorokin (1927) had a rather modern conception of content dimensions (and structural dimensions, too, as we shall see). His were political stratification, economic stratification and social stratification. Lenski (1966), a contemporary writer in the classical tradition, focuses on power and privilege and, to a lesser extent, prestige, all three of which he, like Sorokin, clearly sees as hierarchical dimensions. Power is understood today to include any variable that describes hierarchically ordered differences among actors (individuals or small collectives such as families, or even whole

societies) according to their success at eliciting desired behaviors from others. This dimension is manifested in a number of specific variables, each with forms that vary among social entities (societies, nations, corporations, etc.) It includes legitimate political influence, authority, as well as illegitimate coercion, etc. Of these, only authority and authority-based influence (formal recommendations) have been subjected to the kind of explication that would yield measurable variables (Robinson and Kelley, 1979; Wright, *et al.*, 1982; Pastore, Haller and Gomez-Buendia, 1975, 1977). Nevertheless, power variables cannot yet be said to have yielded to measurement procedures that are widely accepted.

Privilege encompasses some variables which are relatively easy to measure and others that are as illusive as those of power. On the one side, it includes economic status such as wealth (assets) and income; on the other, the varying legal privileges of distinct social strata. Wealth and income are variables about which much is known. Differences in economic status are widely discussed in the literature. Legal privilege is often thought not to exist anymore, at least in the more developed societies. But of course it does; though in societies where nobles no longer have special rights and where slavery no longer exists, categorical legal privilege has been reduced considerably. In the well-to-do democracies it mostly defines rights and responsibilities of adults and children, of the sane and insane, of criminals and non-criminals. And of course this refers to *de jure* rather than *de facto* privilege.

Classical theory (e.g., Lenski, 1966) thus has been mostly concerned with grand issues of power and privilege. The empirical traditions dealing with these classical content dimensions are fragmentary. On the one hand, economic status has been given considerable attention – by economists rather than stratification specialists: except for economic status, and then only by implication, economists do not ordinarily deal with stratification phenomena; and it is only recently that stratification researchers have begun to deal with economic variables. Most of this latter work concerns the influence of labor markets on earnings. And empirical work on power and legal privilege has hardly begun. The upshot of this is that among stratification research specialists, work on the classical content dimensions is as yet almost nonexistent.

The empirical stratification researchers have done much better by two other content dimensions, called social and informational status by Svalastoga (1964). It was Sorokin (1927) who, while at the University of Minnesota, first employed an hierarchical array of occupations to measure differences in social status. He used occupational intelligence data taken from United States Army records from World War I, data which were collected by his colleagues in the Department of Psychology. Perhaps because of doubts about the use of intelligence data to infer status, stratification researchers generally ignored his measure. But they were clearly interested in the idea of distinguishing social statuses by means of occupational data of some sort. Indeed, an empirical research tradition focusing on occupational prestige arose in the 1920s, later resulting in a landmark national study of occupational prestige (North and Hatt, 1947). This was followed by many such

## Archibald O. Haller, Hélcio U. Saraiva

studies over much of the world. Some of the first international work was analyzed by Inkeles and Rossi (1956). The main summary of this work was published by Treiman (1977), who views occupational prestige as the central variable of stratification, subsuming and accounting for all other content dimensions such as power and privilege. In any case, it has become routine to measure social status by means of widely understood ratings of occupational prestige obtained by asking representative samples of people to evaluate the standing of each of a set of occupational titles and then attributing to any particular person the average standing of his occupation.

A second line of occupational status thinking, centered on what are called "occupational socioeconomic indexes" (SEIs), has emerged from the occupational prestige line. The occupational prestige rankings of North and Hatt (1947) were attractive as bases for occupational status attributions because the raters were representative of the entire American population. But only 90 occupations were rated. Duncan (1961) regressed the ratings of the North-Hatt occupations on the education and income of comparable occupations from the 1950 census. This provided a regression-weighted algorithm by which to assign estimated occupational prestige scores to all occupations. He called the resulting scores SEIs. His followers, especially Featherman and Hauser (1978), have tended to prefer SEI scores to direct prestige scores when measuring social status. On the whole, the logic of SEI scoring appears to be a valid way to estimate the prestige dimension in the United States. Such scores, though different from those calculated for the United States, also work well in Brazil (Bills, Godfrey and Haller, 1985; Silva, 1985; Saraiva and Ward, 1985), possibly the only developing society for which they have been constructed.

Informational status, in the specific form of educational attainment, entered the empirical stratification literature in a wave of social psychological analyses of status allocation processes. Though education had been thought of as a stratification variable as early as Weber, and had even been studied sporadically, it first entered the stratification literature in a way that clearly presages the status allocation research wave in two articles by a group at the University of Wisconsin in the mid-1950s (Haller and Sewell, 1957; Sewell, Haller and Strauss, 1957). The theoretical aspects of this wave are summarized in Haller (1982b). Consistent with Treiman's position, this group seems to have assumed early on that occupational status was the key stratification variable, although they soon broke with that assumption, as indicated in Haller (1970). In any case, from the beginning, they and those who followed them took educational attainment to be an important stratification variable in itself as well as a mechanism of occupational status allocation.

The general conclusion of this review of content dimensions is that power, privilege, prestige and informational status encompass the range of variables thought by most theorists to lie at the heart of societal stratification. Classical theorists take power and privilege to be the most important. Yet empirical analyses of these are in their infancy. (Of course economists have done a great deal with

income and wealth. This work mostly remains to be incorporated into stratification theory.) Only recently have stratification researchers begun to use income as a key variable. On the other hand, the dimensions least important to classical theorists, prestige and informational status, have been examined rather thoroughly by empirical stratification researchers. The particular variables are occupational status (whether as prestige or as SEI) and educational attainment.

The implication of this is that three variables are now widely used in stratification research bearing on ascription and achievement. These are educational attainment, occupational status and income. Of these the most likely to be used and measured well is occupational status. As a result, research on ascription and achievement leans heavily on occupational status.

## Structural dimensions

For many years, the transformations of societal stratification structures were mostly ignored. For example, Weber, often considered the fountain of modern stratification theory, seems to have written nothing on the variations of stratification structures despite the stimulus he provided to his followers in the identification of what we have called content dimensions. Earlier, Marx was obviously concerned with transformations of stratification structures, but apart from class conflict, his views seem vague in light of modern theory.

Again, it is Sorokin (1927) who, early on, had the clearest conception of stratification structures and their variations. He, for the first time in the stratification literature, tried to call attention to ways stratification structures may change. Though his vision was imperfect, it clearly presages modern thinking. It was he who realized that Pareto's and others' concept of inequality could be applied to stratification structures: that each content dimension of a stratification structure may vary over time in terms of its degree of inequality. Along with this he recognized that the shapes of the distributions of stratification dimensions could vary. He put inequality and shape together in a structural dimension he called "profile." He went on to point out that the level of whole content dimensions could rise or fall. So profile and level were his structural dimensions. During the 1960s, Svalastoga (1964) and Duncan (1968) clarified concepts of the forms stratification structures could exhibit. These have been incorporated in a slightly more comprehensive set (Haller, 1970). We recognize the following as the dimensions describing the variations each stratification structures may exhibit: variations in status central tendency (a general rising or falling of the variables measuring a content dimension), variations in status dispersion (the degree of inequality regarding the variables measuring a content dimension), variations in status crystallization (the degree of association among variables measuring each dimension), variations in status inheritance (the degree of parent-to-offspring

correlation of each status content variable-which is the same as the relative degree of social immobility), variations in status stratigraphy (the size and location of modes and depressions in the distribution of each variable describing a content dimension) and variations in status skewness (the degree of skewness of the distribution of each variable measuring content dimension).

## Ascription and Achievement

These terms were introduced by Ralph Linton (1936) to analyze positions within a society. They both refer to status, which Linton defines as "a collection of rights and duties" (113), specifying the activities to be expected of any incumbent of a position. One's gender defines one of one's statuses, one's age another, one's race or ethnic group another, etc. Achieved and ascribed statuses are brought into play by Linton to distinguish the statuses one gains "by one's own efforts" from those that are defined by birth. Genders provide one example of ascribed statuses are not necessarily hierarchical, though achieved statuses are. Ascribed statuses are "assigned to individuals without reference to their innate differences or abilities. They can be predicted or trained for from birth." Achieved statuses "are left open to be filled through competition,"

The word "status," however, was in wide use among sociologists to refer to any given level of a hierarchical stratification variable or even to the whole variable. Occupational status is one such term. It can mean a status variable describing the whole range of occupational prestige levels (Treiman, 1977), or their strong correlate, occupational socioeconomic status (Featherman and Hauser, 1978). Or it can refer to an individual: John Doe's occupational prestige status. More generally, status refers to hierarchically ordered variations on each of the stratification content dimensions and content variables we discussed earlier. Achieved and ascribed status variables are germane to stratification theory to the extent that they describe, determine or constrain people's positions of power, privilege, social status or informational status.

## Transmission, Ascription and Other Status Allocation Processes

Status allocation processes regarding education, occupational status and income have been subjected to considerable analysis. The goal of this line of research is to determine why some persons come to occupy higher statuses while others come to occupy lower ones. Most of this work has been summarized in Bielby (1981)

and Haller (1982b), although more has continued to pour out since those essays appeared. From the first (Blau and Duncan, 1967; Sewell, Haller and Portes, 1969; Sewell, Haller and Ohlendorf, 1970, Haller and Portes, 1973), it has been evident that the hierarchical statuses attained by individuals are due in part to the statuses passed on to them from their parents, although in American society, a much larger part is due to other forces.

This is not the place to review such processes, though in developed western societies it appears that the key mechanisms include one's status aspirations. the influence of, one's "significant others," one's performance in school and one's ability to manipulate linguistic and numerical symbols ("intelligence"). One's initial level of status, transmitted from one's parents, appears to be far less important than the above factors, at least in the United States. Gender, age, etc. do have substantial impacts on hierarchical status, but they do not categorically determine them in the more "open" societies. Indeed, this disarticulated quality is precisely what is meant by the term "open society." In the one extreme, highly stratified societies would exhibit a high degree of dispersion (inequality) on each status content variable, a low degree of inter- and intragenerational status exchange mobility on each such variable, a high degree of correlation (status crystallization) among all such variables, and sharply distinct strata and marked skewness. The hierarchy of such societies would be simple and profound. All of the mechanisms of status allocation would operate. But instead of functioning to open channels of mobility, they would simply operate as status transmission mechanisms, guaranteeing that the offspring of the lowly remain lowly while those of the mighty remain mighty. Open societies, those at the opposite extreme, would have a low degree of status dispersion, a high degree of exchange mobility, a low degree of status crystallization, and a status distribution that is nearly normal.

Qualifications and Status Allocation. Linton's distinction between ascription and achievement implies to some that, in Western societies, statuses are allocated according to merit or talent (Davis and Moore, 1945). Whether this is true or not, education is clearly a large factor in status allocation. Most of the effects of earlier occurring processes, including status transmission, appear to operate through education in the United States (Otto and Haller, 1979). Education's impact on occupational status is especially large and its influence on income is also substantial.

One's level of educational attainment is considered a major factor specifying the status levels one is qualified to attain. Thus the degree to which education influences attainment in other variables is often contrasted with the degree to which one's status is achieved or transmitted to one from his parents. In other words, education seems to have become a surrogate for Linton's ''achieved'' component, just as, for some writers, parental status often, if inexactly, serves as a stand-in for the ''ascribed'' component. This contrast, however inexact, is useful to the extent that education is not itself determined by status origins.

## Archibald O. Haller, Hélcio U. Saraiva

Occupational age-income trajectories. These form another feature of status allocation mechanisms now coming to be documented in recent literature (Haller and Spenner, 1977; Spenner, 1988). Two key processes appear to be at work: First, constraints due to the center of gravity and outer limits of the income stream of one's occupation; and, second, income changes due to job changes.

Regarding the first process, each occupation has its own characteristic ageincome trajectory (and women's are invariably lower than men's). At any particular moment, each occupation will have a certain average income and a certain dispersion around it. These averages and dispersions are established by market forces and non-market norms. So long as a worker plies a certain occupation, his income and thus his income trajectory is constrained by forces applying to all those in his occupation. These occupational age-income streams may rise and fall or widen and narrow with the passage of time; each occupation has its own. The individual worker's income trajectory lies within his occupation's stream. In the United States, these curves are quite marked. Higher paying occupations are sharply concave; the curves of poorly paying occupations are almost flat with age (Haller, Perrone and Miller, 1975).

The second process modifies the individual effect of such streams. Individual workers move among occupations. The income of a person who leaves one occupation to take another falls under the influence of his new occupational age-income stream. So individuals are not absolutely bound within the trajectory of a given age-income stream. They may and do move around among streams. The processes by which such movements take place are only now coming under serious study (Spenner, 1988).

The educational, occupational and income statuses of persons in advanced industrial societies are largely achieved, in Linton's terms. Yet gender and race act as ascriptive constraints on the operation of achieved status.

The interplay of ascription and achievement. Hereditary slavery provides an informative example of the interplay of ascriptive and achieved components of status allocation processes. In societies with hereditary slavery, the statuses of slaves and the freeborn are ascribed. The slave is on the bottom of each of the content dimensions. The very definition of the slave bars him from the exercise of legal or political rights or influence. This, in turn, makes it unlikely that his position on other content dimensions or variables will be above the very bottom. So the slave's ascribed legal status categorically determines – that's to say, severely constraints – his other hierarchical statuses. But this is not true for the freeborn. Freeborn persons may find themselves anywhere on the various content dimensions. For them, status may or may not be transmitted from their forebears. More accurately, the degree to which such peoples' hierarchical statuses are transmitted may vary in time and place, but they are not categorically constrained by the ascribed status of being freeborn.

In any case, there exist both generationally transmitted and non-transmitted components in the process by which hierarchical statuses are allocated to individ-

uals within society. Part or all of the transmitted component may be ascribed – determined by explicit or implicit rules which allocate elite, middle or humble statuses of parents to their sons and daughters. Sometimes the rules include race, color, gender or ethnicity. Formerly in the South of the United States, the ascribed statuses of the freeborn and the slave exerted a substantial impact on a person's economic, political, social and informational statuses. In the same way, the ascribed status of noble, commoner and serf controlled much of the transmitted component in status allocation in Europe well into the last century. But the statuses of people in certain highly unequal societies may have a strong transmitted component that is not ascribed. This could happen if education were to become the main status allocation mechanism in a society where the elites monopolized educational opportunity. Today, gender, race or color, and ethnic group tend to define ascriptive statuses. These constrain, but do not wholly determine, one's positions on the content dimensions.

We imply that the transmitted component of hierarchical status can be measured. This was one of the main contributions of Blau and Duncan (1967). They and other analysts have shown conclusively that in advanced industrial societies the component of status transmitted to sons and daughters from their parents is rather small. In any case, ascription would contribute part, but not all, of the transmitted component of one's status.

## Derivative Statuses

Another source of confusion may lie in the distribution between ascribed statuses and derivative statuses. The hierarchical statuses of certain individuals come to set the statuses of others with whom they are connected. For many purposes, the fundamental units of society are households, most of which are familial households, most of these in turn being nuclear familial households. (In some societies, the household may be composed of a set of hearths, often consisting of an adult male and female conjugal couple and their children, if any.) Households may consist of only one person; a pair or more of unrelated persons; a conjugal couple; a conjugal couple and their children and perhaps others; or the remaining member of a dissolved couple, their children and perhaps others. At least one of a household's adults will be engaged in extracting sustenance, and perhaps more, from the household's environment.

It is the society's status allocation mechanisms which determine the status of any particular household. The extra-household activities of the household members who act to sustain and enhance the households' resources are directly linked to others who have similar extra-household responsibilities. Hierarchical statuses are attributed or confirmed collectively by those with whom one interacts in these extra-household "gainful" activities according to criteria that are society-wide. It is the household members with such extra-household roles who set the hierarchical status in the larger society for each member the household. The statuses of others within the household, especially the familial household, are specified derivatively by the status of the outward-acting members, whom we could call the "prime status holders." Specifically, this is why the occupational or income status of male heads of households often sets the status levels of each of the household's members.

In America today, the prime status holders are often called "breadwinners" and the others, "dependents." In nations like Brazil, where the concept of the "head of the family" has a legal meaning, prime status holders would usually be referred to as heads of families. In today's research literature, status allocation processes almost always refer to mechanisms affecting those who are already prime status holders, or who, as youths, appear to be coming into such roles.

There are ascriptive and other transmitted elements involved in the status allocation processes of derivative status holders. But derivative statuses are not ascribed statuses. Theirs is another order of status allocation phenomena.

## Gender and Status Transmission in Brazil

The main business of this paper is to show how and (insofar as possible) to what degree the current statuses of employed Brazilians have been influenced by ascription or have been transmitted to them from their families of origin, in relation to levels of development of the nation. Data are used from two points in time: 1973, when the so-called "Brazilian miracle" was in full swing, and 1982, when the boom had come to an end. At both times, comparisons are made by level of regional development. Status means of men and women are compared, thus providing evidence of an ascribed component in the attainments. Then the total effects of father's occupational status on one's education, occupational and income levels are measured. Data are also presented on the total effects of education on occupational and income levels. This permits a rough comparison of the relative status origins and qualifications. One's educational qualifications are not independent of one's status origins. This too is assessed.

## Prior Theory

Current stratification thought, articulated by Treiman (1970) and implied by Lenski (1966), holds that economic development tends to destratify society. For present purposes, the main consequence of this is that the effect of ascription and of

non-ascriptive status transmission should decrease with development. These are the main hypotheses to be tested herein, although we shall present additional data. We have but one criterion of ascription, gender, and its effects are taken to be mixed with those of other variables.

## Brazil

Brazil is one of the larger countries of the globe, where about three percent of the world's population occupies the fifth largest national territory. Now at 150 million or so, most of its people live within about 500 miles of the Atlantic coast: about 45 million in the one-fifth of the land surface called the Northeast, about 95 million in the one-fifth called the South, and about 10 million in the undeveloped Western and Northern two-thirds of the country-the so-called Amazonian Frontier. The productivity of the industrial heart of the nation, around São Paulo, Rio de Janeiro and Belo Horizonte, is substantial, both in manufacturing and in agriculture. The volume of Brazil's agricultural export sales is second only to that of the United States. Even so, its industrial exports exceed those of its farms. Yet in 1970, it is estimated that half its population - or about 47 million people - were in extreme poverty, living in families earning less than one-fourth of the minimum wage per person. Because of rapid economic growth and a job generation rate of four percent per year that greatly exceeded the population's growth rate of 2.5 percent per year, the proportion and number of persons in such extremely impoverished families decreased dramatically by 1980 to about 21 percent or 25 million people by 1980 (Pastore, Zylberstajn and Pagotto, 1983). (Of course, 25 million is greater than the population of most nations and their level of poverty was severe.) At around G = .51, Brazil's gini coefficient, measuring the degree of relative inequality in income, was one of the highest in the world (Jain, 1975), From 1950 to 1980 the population shifted from being two-thirds rural to two-thirds urban. Yet Brazil is an unevenly developed nation. We shall go into this later. But briefly, the populous South is rather well developed. The populous Northeast is much less developed. The sparsely populated Amazonian North and Northwest are hardly developed at all.

The nation's intergenerational social mobility pattern as of 1973 is instructive. Until Pastore (1982) published his analysis of prime status holders (male heads of families), it was commonly believed that there is little or no social mobility in Brazil. He showed this belief to be simplistic. The employed heads of the families he analyzed show some interesting patterns. For one, intergenerational economic development induced an overall pattern of upward "structural" mobility. The vast bulk of this lay in the rural-to-urban migration: large numbers of men had moved from the country to the city to rise just barely above the positions of their fathers. A second pattern was the expansion of the upper (professional-managerial,

## Archibald O. Haller, Hélcio U. Saraiva

or "elite") stratum. It was and is small. But, even after controlling for the elite stratum's numerical expansion due to population growth, in percentage terms it was half again as large among heads of families in 1973 as it was for their fathers. Also, Pastore's elite stratum was far from self-reproducing. Many sons of elites were found in lesser positions and many elites had fathers from other strata, a large percentage coming from the various working class levels. (This is not to say that it was common for those from the lowest stratum to rise to the top: only one percent of the sons of rural workers found themselves in the elite stratum.) For our purposes, his work shows that it would be useful to examine the roles of ascription, non-ascriptive status transmission and qualification in the status allocation processes of employed Brazilians. Much is already known about such processes in advanced industrial societies, especially the United States. An analysis of them in Brazil could help researchers understand how they operate in less developed societies.

## Data

The main data for this paper were taken from the Brazilian National Household Sample Surveys (PNAD: Pesquisa Nacional Por Amostragem de Domicílios) of 1973 and 1982. They were collected and coded in machine-readable form by IBGE (Instituto Brasileiro de Geografia e Estatística: Brazilian Institute of Geography and Statistics, the national statistical agency.) The two PNADs have many variables in common. Despite the fact that the 1973 data were collected for a labor force analysis while those of 1982 were collected for an analysis of education, the two data sets provide comparable measures of all the key variables used herein. The 1973 data were taken from a special magnetic tape, which includes all sample members 10 years of age or older. For present purposes, all income-earning men and women between 15 and 64 years of age are included. The 1983 data used herein are from a 1/3 sub-sample of PNAD households and, of course, consist of all income-earning men and women 15 to 64 years of age. Both PNADs were multistage area probability samples, weighted to permit generalization to the nation and its regions. A second source of data, also provided by IBGE, was used to identify Brazil's socioeconomic development macroregions, and the results published earlier (Haller, 1982a). Similarly, public data were used to determine whether Brazil would be considered more developed in 1982 than in 1973.

## Brazil's Development

For most of the past two decades the nation's economic growth exceeded six percent per year. From 1965 to 1983 it averaged five percent per year (World

Bank, 1985). The current recession, mostly a delayed reaction to the oil crisis, struck in late 1981. The GNP per capita declined. Yet it was clearly a more developed nation in 1982 than in 1973. We have estimated that the average income of labor force participants was about 57 percent higher in 1982 than in 1973 (Haller and Saraiva, 1988).

By our group's per capita calculations (Haller, 1982a), Brazil's 360 official continental microregions fall easily into five socioeconomic development macroregions: 1) The Developed South, dominated economically by the manufacturing and agriculture of São Paulo, Rio de Janeiro and Minas Gerais, most of whose people are relatively well-off almost everywhere; 2) The South's Developing Periphery, a belt-like region arcing around the northern perimeter of the South and projecting out along the western borders for a thousand miles, whose people tend to be noticeably worse off than those of the South but substantially better off than those almost all the rest of the country, 3) The Undeveloped Amazonian Frontier, the vast north of Brazil which is almost devoid of people except in a few isolated and remote cities and whose people, though at a depressed level of living, are not as poorly off as some. 4) The Unevenly Developed Northeast, populous and characterized by levels of development that vary sharply by microregions, highest in certain capital cities, but nowhere rising to the higher levels of the South. 5) The Underdeveloped Middle North, covering more than 500,000 square miles, sparsely populated and practically everywhere at the lowest levels of development in the nation.

These macroregions were identified using 1970 data. Yet the correlation of the development levels of the nation's 360 microregions between 1970 and 1980 are so high (r = +.99) that there is no reason to expect that their boundaries had changed significantly over the decade, though overall levels rose everywhere (Rocha, 1987).

In general, we can conclude that the socioeconomic development levels of Brazil's population rose between 1973 and 1982 and that at both times they varied sharply among the nation's macroregions.

## Variables

This analysis employs nine variables beside gender and development level. Each of these is described more fully in Haller and Saraiva (1988). Briefly, they are as follows:

 Father's Occupational Status. This is an occupational status scale canonically weighted by each occupation's average education and average income (Saraiva and Ward, 1985). It is one of the two main independent variables whose effects are analyzed herein. These scores were calculated for this project, using the strategy indicated in Bills, Godfrey and Haller (1985). Their scores were calculated only for the occupations demonstrated in the 1973 PNAD data. The 1982 data included many more occupations. The present scores are comparable for 1973 and 1982.

- 2) Age. This variable is used mainly as a control in the present analysis. It is coded by year in both samples. It is widely used as a proxy for labor force experience because the correlations between age and years in the labor force are so high as to make them interchangeable for most purposes. In these data, the correlations were too high to use both. We decided to go with age (and age squared). The relationship of age and income is curvilinear, rising to about age 45 or 50, then plateauing or falling. This shows that something more than experience is involved. Indeed, the more an occupation pays the more pronounced its curvilinearity (Haller and Spenner, 1977).
- 3) Age Squared. This variable is also included mainly as a control. Set orthogonal to age, it captures the main non-linear component of the age-income relationship.
- 4) Urban-Rural Location. This is a dichotomy. It is included as one of two labor market segmentation variables and as a factor which exerts a substantial effect on one's educational opportunities.
- 5) Education. This is another key variable. As we shall see, in assessing the impact of father's occupational status it serves as one of the dependent variables. It also serves as a measure by which to compare the relative effects of father's occupational status with those of qualifications -''family status vs. merit.'' The exact measures differ slightly in the two samples. In the 1973 data, a detailed series of categorized response alternatives were provided, which we coded into a rather precise approximation of the number of grades successfully completed. In 1982, the exact number of grades successfully completed was recorded.
- 6) Occupational Status. This is a major dependent variable. It was measured with the same scale used for father's occupational status.
- 7) Class. This is a dichotomy distinguishing those who were owner-employers of private businesses from all others. It is thus a rather pure measure of Marxian class position, distinguishing, as is done in Soviet law, between capitalists who employ the labor of others, and workers who provide labor. The effectiveness of this variable has already been demonstrated (Haller and Pastore, 1983; Bills, *et al*, 1985).
- 8) Protected Labor Market. This, too, is a dichotomous labor market segmentation variable. It distinguishes those whose job situations are protected by government or private social security measures from those whose jobs are not. This variable was not included in the 1973 analysis.

9) Income. This variable is the natural logarithm of income. It was reported in *cruzeiros* in 1973 and in numbers of minimum wages earned in 1982. Because of Brazil's long-term inflation, the nation has for years expressed wages in terms of the number of minimum wages a person earns. This figure, in turn, is tied to a cost of living index. Because of the chaotic pattern of inflation, periodic readjustment and the differences in the metric, the 1973 income figures and those of 1982 are not comparable.

## Strategy

A model of the impact of Father's Occupational Status, Urban/Rural Location, Age and Age-Squared on education and subsequent variables; on Occupational Status, Class and Protected Labor Market; and of each of the latter three variables on Income  $(ln_n)$  was estimated by means of path coefficients. The first four variables were taken as exogenous. Education was taken to be the next. Occupational status, Class and Protected Labor Market were taken to be simultaneously acting variables through which Education and its antecedents might influence Income  $(ln_n)$ . Within this order, all possible path coefficients were calculated.

As indicated earlier, we take as an hypothesis to be tested that development reduces the influence of status origins on one's own status and increases the influence of qualifications on one's status. To measure status origins, we employ the Father's Occupational Status. To measure qualifications, we use grades ("years") of Education successfully completed. To measure one's own status, we follow conventional procedures and use Education, Occupational Status and Income  $(ln_n)$ .

The crucial data are the total effects, as estimated by conventional standardized path coefficients (Wright, 1960; Duncan, 1966). In this form of analysis, total effects are seen as the sum of all direct and indirect effects of an antecedent variable on a dependent variable. Such effects are measured under strict assumptions of the causal ordering of the variables. Each direct effect is a standardized partial regression coefficient. Indirect effects are the products of any two or more standardized partial regression coefficients in the path linking three or more causally sequenced variables.

The basic comparisons are of the total effects of Father's Occupational Status on Education, Occupational status and Income  $(ln_n)$  in the various socioeconomic development regions, by sex, followed by a comparison of the total effects of Father's Occupational Status and one's own Education one's Occupational Status and Income  $(ln_n)$ .

The path coefficients describing causal relations among different variables in the same model applied to a single data set are comparable to each other. Normally, comparisons describing a given relationship in the same model applied to two different data sets are not strictly comparable. But lacking a viable alternative, in this analysis we use ordinary path coefficients derived from standardized regressions. This is satisfactory for present purposes because we are interested merely in determining whether development exhibits the expected differences in effects, rather than in assessing the amount of effect; and because the standard deviations decrease with decreases in level of development, the development trends of the path coefficients are under-estimated. Thus the figures we present underestimate the increasing effect of development on the impact of Father's occupational status on one's own status. That is, as we shall see, within Brazil the effect of development on the impact of status origins and of qualification on later status is precisely the opposite of what current stratification thinking leads us to hypothesize, and our conservative analysis scheme tends to underestimate the degree of divergence between the theory and our findings.

## Results

There are two main hypotheses to be tested: 1) that with development, the effects of ascribed status decrease; and 2) that with development, the effects of status origins decrease. Two subsidiary hypotheses are also tested. These are given as they come up.

Ascription. To test this hypothesis thoroughly it would be most useful to have data on both color and gender. Though Brazil is said to be a racially integrated society this is an exaggeration. It is patently obvious that practically everyone in the upper strata is fair-skinned while, those in the bottom strata are mixed. It is equally obvious that practically all of the most influential positions are held by men. In this regard, research confirms what Brazilians all know. We cite two examples. First, Nelson do Valle Silva (1978) has shown that darker skin color affects one's income status. Second, among employed heads of households 20 to 64 years of age in 1973, 3.5 percent of men were classed by Pastore and Haller (1982, 124) as being in the "elite" stratum and only 0.8 percent of the women were so classed. Very few black people make it into the upper strata.

But it is not known whether ascription rates vary with development in Brazil. Neither does the existing literature say which of the various status variables is influenced by ascriptive factors. Responses to these questions may be gleaned from present data by comparing the educational, occupational and income statuses of men and women under our two criteria of development: temporal (1973 and 1982) and regional (the five development macroregions). Unfortunately our data tapes do not include race or color.

Table 1 presents the essential data, comparing Education, Occupational Status and Income for men and women in the labor force in 1973 and 1982. (Note that the results of the analysis are comparable even though the income metrics for 1973 and

1982 are not.). Clearly, different indicators of status yield different conclusions. With but one exception, Education in the Underdeveloped Middle North in 1973, women average more grades completed than do men, though both are low by comparison with the more developed nations. Also, the educational gap between the sexes seems to have widened between 1977 and 1982. Furthermore, variations by regional development are not in perfect agreement with the hypothesis. Nevertheless, on the whole, the more developed the region, the greater the number of years of education completed, except that the educational levels of those in the Underdeveloped Amazonian Frontier are rather like those in the Developed South. In general, if the education of men and women were the single criterion on which to test the hypothesis that women are ascribed lower status than men, the answer would be a resounding No. It even looks as though development increases the advantage of women. But there is more to be said.

The highest occupational status averages of such statuses are found in the most developed regions, and most of the averages rose between 1973 and 1982. So it can be said that Occupational Status tended to rise with development. But what about gender, our ascriptive variable? This yields results that are more ambiguous. First, in 1973 men indeed had higher scores in the South, the Northeast and the Middle North. But in 1982 women had the higher scores than men in all regions. Obviously, women gained more over the nine years than men did. As with education, it would appear that the ascriptive hypothesis does not hold for occupational status.

While not denying this conclusion, it does deserve further comment: things are not always exactly as they seem, even when based upon careful measurement. In our judgment, several subtle factors are at work. For one thing, women are more educated than men and the occupational status scale is weighted with the average education of people in each occupation. (Bills, Godfrey and Haller, 1985.) More important is the fact that men and women are located at different levels of the occupational hierarchy. Women tend to be concentrated in rather few occupations around the middle or lower middle of the scale. For example, most primary and secondary school teachers are women, with a score of 56 on a scale of 0-100. So are most typists and stenographers, with a score of 48, and midwives and practical nurses, with a score of 33. Men, on the other hand, are spread out over the whole range, though they are concentrated near the bottom. Practically all who score above 70 are men. But very few people reach that level. On the other hand, manual workers - skilled and unskilled - have scores below 30 and practically all of their incumbents are men. So the more precise conclusion about ascription is that it is a operating powerfully in the distribution of occupational status even though the scale averages do not show it. It works through a sex-determined occupational segregation which tends to channel women into relatively few occupations at the lower-to-middle white collar levels. It distributes men all over the range but mainly into lower regions.

Income is the variable which shows the ascriptive impact of gender and the influence of regional development most consistently with the hypothesis. (We cannot determine the effect of temporal development on income because the metrics are not comparable.) Regarding development, those in the Developed South earn the most, both men and women, while those in the poor Northeast and the poorer Middle North earn the least. The middling positions of the South's Developing Periphery and the Undeveloped Amazonian Frontier are inconsistent with each other. The Frontier, underdeveloped as it is, is the seemingly problematic case. But in fact it can be explained. The population of the Frontier is concentrated mainly in and near the two large Amazonian cities: Belem and Manaus, and in a few smaller places. Frontiers generally pay more than settled areas because the hazards are thought to be greater and because it takes extra incentives to attract workers to them. Also, unlike everywhere else in Brazil, the rural population is sparse indeed: few want to live scattered out through Brazil's million or so square miles of dense and dangerous jungles. In our judgment, frontiers are places where large-scale organizations - companies or governments - have decided to make investments. So frontiers demand special incentives. The Amazon region is a true frontier: the rest of Brazil is not.

Is there evidence of an ascriptive factor in earnings? There is. The earnings figures for men and women speak clearly for themselves. Women's average earnings do not reach 60 percent of those of men in any of the 10 development categories. But does development have any influence on the degree to which ascription affects income? To examine this, we reduced women's earnings per unit time to a percentage of those of men. (For 1973, this is done in terms of earnings per hour. For 1982, the minimum wage data are automatically standardized.) The result is that in each development region, women's income, as a percentage of men's, was higher in 1982 than in 1973, though this catch-up factor was much higher in the less developed regions. We conclude that there is a strong ascriptive factor, based on gender, in the earnings of Brazilians.

The general conclusion is that gender ascription is a strong force on income differences, a real but more subtle force on occupational differences, and has no effect on education.

## Status Transmission

As we have seen, it would be easy to confuse ascription with status transmission, which is the degree to which the status of parents is reflected in the status of their offspring, regardless of whether there exist any specific norms dictating the latter's status. In other words, parent-to-child ascriptive forces (such as race) are a special case of status transmission.

Here we examine the total effects of Fathers' Occupational Status on Education, Occupational Status, and Income  $(ln_n)$ , by sex and by development levels (both regional and temporal, 1973 and 1982). These total effects, as we have seen, are calculated by routine path analysis methods employing ordinary least squares regressions within a fully recursive model. The model assumes the following causal order. The exogenous variables are Father's Occupational Status, Urban/Rural Location, Age and Age-Squared (set orthogonal to age). The subsequent variable is Education, Next, taken to operate simultaneously, are Occupational Status, Class (in the Marxian sense) and - in 1982 - whether one has a job in the "protected" sector. Income  $(ln_n)$  is the ultimate dependent variable. In other words, we look at the effect of Father's Occupational Status on Education, net of the effects of three central variables-Urban/Rural Location, Age and Age-Squared. We look at the total effects of Father's Occupational Status, net of the control variables, on Occupational Status, both directly and to the extent that its influence may operate indirectly through its impact on education. Finally, we look at the total effects of Father's Occupational Status on Income  $(ln_n)$ , net of the control variables: as it operates directly; as it operates indirectly through Education and Occupational Status; and as it operates indirectly through Education and hence through class and (in 1982) through Protected Labor Market.

The results (Graph 1, see Appendix for details) are summarized in trend lines describing regional variations in the total effects of father's occupation on men's and women's Education, Occupational Status and Income  $(ln_n)$  for each of the two years. It is the general direction of, and major differences between, these lines that is to be noticed. The values presented here no doubt represent slight underestimates of the differences between places and times, because the standard deviations of the three status dependent variables vary directly with the level of development. (The degree of inequality tends to be greater in the more developed regions). Note, too, that because of the small number of cases with complete data, the Northeast and Middle North were combined for the 1982 analysis.

The following tendencies toward patterns are apparently present:

- 1) The higher the level of development, both in place and time, the greater the influence of Father's Occupational Status on each status variable. In other words, the transmitted component of status tends to increase with development in Brazil.
- 2) The effect of Father's Occupational Status is larger among women than among men. That is, the statuses of women are more tightly constrained by those of their fathers than are the statuses of men.
- 3) The impact of Father's Occupational Status tends to be greater on Education than on Occupational Status, and the latter tends to be greater than on one's Income. In other words, one's status origins have more influence on Education than on Occupational Status, and more influence on Occupational Status than on Income.

4) The tendency of the impact of father's occupation on the three status variables to vary directly with the level of regional development appears to be more pronounced in 1982 than in 1973. That is, as the general level of development rose from 1973 to 1982, it would appear that regional development increased more sharply the impact of status origins on one's own status.

## Qualification

By way of comparison, we have included a similar set of curves describing the total effects (within the model of course) of Education on Occupational Status and Income  $(ln_n)$ . The purpose of this is to provide a basis for comparing the effects of individual qualifications with those of social origins. Here, it must be remembered that education is powerfully, though by no means exclusively, affected by status origins: the impact of status origins on one's qualifications could range from none at all to complete determination. As Sewell, *et al*, hinted long ago, in 1969, it is reasonable to expect that elite families would try to get the most and the best education for their offspring when qualifications come to play an important role in status allocation. In such a case there would be a strong indirect path from Father's Occupation to later statuses through education.

As always, we use a specific, tractable variable to measure the key status variable. In the case of Qualification, we use Education in grades successfully completed – estimated grade-equivalents in 1973 and grades in 1982. Occupational Status and Income  $(ln_n)$  are the dependent variables. The total effect of Education on Occupational Status is the same as the direct effect. The total effect of Education on Income  $(ln_n)$  includes the direct effect plus the effects mediated by Occupational Status and Class. In 1982, Protected Labor Market was also used as a mediator.

Data concerning the effects of Education on Occupational Status and Income (ln), included in Appendix B, are summarized immediately below. The total effect of Education on Occupational Status is the same as the direct effect. The total effect of Education on Income (ln) includes the direct effect plus the indirect effect through Occupational Status and Class, and in 1982, Protected Labor Market. (Note that for 1982, the data from the Northeast and Middle North were combined.)

For men in 1973, the total effects of Education on Occupational Status are: Developed South (S) = .523, the South's Developing Periphery (P) = .559, the Undeveloped Amazon (A) = .466, the Unevenly Developed Northeast (N) = .419, the Underdeveloped Middle North (M) = .592. For men in 1982: S = .610, P = .609, A = .610, N+M = .654. For women in 1973: S = .664, P = .660, A = .628, N = .575, M = .674. For women in 1982: S = .717, P = .762, A = .763, N&M = .613. We turn now to the total effects of education on income (ln). For men in 1973: S = .476, P = .438, A = .418, N = .343, M = .441. For men in 1982: S = .515, P =

.528, A = .520, N+M = .474. For women in 1973: S = .538, P = .523, A = .510, N = .363, M = .484. For women in 1982: S = .578, P = .586, A = .535, N+M = .437. Thus these data show the following:

- 1) All the path coefficients describing Education's effects on both dependent status variables are rather high in both years.
- 2) These total effects were substantially higher in 1982 than in 1973, apparently indicating that nine years of development increased the impact of Education on Occupational Status and Income.
- 3) Even so there appears to be no consistent effect of regional development on the impact of education on occupational status or income.
- 4) For employed women, the coefficients are markedly higher than for men, indicating that women's occupational status and income are more dependent upon education than are the corresponding statuses of men.
- 5) Occupational Status is more dependent upon Education than Income is. (This is hardly surprising because education and income are causally more distal than education and occupational status.)

The main conclusions to be drawn from the analysis are: first, that temporal development seems to have increased the effect of education on both occupational status and income, but that there is no apparent effect of macroregional development on education's impact on the two variables; and second, that the occupational status and income of women are apparently more closely tied to education than are those of men.

## Education as a Mediator

So the results suggest a curious contradiction, at least from the point of view of prevailing speculation. According to the latter (Lenski, 1966; Treiman, 1970), the effect of status origins should decrease with development and the effects of education should rise. In Brazil (1973 and 1982) we have found that the effects of status origins (the transmitted component of one's status), and perhaps qualification, both increased with development. The seeming anomaly might be explained by what we shall call the *educational monopoly hypothesis*. This hypothesis holds that as development proceeds, the linkage between education and other status variables becomes progressively closer. This increasing linkage between qualification and rewards is evident to large proportion of the population, obviously including the families of the higher status levels. More than other families, these have the resources to put their offspring through many long years of formal education and to pay to get them into the best schools. So the rich tend to monopolize educational opportunities.

## Archibald O. Haller, Hélcio U. Saraiva

If the educational monopoly hypothesis is valid, the higher the level of development, the greater the role of education as mediator of influence on one's status origins on one's status. Translating this into operational terms, the higher the level of development, the greater the proportion of the total effect of Father's Occupational Status on one's Occupational Status and Income that may be attributed to Education.

The data are presented in Table 2 and are summarized in Graph 2. Allowing for some puzzling exceptions, the data seem more consistent than inconsistent with the hypothesis. The overall results are these:

- 1) For both men and women almost all the mediated total effect percentages were greater for 1982 than for 1973.
- 2) In most comparisons by development region, the higher the level of development the greater the proportion of total effects mediated by education. (Most of the exceptions are in cells of presenting data from the Underdeveloped Middle North. We have no explanation for this).
- 3) On the whole, the proportion of the status effects of Father's Occupational Status that was mediated by Education is greater for women than for men.

In general, the results appear to support the hypothesis. It does appear that as development levels rise, the higher strata tend increasingly to transmit their status to their offspring via formal education.

This does not explain the gender differences, however. The above processes are more pronounced among women than among men: parents apparently use their are education as a status transmission device more for their daughters than for their sons. Why? Is there a connection between ascription and status transmission? Is status inheritance more pronounced among women than among men? Is it more pronounced among those on whom the limitations imposed by ascription fall most heavily? So it seems.

## Conclusion

In this paper we have reviewed the concepts of ascription and achievement as they were so lucidly presented two generations ago by Ralph Linton and as "achievement" has been elaborated by theorists of status allocation processes. It would appear that Linton's conception of ascriptive mechanisms of status allocation, in which status is determined or constrained at birth by well-understood norms, has survived intact. The "achieved" aspect, however, has been reconceptualized. No contemporary analysts, to my knowledge, mention the philosophical concept

of "free will," and it seems doubtful that any key researcher thinks that status achievement is so driven. On the contrary, the general assumption seems to be that status goals are formed in early interaction with significant others and that once formed they serve as criteria for deciding among the alternative circumstances that individuals confront. Unlike Linton's view, there is no more room here for free will than is available to a guided missile programmed to change course as it seeks an evasive target.

The standard assumption has been that development decreases the effect of both ascriptive and non-ascriptive mechanisms of transmission while increasing the effect of one's own qualifications. In data representative of Brazil's population as the nation developed between 1973 and 1982 and as its development levels vary among its socioeconomic macroregions, we appear to have found the following; 1) That gender-determined ascription has strong effects on income, depressing it among women, smaller but real, if subtle, effects on occupational status and no effect on average education; 2) That the higher the level of development, the larger the size of the component of one's status that is transmitted from parents to offspring; 3) That the effects of regional development were greater in 1982 than in 1973; 4) That the transmitted component of status was greater for women than for men, suggesting that gender ascription not only reduces the status of women but also increases the transmitted component of status among women: 5) That the effect of qualifications also tends to rise with development; 6) That the effect of qualifications is more pronounced among women than among men; 7) That with rising development, there is a greater tendency for parental status to be passed on through education; and 8) That this latter effect appears greater for women than for men.

It is not clear whether the ascriptive element in status increases with development in Brazil, but there is no evidence that it decreases. But clearly the transmitted element does increase, as does the effect of qualification, and these tendencies are more evident among women than among men. It would appear that social origins are quite powerful status allocation mechanisms in Brazil; that their effects increase with development; and that they are more powerful among women than among men. In other words, women are more tightly locked into the statuses of their parents than men are; and this effect is increasing with development.

So this analysis has led to conclusions that run contrary to almost all current thinking regarding development and status allocation processes (Lenski, 1966; Treiman, 1970). They are also apparently inconsistent with the results of the little international comparative research that is available (e.g., Lin and Yauger, 1975; Grusky and Hauser, 1984). On the other hand, the results dealing with development and status transmission appear to echo those obtained by Grusky (1983) in his analysis of regional variations in Japan. They are also reminiscent of the observations of development economists who have "always maintained that growth is an inegalitarian process" (Lewis, 1976).

#### Archibald O. Haller, Hélcio U. Saraiva

In any case, the methods used herein should be examined carefully in future analyses of Brazilian data, and the hypotheses should be retested in other developing regions of the world. If such further work sustains the conclusions reached herein, it will be necessary to rethink a good many issues regarding stratification and development. The overriding question would concern our assumptions about the impact of political democracy and industrialization on the degree and forms of stratification. Still dominated by notions of the inevitability of progress, we seem to have assumed that aristocracies went out with American, French and subsequent revolutions, along with the rise of the industrial and post-industrial economic systems and the apparent demand for a diversified labor force. But perhaps the world's elites are more clever than many have thought. Maybe the main world trend is not toward destratification but rather toward new forms of aristocracy, operating within democratic frames, with the educational opportunities that are more readily available to the higher strata emerging as the main criteria for selecting people into the various levels. In any case, present data show that status transmission, in general and by means of education, increased with development in Brazil, and that gender-based ascription remained a powerful force, even increasingly interacting with status transmission processes under conditions of greater development.

86

Table 1. Education, Occupational Status and Income of Employed Brazilian Men and Women, by Development in 1973 and 1982

Region	Year		Status and Gender										
		Edu	cation <sup>a</sup>	Occi	upation <sup>b</sup>	Inc	ome <sup>c</sup>	Size	(N)				
		Men	Women	Men	Women	Men	Women	% <sup>d</sup>					
Developed South	1973	4.3	4.7	22.9	22.0	9,672	4,604	48	22,711				
	1982	5.6	6.2	26.2	26,7	47.7	24.3	51	11,785				
Developing Periphery	1973	4.4	5.0	24.1	24.5	9,300	3,069	33	1,950				
	1982	4.2	4.5	21.8	26.1	42.0	20.5	49	1,330				
Undeveloped Amazon	1973	. 4.4	5.1	26.4	27.8	8,817	3,930	45	1,441				
	1982	4.1	6.1	24.6	27.6	39.3	21.1	54	862				
Unevenly Developed	1973	2.4	2.5	15.4	15.2	4,633	1,919	41	4,296				
Northeast	1982	3.5	4.7	18.9	22.7	28.6	16.1	56	9,811				
Underdeveloped Middle	1973	1.9	1.0	10.8	8.8	2,578	1,241	<b>48</b>	2,192				
North	1982	2.1	3.1	12.6	14.9	15.5	9.0	58	879				

Source: Haller and Saravia (1988) Table 1, calculated by the authors from the Brazilian National Household Sample Surveys of 1973 and 1982.

<sup>a</sup>1973; Estimated grade-equivalents completed; 1982: grades completed. <sup>b</sup>Canonical socioeconomic status scores of occupations.

"Total income per year. Income figures for 1973 and 1982 are not comparable. 1973: Cruzeiros; 1982; minimum wages.

(Total number of minimum wages required by law = 13, one for each month, plus one as a bonus.)

Women's earnings per unit time as a percent of those of men - 1973: cruzeiros per hour; 1982: number of minimum wages per year.

(Education's Percentage of the Total Effects of Father's -----Occupational Status on Occupational Status and Income  $(ln_n)$ ).

Regional	Temporal Development										
Development	Men	1973 Women	Men	1982 Women							
SO (highest) <sup>a</sup> DEV PER AM NE MN (lowest)	60 65 51 52 67	Education's Perc Father's Oc <i>Occup</i> 69 67 69 65 65 64	cent of the Total Eff cupational Status or pational Status 70 70 67 71 <sup>b</sup>	80 83 82 62 <sup>b</sup>							
Income (log <sub>n</sub> ) SO (highest) DEV PER AM NE MN	72 65 56 62 73	71 62 62 51 54	77 65 62 62 <sup>6</sup>	76 73 63 77 <sup>b</sup>							

lations.

Source: Brazilian National Household Sample Surveys of 1973 and 1982. Authors' calcu

<sup>a</sup>SO: Developed South; DEV PER; South's Developing Periphery; AM: Undeveloped Amazonian Frontier; NE: Unevenly Developed Northeast; MN: Underdeveloped Middle North. <sup>b</sup>NE and MN combined for 1982

Graph 1. Total Effects Father's Occupational Status on the Education, Occupational Status, and Income (In) of Employed Brazilians Age 15-64 in 1973 and 1982<sup>a</sup> by Sex and by Socioeconomic Macroregion<sup>b</sup>



Graph 2. Education's Percentage of the Total Effect of Father's Occupational Status on the Occupational Status and Income (In) of Employed Brazilians Age 15-64 in 1973 and 1982<sup>a</sup> by Sex and by Socioeconomic Macroregion<sup>b</sup>



1982 Total Effects 80 70 60 50 40 30 20 10 0 'so DP NE+MN AM Region -i

<sup>a</sup>Data from the National Household Sample Surveys of 1973 and 1982. <sup>b</sup>See Haller, 1982. MN here is the same as

the "New Northeast." Haller, op cit.

Th 111		a .		3.0	
Rr2711	¢.	Norioeconom	310	MOOTOTO	mone
DIALI	ο.	DOCIÓCCOUCI	IIC.	1VIAUIUIU	ELOII3

	0
SO	: Developed South
DEV PER	: South's Developing Periphery
AM	: Undeveloped Amazonia
NE	: Unevenly Developed Northeast
MN	: Underdeveloped Middle North



Appendix. Total Effects<sup>a</sup> of Father's Occupational Status and other Variables on Respondents' Education, Occupational Status and Income (In<sub>n</sub>), and of Respondent's Education on Respondents' Occupational Status and Income (logn), Employed Brazilian Men and Women Age 15-64 in 1973 and 1982<sup>b</sup>, by Macroregion<sup>c</sup>

Variables	50		DEV DED		Socioeconom		omic I	mic Development l		nt Macroregions <sup>c</sup>		50		DEVPER		۸M			
v ariabics		30		SVILK	1973					MIX		30	101	1982		AIN.	111	771 <b>411 4</b>	
	Men	Women	Men	Women	Men	Women	Men	Women	Меп	Women	Меп	Women	Men	Women	Men	Women	Men	Women	
								Total Ef	fects, in	n Path Coe	efficier	ts							
Father's Occupation																			
Education	.508	.548	.478	.543	.437	.454	.355	.398	.427	.435	.530	.573	.431	.494	.456	.414	.370	.373	
Occup'l Status	.440	.514	.413	.538	.397	.413	.285	.348	.377.	.456	.462	.513	.376	.451	.417	.386	.340	.370	
Income (log <sub>n</sub> )	.337	.410	.321	.458	.329	.374	.198	.282	.258	.387	.356	.435	.333	.398	.351	.354	.274	.213	
Urban/Rural Location																			
Education	043	.049	.163	.054	.273	.214	.233	.226	.175	.153	.143	.085	.237	.206	.279	.084	.163	.304	
Occup'l Status	.177	.169	.199	.014	.305	.214	.251	.235	.119	.027	.227	.184	.348	.238	.353	.078	.226	.331	
Income (log <sub>n</sub> )	.126	.117	.218	.136	.243	.140	.138	.046	.130	.057	.195	.058	.232	.141	.258	.004	.144	.235	
Age (Experience)									-										
Education.	079	110	078	187	068	163	144	205	092	179	077	107	~.083	076	055	120	081	058	
Occup'l Status	.148	.020	.150	048	.156	.026	.149	.009	.142	049	.157	.039	.122	.048	.117	.021	.093	.128	
Income (log <sub>n</sub> )	.293	.223	.300	.241	.246	.161	.128	.126	.386	.210	.404	.308	.361	.290	.283	.311	.385	.241	
Age <sup>2</sup>											-								
Education	138	096	082	103	044	054	011	025	.098	120	084	112	105	123	091	165	121	123	
Occup'l Status	.024	098	146	108	.130	105	120	095	129	133	134	128	136	143	114	175	143	152	
Income (log <sub>n</sub> )	117	226	229	262	174	159	066	187	280	229	232	224	204	- 206	168	255	263	165	
Education																			
Occup'l Status	.523	664	.559	.660	.466	.628	.419	.575	.592	.674	.610	.717	.609	.762	.610	.763	.654	.613	
Income (ln <sub>n</sub> )	.476	.538	.438	.523	.418	.510	.343	.363	.441	.484	.515	.578	.528	.586	.520	.535	.473	.437	
Occupational Status							:											•	
Income (ln <sub>n</sub> )	.279	.400	.268	.400	.269	.301	.216	.138	.216	.465	.269	.340	.264	.262	.261	.319	.237	.302	
Labor Market Segment <sup>d</sup>																			
Income (ln <sub>n</sub> )											125	.141	.088	.140	.145	.116	.027	.190	
Class																			
Income $(\ln_n)$	.115	.054	.223	.055	.129	.063	.035	.064	.222	.103	.083	.044	.130	.075	.115	.079	.131	.039	

Source: Brazilian National Household Sample Surveys of 1973 and 1982. Author's calculations.

<sup>a</sup>Total effects are the sum of the direct effects and all indirect effects as measured in a path analysis employing the model on page 15. <sup>b</sup>Source: Brazilian National Household Sample Surveys of 1973 and 1982. Calculations performed by the University of Wisconsin based on "pairwise present" cases. The 1973 data include all sample members fitting the criteria. The 1982 are from 1-in-3 n<sup>th</sup> case of sample households.

<sup>c</sup>See Haller (1982).

<sup>d</sup>This variable was not included in the path analyses of the 1973 data.

Archibald O. Haller, Hélcio U. Saraiva

g

## References

- Amaro, Nelson R., 1975. Ascription and Talent in Status Attainment. Madison: University of Wisconsin. Unpublished doctoral thesis.
- Bielby, William T., 1981. "Models of Status Attainment." Research in Social Stratification and Mobility (1):3-26.
- Bills, David B., Daramea S. Godfrey and Archibald O. Haller, 1985. "A Scale to measure the Socioeconomic Status of Occupations in Brazil," *Rural Sociology* 50(2):225-250. Bills, David B. and Archibald O. Haller, "Socio-economic Development and Social Stratification: Reassessing the Brazilian Case," *Journal of Developing Nations*, 1984, 19 (October):59-70.
- Bills, David B., Archibald O. Haller, Jonathan Kelley, Mary B. Olsen and José Pastore, 1985. "Class, Class Origins, Regional Socioeconomic Development and the Status Attainment of Brazilian Men." *Research in Social Stratification and Mobility* 4:89-127.
- Blau, Peter M., and Otis Dudley Duncan, 1967. The American Occupational Structure. New York: McGraw-Hill.
- Davis, Kingsley and Wilbert E. Moore, 1945. "Some Principles of Stratification." American Sociological Review 18 (April):387-394.
- Duncan, Otis Dudley, 1968. "Social Stratification and Mobility: Problems in Measurement of Trend." Pp. 675-719 in Eleanor B. Sheldon and Wilbert E. Moore, editors, *Indicators* of Social Change. New York: Russell Sage.
- Duncan, Otis Dudley, 1966. "Path Analysis: Sociological Examples." American Journal of Sociology 72(July):1-16.
- Duncan, Otis Dudley., 1961. "A Socioeconomic Index for all Occupations." Pp. 109-138 in Albert J. Reiss, Occupations and Social Status. New York: Free Press.
- Featherman, David L. and Robert M. Hauser., 1978. *Opportunity and Change*. New York: Academic Press.
- Grusky, David B., 1983. "Industrialization and the Status Attainment Process." American Sociological Review (August):494-506.
- Grusky, David B., and Robert M. Hauser, 1984. "Comparative Social Mobility Revisited," American Sociological Review 49 (February):19-38.
- Haller, Archibald O., 1982a. "A Socioeconomic Regionalization of Brazil," *Geographical Review* 72(October):450-464.

, 1982b. "Reflections on the Social Psychology of Status Attainment," Pp. 3-28 in Robert M. Hauser, David Mechanic, Archibald O. Haller, and Taissa S. Hauser, Social Structure and Behavior: Essays in Honor of William Hamilton Sewell. New York: Academic Press.

- , 1970. "Changes in the Structure of Status Systems." *Rural Sociology* 35 (December):469-487.
- Haller, Archibald O. and Luther B. Otto, 1979. "Evidence for a Social Psychological View of the Status Attainment Process: Four Studies Compared." Social Forces 56 (March):887-914.
- Haller, Archibald O., and José Pastore, 1983. "Labor Market Segmentation, Sex, and Income in Brazil." Pp. 183-196 in Dorothea Gaudart, ed., *Industrial Relations in the Unorganized Sector*. Tokyo: Japan Institute of Labor.
- Haller, Archibald O, Phillip Perrone, and Stephen J. Miller., 1975, Sex-Specific Age-Income Graphs for All Occupations. Madison: University of Wisconsin, Report to the National Institute of Education.

- Haller, Archibald O., and Alejandro Portes., 1973. "Status Attainment Processes," Sociology of Education 46 (Winter):51-91.
- Haller, Archibald O., and Hélcio U. Saraiva, 1988. "The Income Effects of Education in Development: Brazil-1973 and 1980." Prepared for Bam Dev Shavda, ed., *Inequality* and Development (forthcoming).
- Haller, Archibald O., and Kenneth I. Spenner, 1977. "Occupational Income Differentiation in Status Attainment." *Rural Sociology* 42 (Winter):517-535.
- Haller, Archie O., and William H. Sewell., 1957. "Farm Residence and Levels of Education and Occupational Aspiration," *American Journal of Sociology* 62 (January): 407-411.
- Inkeles, Alex and Peter H. Rossi., 1956. "National Comparisons of Occupational Prestige Hierarchies." American Journal of Sociology 59 (January):329-339.
- Jain, Shail, 1975. Size Distribution of Income. Washington: World Bank.
- Lenski, Gerhardt., 1966. Power and Privilege: A Theory of Social Stratification. New York: McGraw Hill.
- Lewis, Arthur, 1976. "Development and Distribution." Pp. 26-42 in Alec Cairncross and Mohinder Pari, editors, *Employment, Income Distribution and Development Strategy: Problems of the Developing Countries: Essays in Honour of H.W. Singer.* New York: Holmes and Meier Publishers, inc.
- Lin, Nan, and Daniel Yauger, 1975. "The Process of Occupational Status Achievement: A Preliminary Cross-National Comparison," American Journal of Sociology 81 (November):543-562.
- Linton, Ralph, 1936. The Study of Man. New York: Appelton-Century.
- North, Cecil C. and Paul K. Hatt, 1947. "Jobs and Occupations: A Popular Evaluation." *Opinion News* 9 (September):3-13.
- Otto, Luther B., and Archibald O. Haller, 1979. "Evidence for a Social Psychological View of the Status Attainment Process: Four Studies Compared." Social Forces 57(March):887-914.
- Pastore, José, 1982. Inequality and Social Mobility in Brazil. Madison: University of Wisconsin Press.
- Pastore, José, and Archibald O. Haller, 1982. "Social Mobility Under Labor Market Segmentation in Brazil." Pp. 113-140 in Robert M. Hauser, David Mechanic, Archibald O. Haller and Taissa S. Hauser, Social Structure and Behavior: Essays in Honor of William Hamilton Sewell. New York: Academic Press.
- Pastore, José, Archibald O. Haller and Hernando Gomez-Buendia., 1975. "Wage Differentials in Sao Paulo's Labor Force." *Industrial Relations* 14:(October):345-357., 1977. "Training, Position and Experience in the Wage Rates of Specialized Personnel in Sao Paulo's Manufacturing Firms." Pp. 157-169 in Subbiah Kannappam, ed., *Studies of Urban Labor Market Behavior in Developing Areas*. Geneva: International Institute for Labor Studies.
- Pastore, José, Helio Zylberstajn and Carmen Pagotto, 1983. The Decline in the Incidence of Extreme Poverty in Brazil, 1970-1980. A Report to the Inter-American Foundation. Madison: University of Wisconsin Department of Rural Sociology.
- Robinson, Robert V., and Jonathan Kelley, 1979. "Class as Conceived by Marx and Dahrendorf: Effects of Income Inequality and Politics in the United States and Great Britain." *American Sociological Review* 44 (February):38-58.

- Rocha, Maria Camila Omegna, 1987. Socioeconomic Development in Brazil (1970-1980). Madison: University of Wisconsin Department of Rural Sociology. Unpublished M.S. thesis.
- Saraiva, Hélcio Ulhôa, and Rachel Ward, 1985. "The Measurement of Socioeconomic Status of Occupations: Brazil-1982 PNAD." Madison: Brazil Projects Working Paper (offset).
- Sewell, William H., Archibald O. Haller and George W. Ohlendorf, 1970. "The Educational and Occupational Attainment Process: Replications and Revisions." American Sociological Review 35 (December):1014-1027.
- Sewell, William H., Archibald O. Haller and Alejandro Portes, 1969. "The Educational and Early Occupational Attainment Process." American Sociological Review 35(September):851-861.
- Sewell, William H., Archie O. Haller and Murray A. Strauss, 1957. "Social Status and Educational and Occupational Aspirations," *American Sociological Review* 22 (February):67-73.
- Silva, Nelson do Valle, 1978. Black-White Income Differentials, Brazil, 1960. Ann Arbor: University of Michigan. Unpublished doctoral thesis.
- Silva, Nelson do Valle, 1985. "Atualização da Escala Socioeconomica de Ocupações Para 1980." Rio de Janeiro: Laboratorio Nacional de Computação Científica."
- Sorokin, Pitrim A., 1927. Social Mobility. New York: Harper and Row.
- Spenner, Kenneth I., 1988. "Occupations, Work Settings, and the Course of Adult Development: Tracing the Implications of Select Historical Changes." *Life-Span Development* and Behavior 9:244-285.
- Svalastoga, Kaave, 1964. Social Differentiation. New York: David McKay.
- Treiman, Donald J., 1977. Occupational Prestige in Comparative Perspective. New York: Academic Press
- Treiman, Donald J., 1970. "Industrialization and Social Stratification." Pp. 207-234 in Edward O. Laumann, ed., Social Stratification: Research and Theory for the 1970s. Indianapolis: Bobbs-Merrill.

World Bank, 1985. World Development Report 1985. New York: Oxford University Press.

- Wright, Eric, Cynthia Costello, David Hachem and Joey Sprague., 1982. "The American Class Structure," American Sociological Review 47 (December):709-726.
- Wright, Sewall, 1960. "Path Coefficients or Path Regressions: Alternative or Complementary Concepts?" *Biometrics* 14(June):189-202.