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Structural Changes in  
Status  
Stratification Systems\*

by

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## 1. Introduction

The main outlines of today's social problems are all too evident to most of us--the racial and ethnic crisis, an unpopular war, a faltering economy, decay in the urban cores, impoverishment of many rural groups, chemical and bacteriological pollution of air, water, and food.

In one way or another many aspects of these problems are bound up in what the sociologists call stratification. In this paper today, I hope to sketch a bit of the sociologists' current thinking about stratification systems and the changes they may undergo. The emphasis will be abstract, although we shall not totally neglect general policy suggestions. You will, of course, wish to draw your own conclusions about how to apply the ideas to understanding and coping with our social problems. Unfortunately we are only just now working out the necessary research on stratification. So the full impact of recent conceptual improvements will not be felt until after we carry out a substantial amount of research in which they are used.

Our specific aim in this paper is to outline some general concepts of stratification, especially "status stratification" which can be used to conduct empirical research. In the long run almost all stratification variables can be used as dependent variables which could be influenced by appropriate policies. Among these, some are especially relevant right now, during this decade; others may become important at a later time. Even more specifically, I want to present a set of

variables we may use to understand changes in the structure of status stratification.<sup>1/</sup>

## 2. Status Stratification

Stratification refers to enduring states of and relationships among social units regarding wealth, power, and prestige. Status stratification applies to small units. We shall first discuss these "particulate" units and then the three dimensions. (There is also a question of units of aggregation. We shall return to this later.)

2.1. Particulate Units. Usually families or households constitute the units. In modern societies these are usually consumption units; in times past they were often units of both consumption and production. Today these are usually nuclear families (parents and children), though in some times and places they have been extended families. For some purposes, such as the analysis of status attainment, the individual person may be the unit. Larger units are also possible: some others (notably Lagos, 1963) have concerned themselves with stratification of national states. Though rarely conceived in this way, the units might be legal entities, whether individuals or firms. Indeed the most interesting questions in stratification may well turn out to be wealth and power differences between different types of legal persons and entities. At present, the main emphasis is on status stratification, which applies to small units such as families, etc., within larger "units of aggregation," such as communities or societies. This is our main focus.

2.2. Content Dimensions. The main content dimensions--wealth, power, and prestige--were spelled out years ago by Max Weber (1946,

1947), though he used somewhat different words. They appear to be universal; at least they apply to every known society. Each is viewed as a class of variables. Wealth we define as access to goods and services. It is a variable, or class of variables, not a state. Money and negotiable property are subclasses of wealth. So also is "free" access to medical and other services. That is, access to public services is a variable describing an aspect of a unit's wealth. This dimension is relatively easy to measure. In the United States, monetary income appears to be a good indicator in its own right and a good proxy for other wealth indicators.

The power of a unit is its ability to induce other units to conform to its expectations. Legitimate power is the general category of most interest to sociologists. It is power exercised within a context of specific norms (legal or customary) which specify the limits to which and the means by which one or more units may exact compliance from others.<sup>2/</sup>

This is a class of variables which has been particularly difficult to measure validly. It appears to have been measured only at the level of local communities and then is limited to the identification of influential persons or "decision-makers" (Pease, Form, Rytina, 1970). We are now working on a way to index one specific power variable, political influence level, the highest governmental level at which a person has succeeded in obtaining something he sought (Saraiva, 1969). This is the smallest of beginnings; much work needs to be done to identify the specific power variables and to determine differences in the degree of

each such variable among units. We know of no other instances in which measures of power applicable to all families in a community have been taken.

Prestige is much better known. The main indicator used today is "occupational prestige," the evaluation of a unit which is based upon the social standing of the unit's main "breadwinner." Occupational prestige hierarchies are now available for many societies, and indeed are quite similar to each other (Hodge, Treiman, and Rossi, 1966). The best known of these has been worked out by the National Opinion Research Center at the University of Chicago. You may know that research shows the American occupational prestige hierarchy to be remarkably stable over at least a half-century or so (Hodge, Siegel, and Rossi, 1966). After a lapse of two decades, work has been started anew on ways to measure the prestige of particular members of a community (Park, 1966; Saraiva, 1969). This latter obviously applies only among small communities in which there is a probability of well over zero that any one adult person will know another. The former applies to both the national society and the smallest community. (In a poor and isolated Brazilian community we have found a correlation of  $r = +.47$  between these two prestige variables; Haller and Saraiva, 1969.)

Clearly, much work remains to be done on ways to measure differences among small units in each of the content variables. Even so, the importance or potential importance of each is indisputable. Wealth describes the negotiable resources of the unit. Power describes the ability of the unit to exact its requirements from others and by implication to be free from the demands of others. Prestige describes the

evaluation attributed to the unit by others and thus today is a main factor influencing self-respect.

This is not to say that other hierarchical status variables have not been proposed. I have dealt with this question earlier (Haller, 1970). Briefly, all others seem to be either (1) less than universal (education), (2) categories whose main social differences are due to historical accidents producing and reinforcing especially low or high content dimension means for one or more categories (color, race), or (3) composite status indicators ("level of living" scales).

### 3. Structural Dimensions

Though the basic content dimensions seem to exist in all societies and at all times, stratification systems may differ from each other and may change over time. Some variations are in the content dimensions themselves and some are in the structure or form of the content dimensions. Presumably changes in content (such as the switch-over from Tokugawa or Hindu occupational prestige hierarchies to a modern urban-industrial hierarchy) occur over a long time. Because the general types of these have not yet been worked out, and because those we know about apparently take centuries to work themselves out, we shall not discuss them here.

Changes in structural dimensions can take place over short periods of time and are quite well worked out. It will be obvious that different communities may be compared on each of these dimensions, and that each lends itself to studying changes in the structure of status stratification over time. In the ensuing discussion we shall refer

only to changes, both for simplicity and to emphasize that such changes may be an outcome of deliberate policy decisions.

Structural dimensions of status stratification describe the distributional characteristics of the content variables. There are at least six of these. But before presenting them, we should point out that there are several levels of complexity among hierarchical status concepts and their referents: content variables, content dimensions, and general status factors. Content variables are more specific than content dimensions and they in turn are more specific than status system factors. To be complete, each of the various facets of a complex concept such as wealth requires its own indicator: income is one, value of stocks is another, value of real estate another, etc. The same applies logically to power and to prestige though the various facets of these concepts have not yet been well delineated. Similarly, underlying factors (in the "factor analysis" sense) may be invoked to explain more parsimoniously the covariation among the three content dimensions or among the several content variables describing the various facets of each. Of the structural dimensions which we have identified so far, all but one applies to each of the above levels of complexity, and that one applies to the two most complex levels. We go to these now.

The structural dimensions we have combed from literature are: central tendency, dispersion, skewness, stratigraphy, flux, and crystallization.

Central tendency would normally be measured by a mean (Jackson and Curtis, 1968). Changes in such measures indicate a shift upward

or downward in a status indicator: wealth, power, or prestige levels of units would be rising or falling. If the indicator measures general status, such a change shows that the whole status system is shifting upward or downward.

Dispersion, when it undergoes change, tells us whether the particulate units are coming together in status or are separating--whether the system is squeezing together or stretching apart, so to speak--or, as it has been expressed elsewhere, experiencing "equalization or polarization" (Haller, 1967). As Jackson and Curtis (1968) have indicated, the skewness and stratigraphy of the distribution affect to a degree the usefulness of most statistical devices for measuring it. Nonetheless, the variance ( $\sigma^2$ ) is probably the best single numerical indicator of dispersion. Actually, the "distortion" of the variance which would be introduced by the upwardly skewed distributions typical of stratification variables, and by polymodality if it exists, may not be wholly inappropriate when applied to status indicators: larger variances indicate greater dispersion, and upward skewness and polymodality will increase the variance.<sup>3/</sup>

Skewness (discussed by Svalastoga [1965] as a lognormal distribution, and mentioned by Jackson and Curtis [1968] as "form") shows the extent to which the few are favored over the many. It is probably best presented by simply displaying the frequency distribution, although numerical indexes of skewness are available in statistics books.

Stratigraphy is a structural variable far more often discussed than observed. It would be indicated by a distribution with multiple modes. That is, if it is important to discuss "discrete classes" or "social



cleavages" (Landecker, 1970)<sup>4/</sup>, they must be observable. If they are observable, they will appear on a frequency distribution as the valleys and hills of a polymodal distribution. With modern data-processing equipment, there is no reason why this too cannot be represented by a straightforward display. Though it has yet to be demonstrated, such a phenomenon should be of importance even if it held only for a single content dimension or for even one of its components; if it held for a general status factor, it would indicate a general schism in the social system. Such polymodal income distributions have been reported by Newhouse (1971). He attempts to explain the particular stratigraphy of a given area by its "industrial mix." Unfortunately he does not look into the consequences of polymodality, such as heightened alienation and hostility, political extremism, etc.

Flux, loosely speaking, is upward and downward movement of particulate units. It incorporates most of what people call "mobility." Or what another (Svalastoga, 1965:40) calls "permeability." It is derived from the degree of correlation between comparable social units' levels of the same status indicator at two points in time. The higher the correlation, the lower the flux ("circulation") of social units. It is worth noting that the amount of flux is almost totally independent of the previous four structural dimensions. A special case of flux, which could be called "heritability," is of particular importance. It is the degree to which one generation's levels are determined by those of their forebears, and is usually indicated by the correlation of an individual's status with that of his parents (see, for example, Duncan [1964:70] discussing

Rogoff [1953]; also Svalastoga [1965:40], as well as Duncan [1968], and Tully, Jackson, and Curtis [1970]). Changes in flux require measurements at four or more points in time.<sup>5/</sup>

Crystallization (Landecker, 1970) is a structural dimension which describes the "tightness or looseness" of the system. It is known from correlations among status indicators at one point in time. It thus applies only to the two most complex classes of status indicators. At the level of the single status content dimension, its primary data are correlations among status variables. At the level of the status system factor its data are correlations among status dimensions, or perhaps among status content variables of all status dimensions. To determine it and measure it with precision, one must consider three properties, all based on factor analysis: (1) the number of factors (almost sure to be small because there are few variables factored), (2) the amount of common variance accounted for by each factor, and (3) the factor loadings of the correlated indicators. Each of these provides different information. The degree of crystallization per se would be estimated by the size of loadings of the constituent variables of the factor or factors most clearly measuring status. If the loadings are high, so is crystallization. If they are low, crystallization is low. If they are variable, crystallization may still be high on the most definitive status variables, or there may be a multifactor solution with high crystallization on at least one factor. Detailed multi-dimensional analyses of status are surprisingly few in number; I know of only one such where data more or less appropriate to illustrate this are available (Saraiva, 1969:80). It presents a factor analysis of seven

status variables, at least one of which was a measure of each content dimension. It yielded a one-factor solution--general status, or, as Saraiva called it, "socioeconomic status"--with very high loadings. It is not yet clear just how to determine a single number which will stand for the degree of crystallization of a status dimension or of a status system factor at a point in time. Possibly a mean of the loadings on a given factor might serve. In any case, when we get to the point of studying the status crystallization levels of many status systems, such a "crystallization coefficient" will have to be provided. This dimension is important because it summarizes the degree to which a unit's status on one content variable or dimension may be estimated from its status on the others. In loose words, it measures the "degree of stratification" in the total system. A highly crystallized system would be one in which the unit's position on one variable or dimension would indicate its position on the others. An uncrystallized system would be one in which a unit's level on one variable has nothing to do with its level on another. That is, the higher the crystallization is, the more restricted are the unit's possibilities of making up in one dimension what it lacks in another.

Units of Aggregation and Their Importance. If the particulate units of status stratification are nuclear families or individuals (or some other small unit), then what are the units of aggregation--the larger units to which the particulate units refer? To be frank, so little appropriate research has yet occurred that it is hard to be sure just how this will be worked out. At minimum there are two levels of aggregation units--the community and the society. Later work may

show others lying between these, such as states or regions. It makes sociological sense to speak of each structural dimension as applying to content dimensions of either a community or a nation-state: the central tendency, the dispersion, the amount of skewness, the number of strata, the degree of flux, the level of crystallization. Readings may be taken on each such variable for each community. Such measurements are descriptions of the status stratification systems of communities and of course changes in the readings are measures of changes of the structure of the community's status stratification systems. Analogous comments could be made about readings taken on the status stratification system of the nation-state as a "total system." (Perhaps the same may be said of units at intermediate levels of aggregation.) Clearly, then, structural trends in a particular community might well be exactly the opposite of their analogues at the level of the nation-state in any particular empirical instance. The point is this: in the long run we may well have to measure the structural changes at both (or even more) levels simultaneously in order to assess the effects of changes in the structure of status systems on such key social and political dependent variables as societal integration, intergroup conflict, in-and-out migration, etc.

#### 4. Conclusion

As Durkheim indicated long ago, when a change in status occurs, people experience an incapacity to act in a coordinated fashion due to "anomy": ignorance or absence of appropriate norms to guide behavior. Any major changes in status should do this: a rise or fall in status level, an increase or decrease in dispersion, skewness or stratigraphy

which is either more or less sharply drawn, an increase or a decrease in flux or in crystallization. But some changes are viewed by participants as inequitable, and "inequitable" changes generate intergroup hostility: a drop in central tendency, an increase in dispersion, an increase in skewness, a separation into distinct strata, an increase in crystallization. (Though many social scientists seem to think that a high level of flux is "good"--equitable?--it is not at all clear what would be the net effect of a change in flux on participants' senses of equity. Net upward movement, a rise in central tendency, is doubtless "equitable." But an increase in flux means that more units rise and more units fall, relatively speaking; a decrease in flux means that more lower status units are "locked out" of higher positions and more higher status units are "kept from" falling. Which is more equitable?) If any change produces anomy, and thus restlessness and anxiety, and if inequitable changes also produce alienation, a sense of injustice, then inequitable changes will compound the effects of both. Changes in the direction of equity would thus produce anomy but decrease alienation.

We are engaged in a search today for "social indicators" which will signal changes in the integration of American society and in the quality of life of our people. I submit that the variables describing changes in the structure of status stratification systems should be considered as candidates for inclusion. One would guess that the least divisive policies regarding these variables would aim for slow rates of change which would gradually affect each content variable at both the community level and the national level, changes which: would raise mean levels of each; would

decrease dispersion of each; would reduce polimodality of distributions of each; would decrease skewness of distributions of each; would decrease the crystallization or correlation among the dimensions. The changes would be slow so as to reduce anomy; they would be in the directions proposed so as to reduce alienation. (Scattered evidences [Duncan, 1968; Tully, Jackson, and Curtis, 1970; Rogoff, 1953] seem to indicate that flux levels in the United States are moderate and not changing much. We cannot guess what an optimal level of flux would be. It is therefore not at all obvious what if anything should be done about them.)

Few would deny the worth of increasing people's positions on the key dimensions of wealth, power, and prestige. But if not carried out carefully such increases could be divisive and therefore self-defeating. It would seem possible to formulate and conduct national and regional policies which can bring the distribution of these dimensions under rational control so that mean increases, such as we have seen over many years, might continue without adding a sharper "class" division to the racial and ethnic differences which already exist.

Clearly, this type of analysis argues for renewed concern with means by which to equalize access to goods and services--or in other words to minimize the differences among people regarding income and regarding use of human and natural resources. Less obviously, it argues for the same kind of thought to be given to ways to raise the social evaluation of currently non-prestigious work. (A careful study of the Hodge, Siegel, and Ross [1966] data shows that this is happening, but ever so slowly.) This would have the effect of equalizing the prestige

of occupations, which sociologists believe to be one of the most important bases of self-respect or self-disrespect in today's world. Similarly, an increase in political influence on the part of those groups who do not now participate significantly in the political arena would decrease the dispersion of power. I think this is now going on at a fairly rapid rate. One would guess that the nation will survive the shocks of anomy which are thus produced and go on to reap the long-term benefits of the resulting increases in the population's sense of equity.

## FOOTNOTES

- 1/ Most of the ideas presented herein have been published elsewhere (Haller, 1970).
- 2/ Non-legitimate power is also of great importance because it is exerted in situations when (1) norms are not shared by participating units or where (2) shared norms are ignored by one or more participants. At the level of small units most instances of the exercise of power are legitimate. Among small units in the United States today, the exercise of non-legitimate power is almost always illegal, and, cannot account for more than a tiny proportion of all acts in which power is exerted; in any case people don't like to describe their illegal acts to social scientists. So they are particularly difficult to study.
- 3/ Of course, other devices are useful in certain research problems. Percentile distributions (for example, Roby, 1968; Miller, 1966; Lampman, 1962), and Lorenz curves and their derivatives (Svalastoga, 1965: 37-39; Alker and Russett, 1964; Bonnen, 1968; McKee and Day, 1968) are good indicators of the relative inequality among units of the same system at the same time. And important structural changes may be signaled by changes in these indicators over the course of time. Yet when used to indicate changes over a period of time, they are often deceptive. The trouble is that such percentages and indexes can maintain the same values over a period of time or even yield values suggesting that equalities are increasing when in fact the social units are becoming more



unequal because the absolute distances (say in income) between them are increasing. On the assumption of a constant Gini coefficient, if a social system's total wealth, say, doubles over a period of time, the units at all levels will also double their assets. In absolute terms, those at, for example, the 20th percentile point would make a modest gain and those at the 80th percentile point would experience a substantial increase in their wealth. For all their difficulties, variances would appear to be the best measures of dispersion.

4/ "Cleavage" may also mean a break in the interaction rates between two or more sets of social units occupying different levels of a status system. This is probably what most thinkers have intended by the concept (Lasswell, 1965:319-323). It is of great importance because such a break in interaction rates within a community or larger social system signals a break in communication between contiguous strata. It is difficult to see how the government of communities or societies could be based on "consent of the governed" when such cleavages are pronounced. Because of the confusion on this point, it is worth emphasizing that the status indicators which show the level of various strata in the system may or may not be continuously distributed; "breaks" or nodes of interaction rates among units may approach zero with or without "cleavage" (polymodality) on the status indicator.

5/ Flux (F) could be defined as  $F = 1 - r_{t_1 t_2}^2$ . Heritability (H) would be  $H = r_{po}^2$  (where p:parent and o:offspring).

## REFERENCES

Alker, Hayward J., Jr., and Bruce M. Russett

- 1964 "On measuring inequality." Behavioral Science 9 (July):  
207-218.

Bonnen, James T.

- 1968 "The distribution of benefits from selected U.S. farm  
programs." Pp. 461-505 in The President's National Advisory  
Commission on Rural Poverty, Rural Poverty in the United  
States. Washington, D.C.: Government Printing Office.

Duncan, Otis Dudley

- 1964 "Methodological issues in the analysis of social mobility."  
Pp. 51-97 in Neal J. Smelser and Seymour Martin Lipset (eds.),  
Social Structure and Mobility in Economic Development.  
Chicago: Aldine.
- 1968 "Social stratification and mobility." Pp. 675-719 in  
Eleanor Bernert Sheldon and Wilbert E. Moore, Indicators  
of Social Change. New York: Russell Sage.

Haller, Archibald O.

- 1967 "Urban economic growth and changes in rural stratification:  
Rio de Janeiro, 1953-1962." America Latina 10 (October-  
December): 48-67.
- 1970 "Changes in the structure of status systems," Rural Sociology  
35 (December): 469-487.

Haller, Archibald O. and Helcio Ulhoa Saraiva

- 1969 "Status measurement and the variable discrimination hypothesis in an isolated Brazilian region." Unpublished paper.

Hodge, Robert W., Paul M. Siegel, and Peter H. Rossi

- 1966 "Occupational prestige in the United States: 1925-1963." Pp. 322-334 in Reinhard Bendix and Seymour Martin Lipset (eds.), Class, Status, and Power. New York: The Free Press.

Hodge, Robert W., Donald J. Treiman, and Peter H. Rossi

- 1966 "A comparative study of occupational prestige." Pp. 309-321 in Reinhard Bendix and Seymour Martin Lipset (eds.), Class, Status, and Power. New York: The Free Press.

Jackson, Elton F. and Richard F. Curtis

- 1968 "Conceptualization and measurement in the study of stratification." Pp. 112-149 in Hubert M. Blalock and Ann B. Blalock (eds.), Methodology in Social Research. New York: McGraw-Hill.

Lagos, Gustav

- 1963 International Stratification and Underdeveloped Countries. Chapel Hill: University of North Carolina Press.

Lampman, Robert J.

- 1962 The Share of the Top Wealth-Holders in National Wealth. Princeton, New Jersey: Princeton University Press.

Landecker, Werner S.

- 1970 "Status congruence, class crystallization and social cleavage." Sociology and Social Research 54 (April): 343-355.

Lasswell, Thomas E.

1965 Class and Stratum. Boston: Houghton Mifflin.

McKee, Vernon C. and Lee M. Day

1968 "Measuring the effects of U.S. Department of Agriculture programs on income distribution." Pp. 507-521 in The President's National Advisory Commission on Rural Poverty, Rural Poverty in the United States. Washington, D.C.: Government Printing Office.

Miller, Herman P.

1966 Income Distribution in the United States. A 1960 census monograph. Washington, D.C.: Government Printing Office.

Newhouse, Joseph

1971 "A simple hypothesis of income distribution." Journal of Human Resources 6 (Winter): 51-74.

Park, Peter

1966 "Scale analysis of social status ranking." Paper presented to the 1966 American Sociological Association meetings, Miami Beach, Florida. (Mimeo, University of Massachusetts.)

Pease, John, William H. Form, and Joan H. Rytina

1970 "Ideological currents in American stratification literature." American Sociologist 5 (May): 127-137.

Roby, Pamela

1968 "Inequality: A trend analysis." The Annals of the American Academy of Political and Social Sciences 385 (September): 110-117.

Rogoff, Natalie

- 1953 Recent Trends in Occupational Mobility. New York: The Free Press.

Saraiva, Helcio U.

- 1969 "The 'variable discrimination' hypothesis and the measurement of socioeconomic status in an isolated Brazilian region."  
Madison: University of Wisconsin, unpublished Ph.D. thesis.

Svalastoga, Kaare

- 1965 Social Differentiation. New York: David McKay.

Tully, Judy Corder, Elton F. Jackson, and Richard F. Curtis

- 1970 "Trends in occupational mobility in Indianapolis." Social Forces 49 (December): 186-200.

Weber, Max

- 1946 "Class, status, and party." Pp. 180-195 in Hans Gerth and C. Wright Mills (eds.), From Max Weber. New York: Oxford University Press.
- 1947 "Social stratification and class structure." Pp. 424-429 in A. M. Henderson and T. Parsons (eds.), The Theory of Social and Economic Organization. New York: The Free Press.

FIGURE 1. ILLUSTRATIONS OF CHANGES IN THE STRUCTURE OF STATUS STRATIFICATION SYSTEMS

