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STRATIFICATION AND DEVELOPMENT: THE BRAZILIAN CASE

For many years scholars and statesmen have been concerned with the supposed relationship between stratification and development. The topic is obviously of great theoretical and practical importance. Unfortunately, until recently the available specifications of both concepts have been too imprecise to permit a clear delineation of the empirical relationships between them. Moreover the data by which to measure the variables implied by each are only just now becoming available, and even at present are rarely available except in the most highly developed countries. Topics such as this, which are important to many people but about which very little systematic empirical information exists, tend to generate large numbers of hypotheses and even myths. Some may be held quite tenaciously, often becoming bases of massive political programs. Other than war itself, few issues of the 20th Century engage the passions of practical people or the thoughts of theorists more than the development of nations and stratification--or social, political and economic inequality among people. It would be futile to try to list or to rationalize even a fraction of the often contradictory hypotheses that abound in this field. But some are of special importance For example, some (Lenski, 1966; Treiman, 1970) hold that in the modern world, development reduces inequality and enhances social mobility. Others hold that development increases inequality (Lewis, 1976). One of the more useful and complete lists of such hypotheses is presented in Treiman (1970). Nevertheless the confusion in the literature on stratification and development is so great that one perspicacious analyst (Garrell, 1981) presented the conflicting hypotheses in sic et non fashion, arraying them loosely according to "dependency" and "modernization" hypotheses.

The fact is that down to today, most of the conceivable relationships between social stratification and development remain unknown. This is true despite the many years that research has been devoted to the topic. Perhaps the main reasons for this state of affairs are the following. 1) Both concepts, social stratification and development, are many-faceted, and the full set of their empirical relationships may be determined only after all of their various aspects have been identified and subjected to quantitative measurement. 2) The full array of conceptual variables needed to mark the various facets of social stratification had not been identified until recently ~~(Svalastoga, 1964; Duncan, 1968;~~ Haller, ~~1970~~ 2009, 2010, in press). 3) Appropriate concepts and adequate descriptors of development are only just emerging, despite years of research employing single-factor conceptions and measurements, such as indexes of manufacturing intensiveness, energy consumption, etc. shade 4) Even when satisfactory concepts and variables have been worked out, it is enormously expensive to obtain the data to measure the variables ~~implicated in~~ implied by each concept. 5) Even now, such data are available only in the most advanced nations and in a very few developing nations. If measures of many of the key variables simply cannot be had for most of the less developed nations, it is obviously impossible to draw valid inferences about the relationships between social stratification and development among nations.

Indeed, to date almost all, if not all, efforts to test hypotheses concerning relationships between stratification and development have employed comparisons among nations. Invariably, such studies fail to encompass the full range of stratification phenomenon as in the research on income inequality and economic development (Paukert, 1973; Jain, 1975) or they suffer both from onesideness and are based upon haphazard samples of countries,

as in the research on prestige and development (Treiman, 1977; Haller and Bills, 1979) or the studies of social mobility and development (Hazerigg and Garnier, 1976; Tyree, Semyonov and Hodge, 1979).

Clearly, as the requisite concepts and data become available it is important that the empirical relationships between each aspect of both phenomena be determined. At this juncture it would be useful to mark the relationships between the development levels of all societies and the key variables describing their stratification systems. Given the data limitations in most less developed countries (LDCs), this is not now feasible. But there is a useful alternative. This paper presents such data for a nation (Brazil) whose regions vary so markedly in development levels that they encompass most of the development variation found among the nations of the world. This analysis is not merely a substitute for the appropriate international comparisons that may become possible in years to come; to be credible international comparisons must overcome serious research problems that do not exist in the present instance. Leaving aside the question of diachronic measurement the sampling and data-processing requirements of such systematic international comparisons would be demanding and costly in the extreme. Parameters must be measured or estimated for at least three levels of units--household, national, and international. Probability samples of households would be needed to yield unbiased estimates of national parameters. A statistical description of the stratification system of a nation requires at least one such parameter estimate be determined for each stratification variable. Since very few nations, practically all of them highly developed, collect such data on stratification, new household probability samples would have to be drawn in many countries. The countries themselves would have to be either fully enumerated or selected on a probability basis. The

total number of nation-states is small (154) and most of them are LDCs. At most, only 20 or 30 could be considered highly developed by current standards. If nation-states were to be sampled rather than enumerated, the sampling proportions would have to be high. So the problems of sample selections would be immense.

But this is just the beginning of the complexity of the problem. An internationally applicable indicator of national development level capable of encompassing and properly weighting each demonstrably relevant aspect of the concept, would have to be worked out; "proxies" and other ad hoc single-variable "indicators" whose validity is untested simply will not suffice. Among countries where data can be obtained, there still may be problems of data comparability. Some of these can arise because the various nation-states have different legal regulations regarding collection and recording. Others will surely arise because of language and other cultural differences among nation-states and among nations within certain states. Still others may arise due to variations in the quality of the existing research infrastructures.

So a large and developmentally diverse nation-state, uniform in language and other major aspects of culture, with the required research infrastructure, can provide a useful entity on which to measure the covariation of stratification and development. A description of the relationships between stratification and development within one nation, no matter how large, cannot, of course, provide information on the relationships of corresponding phenomena as they exist among nations. But there are substantial gains to be made by through such a description. At minimum such evidence would show that at least some of the numerous and often contradictory speculative

hypotheses are false in at least one significant case, thus either negating or limiting their applicability. Also, by providing a clear example of research yielding simultaneous measurement of the relationships between development levels and the levels of each of a comprehensive set of stratification variables, it would show how similar research might be carried out in other developmentally diverse nations such as Italy, the Soviet Union, Saudi Arabia, China, etc., as appropriate data become available. Lastly the resulting estimates of parameters can serve as benchmarks by which to determine the relationship between changes in development and changes in stratification. Most of all, it can clean out false hypotheses and begin the construction of better ones.

Brazil is one of the few nation-states meeting the above conditions. It may be the only one today. In theory and in fact, it is a nation of one culture and one language, Portuguese. Its culture, indeed, is mostly European, with certain African and Indian elements. The nation was founded by Portuguese empire builders, together with their African and Indian slaves, and consorts and the descendants of these in every imaginable combination--seamen, plantation owners and workers, prospectors and miners, small farmers cattlemen, and adventurers. The borders of the vast national territory have not changed much in 200 years and not at all in this century. Brazil has wide variations in levels of development. In a loose way this has been known for many years. It now appears possible to measure its regional development differences with relative precision: an abstract single-factor indicator of socioeconomic development of demonstrated validity has been worked out for the nation's 360 continental microregions (Haller, 1982 ; 1983). From it the nation's macroregions have been determined (see this volume). Finally, the national statistical agency, (IBGE: The Brazilian Institute of Geography and Statistics) regularly collects excellent household sample-survey data on most aspects of life essential to the study of stratification.

In the discussion to come, we shall present a set of concepts permitting a description of variations in key stratification phenomena among large societal units such as nation-states, macroregions and microregions of nations, and communities. These concepts will be used to summarize, from the empirical literature, the findings regarding the relationship between stratification and development. This will be done in two stages. The first will be devoted to findings regarding between structural dimensions of stratification and development, and the second between status attainment processes and development. After determining what is already recorded in the empirical literature, the same two-stage strategy will be applied to the analyses of stratification and development in Brazil.

The "substances" of stratification phenomena: content dimensions of status (CDS). Several names are given by various authorities to the substantive dimensions--"content dimensions" (Haller, 1970)-by which small social units such as individuals or households are arrayed in terms of stratification. Comprehensive lists of them usually include at least four: wealth, or access to goods and services; power, or political influence; social status, usually occupational rank, and informational status, usually educational attainment. Measuring the level of each small unit of a larger system on any one content dimension requires a prior act of measurement of each unit's level on one or more specific status content variables by which each more general CDS is manifested.

The questions of how many CDSs there are and exactly what they are composed of must be answered from factor analyses of well-selected indicators of each. Exactly how many factors of what composition will remain to be seen. The factor composition may vary from across time and place (Jackson and Curtis, 1977). Indeed, several sets of such dimensions have been proposed over the years. They traverse quite a range in complexity. Marx seems to have thought in terms of a simple one-dimensional distinction, between the owners, whom he supposed monopolized both capital and power, and the workers, who had neither.

Weber (1946, 1947) seems to have assumed the existence of a single basis continuum of power, which controls "life chances" and which could be manifested in any one of three ways--the political influence of parties, the economic standing of classes, and the "status honor" of traditional strata. Sorokin (1927) proposed three content dimensions: "economic stratification," "political stratification," and "occupational stratification." Svalastoga (1964) proposed the four we mentioned above, though with slightly

different labels--economic status, political status, social status, and information status. Lenski (1966) argued for power and privilege, recognizing prestige but treating it mostly as an epiphenomenon. Oversimplifying a bit, we may say that Duncan (1968) listed seven such dimensions, with "level of living" or "life chances" being a single dimensional summary of them. Other recent writers have gone back to single dimensional systems, prestige (Goldthorpe and Hope, 1976; Treiman, 1977) or occupational status (Featherman and Hauser, 1978).

Each of the above "dimensions" is quite abstract. It is a complicated matter to measure even the simplest of them, for example, those of Marx or Treiman, or Featherman and Hauser. As yet no widely-accepted measure of power differentials among small units has yet emerged. Yet it is striking that many researchers seem to have settled on three specific status content variables as the empirical focuses of contemporary quantitative research in stratification (Alexander, Eckland, and Griffin, 1975; Sewell and Hauser, 1975; Otto and Haller, 1978): income or wages, occupational standing in prestige units (Treiman, 1977) or in socioeconomic index units (SEI: Duncan, 1961; Featherman and Hauser, 1978), and education in years completed (e.g. Sewell and Hauser, 1975).

Because of their terminological differences, the reader might be led into thinking that there is wide disagreement among the many authorities on stratification. Some basic differences do indeed exist. But their agreement is deeper than it may seem. The source of the problem is this: Every scholar who writes about such matters is aware of the existence in every known society of patterned, enduring and marked inequalities among people regarding resources--sometimes serving as sources of societal integration and sometimes as bases of conflict--and in the deference and respect people

accord to one another. But different observers emphasize different aspects of these phenomena. Without precise statistical data on each of the variables implied by the various dimensional concepts and the specific variables by which they are manifested, as well as the mathematical statistical concepts and the computers necessary to make the resulting millions of observations intelligible, there was until recently no way to determine precisely how the apparent dimensions of stratification relate to each other empirically. The research effort that would be required to do this would be enormous, and might turn up great differences among societies. In fine, all writers on social inequality or stratification are concerned with one or another aspect of the same set of phenomena. But they emphasize different specifics. At this juncture, the prudent researcher would employ a range of concepts general enough to encompass the central substantive dimensions of all major writers on the subject and specific enough to exclude all other phenomena. This is what, in recent decades, Svalastoga (1964), Duncan (1968), and Haller (1970, 1979) have tried to do. Any of these sets of terms would serve our present needs because they are equally comprehensive and because the ranges of their referents coincide exactly. These sets also encompass income, occupational prestige, and education, the three specific status variables that are used most often in today's empirical stratification research. In the present work we shall use the generic terms as they were most recently presented (Haller, 1982a; also 1970, 1979). This will keep the terminology and specific concepts consistent with earlier writings (Svalastoga, 1964; Haller and Portes, 1973; Haller and Spenner, 1977; Pastore, Haller, and Gomez-Buendia, 1975, 1977). Thus the content dimensions are taken to be wealth or economic status, power or political status, prestige or social status, and informational status. Income is the nearest measure of the first, occupational status of the third, and education of the last. Power measures are not availible.

of status (SDS).

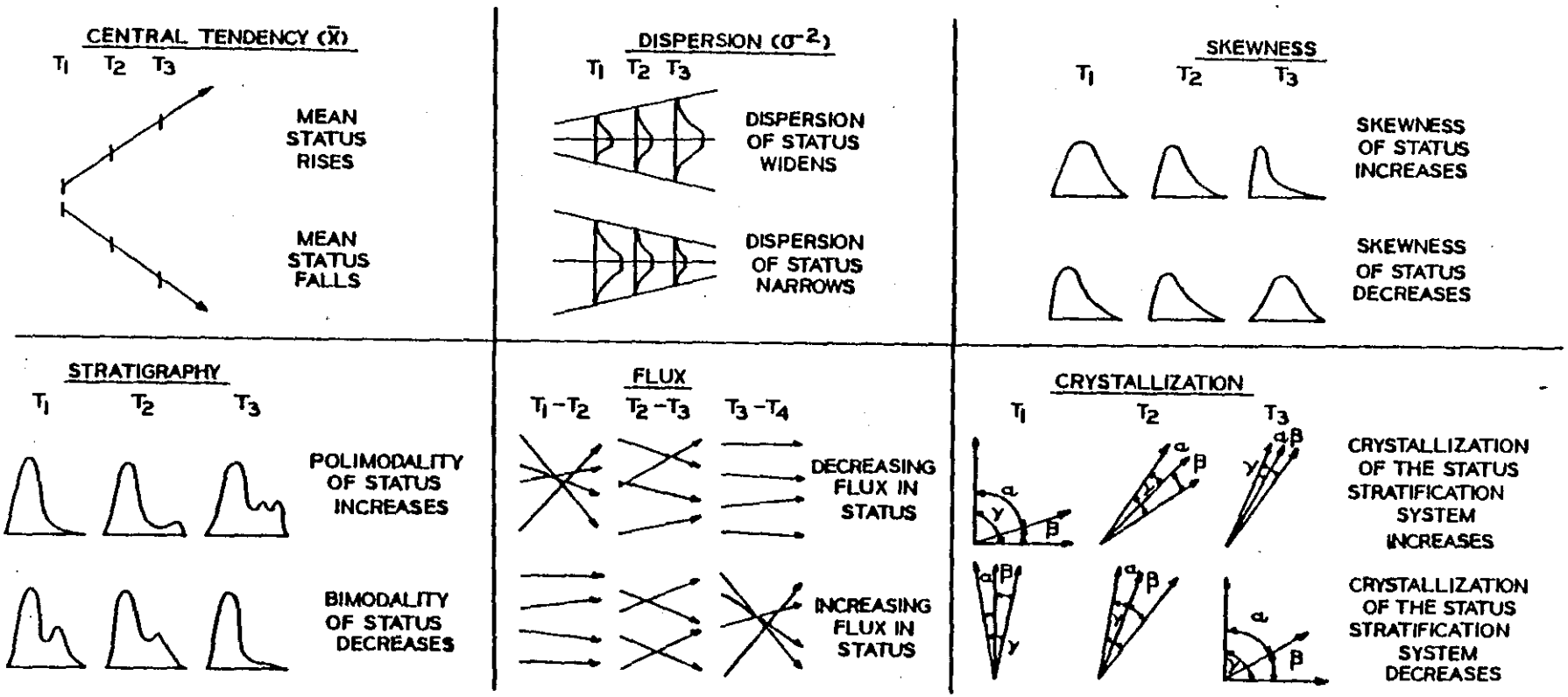
The forms of stratification phenomena: structural dimensions. Under various names, thought regarding at least one formal property of stratification systems, dispersion, goes back many years, having been applied mostly to income (Gini, 1921) but also to other stratification dimensions (Sorokin, 1927). Even so, only within the last two decades have theorists begun systematically to apply a set of such concepts to stratification phenomena (Svalastoga, 1964; Duncan, 1968; Jackson and Curtis, 1968; Haller, 1970). Each the resulting set of "structural dimensions" (Haller, 1970, 1979) is theoretically applicable to each of the substantive dimensions noted above and to each of the more specific status content variables by which the latter are manifested.

Structural dimensions of status (SDS) may be used to describe variations in stratification systems, whether diachronic (of a given system over time) or synchronic (among such systems at one point in time). The nomenclature of Haller (1970), if used here because this set of concepts seems a bit more comprehensive than others; although in concept, but not in name, about half are very close to Svalastoga's (1964) "parameters." There are at least six of these. Illustration of possible diachronic variations in each are presented in Figure 1 and to certain variables of Duncan (1968).

Figure 1 About Here

Variations in the central tendency of a status content dimension variable (SDS) indicate the degree to which the dimension is rising or falling in the same system over time, or the degree to which the average differs from one system to another. Economists employ this dimension quite regularly, especially in studies of Gross National (or Domestic) Product per

FIGURE I ILLUSTRATIONS OF CHANGES IN THE STRUCTURE OF STATUS STRATIFICATION SYSTEMS



capita. Actually, sociologists also employ this variable rather often. But so differently do they process the data and discuss the concept that it appears to represent another concept altogether. The alternative form to which we refer shows itself in status analysis as "structural mobility" (e.g. Yasuda, 1964; Broom and Jones, 1977). Upward structural mobility simply means that most people rose a bit because the whole occupational structure edged upwards, say, between fathers' and sons' generations. Such a change could just as easily be represented by the difference between sons' and fathers' mean occupational statuses, allowing for some loss of detail. Typical statistical devices measuring this SDS would be the mean, median, or mode.

Variations in the dispersion of a CDS indicate the degree to which people are more or less equal as far as that dimension or variable is concerned. It is often called "inequality." Typical measures of status dispersion are the standard deviation or variance of the logs, coefficient of variation, Gini coefficient, Kuznets' H, ordinal shares etc.(Weisskoff, 1976). Variations in the skewness of an SDS indicate another aspect of inequality. Distributions of some CDSs are often markedly skewed, as in T_3 of the upper right panel of Figure 1. Personal income is usually skewed such that logrithmic transformations are routinely applied to it to yield an approximately normal distribtion. Several measures of the degree of skewness are available.

A fourth SDS is called stratigraphy. This aspect was offered in view of the fact that certain status variables likely to be polimodal. In the United States, the distribution of educational attainment in years successfully completed, for example, may be trimodal, one mode for each "graduation" point--eight years, twelve years, and sixteen years. A fifth SDS has been

called "flux," although in recent research it is perhaps best known as circulation mobility. Just as variations in status central tendency may be expressed as vertical structural mobility, so also may circulation mobility be either calculated from a "mobility table" (Featherman and Hauser, 1978) or as the opposite of status inheritance after the change in the means (or "structural mobility") has been eliminated by subtraction or standardization (Kelley and Klein, 1981). Correlation coefficients (r) and coefficients of determination (r^2) automatically perform just such a standardization. So a coefficient of flux circulation mobility, F, may be defined as $F=1-r^2_{T_1T_2}$, where T_1 and T_2 refer to two standard time points. Usually status measurements are taken on men at the time of the interview when the interviewee also provides a status measurement on this father at some standard reference time, such as "when you took your first regular job."

Variations on the sixth and last SDS, crystallization, show changes in the degree to which the different SCDs vary together. As Landecker (1981:48-49), using the terms"rank system"where we use CDS, puts it, "A low correlation indicates the extent to which different rank systems are distinct and separate hierarchies"..."The direct significance of a high correlation is that it represents the degree to which the different rank systems converge with one another and jointly form a monolithic and comprehensive system of inequality." Ways to measure variations in status crystallization have not yet become standard. If sufficient numbers of appropriately selected indicators of each main SCD are can be obtained an examination of variations in item-factor weights might serve. While it would be useful to summarize the degree of crystallization in a single number, this does not now seem feasible.

Content variables and structural dimensions in the present analysis. In analyses to follow, we shall examine Brazilian regional developmental

differences regarding four structural dimensions of status as they are manifested in three commonly used status content variables, drawn from a different SCD. The four SDSs are central tendency, dispersion, circulation mobility and crystallization. The status content variables are educational attainment, occupational status, and income.

What is known about stratification and development: the evidence. Scholarly knowledge of stratification phenomena go back as far as scholarship itself, records of lay awareness of them further yet. But historical records are spotty, both topically and regionally. At least until recently, even the best historical scholarship was incapable of providing a comprehensive and precise description of even one key strucltural dimension of the stratification system of a given societal unit. As insisted earlier, valid reliable measurements of appropriate indicators of each status content dimension must be so taken and processed that the SDS parameters may be estimated with precision. This must be done comparably for each of a set of societal units which have been arrayed in terms of valid and reliable indicators of development such that precise estimates of SDS parameters may be drawn for the larger universe to which the societal units belong. Such data are an emergent of the past twenty-five years or so, and are still quite incomplete.

Considerations regarding the concept and measurement of development are as important to this topic as those of stratification. It will be evident that the term "development" means different things to different scholars. This is because its not all of its ambiguities have yet been clarified in the literature, despite the fact that there is clearly a central core of meaning. A comprehensive review of meanings of national development is presented by Portes (1976); it would appear to apply about equally to other levels of societal units. Forshortening his definitions, he sees it as meaning economic transformation ("increases in the national product"), social transformation ("egalitarian distribution of income and widespread access...to social goods"); and cultural transformation

("reaffirmation of national identity and traditions"). Clearly, not all writers share these meanings; the first stresses productive economic growth, the second, distributional aspects of the economy, and the last national identity. For present purposes, the main meanings are bound up in the first two. The first pertains to variations in the level of economic productivity of a societal unit. Economic growth, GNP per capita (Kuznets, 1971), variations in energy consumption per capita (Jackman, 1974), or in the consumption of electrical energy per capita (Rubinson, 1976), among others, are commonly used indicators of this aspect of the concept of development. The second pertains to economic benefits to the population. It is perhaps less clear in concept than it appears at first sight. To say that a population has "widespread access to social goods" does not necessarily mean that there is an "egalitarian distribution of income." In richer countries, general availability of services such as clinics, hospitals, schools, housing may go hand in hand with income inequality. One facet of the concept of development deals with the availability of services to the population of a societal unit. This is the meaning it holds for Streeten (1976), for example. This facet of the concept of development is closely related to that of the SDS dealing with the central tendency of economic status. It is most useful to keep it separate from development in the sense the degree of inequality of income, which is part of the SDS dealing with status dispersion.

We are left with two aspects of the concept of development which are useful in research on variations in stratification. The first is the economic productivity per capita of the societal unit. It has been measured in several ways, yet it appears that the relationship among them has not yet been clarified. The second is the per capita accessibility of

items or institutions promoting individual development--survival, health, information, and contact with others; in other words, individual access to goods and services. The empirical relationships between these two aspects of development cannot be taken for granted.

In the following paragraphs, we draw upon the small but growing body of quantitative research literature in which at least one SDC parameter has been estimated comparably and with precision for each set of comparable societal units (communities, definable regions, nations, states) so selected as to permit reasonably accurate estimates of the corresponding SDC-by-development parameters in the universe of societal units from which they were drawn. These findings will be presented for each structural dimension of status (SDC), and, within each of them, for each the most commonly used specific indicators of status content dimensions--income, educational attainment, and occupational status.

When such comparisons are made among nations, serious problems of comparability of measurement may arise. For income, it is obvious that monetary units vary among societies. Economists have faced this problem for years, and today most such data are presented in roughly comparable terms, usually standardized.

For education the problem appears to be more difficult and has never, to present knowledge, been solved in a definitive way. The usual ad hoc solution is to treat educational attainment as if whomever successfully completes up through a certain number of years of school has obtained the same amount of learning, regardless of country. If pressed closely it is obvious that the assumption is untrue. But it is useful nonetheless. Consider some hypothetical cases. Suppose a 20 year old Brazilian has successfully completed three years of primary school. Would his learning

be most nearly equivalent to that of a 20 year old American who had not gone to school at all (zero years) or to one who had completed the 6th grade (six years), or the 12th grade, or the 3rd grade. Certainly it would not be very much like that of any of them, especially the one who completed 12 years. It is most likely to be equivalent to that of one who completed two, three, or four years. Now how about a Nigerian who successfully completed the university course. It is true that so-called "universities" differ greatly. Yet it is extremely unlikely that his learning would be equivalent only to that of that American who had finished no more than high school. If the Nigerian had attended an elite university, his learning would be deeper than that of an American who graduated from an inferior so-called "university," or about as deep as that of one who graduated from one of the better American universities. In other words, it is assumed that, on the average, a given number of years of education successfully completed in one place is approximately equal to the same number in another. The assumption appears to be approximated closely enough in reality to permit valid comparisons among societal units. In practice researchers often compare proportions or numbers completing a certain broad level, such as university, or high school, or primary school, or as literacy rates.

For occupational status, the problem is at least as complex. Surprisingly, evidence systematically comparing the central tendency of occupational status with average development levels is only just now becoming available. This is because, first, occupational status indexes that may be comparably applied among or with nations of sharply varying development levels are only just now coming into being; and, second, because the job of comparably identifying the job titles and the numbers of

holders of each is an immense undertaking even for individual countries, and multiple-country comparisons compound it.

The two main types of occupational status indexes are called 1) occupational socioeconomic indexes (SEI: Duncan, 1961; Featherman and Hauser, 1978) and 2) occupational prestige scales (OPS: Treiman, 1977). SEI techniques use standard weighting procedures to assign scores to specific occupational titles according to the average income and education of persons employed in them. They assume that the order of occupations is a consequence of differential individual rewards and inputs. An occupation's rewards are indicated by the average earnings of incumbents, its inputs by their average number of years of education. Obviously, these differ from country to country. Published SEI scales are available only for the United States (Duncan, 1961; Featherman and Hauser, 1978). OPS techniques have been in use for many years (Haller and Bills, 1979). Recently Treiman (1977) has proposed a Standard International Occupational Prestige Scale (SIOPS), which he believes to be a satisfactory instrument for comparing the occupational structures of societal units. As yet published of descriptions of the relationship between development and occupational status as measured by the SIOPS are not available. Definitive research on international comparisons of occupational status is just now getting underway (Jonathan Kelley, personal communication). Preliminary findings based upon what appears to be a modification of the SIOPS are presented in Kelley and Klein (1981).

1. Development and Status Central Tendency (SCT). Obviously, these are some extremely important senses in which these two concepts overlap. In some senses, perhaps including its deepest, the term "development"

means a rise in the central tendency of status of small units--individuals or households--within larger societal units. Yet even in economic terms "development" is not a wholly unambiguous word, and each of its variations of meaning may have a different implication for one or another of the variations of status central tendency. 1) In its meaning of "individual access to goods and services," it is exactly the same as central core of one of the status content dimensions, wealth or economic status. In this case, variations in development among societal units are precisely the same as variations in this aspect of wealth. Its implications for other measures of the wealth domain are almost the same. On the average, societal units' access to goods and services will of course vary directly with the average individual or household income among them. 2) If the term means variations among societal units regarding production or production capacity, then its implication for variations in status among individuals or households is problematical and must be determined empirically. Throughout the history of civilization, rulers have been able to organize the efforts of large masses of people to accomplish production goals, often without much apparent benefit to the average person. In recent years, the "dependent development" (Evans, 1979) of poorer nations has apparently been thought by some (Frank, 1967) to impoverish their populations. Whether this is true or not, the fact remains that the growth of productive firms within a societal unit does not automatically result in an increase in the economic well-being of its population. As one Brazilian president put it a few years ago, "Brazil is doing well, but the people suffer." So it would be imprudent to overlook measures of the income central tendency of small units in the study of developmental variations in the structure of stratification systems. 3) The possibility of redundancy between development and STC really does not arise for other SCDs or variables corresponding to them. It cannot be taken for granted

that among societal units regarding average occupational status or average educational attainment follow the same pattern as variations in development.

Income. It follows that at the level of nations, there is abundant evidence that development and the central tendency of income vary together; indeed they are often assumed with good reason to be exactly the same (Portes, 1976; Kuznets, 1971). The same holds for regions within Brazil (Langoni, 1973, p. 159), and a similar pattern has been found for rural Thailand (Chiswick, 1981; Roongruangsee, 1982) and for the Philippines (Valera, 1980), except that the wealthiest nonindustrial area is Manila rather than in its industrialized urban surroundings. The conclusion is that development and average income are identical for most purposes.

Occupational status. In occupational hierarchies the jobs that score highest are usually those that pay better, are most prestigious, and require the most formal education. The most highly developed societies (or other levels of societal units) are those where small inputs of human energy yield large outputs of goods and services; and conversely the least developed are those in which large expenditures of human energy result in low outputs of goods and services. It follows that highly developed societies require and are most capable of supporting a larger proportion of workers in occupations of higher status than are those in less developed societies. So there should be a strong positive relationship between development and the central tendency of occupational status. Data on the relationship are just now becoming available, as noted. In a preliminary statement, Kelley and Klein (1981:75) have graphed the per capita gross national product of 14 societies by their mean occupational statuses (1975), using a collapsed version of Treiman's (1977) SIOPS as the measure of OPS. The sampling of societies is too spotty to permit calculating the correlation

between the two variables. But it is obvious that they are positively correlated; this is the main conclusion to be drawn. But a close study of the scattergram seems to show that, if measured, the correlation would not turn out to be very high.

Educational attainment. As hinted above, problems of measurement comparability regarding education make the available data on the development and the CT of educational attainment cumbersome. Nevertheless, the overall picture can be inferred from the available evidence. Kelley and Klein (1981) present graphed data on literacy and GNP/k for 1950, taken from the United Nations (1961) and the International Bank of Reconstruction and Development (1971). Some allowances must be made before interpreting it. First, for almost 1/2 of the countries--most of which were rather highly developed--the literacy percentages approached 100 percent. Among the others, literacy and development were positively associated, although even for those, the correlation (not calculated) must have been quite a bit lower than +1.00. In another analysis (Meyer, Ramirez, Rubinson, and Boli-Bennett; 1979) examined the effects of three development variables (1955 log $GNP/_k$ 1955 log $KWH/_k$, and 1950 percent male labor force not agriculture) on educational expansion, 1955-1970, at three levels--primary, secondary, and tertiary. In general, the higher the level of development the greater the expansion of education. On the whole these data support the notion that, at least in today's world, development and educational attainment are positively associated. The degree of association cannot however be estimated for this sort of evidence.

In summary, despite some conceptual problems and quite an even data, at least among nations, some aspects of the relationship between development and status central tendency are clear and others are not. The concept and

and referents of development are a bit ambiguous. Nonetheless no one seriously doubts that $GNP/_k$ (or $GDP/_k$) and $KWH/_k$ both measure at least one aspect of economic development rather well. Development in the sense of $GNP/_k$ is the same thing as CT of income. $KWH/_k$ is not, but because of its (presumably) nearly perfect correlation with $GNP/_k$ it might as well be. The scanty data available within countries conform to the international trend. Similarly, the evidence regarding the CT of occupational status and educational attainment is consistent with that regarding income.

But the data presented here leave much to be desired. Neither the indicators of development nor those of the status central tendency are precise enough to provide a reasonably accurate estimate of the relationships between them.

2. Development and Status Dispersion. This topic is at least as problematical as the previous. Regarding the concept of development, as Portes (1976) has noted, some authors define it as a reduction of inequality. So conceptual redundancy is possible here, too. If on the other hand, development variations in the average level of access to goods and services, then development and inequality are indeed two different concepts (barring problems with the measurement of inequality), and relations between indicators of the two concepts should be straightforward.

But they are not. The measurement of status dispersion is far from unambiguous. Most of the measurement techniques that have been proposed are appropriate for interval scale data, especially income in money, the variable for which they were worked out. They are less appropriate for education and occupational status, which at best only approximate interval scales. But even for income it is not at all obvious how inequality should

be measured. A brief but informative discussion of these questions is presented by Szal and Robinson (1977). This discussion draws theirs but is by no means restricted to it. Perhaps the main issue concerns relative versus absolute measures of inequality. Relative measures are most often used. They deal with the shares of the total income (or other status variable) possessed by all the people (say workers or households) in the societal unit, in effect taken as equal to 100 percent. They yield estimates of the degree to which the proportion held by higher strata exceeds that of lower strata. The Gini coefficients (1921), Kuznets' H (1957), the log variance, and the coefficient of variation $s/\bar{x}$ are perhaps the most widely used. But then are others. There would seem to be at least one serious disadvantage to relative or "share-based" measures. Consumers do not buy goods and services with "share" of the national income, but with absolute units of disposable income--"take-home pay." In the real world, the same (proportionate) share of a societal unit's income can provide vastly different levels of "buying power" depending upon the total income per capita. Suppose each of two societies (A and B) has a population of 5,000 people, and suppose that in both societies the bottom decile (D_1) holds one percent of the disposable income, while the top decile holds 25 percent. So the shares of the national income are the same for corresponding deciles in the two countries. But A is rich and B is poor; A's total annual income is \$1,000,000,000, whilst B's is \$10,000,000. Then in A, the 500 people in D_1 would total \$10 million, whilst their 500 D_1 fellows in B would total \$100 thousand. In A those in D_{10} would share \$250 million, whilst their D_{10} counterparts in B would share \$2.5 million. For D_1 of A the average income would be \$20,000; for B \$200. For D_{10} of A, the average income would be \$500,000; whilst for B, \$5,000. Note the "average D_1 person"

in A is rather well off at $20,000/year; whilst the "average D_{10} person" there is wealthy ($500,000/year). By contrast the "average D_1 person" in B is in abject poverty at $200/year; whilst even the "average D_{10} person" in B is poor, at $5,000/year. Note, too, that the differences in shares of income is the same in both countries at 24 percent (25% - 1%)--they appear to be equally unequal, so to speak. But the absolute differences between the respective means are enormous, for A: $500,000 - $5,000 = $495,000; for B: $5,000 - $200 = $4,800. In this absolute sense the degree of inequality in A is huge compared to that in B. It is $\frac{\$495,000}{\$4,800}$ or 103.125 times as great. This is no doubt why Thurow and Lucas (1973), for one example, compared the (disinflated) dollar value of $\bar{\$}_{D_{10}} - \bar{\$}_{D_1}$ for two time periods when studying the changes in real income in post-war America. The sustained economic boom was so considerable during this period that though the share of the lowest decile remained about the same, their absolute earnings went up dramatically. But the real increase among those in the top decile was even greater--everybody gained but the well-to-do gained by far the most. This has two implications. First, societal units with larger disposable income per capita can have higher degrees of absolute inequality than those of lower, even when share distribution parameters based upon exactly the same observations indicate equality or that it is the poorer that is more unequal. It is absolute, not relative, disposable income that buys goods and services. So valid measures of absolute inequality might tell more about inequality in goods and services, which is the issue of most central to stratification, than do share-distribution measures. Unfortunately, the international data are compiled for share differences, not absolutes. Second, unequivocal conclusions may be drawn only when share-distribution and absolute data both indicate that the same one of the

societal units is the more unequal. In other words, if both the share and the absolute dispersion indicators show that one is more unequal than the other the evidence of difference in inequality is probably indisputable.

One final note. Different indicators of inequality yield different conclusions about the degree of inequality and the concensus concerning their objectives of which one is better than another is weak at best. Besides this, a variety of measures appear to be used often apparently without any strong justification for the choice that was made. The upshot of this is assessments of the relationship between development and status dispersion are at least as disputable as those for development and status central tendency, except when absolute increases, such as s.d. or σ^2 are used.

Income dispersion. Income dispersion analyses by Kuznets (1955) and Paukert (1973), backed up for the most part by those of Ahluwlia (1974), lead to the conclusion that among nations the relationship between development inequality is an inverted U-curve: low among the least developed nations, high in the middle, and lower among the most highly developed. As Frank and Webb (1977) point out, this appears to be a rather weak relationship. This appears to be consistent with Lenski's (1967) long term historical thinking on development and equality. Perhaps the clearest statements of this relationship are to be found in Rubinson (1976) and Bornschier and Ballmer-Cao (1979). Using slightly modified versions of Paukert's (1973) data, they arrive at almost identical zero-order linear correlations of relative inequality (Gini coefficients) and economic development (Log income/capita): $r = -.183$ (Rubinson, 1976:Appendix 2) and $r = -.14$ (Bornshier and Ballmer-Cao, 1976:Table 1). The latter then develop a ln Income/$_k$ (Y_n) development indicator, including a quadratic term, to account for the curvilinearity introduced by the inverted U relationship [$f(Y_n) = b_0 \log Y_n + b_1 (\log Y_n)^2$]. The correlation between this new variable

and the Gini coefficient is +.43. This provides strong support for the inverted U curve hypothesis. In general, share-distribution income data describing relative inequality show two trends: 1) an overall trend in which the higher the level of development, the lower the degree of relative inequality, overlain by 2) an inverted U curve in which relative inequality appears to increase with development among the least developed nations, to reach an asymtote at $\$230/_k$/year (in constant 1964 United States dollars), and to turn down again among more developed nations. (Tyree, Semyonov, and Hodge, 1979, reported a much higher correlation between GNP/capita and "income inequality" [r = -.539]. This partly done to their use of the percent of income held by the top five percent. It may also be affected by their choice of countries: Bornshier and Ballmer-Cao, 1979, report a correlation of -.39 for the same two concepts taken over a larger list of countries.)

In our own review of Paukert's (1973) and Jain's (1975) data, we are struck by certain special exceptions to the overall trend. Eastern European socialist nations are generally low. (In part, this may be artifactual [Lenski, 1978], in that 1) those with multiple jobs are counted as if each job was held by a different person and each job of a multiple job-holder is likely to pay more than the single job of others, and 2) the State tends to provide its special perquisites to those who are already the best paid.) Among nations whose economies are organized to respond strongly to market signals ("capitalist" countries), the nations of the British Commonwealth tend to show relatively low low levels of share inequality. The northern-most countries of East Asia whether socialist or not tend to have rather low levels of share-distribution inequality.

the United States, West Germany, and especially France, tend to have rather high inequality coefficients. So the overall patterns are not at all unambiguous.

Gartrell (1981) has measured at the village level in India a set of variables that appear to be comparable to those used by others at the national level. His key table (for present purposes) is so abbreviated as to make its interpretation uncertain. It seems to say that the Gini coefficient for inequality is negatively correlated with household electrification ($r = -.218$) but positively correlated with household income ($r = +.541$). These coefficients may be correct, but seem contradictory in that both electricity and household income should be measures of development, and indeed they appear to be positively correlated--$r = +.484$. Also, the negative correlation of relative income inequality and household income seems to be inconsistent with national-level findings regarding relative income inequality and development. Given these uncertainties it is probably best to refrain from drawing conclusions for the time being.

Data on the relationship between development and absolute income inequality (say, the differences between standard high and low sets of centiles in a common metric) do not seem to be available. One would guess that if they were to be found they would show a monotonic increase: the higher the level of economic development ($GNP/_k$ or $KWH/_k$) the greater the absolute difference between contrasting centiles. This happened in the U.S. since World War absolute inequality increased dramatically (United States Department of Commerce, 1

Occupational status dispersion. As far as can be seen there is as yet only one bit of suggestive data available on the dispersion of occupational status by development. These are presented in Kelley and Klein (1981). They appear to show that, except for agriculture the distribution of

occupational status in three developing societies (LDCs) is almost identical to that of ten developed nations (DCs).The average level of the LDCs is a bit lower, but the dispersion does not seem much different. If agriculture is added, then inequality increases among the LDCs, because most farming is at the bottom of the occupational status hierarchy, and because there are many more people in such positions in the LDCs. The tentative conclusion is that higher levels of development reduce occupational status dispersion, but mostly because small farmers are eliminated. But we cannot place much confidence in this conclusion; better data are needed.

Educational attainment dispersion. Systematic data on development and educational dispersion have not been compiled. But some strongly suggestive trend data have been presented by Meyer, Ramirez, Rubinson, and Boli-Bennett (1979:40). From 1950 to 1970 educational attendance for each age group of school-aged children and youth rose in both rich and poor countries. But 1960, almost all children in richer countries were attending school, so this rate had hit its ceiling. For poorer countries the corresponding rate increased sharply, hitting about 70 percent by 1970. The attendance rates for the secondary and teritary levels for richer countries diverged from those of poorer countries. So it would appear that development must have increased educational attainment dispersion. This is purely inferential and if true it applies to absolute dispersion, not necessarily to "share-distributions" of education.

3. Development and flux or circulation mobility. Over the years perhaps more research effort has gone into the relationship between social mobility and development than perhaps any other aspect of stratification and development other than share-distributions of income. Most research and theory pertaining to social mobility is concerned with its upward and

downward components. It deals, that is, with shifts in the form and composition of hierarchically ordered strata. The great debates over revolutionary changes in stratification systems have all been concerned with this aspect of the concept. This, too, is the present focus. It must be stated however that this is not the only concern of mobility researchers. Recent work in Eastern Europe, Zagorski ( ), seems to be moving away from a hierarchical to a broader focus, a concern with occupational shifts that are lateral as well as "vertical." Some researchers in the United States are also moving in this direction (Hauser, personal communication). Behind these two foci, two different research objectives appear to stand. The first is concerned with understanding social hierarchies, that is, with stratification as such. The latter is concerned with labor market analysis. The first is tied to status distributional questions, the second to questions of the operation of the economy. For nearly 20 years (Yusada, 1964), researchers have distinguished between structural and social mobility. As we have seen, variations among societal units regarding structural mobility are conceptually the same as variations in the central tendency of stratification systems. The fact that most data on the former are based on ratings of occupations, whilst most in the latter employ income, does not make any relevant conceptual difference. With minor provisos, conceptually what applies to one applies to the other, although their calculating procedures are quite different. The concept of mobility (structural or circulation) applies logically to income and education as well as to occupational status, and central tendency applies logically to occupational status and education, not just income. If a population is structurally mobile, its whole structure is rising or falling. Mobility rates require that measurements be taken on the same social unit at least

two standard times, of course, while synchronic comparisons can be made on measurements of central tendency. Synchronic measures of central tendency differenes among societal units merely show that the "structural levels" of units vary. Structural mobility differences among such units would imply that the rate of change in central tendency varied among them.

Circulation mobility or flux refers to the difference between total mobility and structural mobility. Conceptually it means that apart from the mobility caused--some say "forced"--by changes in the occupational structure. In other words, it is the degree of flux (in a technical sense of the word) remaining after the effects of a change in central tendency or structural mobility have been eliminated by standardization. The usual way to do this as indicated above, is by subtraction within "mobility" tables. But it can also be accomplished through correlation (r) because correlation coefficients automatically standardize the metrics of the variables they employ to a mean of zero and a standard deviation of one, and because coefficients of determination (r^2) and of alienation ($1 - r^2$) are simple derivatives of correlation. So the degree of flux or circulation mobility can be measured by a simple formula, $F = 1 - r^2_{po}$, where p is parent's status and o is off-spring's status (Haller, 1970); r^2_{po} (or r_{po}) thus would index status inheritance (Kelley and Klein, 1981). In future research this way of handling flux or circulation mobility might be preferable because it lends itself so well to correlation and regression analysis. The concept of flux or circulation mobility applies to any status content dimension or variable, although in the literature to date it seems only to have been applied to occupational status.

Income and education. As just noted, flux does not appear to have been studied with respect to these status content variables.

Occupational status. International studies of circulation mobility, employing "mobility tables" (hierarchically organized father-to-son origin-destination tables arranged for categorical data) are perhaps the focus of most mobility studies. Much of the early work was compiled by Lipset and Bendix (1959). The findings in this area were revised following methodological discussion by Duncan (1964) and Yusada (1964). Two major "mobility table" analyses of circulation mobility and development have appeared since then. The first (Hazelrigg and Garnier, 1976) used a 17-nation sample of more or less industrialized countries. They reported results that were mostly negative: The principal finding has led us to the conclusion that the endogenous (i.e. circulation: commentator's note) mobility process itself was unrelated to differences in the size of productivity...," as measured by log energy consumption per capita. The second such study (Tyree, Semyonov, and Hodge, 1979) adds a few more countries and has a somewhat different focus. Regression equations (p. 418) seem to show a weak positive relationship between the degree of circulation mobility and level of national development (GNP per capita), net of relative inequality. Unfortunately the zero-order correlations are not given. Taking the two together we infer that there may be a weak positive relationship between the degree of flux and the level of national development.

4. Development and status crystallization. The first clear presentation of the concept of status crystallization seems to have been in an article by Benoit-Smullyan (1944). It is also employed by Duncan (1968) under the label, "rigidity of inequality." But its main exponent over the years has been Werner Landecker. His recent book on the concept, here called "class crystallization" (Landecker, 1981), describes it rather completely. By whatever name, the concept is the same. It is a characteristic, or

structural dimension (Haller, 1970) of the st[illegible] societal units. It describes the degree to which the various content dimensions or more specific status variables are related to each other. When crystallization is high, all the status content variables are highly correlated. The presumption is that this would make the system "closed" in a sense different from the "closures" described by high degrees of inequality and of status inheritance. Theoretically the most "monolithic" or "closed" stratification system would be one that is very unequal (absolutely and relatively), has a very high degree of status inheritance (or low degree of flux) and is highly crystallized. As research on structural properties of stratification systems unfolds over the years, it will no doubt be the combinations of various levels of each of these three (and the other) structural dimensions that will prove informative in explaining the antecedents and consequences of stratification.

To date only one analysis of crystallization and development has been performed, that of Covello and Bollen (1979). Over the nine societies they compared, they showed a degree of status crystallization ranging from $r = +.694$ to $r = +.225$, depending upon how crystallization was measured. Apparently the more developed societies exhibit a higher degree of status crystallization.

5. Summary. We have seen that the evidence of the relationships between development and the structure of stratification is quite uneven. Most of the data are at the level of comparison among nations. Lower levels of societal units such as macroregion or communities within nations have not been given much attention. Then, too, the research literature tends to be concentrated in certain of the cells generated by cross-classifying status content variables with structural dimensions of stratification; and

there are conceptual redundancies as well. Research on the central tendency of status is concentrated on income, where it is redundant with development. Education and occupational status central tendencies have not been well marked. Dispersion data, too, tend to be concentrated on income, especially share-distribution of income. Absolute dispersion data on income and dispersion data in general on education and occupational status are lacking. Circulation mobility data tend to be restricted to occupational status. Crystallization studies are just beginning. Common wisdom would have it that the most developed . . societal units would 1) have the highest average levels of income, education, and occupational status; 2) low, if not the lowest, levels of inequality of income, education, and occupational status; 3) high levels of circulation mobility for each of the three central variables; and 4) low degrees of status crystallization. It would hold that the least developed societies have 1) very low levels of central tendency regarding income, education, and occupational status; 2) moderate or low levels of inequality on all these variables; 3) low levels of circulation mobility; and 4) a high degree of status consistency. The more advanced developing societies would have 1) moderate levels of central tendency regarding each of the variables; 2) very high levels of inequality regarding each; 3) low levels of circulation mobility; and 4) a high degree of status crystallization. It would appear that the data do not fit these observations very well. Yet the evidence is hardly ever unequivocal. True, high levels of development and higher incomes go together, and there is an inverted U curve between share-distribution inequality and development.

Status attainment and development. In the strict sense of these terms there appears to be almost no defensible published research on this topic to date. It is extraordinarily difficult to combine evidence from various data-sets so as to conduct such analyses on secondary data (although it appears that various data-sets are now being "recalibrated" to permit such analyses; Jonathan Kelley, personal communication). Lin and Yauger (1975) have attempted to compare the United States and Great Britain with Haiti and Costa Rica. Unfortunately, serious sampling biases in the latter two countries made it impossible to draw any pertinent conclusions from it. Holsinger (1975) has attempted to determine the relationship between status attainment and development among four Brazilian cities, using data collected in 1959 and 1960. He uses standardized regression coefficients, although at the time researchers did not fully understand that metric (unstandardized) regression coefficients provide more clearly interpretable evidence. He concludes that the higher the level of development, the lower the degree of status inheritance on occupational attainment and the greater the effect of education on the same variable. So far, the data are in agreement with the Treiman (1970) hypotheses. He also found, contrary to hypotheses, mixed results regarding the development level of the city, and the combined effects of fathers' education and occupational status on the respondents educational attainment status.

Conclusions: Development and the structure of stratification and status attainment. A dozen years ago Treiman (1970) wrote out a set of propositions regarding industrialization and stratification. Quite appropriately he called them "assertions." Clearly, he understood industrialization to mean development. His assertions may well remain the best available set of statements regarding beliefs sociologists hold

about the relationships between stratification and development. The results of research conducted since then on stratification and development leave them essentially unmodified. This is not because they have been tested well and found to be solidly confirmed. Rather it is because they remain untested.

It would be presumptuous to label as "theory" his propositions and those of most others. More accurately, they are suppositions of well-informed thinkers. As suppositions they neither represent rigorous deductions from well-established axioms nor empirical generalizations from adequately conceived and executed research. And the little relevant research that has been done since then neither confirms nor denies them. To add to the confusion, practically all of the sociological research on the topic was concerned with mobility alone. Treiman clearly says that mobility research would change its form and go in the direction of the status attainment research of Blau and Duncan (1967). His essay does not deal with developmental variations in the structural dimensions of stratification.

In view of the equivocal nature of both speculation and research regarding most aspects of the relations between stratification and development, it seems prudent to determine them empirically, by means of systematic research. The following analysis of structural dimensions of stratification and of status attainment among Brazil's developmental macroregions constitute one effort.

Structural Variations and Development

Data of the PNAD-73 can be organized so as to permit an assessment of the relationship between Brazil's Developmental Macroregions and four of the variables called "structural dimensions" of stratification central tendency, dispersion, flux, and crystallization. The findings regarding each of these are presented in Tables 1 through 4. For convenience the

Tables 1-4 about here

first three tables are ordered by status content variable; the last is devoted to status crystallization. Each table presents the information separately for men and for women. The samples are weighted to permit direct estimations of the respective parameters for each macroregion and for the nation (see D.S. Godfrey and D.B. Bills, "Weighting the 1973 PNAD sample to estimate multi-state and national parameters," this volume). Neither formal tests against null hypotheses nor confidence limits are presented. The sample sizes are so huge that almost any difference, no matter how minute or trivial would be labeled "statistically significant," and statistical estimates are very close to their respective parameters. The data concern all persons who reported working regularly 17 or more hours per week. Three basic statistics are presented, the mean ($\bar{X}$), the standard deviation (S), and the coefficient of variation ($S/\bar{X}$). The mean is of course the measure of central tendency and the standard deviation provides the main evidence regarding dispersion. The coefficient of variation is used to permit comparisons with other status content dimensions (Allison, 1978) and for those who are interested in relative measures of dispersion. Because income distributions are usually skewed log normally the same data are presented in logrithmic form.

ble 1. *Structural Variations in Income*[1] Among Brazil's Socioeconomic Development (SED)[2] Macroregions, Data on Employed[3] Men and Women (1973).

Structural Dimensions of Stratification[4]	Income by Macroregion for Males and Females											
	South (78)[5]		South's Periphery (54)[5]		Frontier (32.5)[5]		Old Northeast (31)[5]		New Northeast (13)[5]		Brazil	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
tral Tendency												
ean ($\bar{X}$)	1,800.30	890.81	1,423.42	609.65	1,579.82	738.67	843.92	369.75	536.02	264.01	1,455.76	688.13
ean, $\log_n$ ($\bar{X}_{ln}$)	7.02	6.39	6.72	5.96	6.91	6.18	6.22	5.47	5.91	5.28	6.73	6.04
persion												
tandard deviation (S)	2,670.59	1,132.18	2,329.62	864.10	2,297.98	969.41	1,528.11	642.91	903.08	400.47	2,369.23	994.08
tandard deviation, $\log_n$ (S_{ln})	.89	.86	.95	.90	.87	.86	.88	.82	.75	.65	.97	.94
efficient of variation ($S/\bar{X}$)	1.48	1.27	1.64	1.42	1.45	1.31	1.81	1.74	1.68	1.52	1.63	1.44
efficient of variation, $\log_n$ ($S_{ln}/\bar{X}$)	.13	.14	.14	.15	.13	.14	.15	.15	.13	.12	.14	.16
ber of cases	41,578	15,711	7,686	2,581	2,342	969	14,919	6,885	5,841	2,777	72,365	28,923

rce: Original calculations from an individual-level data-tape of the 1973 National Household Sample Survey of Brazil (PNAD 1973).

alues given in annualized United States dollars of 1973. See D.B. Bills, "Measuring Income in the 1973 PNAD," this Volume.

ocioeconomic Development scores. See "A socioeconomic regionalization of Brazil," this Volume.

ll persons who reported working regularly 17 or more hours per week.

ll structural dimensions for which data are available, except status crystallization which is given in Table 4. Each statistic based on all data present.

ED medians (Md). See note 2/.

Table 2. Structural Variations in Occupational Status[1/] Among Brazil's Socioeconomic Development (SED)[2/] Macroregions, Data on Employed[3/] Men and Women (1973).

Structural Dimensions of Stratification[4/]	Occupational Status by Macroregion for Males and Females											
	South (78)[5/]		South's Periphery (54)[5/]		Frontier (32.5)[5/]		Old Northeast (31)[5/]		New Northeast (13)[5/]		Brazil	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Central Tendency												
Mean ($\bar{X}$)	19.43	20.29	16.79	21.24	21.88	26.16	12.15	13.41	6.86	8.58	16.69	17.80
Dispersion												
Standard Deviation (S)	18.86	19.69	17.98	20.44	18.66	21.01	15.60	17.25	10.76	14.64	18.06	19.32
Coefficient of Variation ($S/\bar{X}$)	.97	.97	1.07	.96	.85	.80	1.28	1.29	1.57	1.73	1.08	1.09
Flux (Circulation Mobility)												
Flux Coefficient ($1-r^2_{fo}$)[6/]	.72	.69	.79	.75	.77	.79	.72	.76	.85	.63	.71	.70
Number of cases	41,578	15,711	7,686	2,581	2,342	969	14,919	6,885	5,841	2,777	72,365	29,923

Source: Original calculations from an individual-level data-tape of the 1973 National Household Sample Survey of Brazil (PNAD 1973).

1/ Values given on a scale from 0-100, based on a canonical weighting of specific occupations by the mean income and education of each.

2/ Socioeconomic Development scores. See "A socioeconomic regionalization of Brazil," this Volume.

3/ All persons who reported working regularly 17 or more hours per week.

4/ All structural dimensions for which data are available, except status crystallization which is given in Table 4. Each statistic based on all data present.

5/ SED medians (Md). See note 2/.

6/ Flux coefficients ($1-r^2_{fo}$): r^2 is a coefficient of determination; $(1-r^2)$ a coefficient of alientation; f is fathers' (occupational) status; and o is the "offspring's" or respondent's status.

Table 3. Structural Variations in Educational Attainment[1/] Among Brazil's Socioeconomic Development (SED)[2/] Macroregions, Data on Employed[3/] Men and Women (1973).

Structural Dimensions of Stratification[4/]	Educational Attainment Status by Macroregion for Males and Females											
	South (78)[5/]		South's Periphery (54)[5/]		Frontier (32.5)[5/]		Old Northeast (32)[5/]		New Northeast (13)[5/]		Brazil	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Central Tendency												
Mean ($\bar{X}$)	4.86	5.29	4.15	5.05	4.81	5.84	2.54	2.73	1.71	1.62	4.05	4.32
Dispersion												
Standard Deviation (S)	3.93	4.32	3.76	4.47	3.96	4.43	3.43	3.79	2.27	2.67	3.88	4.31
Coefficient of Variation ($S/\bar{X}$)	.81	.82	.91	.89	.82	.76	1.35	1.39	1.33	1.65	.96	1.00
Number of Cases	41,578	15,711	7,686	2,581	2,342	969	14,919	6,885	5,841	2,777	72,365	29,923

Source: Original calculations from an individual-level data-tape of the 1973 National Household Sample Survey of Brazil (PNAD 1973).

1/ Education is given in approximate year-equivalents.

2/ Socioeconomic Development scores. See "A socioeconomic regionalization of Brazil," this Volume.

3/ All persons who reported working regularly 17 or more hours per week.

4/ All structural dimensions for which data are available, except status crystallization which is given in Table 4. Each statistic based on all data present.

5/ SED medians (Md). See note 2/.

Table 4. Status Crystallization[1] Among Brazil's Socioeconomic Development (SED)[2] Macroregions, Data on Employed[3] Men and Women (1973).

Status Variables	Status Crystallization[4]											
	South (78)[4]		South's Periphery (54)[4]		Frontier (32.5)[4]		Old Northeast (32)[4]		New Northeast (13)[4]		Brazil	
	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women	Men	Women
Income x Occupational Status	.23	.23	.16	.17	.26	.19	.27	.22	.13	.16	.24	.23
Income x Education	.27	.23	.18	.20	.28	.18	.29	.25	.16	.20	.28	.25
Occupational Status x Education	.52	.65	.51	.67	.49	.61	.53	.63	.35	.52	.53	.65

Source: Original calculations, National Household Sample Survey of Brazil, 1973.

[1] Bivariate shared variance (r^2).

[2] Socioeconomic Development Median scores. See "A sociological regionalization of Brazil," this Volume.

[3] Reported to be working regularly 17 or more hours per week.

[4] SED medians.

The Question of the Developing Amazonian Frontier. In the data to follow it will be noticed that the Frontier often seems out of line with the trend of variations in structural dimensions that appear to fit the other four macroregions. It is not clear why this is so, but at least three factors may make the Frontier data behave differently from other areas. First, the data were collected differently in the Amazon region. Because of the inordinately high cost of on-the-ground sampling and interviewing in the dense and immense forests, the interviewers were instructed to confine themselves to the urban areas. Even though the population density here is very low, given the enormous size of the land surface affected, it is possible that rather large urban bias have been introduced into the data in this macroregion. Second, for many years the government has been especially concerned to develop and populate the Amazon valley (Silva, 1967). The city of Manaus, for example, was made a tax-free area in the mid-1960s to encourage manufacturing and thus to serve as a "development pole" for the region. Though it is nearly 1,000 miles upstream from the coast, transoceanic freighters steam directly up its wharves. Roads are being built through the region. Along side the roads and rivers, new farming areas are being opened up and occasionally a manufacturing plant will be set up. Here and there, mining operations, some quite substantial, are also being organized. The per capita capitalization of these efforts may be large. If so, it might well raise the averages of income, so, better paid, more educated workers whose education and occupational status is higher than would otherwise be expected may be attracted to the region. The third possible explanation of the anomolous behavior of the Frontier, may be mostly another way of looking at the second. Both de Touqueville (1840) and Turner (1920) have argued that frontiers have special developmental consequences for people of European culture. They were

thinking of the United States of course, Touqueville mostly wrote about the incentives encouraged by the American's freedom from a landowning class; Turner, too, about the availability of land but also the resourcefulness induced by the demands of frontier life. This position would argue, not that the economies of frontiers attract unusually productive people but that frontier life induces traits of individual productivity. One would guess that most if not all of the anomolous scores of the Frontier are due to sampling and/or the urban concentration of the bulk of the population.

The Question of Dispersion and Inequality. As we have seen researchers seem to think of inequality as a special kind, or set of kinds, of dispersion. When applied to distributions that are at least approximately normal or have been normalized by some appropriate transformation of the original metric, the standard deviation (S or σ) and its square (S^2 or σ^2) have mathematically definite properties, and they measure the absolute dispersion of the empirical distribution of a variable. When divided by the mean ($\bar{X}$) to yield the coefficient of variation ($S/\bar{X}$), the resulting number permits comparisons of the relative dispersion of the empirical distribution of one variable with that of another (Allison, 1978), permiting statements of the kind, "Variable Y has a greater (or lesser) dispersion than variable X." It would appear that the many measures of "inequality" regarding stratification variables go beyond unambiguous discriptions of dispersion, additionally specifying them in terms of one conception or another of good or just distributions. Some are unabashedly at least as ethical as analytical in concept, as noted by Allison (1978) and Frank and Webb (1977). Indeed there seems to be a wide spread tacit consensus to the effect that when "share-distribution"-- relative dispersion-- measuresremain equal within a country over time, or are

equal among countries, that somehow this is just. So injustice is thought to be done if share-distributions of a country increase , and "justice is done" if it decreases. Similarly a country is that thought to be more just than another if its share distribution is more equal. Those who do not wish to prejudge the ethical implications of a given distribution may prefer to employ the ordinary measures of dispersion of the standard deviation or variance, which are clearly comparable as long as the same metric is used and the shapes of the distributions are approximately the same. The standard deviation is used herein. In the case of income, the dispersion of the natural logrithm is also presented.

Income. The data on income central tendency and dispersion variations among development macroregions, for men and women, are presented in Table 1. The data are given in or computed from annualized United States dollars of 1973, The mean and standard deviations of the original dollar distributions and of the log normal distributions are provided. Coefficients of variation for both distributions are also presented.

For present purposes the breakdowns by sex are mainly to provide separate checks on the general trends, to avoid drawing the misleading conclusions that might be possible if the sexes were combined, and to allow interested researchers to examine sex differences. We do not deal with sex differences here, however, except to note that in each region the means and standard deviations are much higher for men than for women. The ratios of the means ($\bar{X}$ men/$\bar{X}$ women) ranges between 2.02 in the Developed South and 2.33 in the South's Developing Periphery. The ratios of the standard deviations (S men/S women) are even greater, ranging between 2.26 in the Underdeveloped New Northeast and 2.70 in the South's Developing Periphery.

Regarding the central tendency, the main trend is a general rise in income with regional development, regardless of whether one looks at the data for men or for women regarding the means of income or the log transformations of income. For the Developed South (whose SED score is 78), the South's Developing Periphery (SED = 54), the Unevenly Developed Old Northeast (SED: 31), and the Underdeveloped New Northeast (SED: 13) the dollar trends are almost linear. The unexpected finding is that the Developing Amazonian Frontier (SED: 31.5) appears to be out of line.

The same trends, including curve location of the Frontier are evident for the standard deviations of the dollar distributions--a more or less linear positive trend of S_{income} by SED, except for an upward jog for the Frontier. The rest of the data appear to be less useful. The standard deviations of the logs are misleadingly close for men and women, and equally misleadingly make it appear that there is a curvilinear relationship between SED and income variability. The macroregional SED variations of the coefficients of variation are even more deceiving and are to be disregarded.

It seems almost certain the Frontier anomolies are genuinely special cases, and should be held in abeyance for now. So the unsurprising general conclusion is that macroregional mean income and dispersion of income rise with macroregional socioeconomic development.

Occupational status. The corresponding data for occupational status, together with data on father-to-offspring flux, or circulation mobility, are given in Table 2. Here, too, sex differences are of general interest. Contrary to the data on income, the mean occupational status scores for women exceed those of men in each macroregion, ranging from a ratio of sex means ($\bar{X}$ men/$\bar{X}$ women) of .79 in the South's Developing Periphery to .95 in the Developed South. The same is true of the ratios of the dispersions,

ranging from .73 in the Underdeveloped New Northeast to .95 in the Developed South. The flux coefficients, however, yield a mixed pattern of small differences: .94 in the Unevenly Developed Old Northeast to 1.05 in the South's Developing Periphery.

It will be recalled that the Occupational Status Index is based upon Brazilian data and has theoretical range of 100 to zero. The highest scoring of the 93 categories is indeed 100 and includes Engineers, Architects, and Geologists. The lowest, at zero, consists of cigar and cigarette makers. Farm laborers score one, small farm operators 11, heavy machine operators 17, mechanics 22, postal delivery workers 27, primary and secondary school teachers 56, university professors 92, judges 97, etc. The means for the five socioeconomic development microregions range from a low of 6.86 (men in the Underdeveloped New Northeast) to 26.16 (women in the Developing Amazonian Frontier). Scores of seven and lower are the equivalent of unskilled blue collar workers and farm laborers. Scores of, say 20 or 30 are about the equivalent of skilled clerical workers, skilled operators, and foremen. Another way of looking at the meaning of the scores is to indicate that only three percent of the employed men have scores of 60 or more; 42 percent have scores less than ten.

The central tendency trends for occupational status are more or less like those for income, but they are not identical. Apart from the anamolous Frontier data, which are much higher (21.88) than any other, the SED trend is nearly linear. For men, it mounts from a low of 6.86 for the Underdeveloped New Northeast, through 12.15 for the Unevenly Developed Old Northeast, 16.79 for the South's Developing Periphery, to 19.43 for the Developed South. The women's trend, however, appears to be slightly curvilinear, even allowing for the Frontier. For the New Northeast, the occupational status score is

8.58; the Old Northeast is 13.41; for the Frontier, 26.16; for the South's Developing Periphery it is 21.24; for the South it goes down to 19.43.

The dispersion trends do not conform perfectly to any predictable trend, either. True, for males and females they both rise from the New Northeast through the Old Northeast, to the Frontier. After that they are almost flat. (The macroregional SED variations in the coefficients of variation (CV) are misleading: the higher the mean, the lower the CV.)

The flux trends are not completely clear, although the overall pattern may make sense in general, and the main anomoly may make sense in Brazil. It should be recalled that flux or circulation mobility refers to temporal (T_1, T_2)variations net of structural mobility. Total mobility in Brazil has increased substantially as measured from father to son and most of the increase is structural (Pastore, 1982?). This is true for all regions. Using a different scale and a more refined regionalization, the present analysis of men too finds that the average "distance of upward mobility" (sons' scores minus fathers' scores) varies directly with development level--except for the Frontier, of course, whose residents started higher, ended higher, and moved a greater distance to get there. The women's trend is a bit different, however. The greatest average mobility "distance" was travelled by women in the Periphery, with the Frontier and the South following close behind; the shortest,by those of the New Northeast, nearly the same by those of the Old Northeast. A flux coefficient, on the other hand measures the degree to which a person's status is, within the status parameters of his or her societal unit, free of control by his or her fathers' status. In this sense, it turns out that flux or circulation mobility tends to decrease with the level of development. But Unevenly Developed Old Northeast is the main exception here. Its flux line is quite low for women and much lower than the trend line would lead on to expect for men.

In summary regarding structural variations in occupational status with variations in macroregional development in Brazil: Except for the anomolous Frontier data, mean central tendency levels and dispersion vary more or less linearly and directly with macroregional SED levels. The variation in flux levels is generally the reverse of what sociologists might have expected: the higher the SED level, the lower the flux level. For men, the Frontier departs slightly from this trend--circulation mobility is a little lower among Frontiersmen than would be expected for a linear F x SED trend. But among women and especially among men, the circulation mobility is much lower in the Unevenly Developed Old Northeast than one would predict from a linear SED x F regression line. In other words, on the whole, occupational status central tendency and dispersion vary positively, while circulation mobility varies negatively with macroregional socioeconomic development in Brazil. The main exception is in the Frontier, and this may be due either to the Frontier economy or to bias in sampling. Also noteworthy is the dramatic drop in circulation mobility in the Old Northeast.

Educational Attainment. These data are presented in Table 3. As in the case of income and occupational status, both central tendency and dispersion increase more or less linearly with SED, except for the Frontier.

Status Crystallization. Table 4 presents these data. Following Covello and Bollen (1979), the covariances (r^2) of each pair of status central variables are analyzed separately. When plotted (in graphs not presented here), they show a number of useful patterns. We look first at those that are mrerly useful background items, then second at those pertaining to SED

and status crystallization. 1) The degree of crystallization of occupational status and education (at .35 to .67) is much higher than either of the other two types (.16 to .28). 2) The tie between education and occupational status is much higher for women (.52 - .67) than for men (.35 - .53).

The main apparent trend, cutting across all the six comparisons (each pair of status content variables by sex) is that crystallization tends to increase wtih macroregional level of socioeconomic development. Two main anomolies, seen before, also appear here. The Frontier appears to be a bit more crystallized than would be expected, no doubt as part of the more general Frontier Phenomenon. The Unevenly Developed Old Northeast also appears to be more crystallized than would be guessed from the trend line; this is probably an accurate reading. In the one other comparison that has been made of status crystallization by levels of development (industrialization) the findings appear to be about the same. Covello and Bollen (1979) also report that status crystallization appears to increase with industrialization.

Summary. The general findings are mostly in line with what one would expect, most anomolies due to either a peculiarity of the Frontier or to the especially "rigid" stratification of the Northeast. Ignoring the Frontier, the following structural variations in stratification by macroregional SED have been found: 1) The central tendencies of all status variables rise with development. 2) The dispersion of all status variables rise with development. 3) Occupational status flux or circulation mobility falls with development. 4) Crystallization tends to rise with development. Despite the above, both the flux level and the degree of status crystallization are higher in the Old Northeast than would be predicted from the rest of the data points (less the Frontier, of course). The overall cross-sectional picture of Brazil, then, is one in

which individual statuses indeed rise with macroregional development levels. This is another way of visualizing the familiar increase in structural mobility with development. As these statuses rise, they also become more varied. But the rise is accompanied by a decrease in intergenerational circulation mobility relative to the status of origin (fathers' occupational status), and an increase in status crystallization.

The Unevenly Developed Old Northeast does not quite conform to this trend of status "rigidity" increasing with development; its "rigidities" exceed those that would be predicted from the main trend-lines.

Status Attainment and Development

Problem and method. As we have seen, definitive research on status attainment in relation to development has not yet emerged, although there is a small amount of suggestive work available (Holsinger, 1975; Lin and Yauger, 1975; Hansen, 1977). This is true despite the fact that more or less systematic hypotheses concerning the matter have been available for years. Within the United States there is a long tradition of status attainment research though it has little to do with development. From a social psychological perspective, this work has recently been reviewed by Haller (1982). The present essay is an attempt to provide the first systematic analysis of status attainment and development. For employed men and women, it compares successively, by socioeconomic development (SED) level of Brazilian macroregions, the metric (unstandardized) regression coefficients of a number of recently codified antecedents of education, occupational status, and income (and log income). The antecedents of education are age and two social origin variables, father's class and occupational status. Those of occupational status include education and its antecedents, plus three variables describing the labor markets in which the workers participate--the SED or general quality of the local (microregional) labor markets, urban versus rural labor markets, and internal vs. noninternal labor markets. All of the foregoing variables are used as the antecedents of income (or log income).

All individual data were taken from the 1973 Household Sample Survey of Brazil (reported elsewhere in this Volume), and are weighted to permit generalization to states, regions, and the nation (see Godfrey, this Volume). Only persons of 20-64 years of age who worked regularly 17 or more hours per week are included herein.

The dependent variables are years of formal education, as estimated from a detailled set of responses to categorical questions (such as, "Did you attend school?", Did you complete primary school?", etc., through the university level). The distinctions are fine enough so that the means and other statistical esimtates of year-equivalents completed are surely very close to reality. More important for present purposes, they are precisely comparable among regions. Occupational status was measured by a canonically weighted score reported in Bills and Godfrey (this Volume). Income and its natural logrithm were taken from reports of weekly or monthly earnings and other income and are stated in annualized United States dollars of 1973 (Kelley and Bills, this Volume).

For the most part, the independent variables are measured as in the paper, "Antecedents of income: complementary hypotheses from conflicting theories?"(this Volume), although subsequent experience and reflection have helped to understand one or two of them a bit better than was the case when that essay was written.

Father's occupation, is also called "status origin." It is one of the variables describing the individual's social origins, and is measured by the same canonical scale used for the individual's occupational status. Class origin refers to a parsimonious conception of the social class in Marxian and Dahrendorfian terms (Robinson and Kelley, 1979). Persons identified as self-employed employers are considered to be "capitalists," and those who are employees or are self-employed without employees are considered to be "workers." This is consistent with the Robinson-Kelley stance and apparently with practice in Marxian socialist countries. In the most fully "socialized" nations, private economic activities are permitted as long as one person does not employ another. Of course, many

of the people thus labeled as "capitalists" are small operators, and the literature is confused as to the role of size of holdings on the definition of the term. Yet owning the means of production and exploiting the labor of others is clearly the core of the "relations of production." Size is another matter, and most of the status effects of size are surely included in the effects of fathers' occupational status. Class origin thus may miss the size effects of capitalist origins, but those are picked up by fathers' position in the occupatinal status hierarchy. The variable here called "class origins" captures the unique effects of father's capitalist/non-capitalist class, net of the effects of his occupational status and other variables.

Age in years is the third antecedent variable. This is frequently used as a proxy for "experience." It surely includes an experience component, but it may include more. In this analysis we include only the linear effects of age. The well-known quadratic effects are ignored.

Three labor market variables are introduced into the explanation of occupationa status and income differences. They are metropolitan/nonmetropolitan residence; microregional socioeconomic development (MR SED), and internal/noninternal labor market. Urban-rural residence distinguishes between those who resided in a metropolitan area from those who did not (as defined for purposes of PNAD 73--the Pesquisa Nacional de Amostragen por Domicilios, or National Household Sample Survey of 1973). This is taken to be a way of conceiving of labor market segmentation. Brazil's population tends to be concentrated in large cities and in rural areas. The urban area wages respond to the requirements of manufacturing and other more or less specialized activities. In the rural areas, wages tend to be quite low (Haller, Tourinho, Bills and Pastore, 1981; also this Volume). We assume that metropolitan wages and occupational status, as well as the demand for

education are driven higher by the urban occupational structure, and that the opposite is true for rural status.

The MR SED is taken as another measure of the quality of the local labor market. It is now known that Brazil's 360 continental microregions differ greatly in socioeconomic development (SED), that this variable is unifactorial (Haller, 1982, in press; also this Volume), and that it includes the level of industrialization of the microregion. Microregional SED has been scored from zero to 100. It has been found that only a few of the MRs are highly industrialized, 20 at most. All are among those with the highest SES scores. But many non-industrial MRs also have high SED scores.

It is assumed that, net of all else, economic activity reflected in high SED levels drives wages up, and conversely for low SED. So SED is employed as a second labor market segmentation variable.

A third labor market segmentation variable is called internal-noninternal labor market participation (Taira, 1977). In the case of Brazil this is an unusually easy variable to measure on a worker. All civil servants and all those who have a signed "labor card" are considered to be participants in an internal labor market. The government and the larger companies both are required to provide a series of social benefits for workers who have completed and continued beyond a certain minimum service, usually six months. In the private sector, such trusted employees are given signed work cards. Internal advancement rights are among the perquisites of having a signed work card or of being in civil service. Private sector employees lacking signed work cards have no such rights (Pastore and Haller, 1982, in press; also this Volume). Those who have these advantages have an especially high degree of security as well as advancement rights.

Taken together, then, with education and occupational status, income (or log income) is regressed on all of the above. In the analysis to follow, we compare metric regression coefficients across development macroregions for both sexes. The largest sample sizes for education are presented first, followed by those used for occupational status and income (and log income) are in parentheses for the five regions are: Developed South - 41 578 (31 586) men, 15 711 (8 791) women; the South's Developing Periphery - 7 686 (5 942) men, 2 581 (1 658) women; Developing Amazonian Frontier - 2 342 (1 641) men, 969 (602) women; Unevenly Developed Old Northeast - 14 919 (11 804) men, 6 885 (3 918) women; Underdeveloped New Northeast - 5 841 (4 501) men, 2 777 (1 320) women. These figures vary downwards for certain variables in certain samples. The exact data are given in Addendum 1, which also presents the means, standard deviations, bivariate sample sizes, and correlation coefficients for each sample as these were used in the larger samples available for education. Addendum 2 presents all regressions for the full sample ("All Regions"). Addendum 4 shows correlation matrices for the regressions of occupational status, income, and log income. It is based on the bivariate data given in Addendum 4. The nominal definitions of all computer acronyms for variables are presented in Table 5.

Table 5 About Here

Results. The results are presented in 40 regression tables generated for sexes (2) by dependent variables (4) by regions (5). They are numbered in three-digit decimals. The left-hand digit is 1 for men or 2 for women. The middle digit is 1 for education, 2 for occupational status, 3 for income, and 4 for log income. The right-hand digit is 1 for the Developed South (SED=78), 2 for the South's Developing Periphery (SED=54), 3 for the Developing Amazonian Frontier (SED=32.5), 4 for the Unevenly Developed Old

Table 5. Nominal Definitions of Computer Acronyms and Ranges of Variables.

Computer Acronym	Nominal Definition (Abbreviations in parentheses)	Range
ED	Education in estimated year-equivalents	0-17
CANOCC	Canonical occupational status score (SES)	0-100
INCOME	Annualized income in United States dollars of 1973	-----
LNINC	National logarithm of INCOME	-----
URBRUR	Metropolitan[1/]-Nonmetropolitan residence (a labor market variable: Metro/ Nonmetro)	0-1
SCORE	Microregional socioeconomic development score (a labor market variable: MR SED)	0-100
FCANOCC	Father's canonical occupational status score (a social origin variable: Father's SES)	0-100
INTLAMKT	Internal[1/]-Noninternal labor market participation (Int/Nonint)	0-1
CLSSORGN	Father's occupational class, self-employed employer[1/] ("capitalist") versus other (class origin)	0-1

[1/] This side of the dichotomy is scored 1.

Northeast (SED=31), and 5 for the Underdeveloped New Northeast (SED= 13). The decimal numbers for these tables run from 1.1.1 for "Men--Education--Developed South" to 2.4.5 for "Women--Log income--Underdeveloped Old Northeast." These tables present the details. The conclusions are drawn from graphs of them which are not presented here.

Tables 1.1.1 through 2.4.5 after this page

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING MEN DEVELOPED SOUTH 04/18/82 PAGE 12

FILE WKGMEN (CREATION DATE = 04/10/82)
SUBFILE WKGMEN.

* MULTIPLE REGRESSION * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.59700	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.35641	REGRESSION	3.	181259.16505	60419.72168	6292.86930
ADJUSTED R SQUARE	.35635	RESIDUAL	34090.	327308.29364	9.60130	
STANDARD ERROR	3.09860					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1410981+000	.54022	.00116	14694.383
AGE	-.4504968-001	-.13384	.00147	941.461
CLSSORGN	.1556507+001	.11298	.06131	644.464
(CONSTANT)	.4791730+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.1.2

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING MEN *SOUTHS NEVELOPING* 04/18/82 PAGE 12
PERIPHERY

FILE WKGMEN (CREATION DATE = 04/10/82)
SUBFILE WKGMEN,

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.53318					
R SQUARE	.28428	REGRESSION	3.	24356.83266	8118.94422	827.77251
ADJUSTED R SQUARE	.28394	RESIDUAL	6252.	61320.75992	9.80818	
STANDARD ERROR	3.13180					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1333962+000	.45809	.00319	1753.906
AGE	-.5914362-001	-.18587	.00342	299.361
CLSSORGN	.1111139+001	.09786	.12380	80.552
(CONSTANT)	.5076127+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING MEN *DEVELOPING AMAZONIAN FRONTIER* 04/18/82 PAGE 12

FILE WKGMEN (CREATION DATE = 04/10/82)
SUBFILE WKGMEN.

* MULTIPLE REGRESSION * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.56696	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.32145	REGRESSION	3.	8588.72581	2862.90860	266.55139
ADJUSTED R SQUARE	.32024	RESIDUAL	1688.	18130.04868	10.74055	
STANDARD ERROR	3.27728					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1207584+000	.49297	.00499	585.756
AGE	-.6264615-001	-.17678	.00715	76.686
CLSSORGN	.1637412+001	.12110	.27425	35.648
(CONSTANT)	.5394135+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION.

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING MEN (UNEVENLY DEVELOPED) OLD NORTHEAST 04/18/82 PAGE 12

FILE WKGMEN (CREATION DATE = 04/10/82)
SUBFILE WKGMEN.

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.58483	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.34203	REGRESSION	3.	46289.48295	15429.82765	2170.25731
ADJUSTED R SQUARE	.34187	RESIDUAL	12525.	89048.69948	7.10968	
STANDARD ERROR	2.66640					

VARIABLES IN THE EQUATION

VARIABLE	R	BETA	STD ERROR B	F
FCANOCC	.1596528+000	.54985	.00216	5482.809
AGE	-.2814950-001	-.10342	.00198	201.658
CLSSORGN	.8909991+000	.07275	.09081	96.275
(CONSTANT)	.2366853+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING MEN UNDERDEVELOPED 04/10/82 PAGE 12
NEW NORTHEAST

FILE WKGMEN (CREATION DATE = 04/10/82)
SURFILE WKGMEN.

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.42293
R SQUARE	.17887
ADJUSTED R SQUARE	.17836
STANDARD ERROR	2.01573

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	4308.60552	1436.20184	353.46727
RESIDUAL	4868.	19779.56985	4.06318	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1252468+000	.41183	.00425	868.970
AGE	-.1790999-001	-.09664	.00241	55.268
CLSSORGN	-.5431036-001	-.00716	.10602	.262
(CONSTANT)	.1898275+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.2.1

REGRESSIONS FOR WORKING MEN DEVELOPED SOUTH 04/09/82 PAGE 10

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBHKT
CLSSORGN
ED

MULTIPLE R	.76770	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.58937	REGRESSION	7.	6440101.50726	920014.50104	6471.00299
ADJUSTED R SQUARE	.58928	RESIDUAL	31560.	44A7041.29556	142.17495	
STANDARD ERROR	11.92371					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.3679798+001	.09860	.17911	422.074
SCORE	.26A13A3-001	.01536	.00831	10.420
FCANOCC	.1619730+000	.12994	.00559	839.288
AGE	.1305884+000	.07997	.00609	459.088
INTLBHKT	.5996990+001	.16117	.15225	1551.514
CLSSORGN	-.1147318+000	-.00174	.24807	.214
ED	.2801743+001	.58675	.02215	16000.343
(CONSTANT)	-.7730679+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.2.2

REGRESSIONS FOR WORKING MEN *SOUTHERN NEIGHBORING PERIPHERY* 04/09/82 PAGE 10

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED

MULTIPLE R	.75252	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.56628	REGRESSION	7.	1066008.51347	152286.93050	1106.80192
ADJUSTED R SQUARE	.56577	RESIDUAL	5934.	816470.07419	137.59186	
STANDARD ERROR	11.72996					

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.1921134+001	.05313	.37175	26.706
SCORE	.9433571-002	.00656	.01475	.409
FCANOCC	.1722349+000	.12338	.01383	155.122
AGE	.1195793+000	.07764	.01372	75.985
INTLBMKT	.6676088+001	.17822	.36763	329.781
CLSSORGN	.9204042-001	.00168	.48772	.036
ED	.2847613+001	.59455	.05099	3118.779
(CONSTANT)	-.4382563+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.2.3

REGRESSIONS FOR WORKING MEN *DEVELOPING AMAZONIAN FRONTIER* 04/09/82 PAGE 10

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED

MULTIPLE R	.72123
R SQUARE	.52017
ADJUSTED R SQUARE	.51811
STANDARD ERROR	12.93849

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	296352.61615	42336.08802	252.89696
RESIDUAL	1633.	273371.54168	167.40450	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.3826730+000	.00978	.94035	.166
SCORE	-.3628550-002	-.00388	.02257	.026
FCANOCC	.1591158+000	.13846	.02329	46.674
AGE	.1708963+000	.10274	.02962	33.283
INTLBMKT	.5085964+001	.13643	.70081	52.667
CLSSORGN	.8505425+000	.01344	1.11339	.584
ED	.2807009+001	.60010	.10072	776.726
(CONSTANT)	-.2288835+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.2.4

REGRESSIONS FOR WORKING MEN UNEVENLY DEVELOPED OLD NORTHEAST 04/09/82 PAGE 10

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED

MULTIPLE R	.76634
R SQUARE	.58727
ADJUSTED R SQUARE	.58703
STANDARD ERROR	9.76941

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	1601942.05286	228848.86469	2397.79685
RESIDUAL	11796.	1125825.65416	95.44131	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.2691100+001	.08003	.29726	81.957
SCORE	.2092064-001	.02240	.00823	6.462
FCANOCC	.1912006+000	.14172	.00990	373.115
AGE	.6255894-001	.04927	.00764	67.134
INTLRMKT	.6184299+001	.17558	.24055	660.950
CLSSORGN	.2814148+000	.00498	.34599	.662
ED	.2462278+001	.53345	.03673	4493.120
(CONSTANT)	-.7847000+000			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.2.5

REGRESSIONS FOR WORKING MEN UNDERDEVELOPED NEW NORTHEAST 04/09/82 PAGE 10

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED

MULTIPLE R	.66336
R SQUARE	.44005
ADJUSTED R SQUARE	.43918
STANDARD ERROR	7.84099

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	217085.20352	31012.17193	504.41753
RESIDUAL	4493.	276234.82792	61.48115	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.1037180+001	.02911	.04931	4.586
SCORE	.1294534-001	.01427	.01225	1.117
FCANOCC	.1721935+000	.11947	.01902	81.990
AGE	.3381453-001	.03819	.00998	11.480
INTLBMKT	.1199894+002	.29135	.51331	546.424
CLSSORGN	.9632533+000	.02679	.43512	4.901
ED	.1969534+001	.41388	.06173	1017.913
(CONSTANT)	.3876145+000			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.50447
R SQUARE	.25449
ADJUSTED R SQUARE	.25348
STANDARD ERROR	2029.20546

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	8339517576.04534	1042439697.00567	253.16222
RESIDUAL	5933.	24430164535.89696	4117674.79115	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.4171601+003	.08744	64.45569	41.887
SCORE	.1188510+002	.06262	2.55246	21.681
FCANOCC	.1104318+002	.05996	2.42336	20.766
AGE	.2866505+002	.14107	2.38828	144.057
INTLBMKT	-.7572678+003	-.15322	65.34068	134.317
CLSSORGN	.8244538+003	.11373	84.37332	95.482
ED	.1861924+003	.29464	10.89521	292.047
CANOCC	.2145465+002	.16261	2.24572	91.271
(CONSTANT)	-.1499238+004			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING MLN DEVELOPING AMAZONIAN FRONTIER 04/09/82 PAGE 12

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.58988
R SQUARE	.34796
ADJUSTED R SQUARE	.34776
STANDARD ERROR	1900.59129

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	3145932808.76003	393241601.09500	108.86342
RESIDUAL	1632.	5895187510.56834	3612247.25157	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.2915944+003	.05914	138.13868	4.456
SCORE	-.1031769+001	-.00876	3.31597	.097
FCANOCC	.7666225+001	.05296	3.46978	4.882
AGE	.3262682+002	.15571	4.39550	55.098
INTLRMKT	-.5350360+003	-.11393	104.59238	26.168
CLSSORGN	-.2327808+002	-.00292	163.57955	.020
ED	.2285498+003	.38797	17.97239	161.714
CANOCC	.2967015+002	.23553	3.63506	66.622
(CONSTANT)	-.1301310+004			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING MEN UNREVENUE REVELOPED ONLY NORTHEAST 04/09/82 PAGE 12

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URRRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.58356
R SQUARE	.34054
ADJUSTED R SQUARE	.34009
STANDARD ERROR	1214.76616

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	8987922578.90157	1123490322.36270	761.34932
RESIDUAL	11795.	17405372287.79173	1475656.82813	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URRRUR	-.7519531+002	-.02273	37.09060	4.110
SCORE	.3391406+001	.03692	1.02361	10.977
FCANOCC	.1060773+002	.07993	1.25013	72.001
AGE	.1590322+002	.12730	.95208	279.012
INTLRMKT	-.1410073+003	-.04070	30.73755	21.045
CLSSORGN	.4850552+003	.08732	43.02296	127.111
ED	.1392763+003	.30676	5.36746	673.312
CANOCC	.2482104+002	.25233	1.14087	470.030
(CONSTANT)	-.6016130+003			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING MEN UNDER DEVELOPED NEW NORTHEAST 04/09/82 PAGE 12

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.48489
R SQUARE	.23512
ADJUSTED R SQUARE	.23375
STANDARD ERROR	773.36303

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	825835861.53366	103229482.69171	172.59847
RESIDUAL	4492.	2686622001.11765	598090.38315	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.2233930+003	-.07429	47.79187	21.849
SCORE	-.1024976+001	-.01339	1.20807	.720
FCANOCC	.1906833+002	.15479	1.89268	101.501
AGE	.6124642+001	.08197	.98561	38.615
INTLRMKT	.1041027+003	.02996	53.61829	3.770
CLSSORGN	.1194999+003	.03938	42.93951	7.745
ED	.1131878+003	.28188	6.74317	281.754
CANOCC	.1222988+002	.14494	1.47145	69.081
(CONSTANT)	-.1542197+002			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

1.4.1

REGRESSIONS FOR WORKING MEN DEVELOPED SOUTH 04/09/82 PAGE 14

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBHKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.66997	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.44885	REGRESSION	8.	11220.49906	1402.56238	3212.71601
ADJUSTED R SQUARE	.44871	RESIDUAL	31559.	13777.58448	.43657	
STANDARD ERROR	.66073					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.8537937-001	.04783	.00999	73.021
SCORE	.1054662-001	.12633	.00046	524.811
FCANOCC	.2358235-002	.03955	.00031	56.438
AGE	.1183472-001	.15152	.00034	1210.331
INTLBHKT	-.8520168-001	-.04787	.00860	97.211
CLSSORGN	.2255006+000	.07134	.01375	269.102
ED	.7697774-001	.33704	.00151	2610.167
CANOCC	.1301461-001	.27210	.00031	1740.895
(CONSTANT)	.5031893+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LOTUC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URRRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.63391	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.40184	REGRESSION	8.	2202.45949	275.30744	498.21201
ADJUSTED R SQUARE	.40103	RESIDUAL	5933.	3278.52199	.55259	
STANDARD ERROR	.74336					

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URRRUR	.2295785+000	.11766	.02361	94.534
SCORE	.9640557-002	.12421	.00094	106.301
FCANOCC	.3120246-002	.04142	.00089	12.354
AGE	.1084450-001	.13050	.00087	153.637
INTLBMKT	-.1027709+000	-.05084	.02394	18.434
CLSSORGN	.3339939+000	.11265	.03091	116.766
ED	.7062498-001	.27328	.00399	313.108
CANOCC	.1507229-001	.27933	.00082	335.657
(CONSTANT)	.5112035+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING MEN DEVELOPING AMAZONIAN FRONTIER 04/09/82 PAGE 14

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.62332
R SQUARE	.38853
ADJUSTED R SQUARE	.38553
STANDARD ERROR	.68494

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	486.49672	60.81209	129.62252
RESIDUAL	1632.	765.64883	.46915	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.2203298+000	.12007	.04978	19.588
SCORE	.1775531-002	.04050	.00120	2.208
FCANOCC	.3045249-002	.05653	.00125	5.931
AGE	.1232435-001	.15805	.00158	60.531
INTLBMKT	-.1562592+000	-.08941	.03769	17.185
CLSSORGN	.1136696+000	.03830	.05895	3.718
ED	.7905224-001	.36050	.00648	148.965
CANOCC	.1109464-001	.23666	.00131	71.725
(CONSTANT)	.5612770+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING MEN *UNEVENLY DEVELOPED OLD NORTHEAST* 04/09/82 PAGE 14

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.67512					
R SQUARE	.45579	REGRESSION	8.	3995.89089	499.48636	1234.83599
ADJUSTED R SQUARE	.45542	RESIDUAL	11795.	4771.03168	.40450	
STANDARD ERROR	.63600					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.1030125+000	.05404	.01942	28.140
SCORE	.2355961-002	.04450	.00054	19.326
FCANOCC	.4324174-002	.05654	.00065	43.608
AGE	.9915646-002	.13776	.00050	395.700
INTLBMKT	.1444481+000	.07234	.01609	80.567
CLSSORGN	.3092629+000	.09660	.02253	188.506
ED	.7233527-001	.27643	.00281	662.572
CANOCC	.1654138-001	.29178	.00060	761.553
(CONSTANT)	.5227239+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING MEN UNDER DEVELOPED NEW NORTHEAST 04/09/82 PAGE 14

FILE MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.52934	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.28020	REGRESSION	8.	709.72339	88.71542	218.57733
ADJUSTED R SQUARE	.27892	RESIDUAL	4492.	1823.19769	.40588	
STANDARD ERROR	.63708					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.1935574+000	-.07580	.03937	24.170
SCORE	-.2490711-002	-.03832	.00100	6.264
FCANOCC	.9028374-002	.04742	.00156	33.530
AGE	.8678150-002	.13677	.00081	114.240
INTLBMKT	.1768958+000	.05998	.04417	16.039
CLSSORGN	.1233138+000	.04785	.03537	12.153
ED	.7609887-001	.22317	.00555	187.673
CANOCC	.2047070-001	.28568	.00121	285.200
(CONSTANT)	.5319540+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING WOMEN Developed fourth 04/18/82 PAGE 12

FILE WKWOMEN (CREATION DATE = 04/10/82)
SURFILE WKWOMEN,

* M U L T I P L E R E G R E S S I O N * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.62179
R SQUARE	.38662
ADJUSTED R SQUARE	.38647
STANDARD ERROR	3.35583

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	85719.32564	28573.10855	2537.21584
RESIDUAL	12076.	135995.07506	11.26160	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1447100+000	.52651	.00200	5219.235
AGE	-.8091234-001	-.20511	.00283	818.697
CLSSORGN	.2182022+001	.13815	.11449	363.222
(CONSTANT)	.6046575+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING WOMEN SOUTH'S DEVELOPING 04/18/82 PAGE 12
PERIPHERY

FILE WKWOMEN (CREATION DATE = 04/10/82)
SURFILE WKWOMEN,

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.61199
R SQUARE	.37453
ADJUSTED R SQUARE	.37356
STANDARD ERROR	3.56319

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	14680.80518	4893.60173	385.43398
RESIDUAL	1931.	24516.63701	12.69634	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1513646+000	.48676	.00569	707.167
AGE	-.1122381+000	-.27110	.00748	224.883
CLSSORGN	.1891306+001	.13257	.26002	52.908
(CONSTANT)	.7214176+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING WOMEN DEVELOPING AMAZONIAN FRONTIER 04/18/82 PAGE 12

FILE WKWOMEN (CREATION DATE = 04/18/82)
SURFILE WKWOMEN.

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

MULTIPLE R	.61195
R SQUARE	.37448
ADJUSTED R SQUARE	.37161
STANDARD ERROR	3.58132

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	3.	5029.36710	1676.45570	130.70916
RESIDUAL	655.	8400.92979	12.82585	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1095815+000	.44915	.00766	204.620
AGE	-.1273960+000	-.30143	.01320	93.097
CLSSORGN	.2751454+001	.17189	.49759	30.576
(CONSTANT)	.8385007+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING WOMEN LINEVENLY DEVELOPED OLD NORTHEAST 04/18/82 PAGE 12

FILE WKWOMEN (CREATION DATE = 04/10/82)
SUBFILE WKWOMEN.

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.59883					
R SQUARE	.35860	REGRESSION	3.	25238.13582	8412.71194	1034.87189
ADJUSTED R SQUARE	.35825	RESIDUAL	5553.	45141.61595	8.12923	
STANDARD ERROR	2.85118					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1809610+000	.53200	.00376	2315.000
AGE	-.6137398-001	-.20392	.00325	356.723
CLSSORGN	.6516261+000	.04717	.15205	18.367
(CONSTANT)	.3599584+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

PARTIAL CORRELATIONS AND CORRECTED REGRESSIONS FOR WORKING WOMEN UNDER DEVELOPMENT 04/18/82 PAGE 12
NEW NORTHEAST

FILE WKWOMEN (CREATION DATE = 04/10/82)
SUBFILE WKWOMEN.

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 1

DEPENDENT VARIABLE.. ED

VARIABLE(S) ENTERED ON STEP NUMBER 1.. FCANOCC
AGE
CLSSORGN

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.53430					
R SQUARE	.28548	REGRESSION	3.	3972.45653	1324.15218	296.85204
ADJUSTED R SQUARE	.28451	RESIDUAL	2229.	9942.78211	4.46065	
STANDARD ERROR	2.11202					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
FCANOCC	.1449886+000	.46667	.00582	621.412
AGE	-.4306035-001	-.20312	.00380	128.090
CLSSORGN	.4033809+000	.04195	.17966	5.041
(CONSTANT)	.2581602+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *DEVELOPED SOUTH* 04/09/82 PAGE 10

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCOPE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.84055	REGRESSION	7.	2407996.81076	343999.54439	3020.71263
R SQUARE	.70653	RESIDUAL	8783.	1000210.33645	113.88026	
ADJUSTED R SQUARE	.70629					
STANDARD ERROR	10.67147					

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.5758806+000	.01358	.31297	3.386
SCORE	-.6167560-001	-.03019	.01513	16.617
FCANOCC	.8721259-001	.07342	.00830	110.295
AGE	.1383001+000	.07535	.01117	153.304
INTLBMKT	.7924928+001	.20040	.27080	856.410
CLSSORGN	.1441231+001	.02071	.41924	11.818
ED	.3021858+001	.69541	.03449	7678.420
(CONSTANT)	.1230419+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *fourth, DEVELOPING PERIPHERY* 04/09/82 PAGE 10

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED

MULTIPLE R	.87500
R SQUARE	.76562
ADJUSTED R SQUARE	.76463
STANDARD ERROR	10.20779

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	561626.72227	80232.38890	769.99257
RESIDUAL	1650.	171928.20644	104.19891	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.2048701+001	-.04859	.59738	11.761
SCORE	-.6979171-001	-.04081	.02428	8.265
FCANOCC	.1125980+000	.08056	.01980	32.338
AGE	.5337565-001	.02736	.02477	4.642
INTLBMKT	.1552568+002	.36002	.67872	523.261
CLSSORGN	.2986879+001	.04554	.80842	13.651
ED	.2577331+001	.56052	.08461	927.843
(CONSTANT)	.4840512+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

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REGRESSIONS FOR WORKING WOMEN DEVELOPING AMAZONIAN FRONTIER 04/09/82 PAGE 10

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLMKT
CLSSORGN
ED

MULTIPLE R	.83186
R SQUARE	.69199
ADJUSTED R SQUARE	.68836
STANDARD ERROR	12.01777

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	192736.47490	27533.78213	190.64180
RESIDUAL	594.	85789.50798	144.42678	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.3539015+001	-.07617	1.51949	5.425
SCORE	-.4037800-001	-.03536	.03724	1.175
FCANOCC	.6725854-001	.05847	.03056	4.844
AGE	.1876076+000	.09366	.04928	14.494
INTLMKT	.1215329+002	.28195	1.18302	105.465
CLSSORGN	.2973355+001	.04033	1.73259	2.945
ED	.3097716+001	.65608	.1509A	420.974
(CONSTANT)	-.2633568+000			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *UNEVENLY DEVELOPED OLD NORTHEAST* 04/09/82 PAGE 10

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED

MULTIPLE R	.82236
R SQUARE	.67628
ADJUSTED R SQUARE	.67570
STANDARD ERROR	10.23492

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	855646.68841	122235.24063	1166.88438
RESIDUAL	3910.	409586.24515	104.75352	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.5516207+000	.01477	.49806	1.227
SCORE	-.9084427-001	-.08508	.01419	40.998
FCANOCC	.5871314-001	.03825	.01712	11.757
AGE	.3147035-001	.02070	.01443	4.754
INTLBMKT	.1365752+002	.32071	.51152	712.873
CLSSORGN	.5119686+000	.00727	.66001	.602
ED	.2067870+001	.57858	.06390	1743.172
(CONSTANT)	.6889259+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *UNDER DEVELOPED NEW NORTHEAST* 04/09/82 PAGE 10

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 4

DEPENDENT VARIABLE.. CANOCC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED

MULTIPLE R	.84130
R SQUARE	.70778
ADJUSTED R SQUARE	.70622
STANDARD ERROR	9.11425

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	7.	263977.42420	37711.06060	453.96944
RESIDUAL	1312.	108987.31790	83.06960	

---------- VARIABLES IN THE EQUATION ----------

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.1621111+001	-.03163	.92815	3.051
SCORE	-.6756559-002	-.00519	.02382	.080
FCANOCC	.6865303-001	.03835	.03236	4.502
AGE	.4416055-002	.00317	.02172	.041
INTLRMKT	.2772068+002	.50168	.98561	791.269
CLSSORGN	.3277825+001	.05292	.96651	11.502
ED	.2017808+001	.35692	.12621	255.600
(CONSTANT)	.4546808+001			

---------- VARIABLES NOT IN THE EQUATION ----------

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *DEVELOPED SOUTH* 04/09/82 PAGE 12

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.56944
R SQUARE	.32426
ADJUSTED R SQUARE	.32365
STANDARD ERROR	884.74972

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	3298775731.42750	412346966.42844	526.77110
RESIDUAL	8782.	6874392067.77184	782782.06192	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.3823512+002	.01650	25.95290	2.170
SCORE	.1311908+002	.11753	1.25558	109.173
FCANOCC	.5343496+001	.08234	.69280	59.489
AGE	.1571340+002	.15669	.93411	282.971
INTLBMKT	-.6087193+002	-.02817	23.52091	6.698
CLSSORGN	.1749582+003	.04602	34.78158	25.303
ED	.7088825+002	.29859	3.91478	327.895
CANOCC	.1238827+002	.22675	.88466	196.097
(CONSTANT)	-.1577847+004			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN SOUTH: DEVELOPING PERIPHERY 04/09/82 PAGE 12

FILE WOMEN (CREATION DATE = 08/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URRRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.51888	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.26923	REGRESSION	8.	324190879.51731	40523859.93966	75.94229
ADJUSTED R SQUARE	.26569	RESIDUAL	1649.	879929269.84484	533613.86892	
STANDARD ERROR	730.48879					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URRRUR	.211938D+003	.12407	42.90174	24.404
SCORE	.557897D+001	.08053	1.74164	10.261
FCANOCC	.624836D+001	.11034	1.43077	19.072
AGE	.112114D+002	.19186	1.77527	39.884
INTLBMKT	-.232660D+003	-.13316	55.74262	17.421
CLSSORGN	.104241D+002	.00392	58.09082	.032
ED	.594885D+002	.31933	7.56835	61.782
CANOCC	.790698D+001	.19615	1.76173	20.308
(CONSTANT)	-.685556D+003			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *DEVELOPING AMAZONIAN FRONTIER* 04/09/82 PAGE 12

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.52275	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.27327	REGRESSION	8.	150739850.49423	18842481.31178	27.87294
ADJUSTED R SQUARE	.26347	RESIDUAL	593.	400875995.47906	676013.48310	
STANDARD ERROR	822.20039					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.241537E+003	.11681	104.43022	5.350
SCORE	-.250646E+001	-.04932	2.55051	.966
FCANOCC	.165767E+001	.07145	2.09924	3.036
AGE	.147532E+002	.16550	3.41233	18.693
INTLBMKT	-.113689E+003	-.05927	87.85846	1.674
CLSSORGN	.445255E+003	.13569	118.82933	14.040
ED	.561700E+002	.26734	13.50212	17.309
CANOCC	.100164E+002	.22508	2.80712	12.732
(CONSTANT)	-.425078E+003			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN UNEVENLY DEVELOPED OLD NORTHEAST 04/09/82 PAGE 12

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.54696
R SQUARE	.29917
ADJUSTED R SQUARE	.29773
STANDARD ERROR	473.89894

ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
REGRESSION	8.	374746628.99954	46843328.62494	208.58173
RESIDUAL	3909.	877884035.09440	224580.20852	

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.3365208+002	-.02864	23.06507	2.129
SCORE	.3950781+001	.11760	.66036	35.793
FCANOCC	.3401584+001	.07042	.79403	18.352
AGE	.6881725+001	.14388	.66871	105.905
INTLBMKT	-.5600952+002	-.04180	25.75341	4.730
CLSSORGN	.1522655+002	.00687	30.56240	.248
ED	.4432777+002	.31931	3.55758	169.580
CANOCC	.7164538+001	.22770	.74048	93.616
(CONSTANT)	-.3341036+003			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

2.3.5

REGRESSIONS FOR WORKING WOMEN UNDERUTILIZED NEW NORTHEAST 04/09/82 PAGE 12

FILE. WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBNKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.51324	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.26342	REGRESSION	8.	51455228.93238	6431903.61655	58.60583
ADJUSTED R SQUARE	.25892	RESIDUAL	1311.	143880312.65917	109748.52224	
STANDARD ERROR	331.28315					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	-.3286990+002	-.02803	33.77553	.947
SCORE	-.2133169+000	-.00716	.86588	.061
FCANOCC	.1316777+001	.03214	1.17807	1.249
AGE	.3118147+001	.09788	.78952	15.598
INTLBNKT	-.1704590+003	-.14552	45.35897	14.123
CLSSORGN	-.1279665+002	-.00903	35.28400	.132
ED	.5905092+002	.45641	5.01461	138.669
CANOCC	.4535172+001	.19817	1.00349	20.425
(CONSTANT)	-.5525761+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED
CANOCC

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.73398					
R SQUARE	.53872	REGRESSION	8.	3881.21684	485.15210	1282.04537
ADJUSTED R SQUARE	.53830	RESIDUAL	8782.	2980.78827	.33942	
STANDARD ERROR	.58260					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.5065410-001	.02743	.01709	8.785
SCORE	.1786051-001	.20076	.00083	466.659
FCANOCC	.3428682-002	.06629	.00046	56.486
AGE	.1052005-001	.13163	.00062	292.509
INTLRMKT	.2639552+000	.15329	.01549	290.439
CLSSORGN	.1232446+000	.04067	.02290	28.956
ED	.5386886-001	.28470	.00258	436.682
CANOCC	.1218256-001	.27978	.00058	437.352
(CONSTANT)	.3633283+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

FILE NOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URRRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.72866	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.53094	REGRESSION	8.	704.49652	88.06206	233.32033
ADJUSTED R SQUARE	.52867	RESIDUAL	1649.	622.38189	.37743	
STANDARD ERROR	.61435					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URRRUR	.2583186+000	.14406	.03608	51.257
SCORE	.1233810-001	.16965	.00146	70.953
FCANOCC	.5569048-002	.09368	.00120	21.420
AGE	.1126176-001	.13575	.00149	56.895
INTLBMKT	.4064624-001	.02216	.04688	.752
CLSSORGN	.8383967-001	.03005	.04886	2.944
ED	.6060052-001	.30988	.00637	90.644
CANOCC	.1257626-001	.29570	.00148	72.047
(CONSTANT)	.4027349+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

REGRESSIONS FOR WORKING WOMEN *DEVELOPING AMAZONIAN FRONTIER* 04/09/82 PAGE 14

FILL WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.61799	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.38191	REGRESSION	8.	177.41226	22.17653	45.80028
ADJUSTED R SQUARE	.37357	RESIDUAL	593.	287.13108	.48420	
STANDARD ERROR	.69585					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.3677258+000	.19379	.08838	17.311
SCORE	-.2926321-002	-.06275	.00216	1.838
FCANOCC	.4767344-002	.10148	.00178	7.200
AGE	.1367341-001	.16714	.00289	22.417
INTLBMKT	.1477890+000	.08395	.07436	3.950
CLSSORGN	.1828931+000	.06074	.10057	3.307
ED	.5472989-001	.28383	.01143	22.939
CANOCC	.8705112-002	.21315	.00238	13.426
(CONSTANT)	.4901397+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

FILE WOMEN (CREATION DATE = 08/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.67248	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.45223	REGRESSION	8.	1059.60624	132.45078	403.39774
ADJUSTED R SQUARE	.45111	RESIDUAL	3909.	1283.47298	.32834	
STANDARD ERROR	.57301					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.3773036-001	.02348	.02789	1.830
SCORE	.4521456-002	.09840	.00080	32.066
FCANOCC	.6055734-002	.09166	.00096	39.784
AGE	.1056788-001	.16155	.00081	170.824
INTLBMKT	.2810412+000	.15336	.03114	81.456
CLSSORGN	.1685831+000	.05561	.03695	20.812
ED	.7823143-001	.39425	.00430	330.753
CANOCC	.3636972-002	.08451	.00090	16.501
(CONSTANT)	.4413422+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

FILE WOMEN (CREATION DATE = 04/08/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 6

DEPENDENT VARIABLE.. LNINC

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URRRUR
SCORE
FCANOCC
AGE
INTLRMKT
CLSSORGN
ED
CANOCC

MULTIPLE R	.52191	ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
R SQUARE	.27239	REGRESSION	8.	147.30243	18.41280	61.34820
ADJUSTED R SQUARE	.26795	RESIDUAL	1311.	393.47831	.30014	
STANDARD ERROR	.54785					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URRRUR	.1074096-001	.00550	.05585	.037
SCORE	-.1766132-003	-.00356	.00143	.015
FCANOCC	.3875080-002	.05688	.00195	3.956
AGE	.6586504-002	.12426	.00131	25.449
INTLRMKT	.5054330-002	.00259	.07501	.005
CLSSORGN	-.2638927-001	-.01119	.05835	.205
ED	.1009289+000	.46884	.00829	148.128
CANOCC	.2039984-002	.05357	.00166	1.511
(CONSTANT)	.4776783+001			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.

Regressors of education. For men, the net effect of father's occupational status on education ranges from +.160 in the Old Northeast to +.121 in the Frontier. The change in effect is not linear with development. Occupational status origins count the most in the Unevenly Developed Old Northeast and the least in the Frontier. The net effect of class of origin ranges from a high of about +1.6 in the South and the Frontier down to -.05 in the Underdeveloped New Northeast. The beta weights show these effects to be powerful relative to the other antecedents. Except for the often-anomolous Frontier the effect of class on education appears to rise dramatically and more or less linearly with regional development level. The higher the level of regional development, the greater the number of years of education men gain by coming from a capitalist family. The effects of age are negative in all regions. Except in the Unevenly Developed Old Northeast, where the effect of age is markedly reduced, its depressing effect is more or less uniformly rather strong. The combined effects ($\hat{R}^2$) of these variables show no special trend, except that they are much less effective in the Underdeveloped New Northeast ($\hat{R}^2$=.18) than elsewhere ($\hat{R}^2$=.36 to .28).

For women, father's occupational status again shows strong net effects in all regions. There is no special trend, except that, as for men, the effect is noticeably higher in the Unevenly Developed Old Northeast. Regarding class origins, as for men there appears to be a more or less linear trend with development such that the higher the region's development the greater the educational benefits bestowed by having a capitalist father. But again, the Frontier is an exception; there the benefits of having such a father are much greater than anywhere else. Again, as for men, the combined effects of the variables are about the same in four of the regions ($\hat{R}^2$=.39 to .36), but are sharply lower in the New Northeast ($\hat{R}^2$=.29).

The regressions of education on three antecedents show but one apparent trend and it holds equally well for both sexes: the higher the development of the region the greater the educational yield one gains by having a father who was a capitalist--a self-employed employer. But for both sexes the effects of this variable are anomolously high in the Frontier. Other noteworthy items, not trends, are that for both sexes the educational gains of higher status origins and the educational losses of age are lower in the Unevenly Developed Old Northeast than in the more developed regions. For women, the educational decrement of age is also low in the Underdeveloped New Northeast. For both sexes, the total educational effects of all regressors are much lower in the New Northeast than elsewhere.

Thus it may be said that the effects of more prestigious social origins or capitalist class origins increase with macroregional development. For class origins, the trend is nearly linear (though the Frontier is out of line). For occupational status gains due to higher origins are considerably lower for men and women of the Old Northeast. The educational costs of age are also lower for men in the Old Northeast and women in both poorer Northeastern regions.

It is to be noted that insofar as these findings bear on the one available set of sociological predictions about development and status attainment (Treiman, 1970), they run contrary to it. Treiman supposed that "the more industrialized the society, the smaller the influence of parental status on educational attainment." Among Brazil's massive and distinct macroregions this hypothesis does not hold.

Regressors of occupational status. The variable, class origins, was dropped from this discussion because its β value is uniformly small, although because of the huge sample sizes it is often "statistically significant" no matter how trivial. The other regressors are treated in this order: Education is first. The three labor market variables follow: Metropolitan/Nonmetropolitan residence (Metro/Nonmetro), Microregional Socioeconomic Development (MR SES), and Internal/Noninternal (Int/Nonint) labor market participation. Next come the two social origin variables, father's occupational status and father's class. Last is age. The review begins with data on men.

Education is a powerful determinant of men's occupational status in all regions. Its β coefficients are among the largest in the set of regressors for each region, ranging from β = +.60 in the Frontier, down to β = +.41 in the New Northeast. Its variations by development regions are mixed. From the Underdeveloped New Northeast (b = 1.97), through the Unevenly Developed Old Northeast (b = 2.46), up to the other three, all of which are about 2.8+. The trend is positive but not at all linear: the greater the effect of each additional year of education on occupational status is about the same in each region outside the Northeast. But for the two Northeastern macroregions and the rest of the country, the lower SED, the smaller the effect of education. The development progression of effects is b = 1.97, b = 2.46, and 2.80 to 2.85.

Metropolitan/Nonmetropolitan labor market has a modest relative effect on men's occupational status in all regions (β = +.099 to β = +.010). It is not certain a development-related variation exists at all. The data make it appear that Metro labor markets pay off most in the South and the Old Northeast--by far the two most populous regions of the country--

and that net of this there may be a positive increase in the effect of Metro residence with SED. Put in a more reasonable way, the metropolitan areas of the longer settled, more populous South and Old Northeast have higher occupational structures than those of other regions. But given this, the higher the level of macroregional development, the higher the effect of metropolitan residence on occupational status.

Within macroregions, macroregional SED has very little effect at all, and what may be there is too small to deserve attention. Within sets the β values are quite small, ranging from β = -.003 to +.022. Net of other variables, the quality of the local labor market has no discernable effect on the occupational status of men.

Internal/Noninternal labor market participation is another matter. For men, its beta values range from β = +.14 to β = +.29. It has a substantial "effect"everywhere, from b = +5.08 to b = +6.68 in the four more developed regions. But the startling fact is its effect on occupational status in the New Northeast, at b = +12.00. This may tell more about the kinds of internal labor markets in this region than it does about their effects on personnel. The New Northeast may have been the most neglected part of the country in 1973. National attention, both public and private, focuses on the Developed South and its immediate neighbors, the Frontier (especially Manaus and the international boundry regions), and the coastal parts of the Old Northeast. But in 1973 the New Northeast was in no way a center of attention. There were neither manufacturing, nor large-scale agriculture, nor boundry questions, nor dense populations to attract the kinds of large scale private and public organizations that require skilled middle-level personnel. It may be guessed that in this region most of the internal labor market participants were higher officials in federal and state administration.

In a few words, net of everything else measured herein, men's internal labor market participation appears to have a strong effect on occupational status. It does not vary much with development, however. But it is perhaps most plausible to suppose that these varying regressions are a result of the association of internal labor markets with the specialized personnel of large-scale organizations, rather than being due to the varying effects of this variable on occupational status.

As indicated by the beta coefficients, father's occupational status as a uniformly modest net effect on son's occupational status. It varies in a narrow hand of β = +.12 to β = +.14. This is true also of the metric coefficients. There is no meaningful relationship between the occupational status effects of father's occupation and macroregional socioeconomic development level. The b values move from a low of b = +.16 to a high of b = +.19, and there is nothing resembling a developmental trend in these small variations. This would appear to be a very important finding, inasmuch as (at the intersocietal level) it is widely understood that the direct effects of occupational status inheritance should be much greater in the less developed than in the more developed societal units (Treiman, 1970).

Age has a weak, positive net effect on occupational status in all regions, as this is indicated by the beta values. These range from β = +.04 to β = +.10. The b values show no special developmental pattern. They are lower in the two Northeastern regions, a bit higher in the Frontier, and in between in the more developed regions. From the least developed to the most, the b values are: +.03, +.06, +.17, +.12, and +.13. The theoretic significance of this is not certain. But it would appear that sociologists have believed that age makes less of a status difference in the least

developed societal units. This clearly is not the case in Brazil.

Taken altogether, this set of regressors exerts a rather powerful total effect on occupational status. From the least to the socioeconomically most developed macroregion, $\hat{R}^2$ = .44, .59, .52, .57, and .59. It might be said that except for the indeterminancy offered by the Frontier, the combined effects of the regressors increase more or less linearly with socioeconomic development.

The occupational status data for women follow. Education is a powerful determinant of occupational status among women as among men, and the β values show this to be true relative to other variables in each region. Moving from the lowest to the highest socioeconomic development the b values are: b = +2.02, 2.67, 3.10, 2.58, 3.02. What they show is that there is an essentially linear trend from lowest to highest--except that Frontier women gain a bit more occupational status than others for each year of education.

The data for Metropolitan/Nonmetropolitan and Microregional Socioeconomic Development Microregional labor markets show little effect and no noteworthy trends. The development trends are not interpreted. One male-female difference is worthy of note, however: within each macroregion, there is a small <u>negative</u> relationship between microregional socioeconomic development and women's occupational status. To a very slight degree, the higher the level of microregional socioeconomic, the lower the occupational status of women. On the whole, Brazilian women do not take regular paid employment if their men can do well enough to support them and their children. So the better the local labor market the more likely women are to take lower status jobs.

Internal labor market participation, however, is rather highly related to women's occupational status in all macroregions. The β weights range from moderate to powerful--β = +.20 to β = +.54. The macroregional SED variations of the metric effect of Internal/Noninternal labor market participation are strong and essentially negative. From the macroregion with the lowest SED to that with the highest, the b values are b = 27.72, 13.67, 12.15, 15.52, and 7.92. If this variable actually operates as a determinant of women's occupational status, participation in an internal labor market makes a difference of almost 28 occupational status points in the Underdeveloped New Northeast. This is quite large, roughly comparable to the status difference between school teachers and university professors. It is probably premature to treat this as a cause of occupational status, however. As in the case of men, it more likely reflects the status level at which women obtain internal labor market status within each region. The mean status level of women varies directly with macroregional SED, while the mean status level of those in internal labor markets probably varies inversely with macroregional SED.

Father's occupational status makes no more than a very modest difference in women's occupational status in each of the SED macroregions. The β values vary from β = +.04 to β = +.08. There is no discernable systematic macroregional SED variation in the effect of father's occupational status on employed women's occupational status. From lowest SED to highest, the b values are: +.07, +.06, +.07, +.11, and +.09. This is completely congruent with the corresponding findings for men.

As in the case of men, within-macroregional effects (beta coefficients) of father's class, "capitalists" versus all others, are too small to warrant discussion. This of course is also true of the metric coefficients.

Age is another variable that counts for little in determining a woman's occupational status in any of the macroregions. The β values range from +.09 to .00, but whatever regional variations there are are not only small but quite unsystematic. Like those of men, the peak is in the Frontier.

Summarizing, regarding the antecedents of occupational status: 1) Education exerts a powerful effect everywhere, and its effect rises with macroregional socioeconomic development level. This is the opposite of most current thinking among sociologists, as reflected in Treiman's (1970) essay. 2) The effect of Metropolitan versus Nonmetropolitan labor market participation is generally modest, and varies more or less positively with macroregional SED. This variable is essentially inoperative among women. 3) The quality of the local labor market has no meaningful effect on the occupational statuses of men or women (except that women's occupational status varies inversely, if only slightly, with it.). 4) The apparent effect of the Internal labor market dichotomy is moderate among men and quite strong among women. This effect varies mostly inversely with macroregional SED, a trend which is quite pronounced for women and less so for men. The strong effect apparent among both sexes in the Underdeveloped New Northeast is particularly impressive. However, it would be premature to interprete those coefficients in terms of causation. 5) Father's occupation has but a moderate but positive effect on son's occupational status, and even less on that of women. In any case, these effects do not vary by macroregional SED. This finding, too, appears to contradict sociological thinking about development and status inheritance (Treiman, 1970). 6) Father's class has no discernable effect on occupational status. 7) Age bears little meaningful relationship to occupational status. If there it varies at all with macroregional SED, it is in the opposite direction of the thinking of those sociologists who expect the status effects of age to decrease with societal development.

Regressors of income and log i .ogous to that used for education and occupational status will be followed here. The data for men will be examined first, then those of women. The regressors will be presented in the same order as for occupational status. The data are reported for the natural logarithm of income rather than income, except that where it seems useful, income data will be added. The regression tables are presented for both, of course. None of the regressors was found to have inconsequential effects among all regions for both sexes, so all are presented.

For the regression of log income on occupational status the β weights are all positive and rather strong within each macroregion. Actually, they are quite close to being monotonically related to macroregional development. From the region of the lowest development to that of the highest, they are β = +.29; +.29; +.23; +.27; and +.34. The b values are comparable to each other across regions. When converted by the formula, $\left[P_i = e^{bi} - 1.00\right], P_i \times 100$ is the percent increment in income due to a unit increment in the independent variable i (Jenks, 1979,27). (Actually P_i and b_i are often identical.) The b values follow according to the ascending order of development region, with P values presented in parentheses if they differ from the percentages estimated by b_i alone: b = +.020 (.021); +.017; +.011; +.015; and +.013. Except for the dip at the Frontier, the curve of the percentage ($P_i \times 100$) income increment effect of development is monotonic. With the exception of the often anomolous Frontier, the higher the level of macroregional socioeconomic development, the lower the effect of occupational status on income. Two observations are noteworthy. 1) The above increment figures are not small, though they may look it. A 1.5 or even 1.1 percent income increment for each point on a 100-point occupational status scale is impressive. 2) The

relationship with development appears to be negative. This seems to mean that the income differentation of any given occupational status increment decreases with development.

Education , as indicated by the beta weights, is another regressor that has strong net effects on (log) income within each region. The betas vary with increasing development as follows: β = +.22; +.27; +.36; +.27; and +.33. The b values of education, of course, tell more about the (log) income effects of education in the various developmentally different macroregions. Here again values in parentheses will be antilogged P estimates of the percent increase in income due to a unit increase in the regressor, or each year of education. Beginning with the Underdeveloped New Northeast, on up to the Developed South the results are: b = .076 (.079); .072 (.075); .079 (.082); .071 (.073); .077 (.080). The percentage increments of income due to each additional year of education do not change with development. They are quite strong however: each additional year of education yields a seven-to-eight percent increase in income.

The labor market variables were really designed to deal with income, rather than with occupational status. Participation in a Metropolitan vs. Nonmetropolitan labor market is the first. Relative to other variables, within each microregion its effects range from small to weak, and they reverse signs as well. From the least to the most developed macroregions the beta values are: β = -.08; +.05; +.12; +.12; and +.05. The more easily interpreted b values are: b = -.19 (-.18); +.10 (+.11); +.22 (+.25); +.23 (+.26); and +.09. This yields a pronounced inverted U curve with development. In the Underdeveloped New Northeast, Metropolitan residence costs 18 or 19 percent more in income in the few large urban areas than outside. Whether this means that there is money to be made in some of the small towns or on

the farms is a question that cannot be answered here. Metropolitan residence pays off moderately well in the Unevenly Developed Old Northeast, and even better in the Frontier and in the South's Developing Periphery, but only moderately in the Developed South.

As shown by the beta weights, the general quality of the microregional or local labor market makes a modest difference in income in the two more highly developed regions, but only a very small difference elsewhere, slightly negative in the Underdeveloped New Northeast. From less to more developed, β = -.04; +.04; +.04; +.12; +.13. The corresponding b values are: b = -.002; +.002; +.002; +.009; +.011. When plotted against the SED levels of the macroregions (SED = 13; 31; 32.5; 54; and 78), these data show a nearly linear increase with development. The higher the quality of the local labor market, the higher the increment to income of each additional SED score-point. The SED scale has values of zero to 100, so these effects are not negligible. The higher the socioeconomic development of the macroregion, the greater the effect of the SED of the local labor market on income.

Participation in an Internal labor market has <u>negative</u> effects in the three most highly developed macroregions, though they are quite small. While those of the other two regions are positive they too are small. The betas are: β = +.06; +.07; -.09; -.05; -.05. The b values show that these effects are by no means negligible, at b = +.17 (.19); +.14 (.16); -.16 (.14); -.10; -.09 (-.08). Clearly, net of other factors, participation in an internal labor market pays off rather well in the macroregions of lowest socioeconomic development. Yet it costs the worker in the Frontier and the more highly developed South and its Periphery. Could it be that, where jobs are better and more plentiful, the advantages of security begin to outweigh those of more money. For those in internal labor markets are also covered by the social security.

The next set of variables are those pertaining to social origins. Father's occupational status has small positive effects on log income, as indicated by the beta coefficients. In ascending SED order, β = +.09; +.06; +.06; +.04; and +.04. The b values are: +.009; +.004; +.003; +.003; and +.002. Again in absolute incremental effects on income, these are worth considering. Father's occupational status is scaled from zero to 100, so one-half of one percent, say, could make a good deal of difference between persons of widely different status origins. In general, the pattern appears to conform to that which might be expected by sociologists. (Treiman, 1970, substituting SED for industrialization and income for occupational status.)

Father's class, in the sense that those scored "1" for "capitalist" owned the "means of producation" and employed at least one worker, is next. Note that by this criterion only eight to twelve percent of these men's fathers were thus defined as capitalists. The β weights show this variable to have small net effects relative to the others in each macroregion. In ascending order of macroregional development they are: +.05; +.10; +.04; +.11; +.07. The metric coefficients, presented in the same order, are: b = +.12 (+.13); +.31 (+.36); +.11 (+.12); +.33 (+.40); and +.23 (+.25). Clearly this pattern has othing to do with socioeconomic development levels of the Brazilian macroregions. About the most that can be said is that, net of everything else measured, including father's occupational status, having a capitalist father makes a handsome difference in income in all regions, especially where the population is rather dense - the South, the Old Northeast and the South's Developing Periphery. It is to be noted that this is a direct effect. Class origin also has a strong effect on education, whose own effects on income are expressed both directly and through occupational status. In any case, the income effects of father's class do not vary by macroregional development.

Age has moderate effects on log income in all regions. (These are merely the linear effects; quadratic effects were not measured in this analysis.) The β values are: +.14; +.14; +.16; +.13; and +.15, in ascending SED order. The b values, in the same order, are: +.009; +.010; +.012; +.011; and +.012. Except for the higher than expected value for the Frontier, this relationship with SED is positive and linear. With this exception, it appears that each year of age tends to increase income by about one percent, and that the income effect of each year of age increases with development.

The net effects of all of the variables are substantial in each region. From least to most developed, they are: R^2 = .28; .45; .39; .40; and .45. There may be a tendency for the productive efficacy of these regressors to vary positively with SED, but the evidence is not consistent.

In summary, for men, all regressors measured here have direct (net) effects on log income. Some these effects vary positively with development, others negatively, others not at all. The apparent positive variations are marred by the aberrant behavior of the Frontier. With that caveat, 1) the higher the level of development, the greater the income advantage bestowed by Metropolitan employment. 2) The higher the level of development, the greater the (linear) effect of age on income. Regarding negative variations, 1) the higher the level of macroregional development, the lower the effect of occupational status on income. 2) The higher the level of macroregional development, the lower the effect of father's occupation on income. 3) Higher levels of development induce income costs to participation in internal labor markets, while lower levels induce benefits to such participation. Regarding effects that do not vary — at least systematically — with development, 1) there is no relation between development level and the income effects of education. They are strong everywhere. 2) There is no patterning relationship between development and the effects of father's class on income. They

are rather large everywhere, though uniformly so. The relationship between development and the income effects of Metropolitan labor market participation is in the form of an inverted U curve. In the least developed region the effect is negative. In the moderately developed areas it is positive and quite high. In the most developed area, it is moderate and positive.

Sociological theory regarding development and individual income is in its infancy. It has been found here that better quality local labor markets and age tend to produce increasing yields in successively more developed areas. On the other hand, the income benefits of one's own and one's father's occupation, and of internal labor market participation, decrease with development. Also the total effect of these regressors tend (with some important inconsistencies) to increase with development.

The best collation of theory regarding stratification and development is Treiman's (1970) essay. He predicts that the income effects of occupational status should increase with development. Present data disconfirm this hypothesis; the trend is the reverse. Treiman (1970) Smelser (1966) and Anderson (1958) predict that the direct effect of education on income will decrease with development. This too is disconfirmed; education has uniformly strong income effects everywhere. While this is not said in so many words, such theorists clearly imply that the income effect of social origins whould decrease with development. This hypothesis is mostly confirmed - surely, insofar as father's occupational status effects are concerned, though father's class effects show no such pattern. The question of developmental patterns of the income effects of age may not have been considered by theorists. At least since Minier (1974), it has become commonplace for researchers to conceive of age as a proxy for work experience. It seems reasonable to suppose that a given increment of experience would be more

valuable to a person in more developed societies: presumably, in less developed societies life would be simpler, so one would normally gain his income-enhancing experiences early in life. Thus the higher the level of development of societal unit, the greater would be the income effect of each new year of experience. In any case, the income effects of age tend to rise with development in Brazil. Although there has recently been a spate of research on labor market segments, one cannot point to specific hypotheses concerning the income effects of participating in different types of segments. It may be clearly hypothesized that the higher the level of development, the more likely one is to participate in a) a labor market where wages are high, b) a metropolitan labor market, and c) an internal labor market. Indeed, this is the case, as the means presented in Addendum 1 show. For each of these categories of labor market segmentation, the proportion of working men involved in the higher levels increases with macroregional socioeconomic development. But the issue here is developmental variations in the pay-off of such participation to the individual. Regarding the general quality of local labor markets, it seems possible that the higher their SED, the greater will be the returns to a given increment of SED. This is the case: the higher the SED of the macroregion, the greater the effect of local development on income. There is no obvious reason, however, why the income effects of metropolitan labor market participation should vary with development. But vary they do, though not at all linearly: they stand in an inverted U. The development differences in the effects of internal labor markets are also unexpected: positive in the poorer regions, they are negative in richer. In general the net effects of these labor market segmentation variables on income are puzzling in that, while strong, they are not patterned in way that can be readily interpreted in terms of any known theory.

Finally, the total predictive effeciency of the system appears to vary positively with macroregional development, but not only with this. The R^2 is lowest in the least developed region., It is highest in the Developed South and the Unevenly Developed Old Northeast. The South's Periphery and the Frontier are between. The theoretic implications of this pattern are not clear, though perhaps a combination of development and something else - population density, administrative control, etc.? - might be operating.

Women's income status attainment will now be analyzed in relation to Brazil's macroregional socioeconomic development levels. The same strategy will be followed here as for men. Note, too, that in each macroregion, employed women earn, on the average, slightly less than one half the earnings of men.

The relative effect of canonical occupational status, as measured by the beta values, is quite strong in the three more developed regions but rather weak in the two less developed areas. In ascending SED order, = +.05; +.08; +.21; +.30; and +.28. This merely tells us, of course, something about the relative weight this variable assumes in the regression equation for each region; they vary from weak to strong. The corresponding metric regressions are these: b = +.002; +.004; +.009; +013; and +.012. Contrary to the corresponding trend for men, for women the income effects of each unit of occupational status tend to increase with development, with a slight drop at the top, the Developed South.

For women's education, the beta values indicate strong relative effects on log income in each macroregion. In ascending order of development, = +.47; +.39; +.28; +.31; and +.28. In the same order, b = +.10 (.11); +.08; +.05 (.06); +.06; and +.05 (.06). Thus in the least developed area, net of all else,one year of education yields a 10 percent increase in income, while in the most developed it yields a six percent increase. On the whole,

the higher the level of macroregional socioeconomic development, the lower the effect of education on log income.

For women, the relative log income effects of participating in a Metropolitan labor market rather than one that is Nonmetropolitan or outlying, are quite variable from macroregion to macroregion. (In the lowest two regions, the βs are not statistically significant, but they are reported anyway.) In ascending SED: β = +.01; +.02; +.19; +.14; and +.03. In the same order, the b values are: b = +.011; +.038 (+.039); +.368 (+.445); +.258 (+.294); and +.051 (+.052). This is about the same pattern observed for men: an inverted U curve in which there is no payoff to Metropolitan labor markets except in the moderately developed regions. While the theoretical aspects of this may be baffling, its practical implications would be important if workers are sensitive to these relative payoffs. The cities of the moderately developed macroregions would be expected to attract workers from their hinterlands, while those of the other regions would not.

For women's participation in local labor markets varying from higher to lower socioeconomic development(microregional SED), the effects of SED relative to other variables differ rather widely from macroregion to macroregion. In ascending order of macroregional SED: β = .00; +.10; -.06; +.17; and +.20. The corresponding metric coefficients are: b = -.002; +.005; -.003; +.012; and +.018. Clearly, within the poor macroregions local SED makes no noteworthy difference in income. Nevertheless, the overall pattern is one of increasing effects of local labor market SED on income; the higher the level of macroregional development, the greater the effect of the (microregional) development of the local labor market on income.

For women as for men, the macroregional SED variations of Internal versus Noninternal labor market participation are mixed. In ascending order of SED, they are: β = .00; +.28 (+.32); +.15 (+.16); +.04 (+.05); and +.26 (+.30).

For women, Internal labor market participation pays off well in the Unevenly Developed Old Northeast, the Frontier, and the Developed South. Elsewhere it is ineffective. This pattern is even stranger than that of men; at this time it is not interpretable.

For women, the relative, or within-macroregion, direct income effects of status origins (father's occupational status) vary from region to region. They are weak in the least developed regions and strong elsewhere: β = +.05; +.08; +.21; +.30; and +.28—in ascending SED order. The b values are : +.002; +.003; +.009; +.013; and +.012. Thus, by and large, the higher the level of macroregional socioeconomic development, the greater the direct income effect of a woman's status origins. In the three most developed regions, each point of occupational status (from a 100-point scale) adds about one percent to income, though in the areas of lowest SED this variable does not make much of any difference in income. This pattern is contrary to both that of men, and to the pattern predicted by Treiman (1970).

Father's class—capitalist- noncapitalist—has very small relatie effects on income. The β values, in ascending order of SED, are: β = -.01; +.06; +.06; +.03; and +.04. The b values are: -.03; +.17 (+.18); +.18 (+.20); +.08 (+.09); +.12 (+.13). The development pattern seems too mixed to interprete, although in all but the least developed macroregion the effects are positive and large enough to be of some consequence.

Among women, too, age has uniformly modest but positive (linear) effects on income in all macroregions. The β values, in ascending SED order, are: β = +.12; +.16; +.17; +.14; and +.13. The b values, in the same order, are: b = +.007; +.011; +.014; +.011; and +.011. In other words, when one disregards the quadratic effects of age as we have done here, each year of age adds about one percent to women's income in all regions but the least developed.

There is no meaningful pattern of these effects with development. The weakest is in the least developed region, the strongest in the Frontier, The rest are equal.

The total predictive effeciency of this set of regressors varies as follows with ascending order of SED: $R^2 \fallingdotseq .27$; .45; .37; .53; and .54. This range of determinative effects is quite broad, much more so than for men (.28—.45). Except for an upward blip in the Frontier, the trend is monotonic and positive. Perhaps related to this, there is a pattern of increasing complexity of income determination with development that is perhaps more pronounced among women than men. Suppose that $B \geq \pm.10$ is used as a criterion. In the Underdeveloped New Northeast, two variables have effects larger than this—education and age. In the Unevenly Developed Old Northeast, there are three such variables—education, age, and internal labor market participation. In the Developing Amazonian Frontier, there are five—education, age, occupational status, metropolitan labor market, and father's occupational status. In the South's Developing Frontier, there are five—education, age, occupational status, metropolitan labor market, and local labor market SED. In the Developed South there are also five—education, age, occupational status, local labor market SED, and internal labor market. Could it be that one of the hallmarks of a societal unit with low level of socioeconomic development is the simplicity and relative unpredictibility of its status attainment process?

In summary, for women it is found that the income effect of three variables are positively related to macroregional SED: these are occupational status, the socioeconomic development of the local labor market, and father's occupational status. One variable, education, has decreasing effects on income as the level of macroregional development rises. Another, age, has

modest effects that do not vary with macroregional SED, except that the effect is lower in the least developed regions than elsewhere. One, Metropolitan labor market participation has an inverted U curve effect. Two others have such mixed effects that they defy meaningful description: Internal labor market participation and father's class.

Treiman predicts that the income effect of occupational status should rise with development. Reversing the pattern for men, this finding for women would tend to support his hypothesis. He and others also predict that the effect of education on income should decrease with development (Treiman, 1970; Smelser and Lipset, 1966; Anderson, 1958). Unlike the pattern for men, which showed no developmental trend in such effects, the data for women are in accord with theory. Again, the literature implies that the income effect of social origins should decrease with development. For women, this is not at all in accord with the data. The trend is precisely the reverse for the income effects of father's occupational status (which increase with development) and is hopelessly mixed for father's class. In the discussion concerning men it was also remarked that age-proxied increments in experience should be increasingly effective as macroregional development increases. For men this seemed tenable. For women it is not; except that in the poorest region, age has hardly any effect on income. The remaining variables do not seem to bear on current theory of status attainment and development.

Conclusions regarding status attainment and development. Table 6 presents a summary of the findings and insofar as it exists the current sociological thinking about the relationship between status attainment and socioeconomic development of societal units. Obviously, most theory — such as it is — is intended to apply to national development differences — to diachronic and

Table 6. Status Attainment and Macroregional Socioeconomic Developme Effects of Regressors Among Employed Brazilian Men and Wome Education, Occupational Status, and Log Income.

Regressors (see Table 1)	SED Curves Men	SED Curves Women	Prediction from Theory (Treiman, 1970)	Result
		EDUCATION		
ather's Occupation	Zero	Zero	Negative	Reject
ather's Class	Positve	Positive	Negative (Implied)	(Reject)
ge	Mixed	Mixed	None	----
		OCCUPATIONAL STATUS		
ducation	Positive	Positive	Positive	Accept
ather's Occupation	Zero	Zero	Negative	Reject
ather's Class	Zero	Zero	Negative (Implied)	(Reject)
ge	Mixed	Mixed	None	----
etro Labor Mkt	Mixed pos.	Zero	None	----
ocal Labor Mkt.	Zero	Zero	None	----
nternal Labor Mkt.	Negative[1/]	Negative[1/]	None	----
		LOG INCOME		
ccupational Status	Negative	Positive	Positive	Reject
ducation	Zero	Negative	Negative	Reject
ather's Occupation	Negative	Positive	Negative (Implied)	(Reject)
ather's Class	Mixed	Mixed	Negative (Implied)	(Reject)
ge	Positive	Positive?	None	----
etro Labor Mkt	Inverted U	Inverted U	None	----
ocal Labor Mkt	Positive	Positive	None	----
nternal Labor Mkt.	Negative?	Mixed	None	----

[1/] As explained in the text, this probably does not mean that the effect of Internal labor market participation varies inversely with development. More likely, it means that internal labor market coverage reached lower into the occupational structure with development.

synchronic differences alike. We have "mapped" the effects of a set of antecendent variables or "regressors" on each of three attained status variables for men and for women in Brazil's five main socioeconomic development macroregional. This is justified on the grounds that these macroregions are very large compared to most countries, that they vary enoumously in development levels, and that Brazil's cultural uniformity controls cultural and measurement differences that might confound international comparisons.

Treiman's (1970) presentation of theory of status sttainment and industrialization remain the clearest in the literature today. From it, five distinctly different explicit hypotheses concerning status attainment and development have been extracted. Four others seem logically implied by such thinking but were not stated by Treiman. The others are presented without hypotheses.

Note that almost all findings regarding the antecedents of education and occupational status in relation to development are, in essence, replicated for men and for women. Of 10 regressions (three for education and seven for occupation status) the only exception is the occupational status effect of Metropolitan labor market participation. The income effects of most of the regressors, however, differ between men and women. Those that appear to be similar for the sexes are the increasing macroregional developmenatl effect of age (or experience) on income, the inverted U curve of the payoffs of Metropolitan labor market participation with macroregional development, and the increasing payoff of higher SED of Local labor markets with development. The macroregional development consequences of the other five regressors show different patterns for the two sexes.

Neither the explicit nor the implicit predictions from the literature faired well in these tests. The explicit ones are taken first, presented in

Treiman's (1970: 221) words, with paraphasing in parentheses. The result of the present tests is presented immediately following each.

1. The more industrialized (developed) a society (societal unit) the smaller the influence of parental staus on educational attainment.

   Reject: the educational consequences of parental status are powerful and more or less equal at all levels of Brazilian macroregional socio-economic development for each sex.

2. The more industrialized (developed) society (societal unit),the greater the direct influence of educational attainment on occupation status.

   Accept: the occupational status effects of education tend to increase with macroregional socioeconomic development in Brazil, for both sexes.

3. The more industrialized (developed) a society (societal unit), the smaller the direct effect of father's occupational status on son's (son's and daughter's) occupational status. Reject: there is no discernible macroregional development trend in Brazil regarding the occupational status effects of father's status for either sex.

4. The more industrialized (developed) a society (societal unit), the stronger the direct influence of occupational status on income. Reject: contrary to prediction, the Brazilian macroregional development trend of the net effects of occupational status on (log) income are negative. The developmental trend for women, however, is in accord with the hypothesis.

5. The more industrialized (developed) a society (societal unit), the smaller the direct influence of education on income. Reject: For Brazilian men there is no macroregional developmental trend at all, although for women the trend is as predicted.

Four additional hypotheses seem consistent with Treiman's thinking, though they are not so stated. Three concern the effects of father's (capitalist)

class on each status dependent variable. The fourth concerns the income effects of father's occupation:

6. The more developed the societal unit, the smaller the influence of father's class in education. Reject: the relationship is the reverse, for both sexes. The higher the societal unit's development, the greater the educational benefit of having a capitalist father.
7. The more developed the societal unit, the smaller the effect of father's class on occupational status. Reject: there is no developmental trend in the effect of father's class on son's or daughter's occupational status.
8. The more developed the societal unit, the smaller the effect of father's class on (log) income. Reject: for each sex there are large payoffs to having a capitalist father, but these effects are not related to development in any discernable way.
9. The more developed the societal unit, the smaller the effect of father's occupational status on son's or daughter's occupational status. Reject: there is indeed a negative developmental trend for men, but for women the trend is exactly the reverse.

Each consistent development effect pattern may be treated as an empirical generalization or (as in the case of the second proposition above) as a confirmed theoretical proposition. (One of the consistent patterns, the probably misleading inverse relationship of the apparent effects of internal labor market participation is omitted here). The developmental effect patterns that are consistent for both sexes follow, whether or not they have any theoretical backing, and whether they are patterns of direct, null, or inverse relationship. All generalizations concern partial regression effects, net of all other variables in the corresponding equation.

1. The net effect of father's occupational status on educational attainment is positive and strong, but is invariant with respect to Brazilian macroregional socioeconomic development level.
2. The net effect of father's social class on educational attainment is positive and varies directly with Brazilian macroregional socioeconomic development. In other words, the educational benefits of having a father who was a self-employed employer are positive and increase with development.
3. The net effect of education on occupational status is positive and strong, and varies directly with Brazilian macroregional development level. That is, the higher the levels of development, the greater the effect of education on occupational status.
4. The net effect of father's occupational status on occupational status is positive, but is invariant with respect to Brazilian macroregional development level.
5. The net effect of father's class (capitalist/noncapitalist) on occupational status approximates zero and is invariant with respect to Brazilian macroregional development.
6. The net effect of the socioeconomic development level of the local labor market on occupational status approximates zero and is invariant with respect to Brazilian macroregional socioeconomic development level.
7. The net effect of metropolitan labor market participation on (log) income varies from very low to strong positive and varies in the form of an inverted U curve with Brazilian socioeconomic development level. That is, the greatest effects of this variable are in the moderately developed regions.
8. The net effect of the socioeconomic development of the local labor market is modest and positive and varies directly with Brazilian macroregional development level.

Apart from the negative findings regarding the theory of status attainment and development, it is thus found that macroregional development increases the effects of status attainment regressors in the following ways. It increases the effect on educational attainment of having a father who is influential in the private sector (a "capitalist", or self-employed employer); it increases the effect of education on occupational status. Development has a distinct but nonlinear effect on the income returns to Metropolitan employment -- income returns to to urban work are substantial in the emerging metropolises of the moderately developed Periphery and in the Frontier. Finally, macroregional development level raises the effect of macroregional development on income.

In other words macroregional socioeconomic development level, as measured herein, has tangible effects on the status attainment processes of both sexes, although they do not correspond well to those that would be expected from current theory of status attainment and development. Class origin is increasingly important for education with development. Education, in turn, is increasingly important for occupational status. Higher socioeconomic development of the local labor market provides increasing for increments to income. Urban, rather than rural, jobs are most advantageous in the newly developing areas.

For women, the occupational status on income increase with macroregional SED and are quite strong in the most developed regions. For men these effects are strong everywhere, but they <u>decrease</u> with development. For both sexes the effect of education on income is strong at all levels of development. But for men the effect does not change with SED, while for women it decreases. The income effects of father's occupational status are puzzling. Thay are positive, of course, for both sexes in all regions. But for men they are

small and they decrease with development. For women, they increase dramatically with development. Regarding age (experience), the effect of this variable is modest for both sexes; for men it increases with development; for women it is especially small in the least developed area and especially strong in the Frontier. The income effects of internal labor market participation are also a bit puzzling. For men they are small at most, for women a bit larger in some regions. For men, participating in an internal labor market increases income only in the two poorest macroregions; elsewhere it decreases income. The pattern for women is even more puzzling. Such participation does not cost them in any region, but it benefits them tangibly only in the Unevenly Developed Old Northeast, the Frontier, and the Developed South.

A few comments regarding macroregional peculiarities are in order. Most developmental patterns are distinct enough, but a few are more or less unique. The most consistent developmental patterns are found among the Unevenly Developed Old Northeast (SED: 31), the South's Developing Periphery (SED: 54), and the Developed South (SED: 78). This includes almost all of the lands that have been occupied for two centuries or more, and a few that were more recently occupied. The least consistent area is the Developing Amazonian Frontier. Effects normally associated with the most highly developed region appear here quite often. As indicated earlier, the reasons for this are debatable. Is it due to classical Frontier phenomena (Turner, 1920), or to oversampling in urban Manaus and Belem, or to federal efforts to stimulate investment in the Amazon basin, or what? The Frontier patterns of settlement and of status attainment may well have unique theoretic properties. The Turner thesis and the heavy investment thesis both suggest this. But even urban oversampling may be more than a technical issue: Frontier occupation patterns may require early concentration of people and capital in urban centers

to serve as supply depots and staging areas for the few early rural settlers sparsely distributed over the land surface in remote, nearly inaccessible locations under extremely arduous conditions. This issue may deserve further consideration.

The Underdeveloped New Northeast also requires comment. This heretofore obscure macroregion is less developed than others by a considerable margin. Here the effects of status attainment variables occasionally behave peculiarly The net effect of father's occupation on son's and daughter's education is suprisingly strong; among men, the net effects on income of participating in a Metropolitan or in a more developed local labor market are actually negative here. Among women the net effect of age on income approaches zero, whilst elsewhere it is positive for both sexes. Among men, the educational effect of father's class is negative. The theoretic relevancy of these observations is not at all clear. But it may be that status attainment processes have unusual properties in societal units that at an extremely low level of societal development and are mostly rural.

Thus there are regional anomolies, probably not unique to Brazil, that appear to demand new theoretic work.

In general, this analysis of status attainment variations by socioeconomic development level in Brazil shows patterns that are mostly different from, and considerably more complex than, current theory would lead one to expect. While it may be tempting to attribute the findings to peculiarities of Brazil, or to technical imperfections such as sampling biases and measurement problems, none of these is likely to provide an adequate explanation for the sharp discrepancy between current theory and these findings. The sampling and data collection appear to have been carried out according to the highest modern standards. The identification of societal units --

macroregions -- appear to have been executed meticulously, using the best methods now available; a set of distinctive, clearly demarked socioeconomic developmental macroregions -- societal units which are taken here as instances of bounded societies.

As societal units, these macroregions have an additional research advantage: as parts of Brazil they have one language, one culture (basically European), and one set of laws. So their main variations are socioeconomic and demographic. In that they differ sharply by level of socioeconomic development (from uniform poverty of the Underdeveloped New Northeast to the rather modern, relatively well-to-do Developed South), they provide a particularly appropriate set of societal units by which to test and extend thinking about development and status attainment. Also, the measurement (and standardization, when appropriate) of all variables was carried out with great attention to measurement issues and with careful attention to characteristically Brazilian nuances of each. Neither is the size of the nation or the macroregional societal units within it likely to be a source of the unexpected findings. Brazil is the sixth most populous, and in land surface, the fifth most extensive nation in the world.

Finally, several key members of the research team are intimately familiar with Brazil, so these findings are not likely to be the result of a misapplication of the theory and methods of status attainment research to the Brazilian situation. However surprising these findings may be, they are probably accurate reflections of developmental differences in status attainment processes in Brazil, and there is a strong presumption that they reflect socioeconomic development variations on the same processes as these exist among nations.

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Addendum 1.

Means, Standard Deviations,
and Correlation Coefficients
Used in Regressions of Education.

For nominal definitions of acronyms, see Table 5.

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FILL MEN (CREATION DATE = 04/09/82)

* MULTIPLE REGRESSION * * * * * * * * * * * * * VARIABLE LIST 1
REGRESSION LIST 5

DEPENDENT VARIABLE.. INCOME

VARIABLE(S) ENTERED ON STEP NUMBER 1.. URBRUR
SCORE
FCANOCC
AGE
INTLBMKT
CLSSORGN
ED
CANOCC

		ANALYSIS OF VARIANCE	DF	SUM OF SQUARES	MEAN SQUARE	F
MULTIPLE R	.58278					
R SQUARE	.33964	REGRESSION	8.	75802754730.12797	9475344341.26600	2028.92712
ADJUSTED R SQUARE	.33947	RESIDUAL	31559.	147384491834.94327	4670125.53740	
STANDARD ERROR	2161.04732					

VARIABLES IN THE EQUATION

VARIABLE	B	BETA	STD ERROR B	F
URBRUR	.9451037+002	.01772	32.67887	8.364
SCORE	.9984372+001	.04002	1.50575	43.968
FCANOCC	.1328754+002	.07458	1.02669	167.498
AGE	.3481230+002	.14916	1.11262	978.982
INTLBMKT	-.6192475+003	-.11645	28.26371	480.032
CLSSORGN	.6649970+003	.07041	44.96025	218.767
ED	.2402395+003	.35203	4.92800	2376.556
CANOCC	.2885073+002	.20187	1.02020	799.733
(CONSTANT)	-.1951470+004			

VARIABLES NOT IN THE EQUATION

VARIABLE	BETA IN	PARTIAL	TOLERANCE	F

ALL VARIABLES ARE IN THE EQUATION

STATISTICS WHICH CANNOT BE COMPUTED ARE PRINTED AS ALL NINES.