1. MONITORING SOCIAL CHANGE IN AMERICAN SOCIETY

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THE NOTION that far-reaching change is taking place in the structure of American society is now rather commonplace. However vague our understanding of the basic functioning of our society, we do know that the growth and urbanization of the population, the rising technicality and bureaucratization of work, the general upgrading in standards of living, the spread and increasingly higher attainment levels of education, and the heightened self-awareness and rise of minority groups have created serious social strains. Concomitantly, national concern for the prospects of our society has increased and extended beyond strictly economic considerations—in civil rights legislation, large-scale support of education, programs to alleviate inequalities, medicare, and many other efforts.

Recent social change is such a prevalent and disturbing feature of contemporary life that both specialists and laymen have begun to analyze and question its antecedents and its consequences. The contemporary resurgence of attention to social change may be attributed partly to "the threatening newness of the world,"[1] partly to the many criticisms that social scientists have neglected these problems, and perhaps partly to the enlarged body of descriptive data about our society. For the social scientist, and particularly for the sociologist, an interest in social change represents a return to a major preoccupation of the founders of the discipline, which began more than a century ago. That interest was almost lost among the great majority of sociologists, as both theorists and methodologists addressed themselves to cross-sectional interdependence rather than to sequential links through time. The recent revival of interest may have been provoked as much by practical concerns in reducing the social costs of headlong change, in deliberate social intervention and program evaluation, as by strictly theoretical developments.

It is especially for those who have undertaken responsibility for bringing about publicly approved changes that the notion of "social indicators" is appealing. Such indicators would give a reading both on the current state of some segment of the social universe and on past and future trends, whether progressive or regressive, according to some normative criteria. The notion of social indicators leads directly to the idea of "monitoring" social change. If an indicator can be found that will stand for a set of correlated changes, and if intervention can be introduced (whether on the prime, indicative, variable or on one of its systemic components), then the program administrator may have been provided a powerful analytical and policy tool.

The indicators explored in this volume are *not* designed for program evaluation, although various authors, at our invitation, have noted some practical or policy-oriented implications of the trends discerned and dissected. The volume is heavily weighted toward the scholarly, or analytic, side of the balance between theoretical and practical concerns focusing on large-scale structural change. It asks the primary question: What is changing? Underlying any answer to this question is some theory or model of society, however vague, explicit or implicit.

The chapters in this volume provide the major categories by which we have identified the component parts of a functional system—that society undergoing change. We have proposed four major rubrics for examining structural changes in American society and its constituent features:[2] (1) the demographic base, giving an indication of aggregative population trends, its changing composition and distribution across the nation's surface; (2) major structural components of the society, examining the functionally distinct ways in which a society produces goods, organizes its knowledge and technology, reproduces itself, and maintains order; (3) distributive features of the society, looking at how the products of society—people, goods, services, knowledge, values, and order—are allocated across the several sectors of the American population; (4) aggregative features of the society, suggesting how the system as a whole changes with respect to its inequalities and variable opportunities and in terms of its social welfare.

Our approach does not constitute a theoretical model of American society, for such a model would incorporate the functional and sequential links among the segments. We anticipate, however, that the contents of these chapters may guide us and others in the construction of such models.

MAJOR STRUCTURAL CHANGE AND ITS MEASUREMENT

The term "social structure" has not been accorded a uniform and consensual meaning in the scholarly literature of the social sciences. The uses of the term range from the very inclusive concept of any *pattern of action or relationship*—say, modes of acknowledging introductions to strangers, traffic flows in central business districts, or forms of religious ritual—to the very restricted concept of *social differentiation*, particularly with respect to status inequalities. It is also possible to view structures as *social systems*—complete with values, norms, and motivated actors playing prescribed roles—or, at another extreme, as a set of *statistical categories*—the age structure of a population, the occupational structure of the labor force.[3]

Social change, too, is a term that may cover a wide range of phenomena:

> Social change is the significant alteration of social structures (that is, patterns of action and interaction), including consequences and manifestations of such structures embodied in norms (rules of conduct), values, and cultural products or symbols.[4]

In this introductory essay and in the subjects discussed in this volume, we shall limit our view of structural change to the central functional features of a society's operation. Thus, changes in the way people earn a living, in the size and kinship composition of households, in the forms of maintaining political order are prime candidates for attention. The emergence of leadership patterns in task-oriented small groups, the effects of succession to office on administrative organization, or seasonal variations in air travel, though examples of change, are not of present concern.

Some Theories of Change

Despite general neglect of social change in sociological analysis, that neglect has not been total or totally lacking in attempts at explanatory generalization. We shall briefly examine some of these attempts.

Evolution and Revolution. The once-popular extension of evolutionary theory to social interpretation had almost dwindled away, only to undergo a recent revival on the part of those seeking explanation of long-term change. The notion of evolution seems to have some explanatory value in accounting for cultural diversity in terms of selective adaptation. It also may have some explanatory value for part of the

general course of human experience in terms of long-term cultural accumulation and of increasing social differentiation. For evolutionary theory to be sensible, even as a metaphor, a source of variability must be identified, for otherwise the notion of selection makes no sense. Here the concept of *innovation* is appropriate and, given the purposive and problem-solving proclivities of social man, some innovations may be deliberate and not merely accidental discoveries or inventions.

Nevertheless, evolutionary theory has poor predictive power, and is especially poorly fitted to predict large-scale and rapid change. Although evolution and revolution are often placed in sharp contrast, in many instances the explanation of revolution turns out to be a kind of evolutionary theory. Thus in Marxist or neo-Marxist views, revolution is seen as a necessary consequence of antecedent conditions and events, an unfolding of inescapable sequences. But revolution, of course, does emphasize discontinuity in short-term and large-scale transitions.

Both evolutionary and revolutionary theory are, in effect, *special* theories of structural change. They each account for a portion of such changes, but taken together their total contribution to our understanding (read: capacity to predict) is small. Not all significant structural changes are either gradually accumulative and exemplary of evolution or sharply discontinuous with precedent and exemplary of revolution. Without other explanatory principles we should be in dire straits indeed.

Alternative Prime Movers. Still other simplifying solutions to apparent complexity and instability are available. It has occurred to one or another scholar to find the basic, or ultimate, or long-run, or "in-the-last-analysis" source of change in a particular segment of social functions. Persuasive cases can be presented for several prime movers.

The view that economic changes are primary in the alteration of other social arrangements was scarcely invented by Marx, and since Marx's time has been espoused by interpreters not otherwise Marxist in orientation. The argument here is one or another minor variant of the view that social change is interest-based, and that unequal economic power will yield changes in production systems and allocation of benefits, which, in turn, will have wider ramifications. It is not necessary to the theory of economic primacy that the aggregate consequences must be intended, perhaps by anyone. The distribution and use of scarce productive resources is so essential for a variety of other shared and collective goals that the assumption of a kind of economic

primacy has served well as a first approximation to the explanation of social change in newly developing countries. The heuristic value of a theory does not, of course, validate it as an unchallenged principle.

A very popular variant of economic primacy is the view that technology leads all else. Certainly in the contemporary world we can witness the institutionalization of rationality (including efficiency), the organized support for deliberate improvements in techniques ranging from production of goods to the control of crimes. Yet it is precisely this purposive element that undermines the theory, for this means that some extensions of knowledge will get major attention, and others minor support or none. A modern society "selects" its technology from a universe of alternative possibilities by virtue of deliberate decisions in resource allocation, not through the consequences of mindless or accidental technical innovations.

Both for advanced industrial societies and, especially, for nations seeking to gain admittance to that rather select circle, a fair case can be made out for the leading position of the polity as a prime mover of change, in the form of the organized national state. One theory of modern history would maintain that the few nations initiating the first Industrial Revolution did so largely under decentralized and private sponsorship, with permissive positions taken by political organs supplemented by occasional positive intervention. The argument continues, however, that late-comers cannot tolerate either gradualness or wasteful competition, with the result that the polity is uniquely equipped to mobilize resources for planned achievement of individual and collective goals. There is a clear tone of authenticity to this argument, but it is still partial, for it relates only to "new nations." There is in fact a secular trend toward increasing governmental participation in the economy in *all* contemporary societies, not only in newly modernizing countries. The particular reasons for governmental guidance may differ, and do. But simplification has been pushed too far, and one must hope to have a change-model that will specify the forms and degrees of political initiative to be expected under varying conditions—and some of those conditions will be variable in terms of historical time and in terms of problems that may be peculiar to each country.

Other explanatory principles have claimed adherents, though less conspicuously. At least since Malthus, a kind of demographic determinism has been a somewhat defensible position. Demographic change may be viewed as the aggregated consequences of individually motivated actions and of primarily environmental determinants of mor-

bidity and mortality. No recent theorist has argued that population trends claim exclusive attention, but theorists who neglect demographic dimensions stand on extremely unfirm ground.

Finally, we dare not neglect the claims of ideological determinism. The classic example of the (largely implicit or unintended) structural consequences of an ideological position is that of Max Weber's interpretation of the primary importance of Protestantism in the rise of capitalism.[5] No one would seriously argue that Protestantism is now a sufficient or even a necessary condition for economic modernization. But a persuasive case can be made for functional equivalents of Protestantism as an ideological determinant of structural change. Communism as a quasi-religious movement, and nationalism in its many manifestations, provide examples of explicit rationalizations for current sacrifice in view of future benefits, for the collectivity if not for the individual.

Typologies. Somewhere between the identification of a unique universal principle of structural change and the nihilist position that "everything depends on particular circumstances of time and place," there may be some tenable positions. One is the resort to typologies. Thus, it may well be that generalizations about social sequences can be most readily upheld if limited to, say, either highly developed or to newly developing economies. Each of those categories may need further subdivision. Indeed, if there are not sharp discontinuities in the defining or identifying criteria, scalar ordering may be preferable to the use of types. This would yield propositions of "The more . . . the more," type (which are still essentially cross-sectional), and possibly such propositions as, "The faster the rate of change in X, the greater the probability of dissonance in Y," and even the form, "If X is changing at velocity V_1, Y will change at velocity V_2."

Backing off from the most general level of theorizing by resort to typologies or even cases may be a necessary concession to complexity poorly comprehended. Yet that alone is not enough. One must also have resort to observation.

Quantitative observation and analysis have only recently become fairly general in the "less developed" social sciences, such as political science and sociology. And even so, with the conspicuous exception of sociological demography, little attention has been given to sequential as distinct from cross-sectional or correlational analysis.[6] Yet such observation seems essential if we are to predict (and possibly alter) social

trends, to identify leads and lags, to distinguish proximate causes from proximate effects.

A Note on Measurement

The measurement of social change shares with other targets for measurement a congeries of statistical hazards. The first of these rests in the relation between numbers and meaning. Statistical analysis deals with numbers produced by certain operations and conclusions, based on numbers relating to both the processes producing them and to the explanatory context from which they derive and to which they refer. No item of information, no measure or series of measures, is self-explanatory. For example:

> When we speak of "observing" business cycles we use figurative language. For, like other concepts, business cycles can be seen only "in the mind's eye." What we literally observe is not a congeries of economic activities rising and falling in unison, but changes in readings taken from many recording instruments of varying reliability. These readings have to be decomposed for our purposes; then one set of components must be put together in a new fashion. The whole procedure seems far removed from what actually happens in the world where men strive for their livings.[7]

The aggregation and decomposition of such "observations" are recorded in columns of figures, each of which is as abstracted from reality and as divorced from its particular matrix of meaning as the processes that produced it.

Duncan points to many simple cautions in interpreting time-series data: (1) Large relative gains come easier from a low starting point than from one approaching a ceiling; (2) absolute differences often give an opposite impression from that conveyed by relative differences; (3) quantities in a time series often require standardization before any interpretation can be ventured.[8]

The volume we are here introducing is concerned with the changing quantities (and implicitly the changing qualities) of American life. The authors of the several chapters are uniformly concerned with quantitative demonstration. Yet it would be silly indeed to suppose that they have at hand the reliable quantities necessary for testing leads and lags, let alone a grand probability matrix of sequential changes.

Problems of Statistical Systems. In the United States and in other advanced industrial societies, a great flow of numbers representing forms of social behavior is available from public or private sources. For

traffic densities or some forms of market transactions the information may be virtually instantaneous, and summaries (totals or averages) may appear perhaps on an hourly basis. Other information is assembled and codified less frequently.

Many of the bits of information available to the observer have been collected for reasons other than his own. They are often statistics that are a by-product of control-mechanisms for an administrative process: how many dollars were spent in a stipulated time period for how many recipients of a particular publicly supported welfare program? The causes of welfare-payment needs, or the consequences of one or another solution to those needs, or even the over-all magnitude of the identified "problem population" may receive little attention, if any at all.

Problems of Additivity. The great advantage enjoyed by economists in dealing with market transactions and other forms of economic activity has been the availability of a common unit of measurement—money. By translation into monetary terms, one can indeed add apples and oranges, horses and jet-plane trips, public welfare benefits and private savings. Of course, not all economic indicators are additive, and one must be cautious before excluding economists from the penance-box for sinful aspirants to social measurement. The production of kilowatt-hours per capita, or ton-miles of overland freight, or portland-cement production, or freight-car loadings comprise quantities that are changeful and no more additive than crime rates, divorce and separation rates, the "birth" rate of new voluntary associations, and the average educational attainment of the adult population.

There are always available at least partial solutions to problems of adding unlike quantities, particularly in trend analysis. One such solution is the use of index numbers, pegged to a common temporal base, allowing the observer to sort out differential rates of change, and, perhaps, some clues to temporal priorities—which changes lead and which lag.

Additionally, high correlations among some subset of measured observations originally thought to warrant individual inspection may permit the reduction of the series to a more limited number of indicators. We thus return to an earlier theme, the appeal of simplifying reduction of the great big buzzing confusion of social events. In the current state of the theory and art of social diagnosis, it would appear that such simplifying indicators must be established by inductive generalization, not by deductive derivation from established laws.

Problems of Frequency. If we grant the need for a better observational base for plotting, and predicting the course of structural change, does this mean in realistic terms an empty and pious vote for perfection never attainable? Since all of science deals with successive approximations to verity, the counsel of perfection would be a counsel of despair.

The current state of analysis of social change gives no cause for the particular worry that its students are likely to complete their task and be thereafter unemployable because obsolete.

Take, for example, the practical (and theoretical) problem of the frequency with which observations of current state should be made, in order to detect and then generalize about the rates at which component structures change, and the sequences of change among the components.

Theory gives us little help here. There are notions commonly stated to the general effect that values are slow to change and practical techniques relatively fast, but exceptions and clarifications can be adduced to make that formulation either suspect or false.

There is simply no *a priori* basis for determining the frequency of observation of any aspect of social behavior or function. Such a premise would require precisely what we lack—rates of change and their shape over various periods of time.

Some observations can be made almost continuously, we have noted, as they usually derive from some administrative mechanism—market prices, birth and death registrations, passenger miles in domestic and international travel. Other observations may be readily made frequently (say, monthly) because of administrative rules (which may have little intellectual justification)—crime reports, hospital admissions, recipients of welfare payments or services of various kinds.

Short of a continuous and universal surveillance system, there is likely to be no ideal solution to the problem of observational frequency. (On technical grounds, constant and massive inputs would overload any analytical system, quite apart from the ethical issues involved in surveillance, to which we are not insensitive.)

We are impressed with the importance of approaching this problem *empirically,* in the strict and original meaning of the term—that is, attempting to achieve the maximum feasible frequency of observation, and then relenting when this produces scant evidence of short-term fluctuations. Where the reasons for short-term fluctuations are obscure (and we thus, conventionally, give our ignorance the neutral designation of "chance"), those fluctuations may hide underlying trends.

The temporal order of events, of major structural change, has perhaps suffered from too much observation of concurrent relations and

too little observation over longer periods of time. The latter is inherently more difficult, if for no other reason than the fact that observers also move through time, and are not immortal. But that is a detail, and scarcely an argument against the cumulative knowledge available to a continuing scientific community.

A CHANGING AMERICAN SOCIETY

It is perhaps not possible—and surely not desirable—to attempt a summarization of the wealth of materials detailed in the chapters that follow. We may attempt, however, to review briefly some large-scale changes that have occurred in the basic structural, distributive, and aggregative features of American society.

Structural Changes

Two primary transformations characterize the nation's population: growth and urbanization, or as more dramatically expressed, explosion and implosion.[9] Between the first (1790) and the latest (1960) decennial census the population of the United States increased from fewer than 4 million to more than 180 million. We are now a nation in excess of 200 million persons. Also at the earlier date, 95 per cent of the population lived in rural areas; by 1960 70 per cent of the American people resided in urban places. About three out of five persons in this nation now live in metropolitan areas. While the population has become increasingly concentrated in urban and metropolitan areas, decentralization has occurred—with rising proportions of residents living in the suburban ring and a declining percentage in the central city.

Along with these sweeping changes occurred the westward movement and settlement of the continent, the growth and redistribution of the Negro population (to the North and West and from rural to urban living), the assimilation of the foreign-born, the decline of large families and households, the virtual eradication of illiteracy and the rise in educational attainment. (See the chapters by Taeuber, Goode, and Beverly Duncan.)

Economic growth over the past century has been great, but, as Sametz notes in his chapter, it is difficult to compare data for 1867 with those for 1967. However, since "structural change is the essence of secular change" (p. 77), it must be accounted for. Sametz outlines a method—adjusting the Gross National Product upward to allow for the increase in quality of output and of leisure and downward to allow

for the market effects of the commercialization of domestic activities and the social costs of an urbanizing-industrializing society.

American society has also completed the transformation from an essentially agricultural to an industrial economy, and then to the now emergent "postindustrial" society.[10] (A postindustrial society is one in which more than half of the economic activity is devoted to services, whether measured by value of product or by distribution of the labor force.) As the nation's working force moved from predominantly farm to manufacturing to service occupations, we observe a decline in the role of the entrepreneur and small-scale business enterprise and an increase in the concentration and bureaucratization of work (see the chapters by Taeuber and Lebergott). Per capita output is three to four times greater than a century ago and about 50 per cent greater today than at the end of World War II, as is noted by Sametz. A rising obsolescence in workers' skills has accompanied the increasing productivity, with about 80 per cent of manufacturing workers being displaced by machines. The hours worked each week had fallen rapidly since the turn of the century but that decline ceased by 1929, remaining stable since the 1930's. Union organization and federal wage-hour legislation have done little to cut prevailing factory hours. The tendency to exchange more income for more leisure was apparently checked by the mid-1930's. Since then, productivity gains have been taken mostly in money rather than in leisure (a circumstance noted by Lebergott and Ennis). Evidence that a shorter work-week is at least optional can be found, but national averages obscure the extent to which options are exercised between income and greater leisure.

Increasing productivity has resulted, of course, from rapid advances in technology, a rapid accretion of knowledge, and a startling change in the character of knowledge. The impact of these changes has been felt not only in the economic sphere—rise in output, an extended division of labor, and the increasing scale and concentration of enterprise—but also in ever finer distinctions of social differentiation and psychic differentiation, noted in the chapter by Bell. The world has become more open, more available; there is a greater eagerness for experience and change; a child of today not only faces a radical rupture with the past, but he must also be trained for an unknown future. The family as a social institution combining primary socialization, economic, welfare, recreational, and other functions has been sundered. There ensued a distribution and sharing of these functions by other institutions—thereby producing further structural change. Meanwhile, the family is not about to disappear, as some of its previously less notable functions

become prominent—adult sexuality and personality formation, initial socialization, and social placement of infants and the young.

The shift from an agricultural to an industrial to a postindustrial economy and society, with an increasing focus on a service economy, is highlighted by a rising preeminence of the professional and technical class; the centrality of theoretical knowledge as a source of innovation and policy formulation in the society; and the creation of new ways of formulating and solving problems. (See chapter by Bell.) Knowledge has become necessary for the existence of society, living by innovation and growth, and by seeking to anticipate the future. The need for planning and an awareness of the nature of innovation has brought about the centrality of theoretical knowledge—"the primacy of theory over empiricism, and the codification of knowledge into abstract systems of symbols that can be utilized and illuminate many different and varied circumstances" (p. 155). This has given rise to a new "intellectual technology" (linear programming, systems analysis, information theory, decision theory, and the like) which, when linked to the computer, produce a powerful tool for analysis, experiment, and policy formulation.

The intellectual system, once and perhaps still currently the guardian of tradition and values, has provided one of the integrative functions of our society. In the future as the primary source of innovation and thereby bearer of change, it begins (haltingly) to replace the economy in carrying out the adaptive functions of the society. Education as the purveyor and distributor of knowledge is becoming the major determinant of the stratification system. For better or for worse, our society is beginning to place almost exclusive reliance on educational attainment as the sorting mechanism for adult occupational position.

In viewing the political system of the nation as a functional element of this wider—and changing—society we find that it represents a paradox of stability and change. Even in the midst of the rapid and perhaps bewildering social and economic change, the United States "has managed to create and preserve one of the most stable sets of formal political structure ever known," according to the chapter by the Mitchells. This nation possesses the oldest operative written constitution, the oldest continuous two-party system, and the oldest recurrent set of peaceful elections in history. Though the original document still defines the basic formal structure of government, its adaptation to change has been considerable, with the addition of fifteen amendments subsequent to the Constitution and original Bill of Rights and with most important changes brought about by judicial interpretation and implementation. The fundamental aspects of the Constitution, with a federal distribution

of power, a separation of power among the several offices of the state, and a federal bill of rights, still hold force.

Though once a "nation," we have now become a "national society" with political institutions more responsive to needs throughout the nation—seeking national solutions to private problems, and to state and local inequities (see the chapters by Bell and the Mitchells). Legislative and judicial changes have brought the enlargement of federal spending and regulatory powers, rationalized by the commerce, tax, and welfare clauses of the Constitution.

The sphere of protective rights has enlarged—responsive to the impact of growth, urbanization, the increasing role of the mass media, the greater mobility of the population. Economic, social, and military contacts with other nations have transformed the military and foreign policy powers of the executive and legislative branches.

Political life has become both more centralized and decentralized—with greater national and greater state activities, both doing more in specifying problems and implementing decisions. The result has been a proliferation of offices, administrative units, boards, commissions, and the like, across many levels and different geographic jurisdictions. Forms of public and private cooperation have become increasingly widespread. Yet it remains true that in one of the most open and democratic societies the world has yet known, political participation engages no more than two-thirds of the relevant electorates, as the Mitchells note.

If voting is taken as a measure of political effectiveness, the American record is not exemplary. Even in closely contested national elections, the proportion of the qualified electorate that actually votes rarely exceeds 60 to 65 per cent. It might of course be argued that apathy is a privilege in a relatively secure and relatively balanced nation, or conversely that the political process fails to present voters with meaningful choices.

The increasingly interdependent industrial and commercial activities —another feature of a "national society"—has been accompanied by a concentration and bureaucratization of policy-making. National public regulation of the economy has been irrevocably established. Social security, civil rights, medicare, and labor legislation not only bring national regulation, but encourage national protest and complaint—and an increasing bureaucratization of interest groups.

Family and religious variables seem to be somewhat more recalcitrant than the demographic, economic, political, and technological measures to an ordering in accord with some logical scheme of inter-

dependencies, as Goode notes reluctantly in his chapter. Nonetheless, the American family has undergone fundamental change over the years, though its basic stability is apparent. Marriage remains virtually universal for adults of this nation (two-thirds of the nation's women are married by age twenty-five, over 90 per cent by age thirty, and in excess of 95 per cent for women thirty to forty-four years old). As noted earlier, however, family functioning has changed in interaction with the changing economy, urbanization, universal education, and the increasing liberty of married women to make choices concerning economic participation. Also since colonial times, reductions in age of marriage, the diminishing size of the family, reductions in the time span of childbearing and child rearing obligations, declining mortality, and gains in expectation of life have continued to produce an increase in the labor force participation of women, an increase in the span of years husband and wife have together after the last child has left home, and a change in demand for new forms of housing and recreation.

Family change has not been without its disruptions, however. Though offset by an increasing propensity to marry (and remarry), there has been an increase in divorce and an upward trend in illegitimacy. Though most children under eighteen years of age live with both parents, about 15 per cent do not. These proportions have remained constant for at least the past two decades. We must note that national averages may conceal as much as they reveal. For example, several trends otherwise observable tend to cancel out in averages relating to household composition: (1) Early marriage (a secular trend downward now coasting off) will remove some, now unknown, proportion of young couples from parental families. (2) These data do not let us know the precise effects of increasing divorce rates, elsewhere noted in this introductory chapter and this volume. Minor children of divorced parents will usually live with their mothers, some of whom do not remarry. (3) It is probably true—but we do not know for certain —that the increasing urbanization of American Negroes has *increased* the number of children recorded by census-takers (and possibly, in some proximate ratio, the actual number of children) who are living in a one-parent family (normally, that parent being the mother). We see here a trend that is not a trend, but rather a combination of rather disparate trends. Aggregation conceals, and disaggregation reveals.

Data on family change are seriously deficient even for long-term trend charting and certainly for causal interpretation (see the chapter by Goode). If generalizations about the family appear to rest on shaky foundations, we must note that conclusions concerning religious change in America are devoid of firm empirical evidence. The extensive analy-

sis by Demerath remains avowedly inconclusive. Suggestive, however, are the following: the data seem to indicate that the rate of formal religious participation rose in the last century, though it is possible that there has been a recent proportional decline in participation, particularly since the early 1960's; religious belief is losing in both orthodoxy and saliency, though the "death of God" thesis is scarcely acknowledged among the lay citizenry; church organization has become increasingly differentiated and bureaucratized; ecumenism is perhaps the most distinctive feature of modern American religion. The changing nature of religion may be less important to American society today than it was a century ago. ". . . [T]raditional religion is increasingly autonomous but decreasingly relevant. No longer is religion inextricably woven into a close-knit institutional fabric so that it must act and react in conjunction with economic, educational, political and other agencies." (p. 434)

Distributive and Aggregative Changes

The economic growth of the nation has been an equalizing factor; all groups shared in the general gains, resulting in an undeniable upgrading in level of living. These trends are examined in the chapters by Moss and by Merriam. Though the rewards of economic growth over the decades have not been equitably distributed, increasing productivity and modern technology have made possible increased consumption of goods and services at all levels and thereby a less concentrated distribution of the national gains. However, in the years since the 1950's growing unemployment hit hardest among those with lowest income and the younger workers—ending a trend toward lesser inequality.

An unmistakable upward trend in production, productivity, and in the flow of goods and services to the consumer is attested by the following, based mainly on the materials analyzed in the chapter by Moss. The Gross National Product, in dollars of constant purchasing power, has increased eightfold since the turn of the century. This growth has been accomplished with declining man effort; product per man-hour worked has more than quadrupled over this same period. The volume of goods and services purchased (in constant prices) has paralleled the increase in GNP, while consumption per capita more closely parallels the growth in productivity. Personal consumption expenditures, though fluctuating in times of war and depression, comprise approximately 63 percent of the GNP.

This abundance has provided more for everyone, though not equally for all: There has been a narrowing of income differentials among

occupation groups and a decline in the share of aggregate income going to the top 20 per cent; an increasing difference between income to men and to women, reflecting in part the increasing proportion of women who work less than full time; rising incomes have accrued more to the white population than to the nonwhite, to earners outside the South more than to earners in the South, to those in the middle-age range than to the younger or the old. Again, these trends and differentials are examined both by Moss and by Merriam.

The risk of being disadvantaged amidst abundance is greater for some population groups than for others. In 1966 about 30 million persons, or 15 per cent of the population, were living in households below the poverty line (using the Social Security Administration definition). The incidence was 12 per cent for whites and 41 per cent for nonwhites. Among the aged it was 54 per cent for whites and 77 per cent for nonwhites. In terms of numbers, however, far more poor persons are white than nonwhite, are young than are old. "Any social policy that is successful in reducing inequality and low incomes will affect larger numbers of whites, of families headed by men and younger family heads than it will nonwhites, families headed by women or aged family heads simply because of their greater number in the total population and in the lowest income groups." (Merriam, p. 757)

In low-income families expenditures for current consumption are appreciably higher than their money receipts, implying the use of assets or credit, the receipt of public or private assistance, gifts, and insurance benefits. In these low-consumption classes food expenditures varied from 27 per cent to 34 per cent of total consumption as compared with 24 per cent for all nonfarm families. A third of the families with incomes below the poverty line lived in housing that was dilapidated or lacked plumbing, totaling approximately 6 million families.

At any level of income consumption entails choice—vocation, location of job, size of family, selection of goods and services, and the allocation of income and time. Affecting the significance of choice, while at the same time reducing the range of choices, have been some developments referred to earlier as characterizing the emergent post-industrial society.

1. The problem of personal choice has been complicated by the increasing expense and time required for developing specialized knowledge in a service economy, and in an increasing obsolescence of occupations over shorter periods of time; the decrease in working time and the lengthening of life expectancy complicate decision and timing in

the accumulation of possessions, in the use of credit, and in financial investment for future use.

2. Concomitantly the increase in government activity (the emergence of a national society) has reduced the range of individual discretion. The proportion of personal income subject to discretionary use, though increasing with affluence, has been eroded by increases in taxes, by increases in many areas of consumption that tend to become "necessities," and by transfer in income provided by public expenditures.

At most income levels and certainly as income levels rise higher, choices become an important issue of personal, family, and social improvement. These choices involve the allocation of income and time among various goods, services, and investments, and between consumption and investment. For the society choices must be made as to how much of the total effort and resources go to private and to public goods and services.

Leisure, health, and education are among those aspects of life that intersect with both personal and public discretionary behavior; and each is differentially distributed among the various social groupings of the population.

Despite the ambiguities involved in distinguishing leisure from other major categories of living and in assigning activities and numbers to one or another categories, leisure time and expenditures for leisure have increased since the turn of the century. However, as Ennis notes, leisure time and dollars are unequally expended by various social groupings, and leisure activities and resources are differentially clustered in the nation. Executive and professional workers expend fewer leisure hours than do white-collar and labor groups, though there is a discernible increase in recreational expenditures as both income and educational levels rise. Apart from weakness in the data, the apparent discrepancy may be attributed, in part, to different types of leisure activities among the various groups. It might be argued that those with higher income can afford leisure activities of higher quality (if that can be inferred from higher cost), but choose a lesser quantity.

Substantial reductions in mortality rates in the past sixty or more years as reflected by increasing life expectancy at birth and by a decline in death rates suggest a remarkable improvement in the health of the nation. As shown by Moriyama, expectation of life at birth has increased from about forty-seven years at the turn of the century to over seventy years today. These gains, however, have not been shared equally by the American people. Length of life for nonwhites was be-

low that for whites as we entered the twentieth century; and though longevity has shown a steady increase, it is still below that of the white population. Longevity in the South remains below that of the North and West, with color differentials accounting for the major portion of the gap.

Improvements in length of life, infant mortality, and other indicators of health began to level off by the 1950's, as did reductions in inequalities. Significant gains in the future health status of the nation hinge on a reduction of these inequities, and more important, on breakthroughs in the prevention of major chronic diseases (heart disease, cancer, and stroke) in the older population, and accidents, congenital defects, and other diseases of early infancy in the younger population.

Trends in the output and distribution of schooling in America show patterns similar to those for income, consumption, and health. The discussion by Beverly Duncan shows that three trends are clear on the output since 1900: (1) a threefold increase in the annual number of school years; (2) a one-third increase in the per capita years of schooling; and (3) an increase of about 5.5 years in the average duration of schooling. Also observed are a growing equality in the distribution of education among members of successive generations and a diffusion of near-universal school attendance from age eleven to both younger and older ages. There has been a decreasing handicap associated with being Negro and being male. Social background (as indexed by family size, education of family head, occupation of family head, ethnic status, public or parochial schooling, presence of both parents in family, region and rural-urban residence) has been and remains significant in its effect on education. Educational attainment is negatively related to family size and positively associated with education and occupational status of family head. The association of education with the family variable is retained even after allowance is made for ethnic status, types of school attended, and place of residence. Despite all attempts at equalization of educational opportunity, the type of family into which a child is born is a major determinant of educational achievement or its relative lack.

The nation's increasing output in goods and services, in consumption levels, health, education and leisure has been attested to by utilizing both a variety of concepts and by many measures pertaining to those concepts. Similarly, we have been able to point out that inequalities in the distribution of our society's outputs have been diminishing since the turn of the century, though perhaps levelling off in the 1950's to date. We seek an answer to still another question: Has there been

change in the extent to which achievement in our society depends upon one's level of social origin? Has there been a change in the "rigidity" of the stratification system, in the relationship between origin status and achieved status, in the degree to which a son's occupational status depends upon that of his father? Duncan's very careful analysis of available indicators provides a partial answer to this question: At least for white males the data suggest that no change has occurred in the rigidity of stratification in America between 1910 and 1950, and the same is probably true through 1966.

Recommendations for Future Developments

Any compilation of data or any time series represents only a sampling of the information that could have been collected. These data themselves indicate which data are considered important, which can be useful in meeting the nation's problems. "All record-keeping is an implicit assertion that it would be costly to do without this information, and that additional facts would cost more than they would be worth. . . . Both social scientists and political leaders are increasingly coming to understand that a much wider range of information is needed for *practical* purposes, simply because the sociopolitical structure has become (or is thought to be) much more complex and is guided at so many points by conscious decisions that need to be based upon adequate information. As any organization becomes more complex, and multiform in its output, far more kinds of information are needed . . ." (Goode, p. 334).

This growing reliance on statistical data for policy decisions is creating an increased demand for data which can be used for projection and prediction. This calls, in part, for firmer evidence of past trends and the factors underlying these trends, as Taeuber has noted. The ensuing chapters confirm both of these proper concerns. As these chapters attest and as pointed out by Taeuber, data that have already been collected are not fully utilized and might well be given more adequate attention before mounting new collections and surveys.

Beverly Duncan, for example, notes, as a top priority in gauging the past and future trend of education, that a more judicious arrangement of data collected under existing statistical programs would provide much of the sought-after material. Collected data might be reassembled in order to examine the progression of successive birth cohorts through the school system. "The pressing need is not the collection of new items, but a new tabulation format for old items. Records now on file which include information about enrollment status, grades of

school completed, and birth year . . . must be re-examined with a view to compiling as complete an account as is possible on the progress of successive birth cohorts through the school system. As additional records including these items accumulate, the series for each birth cohort can be extended forward in time or made more detailed with respect to the past." (p. 670)

In addition to exploiting already collected data, more frequent collection, greater speed in availability, more detailed tabulations, and greater attention to future descriptive and analytic needs are recommended by several contributors. The most serious gap at present, cited by many of our authors, is the absence of longitudinal data. The largest bulk of currently available information consists of discrete occurrences and events. Trends are deduced when comparable observations are taken at different time periods, as in two censuses. Observations made on a cohort of individuals or families followed over a long period of time are called for by contributors seeking family change data, consumption choice information, and poverty and welfare changes. It is recognized that longitudinal studies are expensive and require a long-term research commitment; the attempts to compress real time into cross-sectional analyses—for example, by age differences—provide major hazards in interpretation.

Periodically repeated surveys, rigorously planned and designed with respect to standardized concepts, scales, and survey techniques are recommended for an assessment of measuring the influence of social background on schooling while that schooling is taking place rather than retrospectively. Similarly, repeated surveys (perhaps with ten-year intervals) could provide data for examining any real change in degree of social stratification, or in correlations between variables implicated in the process of stratification. Thus Otis Dudley Duncan places a high priority on the replication of the Occupational Changes in a Generation survey in 1972.

Concern with social policy is necessarily related to economic stability, to projecting education and training requirements, to anticipating the market for skill and the job prospects for the Negro, the unskilled, the teenager. Such concerns are intensified by estimates of the inundation of technology and automation. Lebergott addresses these matters in calling for data consistency between employment and labor force statistics and those on output, capital consumption, sales and investments; greater utilization of Bureau of Labor Statistics wage rate surveys; a widening of information on reports to the Internal Revenue Service; a linkage between household and establishment reporting and

more intensive research aimed at disentangling the net contribution of various psychological and social factors (intelligence, motivation, family background, etc.) to income differentials.

Analytical sophistication and adequate temporal series, however, do not provide all the necessary materials for charting the course of change, or for attempted intervention in that course in terms of policy. The answers to informational questions rarely can be better than the sense of the questions or the reliability of the source of information. Information on cause of death is notoriously inaccurate, because the reporting official (normally a physician) gives the proximate but not the underlying cause. It may be that the underlying cause is nonmedical—driving a car recklessly—but in other instances the underlying cause is a distinct medical pathology not reported. Moreover, the records exempt a very important proximate cause—therapy itself. Some substantial proportion of decedents are the victims of medical and surgical procedures used to deal with other diagnosed ailments. To argue that the patients would have died anyway is indubitably accurate for the long run and probably accurate in the short run for most patients, but one cannot be confident of the detailed accuracy of a statistical system that leaves out such an obvious observational category.

The answers are, of course, not likely to be better than the questions asked. And the rationale for those questions may be theoretical or practical (and the two may or may not coincide). We asked, until recently, about mortality rates, and occasionally about morbidity rates (for classifiable diseases), but as Moriyama notes, not about ill health operationally defined as incapacity for normal and expected role performance. We have asked, for decades, about the relationship of the members of a household to its "head," but those data until recently were thinly reported, only by age and sex, and not in terms of the kinship composition of living units. (Demographers were primarily interested in number of children per primary family as an indicator of fertility trends and differentials, and secondarily in the extent of multigenerational doubling. Anthropologists and sociologists had not "come on strong" as an interest group concerned with the census as a source of information on American kinship. They were concerned with tribal societies or with relatively uninformed theory about the destruction of the extended family in urban-industrial societies.) We have been reluctant to have public officials ask anything about religion or religiosity, for constitutional reasons, but other inquiries have done little better—partly, perhaps, because secular social scientists found the whole range of phenomena more than faintly embarrassing.

All these several and collective failings are regrettable, and the volume at hand represents a considered effort to make amends. To pretend that all is now well would be ridiculous. To pretend that we are no better off would be almost equally foolish.

We are grateful beyond (readily quantifiable) measure for what our learned colleagues have contributed here. It is, of course, their book. We present it now with pride, and not a little fear. For if the book is our colleagues', the initiative was ours, and for that we are accountable.

NOTES

1. Goode, W. J., Chapter 7, p. 296 in this volume.
2. Sheldon, Eleanor Bernert, and Wilbert E. Moore, "Toward the Measurement of Social Change: Implications for Progress," in *Economic Progress and Social Welfare,* Goodman, Leonard, editor, Columbia University Press, New York, 1966, pp. 185–212.
3. See Moore, Wilbert E., "Social Structure and Behavior," in *Order and Change: Essays in Comparative Sociology,* John Wiley, New York, 1967, pp. 171–233.
4. Moore, Wilbert E., "Social Change," in Sills, David L., editor, *International Encyclopedia of the Social Sciences,* The Macmillan Company and Free Press, New York, 1968, vol. 14, pp. 365–375; excerpt from p. 366.
5. Weber, Max, *The Protestant Ethic and the Spirit of Capitalism,* Parsons, Talcott, translator, Allen & Unwin, London, 1930.
6. Moore, Wilbert E., "Toward a System of Sequences," in McKinney, John C., and Edward A. Tiryakian, editors, *Theoretical Sociology: Perspectives and Developments,* Appleton-Century-Crofts, New York, in press (1969).
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8. Duncan, Otis Dudley, "Discrimination Against Negroes," *The Annals of the American Academy of Political and Social Science,* Philadelphia, vol. 371, May, 1967, pp. 85–103.
9. Hauser, Philip M., in *National Growth and its Distribution,* U.S. Department of Agriculture in cooperation with the Departments of Commerce, HEW, HUD, Labor and Transportation, Symposium on Communities of Tomorrow, December 11–12, 1967, Washington, April, 1968, p. 70.
10. Bell, Daniel, "Notes on the Post-Industrial Society (II)," *The Public Interest,* no. 7, Spring, 1967, pp. 102–118.