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Measures of Socioeconomic Status: Alternatives and Recommendations

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MUELLER, CHARLES W., and PARCEL, TOBY L. *Measures of Socioeconomic Status: Alternatives and Recommendations*. CHILD DEVELOPMENT, 1981, 52, 13-30. In this paper we argue that it is ill-advised to use impressionistic or outdated measures of SES in psychological research. After we critique such inappropriate measures, 2 occupation-based measures, the Duncan Socioeconomic Index and the Siegel Prestige Scale, are recommended as the best measures of the SES of individuals or household heads. Another strategy is described for measuring household or family SES where the household characteristics and composition vary.

Variations in SES are an irrefutable fact of life in our own society as well as cross-culturally. Individuals and families vary in their current access to jobs, earnings, assets, and power, and they also vary according to the status of their families of origin. Sociologists have long recognized and argued the importance of social stratification in understanding various social phenomena, and specialists in stratification have devoted considerable time and effort toward arriving at reliable and valid measures of SES. While psychologists have acknowledged this aspect of social life in their research, we will argue that the measures of SES they typically have used are not the ones sociologists consider the most appropriate. Many psychologists may be unaware of the extensive work by sociologists in this area, or they may be uncertain regarding the most appropriate measure for their research. We believe SES is an important enough explanatory and/or control variable for research on social phenomena that care should be given to its measurement. In addition, we argue that, even though some disagreement continues regarding issues in social stratification, there is sufficient agreement on the measurement of SES that we can make recommendations.

Our objectives are as follows. First, based on our content analysis of two journals, we will report on how the contributing researchers conceive of SES, how they measure it, and how it is used in their analyses. Second, we will acquaint nonsociologists with how students of

stratification approach stratification theoretically and, from this, identify some implications for measurement. Third, we will describe and assess the appropriateness of measures commonly used by contributors to *Child Development* and measures we recommend as replacements. Fourth, we will discuss several of the unresolved issues associated with measuring SES. Finally, specific recommendations regarding measures and data collection will be made.

Use of SES by Contributors

Our examination of the volumes from the past 2 years of *Child Development* and *Developmental Psychology* has allowed us to draw inferences concerning why SES is included in these studies, how the contributors conceptualize it, and how it is measured. We observed that SES is used for two purposes: (1) as one of the criteria for selecting subjects into studies, and (2) as an explanatory and/or control variable in the analysis. The first use is more frequent than the second.

Although in some instances the selection process involves matching subjects according to particular SES characteristics, it more often involves identifying what is thought to be some homogeneous population from which the subjects are drawn, or worse, merely reporting *ex post facto* to the reader that the population from which the subjects were selected was homogeneous. Here, however, there appears to be a heavy reliance on impressionistic criteria

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in identifying SES levels. For example, typical of the statements in the articles are "Subjects were selected from predominantly middle-class schools in community X," "Subjects were middle-class white children," and "Subjects were first through fourth graders from a middle-class suburban public school." Thus, the implicit assumption is that the subjects are homogeneous with regard to SES, which is conceptualized rather simplistically in terms of certain schools or areas of the community being upper, middle, or lower class in composition.

In articles where the researcher recognizes there still exists considerable SES heterogeneity within such social units, the selection usually relies on Hollingshead's two-factor index (Note 1), which allows for more detailed differentiation by characteristics of the subject's family. In the smaller proportion of studies which use SES for statistical control and/or explanatory purposes, the Hollingshead index also is the measure used most heavily. Finally, we found only minimal sensitivity to the special problems presented in measuring SES in families other than the stereotypic nuclear family.

In sum, and as will become apparent in the material to follow, there exist two major problems with the current use patterns we have described. First, the impressionistic selection criteria control in only a crude way for SES factors and do not allow for assessment of the considerable SES heterogeneity which exists among subjects within the defined category. Second, the Hollingshead two-factor index is outdated and should not be used.

Conceptual and Theoretical Background

The study of social stratification is of major concern to sociologists. The definitions of constructs sociologists use in this subfield, although more formal, are similar to those used by persons outside of the discipline. The term "social stratification," for example, is used to describe a social system (usually a society or community) in which individuals, families, or groups are ranked on certain hierarchies or dimensions according to their access to or control over valued commodities such as wealth, power, and status. A case's relative position (and associated score) on a particular hierarchy

(or combination of hierarchies) may be referred to as its SES.¹

Sociologists are more concerned with analysis regarding these hierarchies than with mere description of the distribution of cases on a dimension. Two analytic strategies are used. One involves viewing the stratification structure as the phenomenon to be explained, that is, the dependent variable, whereas the second views the stratification structure and, more specifically, a case's position in the structure as an explanatory variable in the analysis of some other dependent variable. Although the concern of the readers of this journal is with the second strategy, we believe some brief comments about the first strategy provide necessary background information about issues and debates in stratification theory which have implications for measurement decisions.

Dominant Theoretical Perspectives

Theories directed toward explaining social stratification are often categorized as being consistent with either conflict or functionalist perspectives. The conflict perspective, exemplified by Marxist and neo-Marxist theories, portrays social stratification, its form and magnitude, as primarily the creation of those in the top economic positions in society. It is the conflict theory which usually is relied on by those espousing a "radical" position that major reform and change are necessary because stratification exploits many to the advantage of a few.

The functionalist theory, on the other hand, identifies the differential distribution of valued commodities as necessary to motivate members of society to occupy positions and carry out prescribed tasks. Rewards such as money and prestige differ for various occupations because, without these differences, important positions requiring special training, skill development, and deferred gratification would not be filled. In short, for the functionalist, stratification serves the basic function of ensuring that various positions in society are occupied.

Because adequate tests of particular theories derived from these two perspectives are possible only with extensive cross-cultural longitudinal studies, the question which best explains social stratification will remain a major unresolved issue for some time.

¹ The term "social inequality" became popular in the nonscientific literature in the 1960s and has caught on among sociologists. Although it is not uncommon to find presentations in which social stratification is treated as conceptually distinct from social inequality, we do not wish to enter such a definitional debate and will instead use the terms as more-or-less synonyms.

The Issue of Underlying Dimensions

Another major issue in stratification theory, which derives in part from the theoretical debate, concerns the dimensions or hierarchies underlying stratification. Conflict theory, especially as espoused by Marxists, emphasizes the economic dimension as the most important. The original Marxian account presents a basic dichotomy between the owners and nonowners of the economic means of production. Max Weber, writing in reaction to Marx, argues that stratification is multidimensional. In addition to the economic dimension, there exist two other dimensions which may be independent of the economic dimension. One of these is the power dimension, which differentiates among individuals in terms of their control over others, even against their will. The second is the prestige, or status, dimension, which refers to the honor given to the occupant of a social position.

The economic and prestige dimensions have received the most attention among contemporary sociologists, undoubtedly because both are given priority in the functionalist perspective and the economic dimension still is viewed as the most important among neo-Marxists. The power dimension has not been neglected, but it typically has been studied independently of the other two dimensions, and there currently exist large bodies of literature on societal power distributions (Domhoff 1970; Mills 1959; Rose 1967) and community power distributions (Clark 1968; Dahl 1961; Hunter 1953).

From the literature just reviewed, we may conclude that in the study of social stratification three dimensions—economic, power, and prestige—are theoretically relevant. That is, these are the most valued commodities in a society. They exist as rewards, resources, and privileges and thus may serve as the basis for the ranking of members. This is about as far as the consensus goes, however. There is no agreement as to which of these is the most important or what the interrelationships among them are.

Implications for Measuring SES

Fortunately, a decision about the measurement of SES does not require that a crucial test be made for the competing explanatory theories. Indeed, if it did, sociologists would have made little progress in understanding how SES influences other social phenomena. Progress has been possible because researchers may take the stratification system as given and not

attempt to explain the mechanisms which have operated to produce it and perpetuate it.

The unresolved theoretical issue of which and how many dimensions cannot be discarded so easily, however, since the dimension(s) must be captured by the measurement instrument. Although conclusive empirical evidence does not exist which tells us which dimensions are the most important, there is considerable agreement that occupation-based measures of SES represent the most reliable and valid single measures of an individual's position on the economic, power, and prestige dimensions. In fact, over the past several decades sociologists have relied almost exclusively on occupational status to measure SES.

Blau and Duncan (1967), who provided a seminal analysis concerning the extent of and causes for social mobility across generations, argue for the central position of occupation in industrialized societies because it serves as the basis from which salaries and wages are derived, it grants its occupant authority and control over others and resources, and, as will be discussed, differential status or prestige is attributed to various occupations. Thus, Blau and Duncan conclude, the occupational hierarchy is the underlying dimension of stratification. Likewise, Runciman (1968) concludes that, because of the substantial theoretical and empirical linkages between the three major dimensions, a single indicator is sufficient and occupation is the most reliable for this purpose, especially for industrialized societies. In addition, Haug (1973, 1977), who provides an extensive review of measures, and Featherman and Hauser (1977), who have examined measurement issues in the study of social mobility, agree with this conclusion.

We concur with these claims and believe occupation-based measures are appropriate for researchers who study various development and socialization processes. In the section to follow we will describe and evaluate the measures which have been used by contributors to this journal and the occupation-based measures we recommend. But before these are discussed, it is necessary to comment on why we will recommend that direct measures of the power and the economic dimensions in general not be relied on as measures of SES.

Not only is there little theoretical agreement about how the power dimension is related to economic and prestige dimensions, but there is no consensus on what is to be measured. Some argue there is a pyramid structure

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with a power elite at the top (Hunter 1953; Mills 1959), whereas others contend the distribution of power is amorphous and pluralistic (Dahl 1961). In addition, there exist no generally accepted or easily implemented measurement strategies; the "objective" data such as education, occupation, and income used for most other measures have not been relied on in measuring social power. Fortunately, as indicated above, most researchers are satisfied that occupation-based measures provide information that is generally consistent with the power dimension.²

While there would be few, if any, who would argue the economic dimension is not relevant to understanding the stratification system, direct measurement of this dimension has never been free of serious difficulties. The classic Marxian dichotomy of owners and nonowners of the means of production simply is inappropriate for modernized societies.³ In addition, income or earnings is not desirable as a single best indicator of SES since it does not vary monotonically with either prestige or power, and there exists considerable income heterogeneity within occupation categories, even with fairly detailed classifications. In addition, income is unstable when compared with occupation because events such as strikes, layoffs, depressions, and wars will differentially influence incomes within occupations and across occupations at a given point in time. Also, comparisons over time, as well as regional and cross-cultural comparisons, require adjustments for price and consumption differences. Finally, response error is more likely to be a problem with income than with occupation.

² For those in research situations which involve group interaction, the power dimension, which may be operationalized through a rank order measure, may be relevant. One major tradition of social psychological research within sociology makes extensive use of what could be viewed as the power dimension of a group's stratification system as a determinant of group interaction. Beginning with research by Bales and his colleagues in the 1950s (Bales 1950; Bales & Slater 1955; Bales, Strodtbeck, Mills, & Roseborough 1951), findings suggested that the status and/or power rankings within groups influenced the initiation of acts (verbal contributions to discussion) as well as outcomes of discussion. While early studies used field populations as subjects, including military personnel (Torrance 1954) and mental hospital professionals (Caudill 1958), more recently work in this tradition has been systematized and formalized by Berger and his colleagues (see Berger, Conner, & Fisek [1974] and Berger, Fisek, Norman, & Zelditch [1977] for summaries). These researchers have developed a program of research based upon strictly controlled experimental studies which have provided evidence concerning the role of power and prestige hierarchies as determinants of small group decision making.

³ We would be remiss, however, if we did not mention that there have been several recent attempts (Robinson & Kelley 1979; Wright 1978; Wright & Perrone 1977) to measure the Marxian class dimension and the authority dimension of Dahrendorf (1959) and to assess the relationship of these to personal earnings.

⁴ This is a question which has not been seriously addressed by most writers. Haug, e.g., who has published numerous papers on stratification measurement, does not consider this a source of potential problems for the researcher.

Some remarks also are necessary about the use of education as the single best indicator of SES. Although many theories certainly suggest that education is a causal factor operating to affect where the person is placed on the power, economic, and prestige dimensions, there is disagreement as to whether this variable operates to reduce or to perpetuate the transmission of SES from one generation to the next (Blau & Duncan 1967; Bowles & Gintis 1976). In addition, on empirical grounds, we must dismiss use of education as a valid proxy for any of the dimensions since it correlates only .56 with the Duncan Socioeconomic Index (SEI) and .50 with the Siegel Prestige Scale (Featherman & Hauser 1977), both of which are occupation-based measures. There also exists considerable heterogeneity in income and occupation within each education level.

As will be suggested in our Recommendations section, we are not saying that no attention should be given to income and education as SES indicators. They can provide important supplementary information, and, if no other data are available, they should be used. However, we cannot recommend that either be viewed as the single best indicator of SES.

Commonly Used Measures of SES

Concluding that occupational status represents the single best indicator of SES does not solve the measurement problems, however. Two questions must be addressed. First, what criteria should be used to rank the occupations? Second, what data on occupations must be obtained from respondents in order to use these measures?⁴

One major strategy derives a ranking by utilizing information on the educational requirements—the social component—of an occupation and the monetary rewards—the economic component—of the occupation. Using this strategy, Edwards (1933, 1938) developed a ranking system for U.S. Bureau of the Census occupations which still serves as the basis for the current Census classification scheme. After placing occupations from the detailed list into what he considered to be major homogeneous groupings, Edwards based his ranking of these on his assessment of the education and income levels of the incumbents to the occupations. He reasoned that education conveys social status on the occupation and, in turn, on the incumbents, and in a similar manner income conveys the economic status. Today sociologists would probably restate such linkages as follows: education reflects the skill and knowledge prerequisites of an occupation, whereas monetary returns reflect rewards for performing the duties associated with the job.

Edwards's original scale consisted of six major categories and four additional subgroups, for a total of 10 (see table 1). Various revisions have been made for each dicennial census, resulting in the 1970 categorization of 12 major categories (see table 1). Some of the major changes include a retitling and reorganization of the manager and blue collar categories, the separation of sales and clerical workers, the movement of farm categories nearer to the bottom, the addition of the service worker cate-

gory, and the renaming of the servant classes as private household workers.

Also in table 1 are a number of intuitively obvious and commonly used categorization schemes which collapse over several of the 12 categories. The major problem with the basic Census scheme for assigning SES scores is the heterogeneity within categories. For example (U.S. Bureau of the Census 1973), the professional, technical, and kindred category includes lawyers with a median income of \$18,700 and median education of 17+ years. In the same category are radio operators with a median income of \$7,300 and a median education of 12.5 years. The craftsman category, although not as heterogeneous, includes locomotive engineers with a median income of \$11,500 and a median education of 12 years, as well as tailors with a median income of \$6,800 and a median education of 9.8 years. The service category includes airline stewardesses with a median income and education of \$8,900 and 12.5 years, respectively, and busboys with a median income of \$940 and a median education of 10.8 years. Using one of the schemes with fewer categories of course results in even greater intracategory heterogeneity (see Hodge & Siegel [1966] for a more detailed discussion of the problems with the U.S. Census classification scheme).

In sum, if the goal is to rank individuals in terms of socioeconomic status, use of the Edwards scheme or some variation of it is not advised.⁵ Even if one has available only crude

TABLE 1
1940 AND 1970 U.S. CENSUS OCCUPATIONAL CATEGORIES AND OTHER SCHEMES

1940	1970	Others	
Professional	Professional, technical, and kindred workers	Professional and managerial	Nonmanual (white collar)
Proprietors, managers, and officials	Managers and administrators, except farm	Clerical and sales	Manual (blue collar)
Farmers (owners and tenants)	Sales workers	Skilled	Farm
Wholesale and retail dealers	Clerical and kindred workers	Semiskilled	
Other proprietors, managers, and officials	Craftsmen and kindred workers	Unskilled	
Clerks and kindred workers	Operators, except transport	Farm	
Skilled workers and foremen	Transport equipment operators		
Semiskilled workers	Laborers, except farm		
Unskilled workers	Farmers and farm managers		
Farm laborers	Farm laborers and farm foremen		
Laborers, except farm	Service workers, except private household		
Servant classes	Private household workers		

⁵ Another detailed classification scheme is provided by the U.S. Department of Labor (1977). It groups some 22,000 separate occupations (with over 35,000 titles) into nine major categories. In addition, the occupations are differentiated with regard to the extent (a range from not at all to the most complex functional relationship) to which the work activities involve

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occupational data, there are more appropriate ways of assigning SES scores.

Hollingshead Two-Factor Index of Social Position (ISP)

Haug (1977), in her extensive review of various measures of occupational indices, claims that the Hollingshead index (Hollingshead, Note 1) has fallen into relative disuse. However, as mentioned above, it is this index which has been most widely used by those publishing in *Child Development* and *Developmental Psychology* during the past few years.

Hollingshead's index is based on the sum of two weighted components, education and occupation. The seven occupation categories and their unweighted scores are:

- 1 = Higher executives, proprietors of large concerns, and major professionals.
- 2 = Business managers, proprietors of medium-sized businesses, and lesser professionals.
- 3 = Administrative personnel, small independent businesses, and lesser professionals.
- 4 = Clerical and sales workers, technicians, and owners of little businesses.
- 5 = Skilled manual employees.
- 6 = Machine operators and semiskilled employees.
- 7 = Unskilled employees.

This classification is similar to the Census scheme, but, as may be seen, it is different in that Hollingshead ranked proprietors, managers, and farmers according to the type, size, and value of their enterprise. Allocation of specific occupation titles to these seven groupings was primarily based on the skill requisite in the occupation and the economic power associated with the occupation. In addition, Hollingshead reports the following were taken into account: (1) size of the industry; (2) span of control in decision making; (3) how society evaluates the occupation with respect to manipulation of things, people, and ideas; and (4) the cleanliness or dirtiness of the job.

Education was scaled from 1 to 7 (1 representing high, as is consistent with the occupation scaling) and includes graduate professional training, college graduate, some college, high school diploma, some high school (tenth and eleventh grades), junior high school

(seventh, eighth, and ninth grades), and less than seventh grade. A rationale for these groupings is not provided. Hollingshead weights the education score by 4 and the occupation score by 7 and sums these two products to arrive at a scale with a theoretical range of 11–77. He identifies cut points which result in five classes, claiming that this results in meaningful categories for identifying a person's social class position.

Although Hollingshead claims to have validated this scale and the break points in research on mass communication and associated behavior patterns, there exist a number of problems with the index. It is outdated; some of the occupation titles listed are not on the three-digit detailed Census list, and in some instances Hollingshead makes finer distinctions for some of the categories (professional and managerial positions) than does the Census. In short, the index has not been revised to meet changes in labor market and occupational structures. Another major limitation is that the list of occupations and status scores includes only about 300 titles and thus does not cover the approximately 450 occupations in the 1970 Census three-digit list. The reason for this is that Hollingshead developed the index for the study of a single community and obtained information only on the occupations which appeared in that sample. Finally, since the scoring of the occupations is based on data from a single New England community, the measurement and coding reliability for sizable, well-defined populations is unknown, as is the quality of the weighting scheme.⁶

SES Measure for Research on Health Behavior

Green (1970), primarily in response to the inadequacies of Hollingshead's ISP, developed a scoring procedure designed for use by those conducting public health research and evaluation. In establishing the rationale for health researchers paying attention to sociological variables like SES, Green argues that normal preventive health behavior is more highly correlated with income, education, and occupation than other personal attributes (which are not identified). He concludes that this re-

dealing with data, people, and things. Six-digit codes are then used for each occupational title, and the occupations are grouped according to 114 required worker traits, which are subdivided into 22 areas of work. This classification scheme, probably because of its complexity and the nearly complete lack of data sets using this coding scheme, has not served as the basis for the occupation-based measures of SES.

⁶ Those interested in a more detailed critique of the Hollingshead two-factor index are directed to the exchange between Haug and Sussman and Hollingshead which appeared in *Social Forces* (Haug & Sussman 1971a, 1971b; Hollingshead 1971).

relationship is indicative of differences in social norms regarding various health matters. That is, individuals at different socioeconomic levels subscribe to different health care norms and/or vary in their degree of support for these norms.

Green's strategy for developing a measure is implicit in his definition: "Socioeconomic status is defined in this system as the relative position of a person, family, or neighborhood in a hierarchy which maximally reflects differences in health behavior" (1970, p. 816). His goal is to obtain a composite measure (based on income, education, and occupation) which maximally correlates with health behavior. In short, predictive validity becomes the criterion by which the measure is selected. Once developed, then the scale represents ". . . a composite of characteristics which reflect the expected level of preventive health behavior in the persons, family, or neighborhood scored" (p. 816).

His manual for scoring involves two steps. In the first step, the researcher assigns scores (derivation described in Green 1970) to the educational level of the female adult in the household (which is chosen because it correlates more highly with health behavior than does the male's education), as well as to annual family income before taxes and the main earner's occupation. The second step involves combining these three scores according to a set of weights. These weights were derived when the criterion variable, a composite index of nine items which measure actual preventive health behavior, was regressed on the education, income, and occupation scales using a statewide sample ($N = 1,592$) of California families with at least one child under 5 years of age. The regression weights were .5 for education, .3 for income, and .3 for occupation, leading Green to conclude that the female head's education was the most important component of SES. A multiple R of .50 is obtained for the equation. Green concludes that this scale will optimally control for SES and/or allow for its influence to be assessed when health behavior is being studied. Researchers apparently agree, as a cursory review of the health services literature reveals that this measure is supplanting the once-accepted Hollingshead ISP.

Although the strategy adopted by Green has a certain appeal and health behavior re-

searchers cannot really be criticized for using it, we cannot recommend that this measure be used outside of the health behavior field or that the strategy used by Green for developing the measure be followed by others. We can identify a number of reasons for taking this position.

First, the scale is validated against health behavior, a variable specialists from other disciplines may know little about and for which generalizing to other dependent variables is at the very least questionable and most likely inappropriate. Second, use of a single index does not allow the researcher the opportunity to assess the explanatory importance of the various components (education, income, occupation) of the index. Third, using Green's strategy as an exemplar would suggest that researchers in various disciplines and specialty areas create an SES scale validated against dependent variables they are interested in. If our goal were to encourage academic disciplines to engage in research in isolation from one another and if the personnel and funds were available for updating each of these several dozen scales to correct for societal changes, then we could reluctantly recommend such a strategy. However, the first condition is not desirable and the second is unlikely. We argue that a single occupation-based scale, such as the Duncan SEI or Siegel Prestige Scale, which has been validated in terms of its relationship to commonly accepted stratification dimensions, should be used by all social science disciplines.

Siegel Prestige Scale

The Siegel Prestige Scale (Siegel, Note 2) is widely used in sociology.⁷ In contrast to the Census scale or the Green measure, development of the Siegel scale is based upon the assumption that ranking of occupations is socially defined. That is, the general public's estimate of social standing or prestige is used in arriving at the ranking.

Three sources of data were used in scale construction. In a 1964 NORC research project a card-sort task was given to a national random sample of 923. The respondents were asked to sort each occupation into one of nine boxes (ladder format representing high to low social standing). Some 203 job titles had been selected over all major Census categories in proportion to the actual 1960 distribution of the male experienced civilian labor force. In 1965

⁷ This is due largely to the availability of data from the survey studies conducted by the National Opinion Research Center (NORC), which routinely codes occupational data in the form of Siegel scores.

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another NORC study was conducted in which 153 additional job titles were sorted using the same procedures as in the 1964 study. These data were then combined with those obtained from a 1963 study designed to replicate the 1947 North-Hatt study (to be described in the section on the Duncan SEI). A scale with a theoretical range of 0–100 resulted.

There is considerable evidence (Hodge, Siegel, & Rossi 1964; Hodge, Treiman, & Rossi 1966; Siegel, Note 2) that the prestige ranking of occupations by the general public is very reliable: it is stable over spans of several decades, over various subpopulations of rankers defined by sociocultural characteristics, across geographical regions, and across numerous societies. Since the research on what raters take into account in ranking occupations clearly shows a large variety of criteria are employed (Reiss 1961; Siegel, Note 2), its validity as a measure of social prestige has been questioned. Overall, this research has shown that in the United States monetary and education-related reasons are most often given for the ranking. From this we may conclude, as do Featherman and Hauser (1977), that the dominant underlying dimension is socioeconomic in nature. Supporting evidence for this is also supplied by Goldthorpe and Hope (1974) in their study of prestige rankings of occupations in Great Britain.

We may conclude, then, that even though the actual prestige ranking of occupations has received remarkable cross-cultural and overtime validation, this measure, which ostensibly measures status or prestige, actually mirrors a socioeconomic dimension. This takes us to the most often used measure, the Duncan SEI, a measure specifically designed to capture the socioeconomic dimension.

Duncan SEI

This index (Duncan 1961) was actually developed in the early 1960s to estimate the North-Hatt prestige ratings for the Census occupations not originally included in that scale.⁸ Each SEI score is obtained by using the following regression equation: $SEI \text{ score} = 0.59X_1 + 0.55X_2 - 6.0$, where X_1 is the percent of

the males in the occupation with incomes of at least \$3,500 and X_2 is the percent of males in the occupation who are at least high school graduates. The 1950 Census data, corrected for differences in age distributions, were used for X_1 and X_2 . The regression weights were obtained by regressing the percent excellent and good ratings from the North-Hatt study for each occupation on X_1 and X_2 . Because not all titles from the original scale were directly comparable to the Census titles for which the education and income data were available, only 45 of the original 90 occupations could be used in estimating the equations. This equation, which produced a multiple R of .91, was used to estimate the scores for the three-digit Census occupations. Recently, Featherman and Hauser (1977) updated this scale to correspond to the 1970 U.S. Census three-digit classification (see Featherman and Hauser [1977, p. 60] for a discussion).⁹

Other Occupation-based Measures

Two additional measures have appeared in the literature which, although not widely used, deserve mention. The Standard International Occupational Prestige Scale has only recently been introduced by Treiman (1977), who proposes that it serve as a standardized scale which will enable cross-cultural comparisons. The scale is based on data from 55 nations for which prestige data were available. Occupations were coded in terms of the *International Standard Classification of Occupations, Revised Edition* (1969), used by the International Labor Office. Treiman views the scale as appropriate for the United States, all industrialized societies, and all developing countries, but warns that it may not be as valid where a large proportion of the labor force is in agriculture. Probably because of its recentness, as well as the absence of cross-cultural research where the individual is the unit of analysis, the scale has not yet been generally accepted or used in the stratification literature.

The second measure, one which has been used very little, is the occupation component of the Socio-Economic Status Index developed by Nam while at the U.S. Bureau of the Census (U.S. Bureau of the Census 1963). The

⁸ The North-Hatt prestige scores were produced from data collected in a 1947 national survey by NORC (1947). The respondents were asked to rate the "general standing" of 90 occupations by placing each on a five-step scale ranging from excellent to poor. These data were then used to form a scale which ranged from a high of 96 for Supreme Court Justice to a low of 33 for shoeshiner.

⁹ Revised Duncan scores will soon be available (Featherman & Stevens, in press) which discriminate among occupations of the same title but in different industries (or among the various classes of worker).

scale assigns scores from 0 to 100 on the basis of Nam's use of U.S. Census data on education and income distributions for the occupations scaled. The scale has recently been revised using 1970 Census data (Nam, LaRocque, Powers, & Holmberg 1975; Powers & Holmberg 1978). Nam and Powers (1968) report that the earlier version correlates very highly (.97) with the Duncan SEI, suggesting that the two indices are measuring the same phenomenon. However, Haug (1977) correctly argues that this is misleading because it is based on using occupations as the unit of analysis. When using a sample of individuals scored with both Duncan SEI and Nam's index scores, the correlation between the two scales was .75, indicating a much lower correspondence between the two scales when used in research.

While our focus in this section has been on the prestige and socioeconomic dimensions of occupations, some very recent work within sociology directs attention to other dimensions along which occupations vary. In particular, one researcher has recently argued that occupational authority and job complexity are dimensions which, although related to prestige, are conceptually and empirically distinct (Spaeth 1979). Other investigators have focused on differences in job authority as explanations for male/female earnings differences (Roos, Note 3) or have looked at determinants of these sex differences in authority levels (Wolf & Fligstein 1979). This line of research is of interest to sociologists for a variety of theoretical reasons which cannot be detailed here. There is, however, no evidence to suggest that occupational differentiation based on authority, for example, would yield different results than differentiation based upon prestige or SES for the types of psychological research discussed here. Therefore, while we cannot rule out the possibility that these recent findings will have implications for the conduct of psychological research, such implications are not apparent at this time.

Data Necessary for Using the Duncan SEI and Siegel Prestige Scoring Systems

Both the Duncan and Siegel measures require the same raw data, the three-digit U.S. Census occupation codes. The U.S. Census Bureau has for some time used standardized questions to obtain the information necessary for assigning the three-digit codes. More recently, stratification researchers and survey research organizations have collected their occupation data in this standardized manner. Three pieces of information are obtained: occupation, in-

dustry, and class of worker. The exact questions are as follows:

- 1A. What kind of work were you doing?

 (For example: electrical engineer, stock clerk, farmer.)
- 1B. What were your most important activities or duties?

 (For example: kept account books, filed, sold cars, operated printing press, finished concrete.)
- 1C. What kind of business or industry was this?

 (For example: TV and radio mfg., retail shoe store, State Labor Dept., farm.)
- 1D. Were you: (Mark one.)
 an employee of a PRIVATE company, business or individual for wages, salary, or commissions? .. PR
 a GOVERNMENT employee (federal, state, county, or local government)? GOV
 self-employed in OWN business, professional practice, or farm?
 own business not incorporated (or farm) OWN
 own business incorporated .. INC
 working WITHOUT PAY in a family business or farm WP

The information on industry is used to differentiate particular occupations which cannot be given the same score across industries, whereas the class of worker information is necessary only to differentiate between self-employment versus salaried (wages).

Once the three-digit code is assigned, then one need only assign the Duncan or Siegel score associated with the three-digit score. A table with three-digit codes and corresponding Siegel and Duncan scores is available in Featherman and Hauser (1977) or upon request from the authors.

Coding the occupational data in terms of the three-digit code requires time and care. Featherman and Hauser (1977) have written a manual explicitly designed for this purpose. This is a "must" for those serious about assigning scores correctly.

If the researcher has access only to crudely categorized occupational data, it is possible to assign scale scores which have been computed for major occupation groups. Table 2 displays these for both Duncan and Siegel scales. Although there is considerable heterogeneity of scores within each category, this is

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TABLE 2
DUNCAN SEI AND SIEGEL PRESTIGE SCORES
FOR MAJOR OCCUPATIONAL CATEGORIES

OCCUPATIONAL GROUP	SCALES	
	Duncan	Siegel
Professional, technical, and kindred	75	60
Managers, officials, proprietors.....	57	50
Clerical and kindred.....	45	39
Sales and kindred.....	49	34
Craft and kindred.....	31	39
Operatives.....	18	29
Service.....	17	25
Nonfarm labor.....	7	18
Farmers and farm managers.....	14	41
Farm laborers.....	9	19

SOURCE.—Featherman and Hauser 1977, p. 17.

superior to impressionistically identifying cases as upper, middle, and lower class.

There exist some data on the reliability of occupation reports, which must serve as the "raw data" for the SES measures we recommend. Siegel and Hodge (1968) have estimated the test-retest reliability of respondent's current occupation to be .87. Unfortunately, many of the occupation reports researchers must rely on are retrospective (reports about occupations held in the past), by proxy (e.g., children reporting on parents), or even retrospective reports by proxy. On the issue of retrospective reports, Walsh and Buckholdt (1970) obtain a correlation of .80 between occupation reports 5 years apart: the 1963 occupation reported in 1963 and again in 1968. With respect to proxy reports, Mason, Hauser, Kerckhoff, and Poss (1976) find that young schoolchildren (below ninth grade) cannot accurately report paternal occupation, but the reports of those between ninth and twelfth grade are as accurate as those of the parents. For proxy retrospective reports Blau and Duncan (1967, p. 462) find a correlation of .74 between adult men's reports of their fathers' occupations (when the respondents were aged 16) and the fathers' own reports. From these data we may conclude that (1) retrospective reports are reasonably reliable, but their accuracy declines with time; and (2) proxy reports about parent's current occupation by children above ninth grade are very reliable, but such proxy reports decline in reliability when retrospective information is requested.

Current Issues and Strategies

The Individual versus the Household or Family as the Unit of Analysis

As in every field of social science, the con-

cepts and measurement strategies utilized in sociology are a partial function of the dominant social forms which exist in society at the time the questions are raised and the measures devised. With reference to measurement of socioeconomic status, it should be obvious from the above discussion that the measures of occupational status and prestige and use of earnings as an indicator of SES may be more appropriate for traditional nuclear families than for many of the other family forms prevalent today.

The traditional method of measuring family (household) social status is to assume that the work status of the household head, who is assumed to be male, provides the source of social status for the family. Hence, one assumes that a family with a head who is a lawyer has higher social standing (prestige as well as income) than the family whose head is an unskilled laborer. At the very least, the increase in the number of single-parent families, the increased labor force participation of mothers, the new awareness of the direct contributions which housewives make to family income and status, and considerations of sex differences in job prestige raise important questions concerning utilization of the measures discussed above.

The first complication we discuss with reference to the traditional model concerns the issue of sex differences in job prestige. We recognize that an increasing proportion of families are headed by females. It is therefore reasonable to use the female head's work status as the basis for determining family social standing. A question arises, however, concerning the use of job prestige measures in such cases: Can we assume that the prestige of a female dentist is the same as that of a male dentist? Given the general tendency for society to devalue women's work, it has been argued that the female's prestige will be lower. Others have argued that, due to sex discrimination, the prestige of the female dentist should be higher, since she has undoubtedly had major obstacles to overcome in achieving her job status that were not faced by men. If there are sex differences in job prestige, how can we accurately measure this construct for both sexes?

The convention in sociology at this time is to assume that male and female incumbents of the same occupation have equal prestige. This notion is based upon findings by Bose (1973), who had subjects rank a series of occupations with male, female, and no incumbents. Results suggested that the sex of the incumbent had only a small effect upon the rating that the occupation received, with wom-

en incumbents receiving slightly higher ratings. In contrast to these cross-sectional findings, we must recognize that over time the prestige level of an occupation may not be fixed if its sex ratio changes. Touhey (1974a, 1974b) reports that, when subjects are informed that a traditionally male occupation is to be increasingly dominated by women, it receives lower prestige ratings than when they are told the percentage of women in that job will remain constant. He also finds that, when subjects are informed that a traditionally female occupation will be increasingly dominated by men, it receives higher prestige ratings than when they are told that the percentage of men in the job will be unchanged. An additional investigation by McLaughlin (1978) also helps place Bose's findings in perspective. McLaughlin argues that, although men and women may occupy jobs of equal or nearly equal prestige, their earnings differ in part because the income potential of the jobs differs in terms of other job characteristics (i.e., types of skills demanded). Taken as a whole, these findings indicate that, while it is legitimate to use the Siegel prestige scores for females as well as males, we should be alert to the possibility that changes in the sex composition of occupations over time may render these ratings obsolete, despite earlier evidence of the temporal stability of the scores (Hodge et al. 1964). Given that the sex composition of occupations tends to change very slowly, however, this problem may be minimal.

A comparable decision can be made for the Duncan SEI. Parnes, Shea, Spitz, and Zeller (1970), report that Duncan scores are equally well predicted by female education and income levels as by the male educational and income characteristics which were used to create the Duncan scores initially. Treiman and Terrell (1975) do argue, however, that the prestige structure of occupations is more invariant than the socioeconomic structure of occupations and that, although the difference is very small, a prestige measure is preferable to a socioeconomic measure when cross-sex comparisons are made.

The issues discussed here are joined by another question germane to the study of socialization, namely, If one parent's social status is to be measured, should it always be the father's? If the mother is the dominant caretaker of the child, then it could be her social status which would influence development directly, with father's status possibly playing a much lesser, indirect role. For example, it may be legitimate to use mother's education as the sole indicator of SES if the researchers' theory

suggests that the educational level of the primary caretaker is what produces variation in a given aspect of development. Of course, given the increase in working mothers, we cannot always assume that the mother is the dominant caretaker. In any case, measuring the social status of women, whether they work inside the home, or both outside and inside the home, is an issue which we must seriously address. If one parent is to be selected, such selection must be accomplished according to the specific goals of individual research problems.

Measuring Household SES

A second major concern we face in evaluating family social standing is how to incorporate both the husband's and the wife's work statuses when both spouses are employed. Given the increased proportion of families with both spouses working, it is no longer reasonable to assume that the male's work status solely determines family social standing. Earnings of both spouses can be combined, but until recently there was no clear guidance for combining prestige or status scores or years of education, and no guidance for combining these separate dimensions into a global measure of SES. Haug (1973), for example, suggested that a family's social status ought to be measured according to the level of the more prestigious spouse's occupation; otherwise, up to one-third of all families would be misclassified lower on the Hollingshead index. Such a strategy has the disadvantage of neglecting to use available information and has not been generally adopted.

Fortunately, an extensive program of research conducted by Peter Rossi and his colleagues now provides empirical guidance for researchers seeking to measure SES for a variety of family situations (Bose 1973; Nock & Rossi 1978, 1979; Rossi, Sampson, Bose, Jasso, & Passel 1974; Sampson & Rossi 1975). Each of these studies is based upon a common method. First, the research assumes that the goal is to measure household as opposed to individual social status and that households may be described in terms of characteristics such as the educational levels and occupations of the spouses, race and ethnicity of the couple, number and age of children, family migration history, single versus multiple adults present in the household, and spouses' fathers' social statuses. In each study a subsample of these variables is selected for analysis and vignettes prepared where a family is described, for example, in terms of spouses' years of education and occupations and race (Sampson & Rossi 1975). Implausible combinations of family

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characteristics are eliminated (e.g., a medical doctor with less than 16 years of education), and a subset of the resulting vignettes is shown to each respondent in a modified probability sample. Respondents are asked to rank the status of the family by placing the card describing it in a box with nine slots, with 9 representing the highest status and 1 representing the lowest. Resulting scores are transformed to correspond to the 0–100 scale used by Siegel, and these scores serve as the dependent variable for subsequent analysis. Multiple regression is used to empirically derive the weights by which the respondents implicitly ranked the hypothetical families.

While some of the findings produced in these studies have been more thoroughly replicated than others, a number of conclusions can be stated. First, when studies include the occupations of both husbands and wives in addition to other family characteristics, the husband's job is weighted more heavily than the wife's in determining family social status. Second, analysis of the standardized regression coefficients shows that occupation is more important than education in determining social status. Third, achieved statuses such as occupation and education are more heavily weighted than ascribed statuses such as sex, race, and spouses' fathers' statuses. Fourth, there is generally strong consensus concerning these ratings across groups of raters who vary by race and sex.

In terms of the implications of these findings for researchers generally, it is possible and

advisable to use the regression weights derived by Rossi and his colleagues to measure family social standing if the researcher has used these same scales of measurement. Table 3 presents some of the coefficients taken from Nock and Rossi (1979), which enable us to assess SES for several types of family situations. We use one of the three regression equations depending upon the particular type of household being evaluated. Occupational prestige is measured via Siegel prestige scores. To compute the Nock-Rossi prestige score for a given example, the sum of the products of the appropriate regression coefficients and mean levels on the given variables is added to the appropriate constant.

To take an example, suppose we wish to compare the social statuses of households consisting of (1) a never married male computer programmer, (2) a divorced female secretary with two children, and (3) a married couple where both spouses are secondary school teachers and they have one child. We see from the calculations summarized in table 4 that use of the Nock-Rossi equations introduces additional sources of variation into the status scores beyond that introduced by the head's occupation. The computer programmer's status is raised above the raw prestige score, principally due to years of schooling. The secretary's social status is also raised above the raw prestige score over 26%, despite the negative effects due to her age and having two children. The household consisting of the two schoolteachers gains more than 20% in status using the Nock-Rossi

TABLE 3
REGRESSION OF PRESTIGE SCORES ON VIGNETTE CHARACTERISTICS FOR SEVERAL HOUSEHOLD TYPES
(Unstandardized Regression Coefficients and *t* Values)

VIGNETTE CHARACTERISTICS	ONE-PERSON HOUSEHOLD				MARRIED COUPLES WITH MINOR CHILDREN	
	Never Married		Divorced		<i>b</i>	<i>t</i>
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>		
Husband/single ^a occupational prestige . . . . .	.553	490.3	.452	315.1	.434	727.6
Husband/single ^a education (years)	1.110	41.6	1.429	57.8	.704	138.8
Husband/single ^a age (years)	-.009	.05	-.018	.18	.025	3.1
Single sex . . . . .	.544	.2	.412	.14		
Number of minor children			-.997	9.6	-.079	.6
Wife occupational prestige . . . . .					.391	621.5
Wife education . . . . .					.497	70.8
Interaction wife/husband occupation					-.002	26.2
Intercept	16.61	37.1	21.7	61.5	10.5	110.4
<i>R</i> ² . . . . .	.178	159.2	.141	91.9	.183	757.0
<i>N</i> ^b		2,956		2,801		23,653

SOURCE.—Nock and Rossi 1979.

^a Refers to values for the persons in one-person households or to husbands in married couples' households.

^b Refers to the number of vignettes of each household type.

TABLE 4
COMPARISON OF SIEGEL AND NOCK-ROSSI
PRESTIGE SCORES

	Siegel Score	Nock- Rossi House- hold Score
<i>Computer programmer</i> : male, never married, 14 years of schooling, aged 24.	50.6	59.9
<i>Secretary</i> : female, two children, divorced, 13 years of schooling, aged 30.	46.5	54.6
Two <i>secondary teachers</i> : both with 16 years of schooling, one child; he is aged 32. (each)	59.8	72.6
<i>Plumber</i> : 12 years of schooling; married to <i>bookkeeper</i> : 12 years of schooling; 2 children; he is aged 35.	40.6 47.3	58.0
Male <i>secondary teacher</i> : aged 32, 16 years of schooling.	59.8	67.7
Male <i>secondary teacher</i> : aged 32, 16 years of schooling, married to <i>theater usher</i> with 10 years of schooling, 1 child.	59.8 14.9	57.4

equation as opposed to a single prestige score. We notice, though, that there is a negative interaction term for the husband's and wife's occupational statuses (see table 3), which suggests that there may be a "ceiling effect" operative in terms of the increments in status obtainable through the spouses' occupations.

An additional example further indicates the underestimation of family social standing which can occur if the wife's contributions are ignored. Assume we have a plumber married to a bookkeeper. They have two children, and both spouses are high school graduates. According to the Nock-Rossi equation, that family has a social status score of 58.0, which is almost 43% higher than the prestige score for the plumber alone (40.6). It is also possible for losses in social standing to occur due to family composition changes. If a male secondary school teacher (Siegel prestige = 59.8) remains single, at age 32 with his college degree and job he has a social status of 67.7. If he marries a theater usher with 10 years of schooling and they have one child, the family's social standing is 57.5, over 10 points lower than his status before marriage and over two points lower than his raw prestige score. We also note that work by Bose (1973) has provided us with

a prestige score for housewives, 46.9, which allows prestige assessment for families where the researcher wishes to incorporate the homemaker's status contribution, even though the work is unpaid.

Since these findings produced by Rossi and his colleagues are very recent, the measures have been little used, and there may be problems with the strategy which we have yet to discover. However, they constitute a major advance in measurement of SES in that they allow incorporation of a variety of household characteristics and use an empirically derived weighting scheme. Use of this method is far superior to impressionistic methods and may generally be preferable to use of a single prestige or status score when family SES is theorized to be relevant or when a multidimensional SES measure is desired. Researchers planning to use this method of SES measurement should consult the articles cited above in order to select the regression equation most appropriate for their problem.

Multiple Indicators

While Rossi and his colleagues have developed one method for providing a multidimensional measure of SES, a second strategy for dealing with this problem also has evolved in recent years. Utilizing principles of analysis of covariance structures as developed by Jöreskog and others (Goldberger 1973; Jöreskog 1973; Sörbom & Jöreskog, Note 4), it is possible to include multiple indicators of the global construct SES along with other variables in any model which can be expressed as a set of structural equations. Figure 1 illustrates one simple model which uses this format.

The example shown posits a correlation between socioeconomic status and internal-external locus of control. Research by Rotter and his colleagues (Rotter 1966) suggests that higher SES individuals are likely to evidence an internal locus of control, while lower SES individuals are more likely to evidence an external locus of control. In this case the unmeasured constructs are SES and locus of control. The SES is measured by indicators of occupational prestige, education, and income. The arrows connecting SES to the indicators are interpreted as causal arrows, and that portion of the model is analogous to a factor analysis model.¹⁰ Similar relationships exist for the locus

¹⁰ This representation suggests that SES "causes" occupation, education, and income. This may be misleading, since sociologists usually view SES as a composite of standing on occupation, education, income, and other status dimensions. Thus, as one reviewer has suggested, it

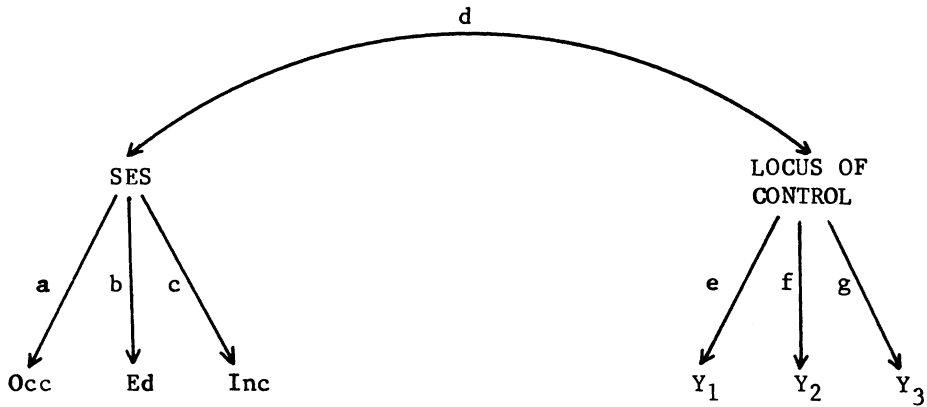


FIG. 1.—Multiple indicators model representing the correlation between SES and locus of control.

of control portion of the model. In this case we assume that the researcher has developed three indicators of locus of control which may be three previously constructed scales, portions of scales, or even individual scale items. The curved, double-headed arrow between the unmeasured constructs symbolizes the correlation between them without implying directionality of causation. The statistical program LISREL developed by Jöreskog and others (Jöreskog & Sörbom 1978) takes as input the covariances among occupational prestige, education, income, and the three locus of control measures and produces a maximum likelihood estimate of the relationship between the two unmeasured variables, SES and locus of control. Use of this method requires no a priori assumptions concerning the relative weights of the indicators as components of the constructs. In fact, output from the analysis contains the path coefficients a , b , c , e , f , and g , which represent the "validities" of the indicators of the constructs (Wheaton, Muthen, Alwin, & Summers 1977). The correlation, d , is also corrected for unreliability using this method.

Despite the fact that the bulk of past usage has been for correlational analysis, Costner (1971) provides strong arguments that multiple indicator models can detect the operation of demand characteristics in experimental analyses. Alwin and Tessler (1974) and Morgan (1975) provide substantive examples from the social psychological literature which make use of these models in the analysis of experimental

data. Detailed discussion of the many technical issues associated with this technique is beyond the scope of this paper but may be found in sources such as Bielby and Hauser (1977), Jöreskog and Sörbom (1978), and Sörbom (1975). A less technical summary is available in Kerlinger (1979).

Recommendations

As should be obvious from the above discussion, the consensus among sociologists is that occupation-based measures represent the single best indicators of SES. Two of these measures, the Duncan SEI and the Siegel Prestige Scale, are appropriate for use in a variety of research situations. Although there exists evidence that the Duncan SEI is to be preferred for the study of occupational social mobility (Featherman & Hauser 1977), there is little basis for choosing between the two for other types of research, and we do not wish to take sides by promoting one over the other. Either should suffice for purposes of assigning an SES score to an individual or to the head of a household if this strategy is deemed appropriate. An earlier section describes what data must be collected to use these two scales.

It should also be clear that the Hollingshead ISP is outdated and should not be used. The health behavior index developed by Green is validated only by its predictability to health-related behavior, and the weights developed for the three components could easily differ for

is perhaps more appropriate to view the relationships in terms of a canonical model where the causal arrows go from the indicators to the SES construct. However, the formulation shown in fig. 1 has been used in empirical research (Jöreskog & Sörbom 1978; Sörbom & Jöreskog, Note 4).

non-health-related dependent variables. While both the Hollingshead and the Green measures may be appealing on the grounds that they are multidimensional and therefore capture "more" than the occupation-based Duncan or Siegel measures, the multidimensional strategy proposed by Rossi and his colleagues entails fewer disadvantages. First, the regression weights derived by the Rossi research are not specific to a substantively narrow criterion variable. Second, a variety of family types are analyzed. Third, the basic findings are current and have been replicated in several studies. Hence, if the researcher desires a multidimensional measure of SES for either individuals or families, the Rossi et al. strategy is far superior to either the Hollingshead or the Green measures.

The reader might logically wonder whether the occupation-based measures are preferable to the Rossi et al. measure or vice versa. On this point our recommendations are more speculative, since there have been no studies which allow such comparative judgment. It may very well be that, for many research situations, use of either strategy would result in the same findings and/or decisions. The occupation-based measures have the advantage of being widely accepted and used, while the very recent Rossi et al. strategy is relatively untried. We therefore have more information concerning the operation of the occupation-based measures in actual research situations, thus allowing comparison of findings across studies. In contrast, there may be a period of several years before the Rossi et al. strategy provides this advantage. On the other hand, Rossi's approach allows for measurement of family SES without necessarily relying upon measurement of SES for one household member, and this increased flexibility has been sought by many sociologists for some time. It also allows for a multidimensional measure of SES. Sociologists would undoubtedly welcome any research which allowed for the relative evaluation of these two basic strategies.

In the absence of such research, we recommend that, when either the Duncan or Siegel scale is used, it is advisable also to measure education and income.¹¹ As indicated above, these characteristics correlate only moderately with the occupation-based scales and thus provide additional explanatory power when most

social phenomena are being studied. Including these variables in the analysis for explanatory and/or control purposes not only will maximally capture socioeconomic status, but the explanatory importance of each for the criterion variables under investigation may be empirically assessed. The cumulative nature of science will then allow us to decide if just the occupation-based measure is sufficient (which we question, given our experience as specialists of stratification) and whether different weights for the various components are required for different criterion variables.

Our final recommendation concerns the situations in which the authors published in *Child Development* choose to use measures of SES in the first place. As we indicated in the introduction, it appears that many researchers do not control for SES as much as they report *ex post facto* that SES of the subjects was controlled since all subjects came from a middle-class school or neighborhood. We find such statements uniformly unconvincing. To us these statements suggest that the subjects may still be rather heterogeneous within schools or neighborhoods. Whether this heterogeneity will introduce extraneous variation into the behaviors being studied is another question; in fact, it is an empirical issue which can only be addressed for each specific dependent variable. It is therefore up to individual researchers to determine whether SES should be controlled either physically or statistically. In making this decision, however, researchers should be aware of the myriad of behaviors which are associated with SES (see Hurst [1979, chaps. 5–6] and Vanfossen [1979, chaps. 9–12] for summaries of this literature). Whether SES effects are as extensive for variables studied by psychologists as for those studied by sociologists remains to be seen, but such an issue cannot be settled unless appropriate measurement strategies are adopted.

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1. Hollingshead, A. B. Two-factor index of social position. Unpublished manuscript, Yale University, 1957.
2. Siegel, P. M. Prestige in the American occupational structure. Unpublished doctoral dissertation, University of Chicago, 1971.

¹¹ When education is measured, obtain actual years of schooling. When earnings is measured, ask for before-tax income of the head of the household. Use of categories is more likely to result in respondent compliance, but each category should be sufficiently narrow to give fairly accurate data and the total number of categories large enough to cover a wide range of income levels. E.g., intervals of 2 or 3 thousand dollars up to about \$25,000 would suffice.

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3. Roos, Patricia A. Sexual stratification in the workplace: male-female differences in economic returns to occupation. Unpublished manuscript, University of California, Los Angeles, 1979.
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