

## 52

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## THE SOCIOLOGY OF SOCIAL INDICATORS

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**S**ocial indicators are statistical time series “used to monitor the social system, helping to identify changes and to guide intervention to alter the course of social change” (Ferriss 1988:601). Examples include unemployment rates, crime rates, estimates of life expectancy, health status indices, school enrollment rates, average achievement scores, election voting rates, and measures of subjective well-being with life as a whole. This chapter begins with a review of the historical development of the field, and then defines the main types of social indicators in use today. This is followed by a section on the uses of social indicators, including a description of a sociological model of social change that includes social indicators. A concluding section describes the prospects for future developments in social indicators.

### THE HISTORICAL DEVELOPMENT OF THE FIELD OF SOCIAL INDICATORS

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#### Social Indicators in the 1960s

The term *social indicators* was given its initial meaning in an attempt, undertaken in the early 1960s by the American Academy of Arts, to detect and anticipate the nature and magnitude of the second-order consequences of the space program for American society (Land 1983:2; Noll and Zapf 1994:1). Frustrated by the lack of sufficient

data to detect such effects and the absence of a systematic conceptual framework and methodology for analysis, some members of the Academy project attempted to develop a system of social indicators—statistics, statistical series, and other forms of evidence to detect and anticipate social change as well as to evaluate specific programs and their impact. The results of this part of the Academy project were published in a volume (Bauer 1966) bearing the name *Social Indicators*.

Generally, the sharp impulse of interest in social indicators in the 1960s grew out of the movement toward collection and organization of national social, economic, and demographic data that began in Western societies during the seventeenth and eighteenth centuries and accelerated in the twentieth century (Carley 1981:14–15). The work of sociologist William F. Ogburn and his collaborators at the University of Chicago in the 1930s and 1940s on the theory and measurement of social change is more proximate and sociologically germane (Land 1975). As chairman of President Herbert Hoover’s Research Committee on Social Trends, Ogburn supervised production of the two-volume *Recent Social Trends* (President’s Committee on Social Trends 1933), a path-breaking contribution to social reporting. Ogburn’s ideas about the measurement of social change influenced several of his students—notably Albert D. Biderman, Otis Dudley Duncan, Albert J. Reiss, Jr., and Eleanor Bernert Sheldon, who played major roles in the emergence and development of the field of

social indicators in the 1960s and 1970s. Another historical origin in sociology is the work of Howard W. Odum (1936) at the University of North Carolina, who published *Southern Regions of the United States*. This volume brought together indicators under an institutional framework, revealing regional disparities in welfare, and demonstrating the need for more definitive data. Involved in the study was Margaret Jarman Hagood, who developed one of the first indices of well-being, a level of living index of farm families (Ferriss 2004).

The appearances of these studies were not isolated events. Several other influential analysts commented on the lack of a system for charting social change. They advocated that the U.S. government establish a “system of social accounts” that would facilitate a cost-benefit analysis of more than the market-related aspects of society already indexed by the National Income and Product Accounts (see, e.g., National Commission on Technology, Automation and Economic Progress 1966; Sheldon and Moore 1968). The need for social indicators also was emphasized by the publication of the 101-page *Toward a Social Report* (U.S. Department of Health, Education, and Welfare 1969) on the last day of the Johnson administration in 1969. Conceived of as a prototypical counterpart to the annual economic report of the president, each of its seven chapters addressed major issues of social concern, namely health and illness, social mobility, the physical environment, income and poverty, public order and safety, learning, science, and art, and participation and alienation, and each assessed prevalent conditions. The *Report* established the linkage of social indicators to the systematic reporting on social issues for the purpose of public enlightenment, but did not elaborate on policy implications of the findings, as some scholars had advocated.

### Social Indicators in the 1970s and 1980s

At the end of the 1960s, the enthusiasm for social indicators was sufficiently strong and broad-based for Duncan (1969:1) to write of the existence of a Social Indicators Movement. In 1972, the National Science Foundation supported the Social Science Research Council Center for Coordination of Research on Social Indicators in Washington, D.C. The Russell Sage Foundation supported the publication of several major efforts to define and develop a methodology for the measurement of indicators of subjective well-being as measures of the quality of life (QOL) (Campbell and Converse 1972; Andrews and Withey 1976; Campbell, Converse, and Rodgers 1976). The Federal Government initiated a series of comprehensive social indicator chart books showing trends in a variety of social forces with limited analyses and few policy implications (U.S. Office of Management and Budget 1974, 1978; U.S. Bureau of the Census 1981). Policy implications, however, were outlined in a series of issues of *The Annals of the American Academy of Political and Social Sciences* (Gross 1967; Taeuber 1978, 1981).

Social scientists recognized the need for more comprehensive data, especially in time series. This led to establishing several important surveys, sponsored by the federal government (Ferriss 1979), that provide important indicators today: the National Opinion Research Center’s (NORC) General Social Survey, begun in 1972, the Bureau of Justice Statistics’ annual National Crime Victimization Survey, and later, the Survey of Income and Program Participation.

Under editorship of Alex Michalos, the first volume of the international journal *Social Indicators Research* appeared in 1974, providing a medium for exchange of research findings. At the same time, the United Nations Organization for Economic Cooperation and Development stimulated the issuance of national social reports based on social indicators. This led to the initiation of social surveys and the improvement of other data-gathering efforts internationally. This also was promoted by the Statistical Commission of the United Nations and United Nations Educational, Scientific, and Cultural Organization (UNESCO). Many nations continue to issue annual or biennial social reports, such as *Donnes Sociales* (France), *Datenreport* (Germany), *Inequality in Sweden*, and *Social Trends* (United Kingdom).

In contrast to the 1970s, social indicators activities slowed in the 1980s, because reductions in funding or non-renewals led, for example, to the closing of the Center for Coordination of Research on Social Indicators (Social Science Research Council 1983); the discontinuation of related work at several international agencies; the termination of government-sponsored social indicators reports in some countries, including the United States; and the reduction of statistical efforts to monitor various aspects of society. Several explanations have been given for this turnabout (Rockwell 1987; Andrews 1990; Bulmer 1990; Ferriss 1990b; Innes 1990; Johnston 1990; Rose 1990). Certainly, politics and the state of national economies in the early 1980s are among the most identifiable proximate causes. Owing to faltering economies and budget deficits, governments reduced spending. In addition, many perceived that social indicators were not fulfilling their initial promise of contributing to public policy making. This was due, in part, to an overly simplistic view of how and under what conditions knowledge influences policy.

### Social Indicators in the 1990s and 2000s

The 1980s ended with the question of “What Ever Happened to Social Indicators?” (Rose 1990) and the mistaken conclusion that the field had faded away. Shortly afterward, however, interest in social indicators revived and since the mid-1990s the field has been expanding.

The revival of interest became vividly apparent in the 1990s (Land 1996, 2000) owing to the widespread political, popular, and theoretical appeal of the quality-of-life (QOL) concept. This concept emerged and became part of the Social Indicators Movement in the late 1960s and early

## 520 • THE QUANTIFICATION OF SOCIAL LIFE

1970s as social scientists in highly developed Western industrial societies raised doubts about economic growth as the major goal of societal progress (Noll and Zapf 1994:1–2). They cited the “social costs” of economic growth and raised doubts about whether “more” should be equated with “better.” Their discussion posed QOL as an alternative to the more and more questionable concept of the affluent society, and they incorporated QOL in discussions of social policy and politics as a new, but more complex, multidimensional goal. As a goal of social and economic policy, QOL encompasses many or all domains of life and subsumes, in addition to individual material and immaterial well-being, such collective values as freedom, justice, and the guarantee of natural conditions of life for present and future generations (Cummins 1996; Diener and Suh 1997; Ferriss 2001). The political use of the QOL notion is paralleled in the private sector by the widespread use and popularity of numerous rankings—based on weighted scales of multiple domains of well-being—of the “best” places to live, work, do business, and play be they cities, states, regions, or nations.

The theoretical appeal of the QOL concept as an integrating notion in the social sciences and related disciplines is, in part, due to the perceived importance of measuring individuals’ subjective assessments of their satisfaction with various life domains and with life as a whole. For instance, QOL has become a concept that bridges the discipline of marketing research and strategic business policy with social indicators. Marketing is an important social force—with far-reaching direct and indirect impacts on the prevailing QOL in a society—through consumer satisfaction (Samli 1987; Sirgy and Samli 1995) and its impact on satisfaction with life as a whole. The intersection of marketing research with social indicators through the QOL concept led to the organization in the mid-1990s of the multidisciplinary International Society for Quality-of-Life Studies (<http://www.isqols.org>).

In addition to the widespread appeal of the QOL concept, another key development in the field of social indicators in the 1990s and early 2000s is evident: The field has entered a new era of the construction of composite or summary social indicators. Often these indices are used to summarize indicators (objective and/or subjective) of a number of domains of life into a single index of the QOL for the population or society as a whole or for some significant segment thereof (e.g., children and youth, the elderly, racial and minority groups, cities and states or regions within the nation). Many of the pioneers of the Social Indicators Movement in the 1960s and 1970s backed away from the development of summary indices, instead concentrating on basic research on social indicators, measuring of the QOL and developing a richer social data base. Today, however, researchers attempt to answer one of the original questions motivating the Social Indicators Movement: How are we doing overall in terms of the QOL? With respect to our past? With respect to other comparable units (e.g., cities, states, regions,

nations)? Responses to these questions are encouraging and include the following examples: (1) at the level of the broadest possible comparisons of nations with respect to the overall QOL, the *Human Development Index* (United Nations Development Programme 2004), Diener’s (1995) *Value-Based Index of National Quality-of-Life*, and Estes’s (1988, 1998) *Index of Social Progress*; (2) at the level of comparisons at the national level over time in the United States, the *Fordham Index of Social Health* (Miringoff and Miringoff 1999), and the *Genuine Progress Indicator* (Redefining Progress 1995), and for a specific subpopulation, the *Child Well-Being Index* developed by Land, Lamb, and Mustillo (2001, 2004; Land 2004).

## TYPES OF SOCIAL INDICATORS

### Policy/Welfare/Criterion Indicators

Based on the premise that social indicators should relate directly to social policy-making considerations, an early definition by economist Mancur Olson, the principal author of *Toward a Social Report*, characterized a social indicator as a “statistic of direct normative interest which facilitates concise, comprehensive and balance judgments about the condition of major aspects of a society” (U.S. Department of Health, Education, and Welfare 1969:97). Olson went on to state that such an indicator is, in all cases, a direct measure of welfare and is subject to the interpretation that if it changes in the “right” direction, while other things remain equal, things have gotten better, or people are better off. Accordingly, by this definition, statistics on the number of doctors or police officers could not be social indicators, whereas figures on health or crime rates could be.

In the language of policy analysis (Fox 1974:120–123), social indicators are “target” or “output” or “outcome” or “end-value” variables, toward changes in which some public policy (program, project) is directed. Such a use of social indicators requires (Land 1983:4) that (a) members of a society agree about what needs improving, (b) it is possible to decide unambiguously what “getting better” means, and (c) it is meaningful to aggregate the indicators to the level of aggregation at which the policy is defined.

In recognition of the fact that various other meanings have been attached to the term social indicators, the tendency among recent authors is to use a somewhat different terminology for the class of indicators identified by Olson. For instance, Land (1983:4) termed this the class of *normative welfare indicators*. Building on the Olson approach, MacRae (1985:5) defined *policy indicators* as “measures of those variables that are to be included in a broadly policy-relevant system of public statistics.” With a meaning similar to that of MacRae, Ferriss (1990b:416) used the felicitous term *criterion indicators*.

As an example, Land et al. (2001, 2004) developed a composite child well-being index consisting of 28 social indicator time series for the United States grouped into

seven domains: material well-being, health, security/behavioral concerns, educational attainments, a place in the community, social relationships, and emotional/spiritual well-being. This index is computed annually based on the most recent data available for the component indicators (see <http://www.soc.duke.edu/~cwi/>). It can be considered a criterion indicator for changes (improvements, deteriorations) in the QOL or well-being of children and youth in American society compared with base year values of the component indicators.

### Life Satisfaction and/or Happiness Indicators

Another class of social indicators has its roots in the work of Angus Campbell and Philip E. Converse in the early 1970s. In *The Human Meaning of Social Change* (1972), they argued that the direct monitoring of key social-psychological states (attitudes, expectations, feelings, aspirations, and values) in the population is necessary for an understanding of social change and the QOL. In this approach, social indicators seek to measure psychological satisfaction, happiness, and life fulfillment by using survey research instruments that ascertain the subjective reality in which people live. The result may aptly be termed *life satisfaction, subjective well-being, or happiness indicators*.

The Campbell-Converse approach led to two major methodological studies in the 1970s (Andrews and Withey 1976; Campbell, Converse, and Rodgers 1976) and a subsequent edited volume (Andrews 1986) exploring the use of various survey and analytic techniques for mapping individuals' feelings of satisfaction with aspects ("domains") of their experiences. These studies examine domains ranging from the highly specific (house, family, etc.) to the global (life as a whole). A number of other studies and applications of these concepts and techniques have appeared over the past three decades (for reviews, see Diener 1994; Veenhoven 1996; Diener et al. 1999) and continue to appear. One or more studies of subjective well-being indicators can be found in almost any issue of the journal *Social Indicators Research* and the *Journal of Happiness Studies*. Research on the related concept of happiness as an index of well-being was surveyed by Veenhoven (1984).

Social indicators literature has established firmly the principle that the linkage between objective conditions and subjective well-being (defined in terms of response to sample survey or interview questions about happiness or satisfaction with life as a whole) is sometimes paradoxical. This leads to the conclusion that subjective as well as objective states should be monitored. However, numerous studies of the measurement and psychodynamics of subjective well-being over the past three decades have led to a better understanding of this construct (see, e.g., Cummins 1995, 1998; Cummins, Gullone, Lau 2002). Research continues, however, and it would be incorrect to say that the debates have been settled. It appears that this construct may have both *traitlike* (i.e., a durable psychological

condition that differs among individuals and contributes to stability over time and consistency across situations) and *statelike* (i.e., a condition that is reactive to situational differences) *properties* (see, e.g., Veenhoven 1994, 1998; Stoneset al. 1995).

With respect to the statelike properties of subjective well-being, Davis (1984) used an accumulated sample from several years of NORC General Social Surveys to document the responsiveness of happiness with life as a whole to (a) "new money" (recent changes in respondents' financial status as opposed to current income level), (b) "an old man or lady" (being married or having an intimate living partner), and (c) "two's company" (a household size of two as compared with living alone or families of three or more). Numerous other studies have found additional factors that are more or less strongly associated with variations in subjective well-being. But the relevance of intimate living conditions/family status almost always is replicated. The connection of subjective well-being to income levels has been a particularly intriguing problem for social indicators researchers ever since Easterlin's (1973) finding that income differences between nations predicted national differences in happiness but that the association of happiness with income within countries was much weaker (for reviews of this research literature, see Ahuvia and Friedman 1998; Diener and Biswas-Diener 2002). Recently, however, Davis's finding of a positive relationship of "new money" or recent income changes to happiness has been replicated by Schyns (2001), using data from a panel study conducted in Russia from 1993 to 1995. Studies of the relationship of subjective well-being or happiness indices to income and other social, demographic, economic, and cultural factors continue to be a lively area of research interest.

### Descriptive Social Indicators

Building on the Ogburn legacy of research on social trends, a third approach to social indicators focuses on social measurements and analyses designed to improve our understanding of what the main features of society are, how they interrelate, and how these features and their relationships change (Sheldon and Parke 1975:696). This produces *descriptive social indicators*—indexes of the state of society and changes taking place therein. Although descriptive social indicators may be more or less directly (causally) related to the well-being goals of public policies or programs and thus include policy or criterion indicators, they are not limited to such uses. For instance, in the area of health, descriptive indicators might include preventive indicators such as the percent of the population that does not smoke cigarettes, as well as criterion indicators such as the number of days of activity limitations in the past month or an index of self-reported satisfaction with health. Ferriss (1990a) gave a compilation of descriptive indicators for the United States at the end of the 1980s. Regularly published national social indicator compilations for other nations

## 522 • THE QUANTIFICATION OF SOCIAL LIFE

similarly contain numerous examples. An example: Speed, social and geographic mobility, single-person households, and materialistic acquisitions are treated in a volume that charts visible and invisible changes in the United States and speculates on the future (Kane 2001).

The various statistical forms that descriptive social indicators can take are described by Land (1983:6). These can be ordered by degree of abstraction from those that require only one or two data series and little processing (e.g., an age-specific death rate) to those that involve more complicated processing into a single summary index (e.g., years of life-expectancy at age  $x$ , years of active or disability-free life expectancy at age  $x$ ). Descriptive social indicators can be formulated at any of these levels of abstraction. Moreover, as described in Juster and Land (1981), these indicators can, at least in principle, be organized into demographic- or time-budget-based systems of social accounts.

## THE USES OF SOCIAL INDICATORS

### The Enlightenment Function

The Social Indicators Movement was motivated by the principle that it is important to *monitor changes over time* in a broad range of social phenomena that extend beyond the traditional economic indicators and that include *indicators of QOL* (Andrews 1990:401; Noll and Zapf 1994:5). Many organized actors in contemporary society—including government agencies, organizations and activists interested in social change programs, scholars, and marketing researchers interested in market development and product innovations—monitor indicators in which they have a vested interest and want to see increase or decline (Ferriss 1988:603).

A second principle that has been part of the Social Indicators Movement from the outset (e.g., Biderman 1970; Land 1996) is that a critically important role of social indicators in contemporary democratic societies is *public enlightenment through social reporting*. In brief, modern democracies require social reporting to describe social trends, explain why an indicator series behaves as it does and how this knowledge affects interpretation, and highlight important relationships among series (Parke and Seidman 1978:15).

It is also important to document the consequences that are reasonably attributable to changes in a series. This includes the systematic use of social indicators to *forecast trends in social conditions and/or turning points therein* (Land 1983:21). To be sure, the area of projection or forecasting is filled with uncertainties. Techniques range from the naïve extrapolation of recent trends to futuristic scenario construction to complex model building with regression, time series, or stochastic process techniques. Moreover, there appear to be intrinsic limits to the accuracy of forecasts in large-scale natural and social systems

(Land and Schneider 1987). But demands for the anticipation of the future (at a minimum, for the description of “what will happen if present trends continue”), for foresight and forward thinking in the public and private sectors, and for the assessment of critical trends (Gore 1990) appear to be an intrinsic part of contemporary postindustrial societies. Thus, it is prudent to expect that the “anticipation” task will become an increasingly important part of the enlightenment function of social indicators.

As the decades of the 1990s and 2000s unfolded, the model of a comprehensive national social report in the tradition pioneered by Ogburn and Olson clearly had faltered in the United States, at least in the sense of federal government sponsorship and/or production. But the key ideas of monitoring, reporting, and forecasting were evident to greater or lesser extents in the production of continuing, periodic subject-matter-specific publications by various federal agencies, including *Science Indicators* (published by the National Science Foundation), *The Condition of Education*, *Youth Indicators* and *Educational Indicators* (published by the Department of Education), the *Report to the Nation on Crime and Justice* (published by the Department of Justice), *Health USA* (published by the Department of Health and Human Services) and numerous Bureau of the Census publications. Special topics involving groups of federal agencies also receive attention from time to time. For instance, the Federal Interagency Forum on Child and Family Statistics began in 1997 an annual publication on *America's Children: Key National Indicators of Well-Being*. In addition, the United States has numerous private research organizations, policy institutes, and scholars that continue to produce reports, monographs, and books interpreting social trends and developments in various areas of social concern. Caplow et al. (1991) published a privately generated, comprehensive social report on the United States. The report follows a framework that was employed for several other countries (France, Germany, Italy, and others). These social reports provided the basis for a study of the comparative social change in the several Western countries.

In contrast to the situation in the United States, comprehensive social reports/social indicators compendiums continue to be published periodically in several other countries. Examples are the *Social Trends* series published annually since 1970 by the United Kingdom's Central Statistical Office, the *Datenreport* series published biennially since 1983 by the Federal Republic of Germany, the *Social and Cultural Report* published biennially by the Social and Cultural Planning Office of The Netherlands, and *Australian Social Trends* published annually by the Australian Bureau of Statistics. Citations and summary reviews of these and other social indicators/social reports publications can be found in the quarterly newsletter and review of social reports, *SINET: Social Indicators Network News* ([www.soc.duke.edu/resources/sinet/index.html](http://www.soc.duke.edu/resources/sinet/index.html)).

The difference in the organization of social indicators and social reporting work in the United States as compared

with that in other countries is, in part, attributable to the lack of central statistical office responsible for the coordination of all federal statistical activities in the United States. More generally, despite the invention of the ideas of social indicators and comprehensive social reporting in the United States, the sector reports on science, health, education, crime, and housing are all that remain of official federal reporting systems. While U.S. administrations have issued reports that attempt to review national social conditions (U.S. President's National Goals Research Staff 1970; U.S. President's Commission for a National Agenda for the Eighties 1980), the U.S. Congress has proposed but never finally mandated a social report on the nation.

Whether a new round of legislative effort will eventually create the necessary institutional base for a national social report remains to be seen. Perhaps marking a turning point and indicative of things to come is Public Law 100-297, enacted April 28, 1988, which requires an annual education indicators report to the President and Congress. Another possibility centers on an effort by the U.S. General Accounting Office (2003), acting at the behest of a Congressional committee, to develop a social indicator system for the United States (see also [www.keyindicators.org](http://www.keyindicators.org)).

### The Policy Analysis Function

Policy analysts distinguish various ways of guiding or affecting public policy, including *problem definition*, *policy choice and evaluation of alternatives*, and *program monitoring* (MacRae 1985:20–29). In the formative days of social indicator development, Bertram M. Gross advocated the application of social indicators to policy evaluation and development (Gross and Springer 1967). The social reporting/public enlightenment approach to social indicators centers on the first of these, namely, the use of social indicators in problem definition and the framing of the terms of policy discourse. Indeed, studies of the actual use of social indicators suggest that this is precisely the manner in which they have affected public action (Innes 1990).

But policy analysts always have hoped for more from social indicators, namely, the shaping of public policy and planning through the policy choice process. At a minimum, this requires the identification of key variables that determine criterion indicators and changes therein (i.e., causal knowledge). More generally, it requires the construction of elaborate causal models and forecasting equations (often in the form of a “computer model”) that can be used to simulate “what would happen if” under a variety of scenarios about policies and actions. An example of this is the development of the National Cancer Institute model for the control and reduction of the incidence of cancer in the United States in the year 2000 (Greenwald and Sondik 1986). Various policy and action scenarios and their implications for cancer mortality were simulated and estimated with this computer model. These simulations led to a

decision to allocate funds to prevention, education, screening, and treatment, and their implications for cancer mortality were simulated and estimated with this computer model. These simulations led to a decision to allocate funds to a prevention program rather than to additional clinical treatment.

### A SOCIOLOGICAL MODEL FOR THE USES OF SOCIAL INDICATORS

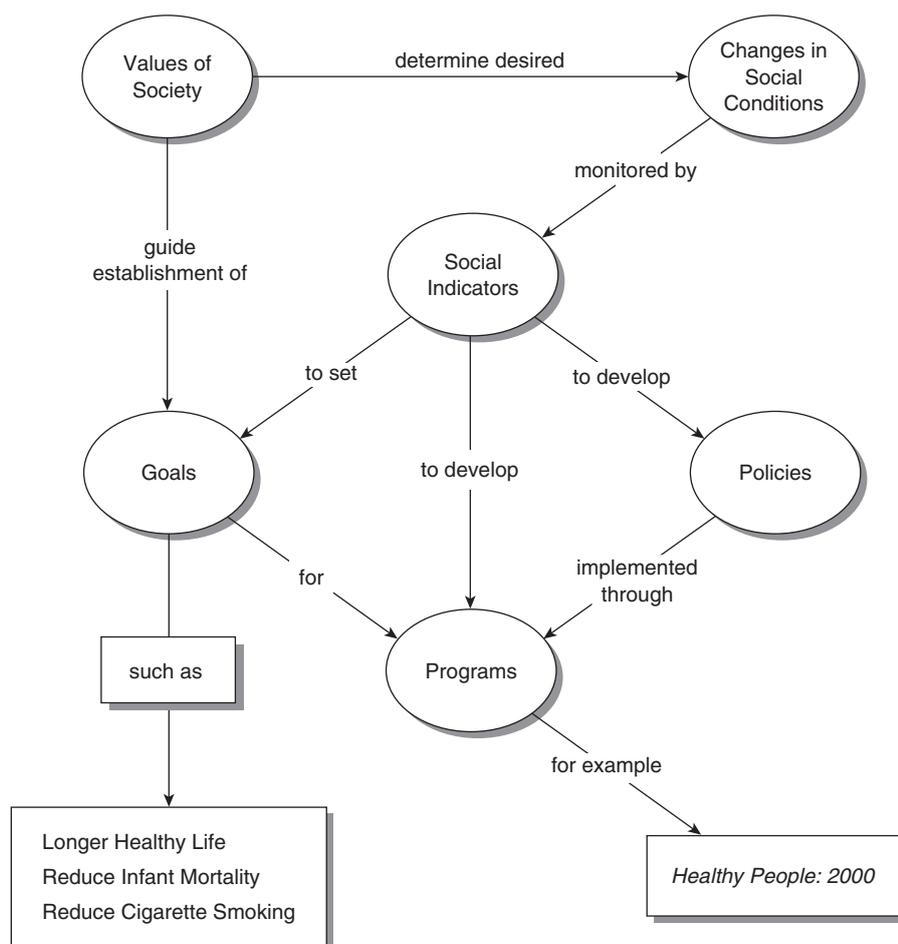
Ferriss (2002a) noted that the following *model for directed social change* emerged during the 1990s in such areas as health, education, and the welfare of children and youth in the United States: (a) *Identify trends in criterion indicators*, the direction or rate of change of which should be changed. (b) *Gather together intelligence* from experiments, field research, or theory that suggests what should be done to bring about the desired change. (c) *Launch a decentralized program to effect change in specific criterion indicators* by specific amounts, to be attained by a target date. (d) *Monitor progress* by periodically assessing trends on the specific indicators, modifying strategies as needed. (e) As initial goals are reached, *set new goals* for continued progress. The model adds social indicators to the conceptual scheme for processes of social change, beginning with cultural values, set forth by Robin M. Williams, Jr. (1967). Land and Ferriss (2002) developed a more complete articulation of this scheme in the form of a sociological model that accommodates both the enlightenment and the policy analysis functions of social indicators.

These functions may encompass the setting of goals for future change. Identifying such goals and setting about altering their direction or rate of change is a process called *telesis*, which means “progress that is intelligently planned and directed; the attainment of the desired ends by the application of intelligent human effort to the means” (*Webster's New Collegiate Dictionary* 1977; Ward 1903 used the term in a broader sense; see also Commager 1967). Land and Ferriss (2002a) recently described several interrelated telic conceptual schemes for the use of social indicators in large, complex societies such as the United States.

Figure 52.1 presents an overview of telesis, identifying the principal elements of the model, with social indicators as the central feature. Figure 52.2 identifies relationships in detail of the teleological process. The following paragraphs describe the components of the model and introduce illustrative examples.

Values of society, cultural values, are the starting point in the initiation of social change, as illustrated in Figure 52.1. The following values have been ranked among the top five in surveys of the American public: “A world at peace (free of war and conflict); family security (taking care of loved ones); freedom (free choice, independence); happiness (contentedness); and self-respect (self-esteem)”

## 524 • THE QUANTIFICATION OF SOCIAL LIFE



**Figure 52.1** Overview of Telesis

(Inglehart 1990:119). Cultural values such as these define the desires (wants) of people in society. For example, “family security” translates into the need, among other things, to preserve life and to live free from harm, and identifies the goal of “longer healthy life,” as shown in Figure 52.1. This value was central to the program of the Surgeon General in 1964 to reduce cigarette smoking in order to reduce illness and extend life expectancy (U.S. Department of Health and Human Services 1990).

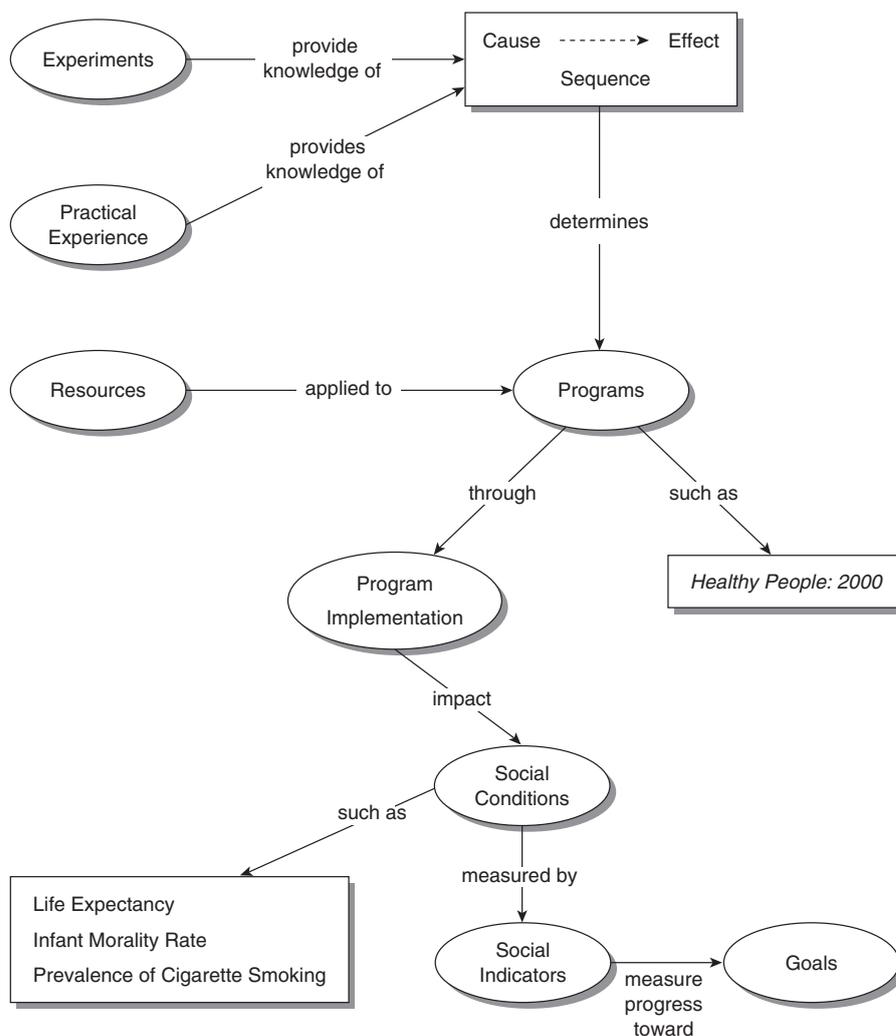
Values determine desired changes in conditions, such as tobacco consumption. Social indicators identify the current status of the practice. For example, in 1990, 25.3 percent of persons 20 years of age and older smoked cigarettes. Health authorities set 15 percent as the goal for 2000. While the goal was not realized, 23.1 percent smoking in 2000, nevertheless, there had been some reduction. During this period the length of life, 73.7 years at birth in 1980, rose to 77.0 years. Mortality rates declined 16 percent. Thus, the status of the condition in the population as identified by social indicators led to the development of policies to be implemented through programs, to reach the goal.

Social indicators help establish the discrepancy between the actual and desired conditions. Trends in indicators reveal the direction of change, whether improving or declining. That a gap exists in social conditions relative to the desired is a call to action. The pattern of optimism that change is possible must also be present.

When the goal and policy are set, the teleological process begins (see Figure 52.2). Knowledge of the sequences of actions that will bring about the desired effect is needed. This knowledge must arise from experiments, observations, practical experience, demonstrations, and tests. For example, in the case of the development of the *Healthy People* (U.S. Department of Health and Human Services 1990) program to reduce cigarette smoking, many prior studies—as many as 7,000—had proved the adverse health consequences of cigarette smoking and others had shown that stopping the habit led to improved health (Centers for Disease Control and Prevention 1989). Such information about causes and effects helped establish the goal of reducing cigarette consumption.

The next problem was to determine what programs held promise to effect change in the indicator. In the case of cigarette smoking, it was initially thought that the secession of cigarette smoking could be prompted through clinical advice of physicians to their patients. It was soon evident that this approach was inadequate. Broader effort, eventually involving labeling and restrictive legislation, proved to be more effective.

Lester Ward, the early twentieth-century sociologist who first employed the concept of telesis in social affairs, believed that change could most effectively be accomplished through legislative initiatives (Ward 1906; Commager 1967). Legislation, especially by state legislatures, in the late 1970s, pushed the nonsmoking movement toward success. Whether through legislation or through private initiatives, resources—money, workers, cooperation of actors, and so on—are required. As with any social movement, the generation of public interest and support is necessary. Dependence on governmental support is one approach, as *Healthy People* illustrates. Private interests can also be successful, as the KIDS COUNT program (<http://www.aecf.org/kidscount>) illustrates. Without



**Figure 52.2** The Teleological Process

resources of funds and manpower, the telic process will falter.

Social indicators provide evidence of change or lack thereof. Monitoring progress should lead to an evaluation of the interventions attempted. With various programs in place in the several U.S. states, natural experiments in effective/ineffective interventions would yield evidence of effective approaches. With such evaluations, revision of the program may be initiated and new goals set.

Monitoring progress involves identifying these changes not only in the aggregate but also with respect to sectors of a target population. Segments of the population differ in prevalence rates. Attention must be directed toward the most critically affected segments. If progress is not being realized, interventions should then be evaluated for their effectiveness and, if found lacking, new steps initiated.

Study of effective interventions is needed to establish the more economically feasible pathway to change. As an example, the KIDS COUNT program to improve the well-being of children in the United States observed progress

during the 1990s in 8 of the 10 indicators that it monitors (Ferriss 2002b). Knowledge, state by state, of effective procedures that generated the changes would enable future efforts to select more efficient interventions. O'Hare and Lamb (2004) described the variation in the progress of the several states in the change process.

Not all segments of the population may welcome a proposed change. In fact, those whose livelihood depends on continuing the status quo may resist change. In the case of reduction in cigarette smoking, the tobacco industry, including the farmers, reluctantly entered into the change process, and inducements for their participation were advanced. The movement to establish a vegetarian diet in place of the diet predominately based on meat and dairy products offers another example of forces resisting change. Advocates of the vegan diet have presented evidence that it can reduce rates of death and disability from heart disease, cancer, diabetes, osteoporosis, autoimmune conditions, and other illnesses. They cite evidence from nutrition and epidemiological studies, particularly *The China Study*. A description of the sizable active forces opposed to such change to a vegan diet is ably described in Campbell (2005).

## PROSPECTS FOR THE FUTURE

We modestly anticipate that social indicators will continue to serve the enlightenment function for societies and their citizens and politicians. We expect that policymakers will find many more applications in the future of social indicators to policy choice and evaluation. In particular, such applications will probably occur in three areas. The first is the additional development of well-grounded, theoretically informed, and policy-relevant indicators and models for national and/or regional level analyses within particular fields, such as health, education, crime, and science (Bulmer 1990). In such applications, the phenomena to be included are definable and delimited, and the limitations of the data on which the indicators are based are known. The health field, particularly, may be expected to pursue change sequences, as evident in the pages of *Health USA*.

**526 • THE QUANTIFICATION OF SOCIAL LIFE**

We also expect the use of social indicators to expand in the field of social impact assessment (Finsterbusch 1980; Land 1982). Social impact assessment has arisen as part of environmental impact assessment legislation and attempts to anticipate the social effects of large-scale public projects (e.g., dams, highways, nuclear waste disposal facilities) as well as to assess the damage of both natural and human-made disasters (e.g., earthquakes, oil spills, nuclear plant accidents). The use of QOL measures, now quite reliably measured, would enhance evaluation of public intervention efforts, such as the program of the Appalachian Regional Commission and the Delta Regional Authority, now evaluated by less precise methods (Ferriss 2004). This application of social indicators in impact assessments brings the field back full circle to its point of origination in the American Academy effort of the 1960s.

Finally, and not of least importance, we expect the many times series of indicators now available will increasingly be used by sociologists to assess theories, hypotheses, and models of social change, thus bringing social indicators data to bear on core issues in sociology, namely, understanding social change. With a tremendous increase in the richness of social data available for many societies today as compared with two or three decades ago, a new generation of social indicators researchers has returned to the task of constructing summary indices. Thus, the field of social indicators will probably see several decades of such index construction and competition among various indices—with a corresponding need for careful assessments to determine which indices have substantive validity for which populations in the assessment of the QOL and its changes over time and social space.