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## SOCIAL INDICATORS OF PERCEIVED LIFE QUALITY\*

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**ABSTRACT.** Modern societies in both developing and developed countries have real and legitimate concerns about the enhancement, maintenance, and redistribution of individual well-being. Indicators of perceived well-being provide direct measures of what societies are trying to achieve, permit cross-sector comparisons, can indicate the adequacy of coverage of 'objective' indicators, and can contribute to social policy making, in both the long and short run. Some commentators, however, have suggested perceptual indicators suffer from methodological weaknesses associated with their validity, interpretability, completeness, and utility. Each of these possible weaknesses is addressed in some detail. New research evidence and certain philosophical perspectives are presented, and it is concluded that none of these presumed weaknesses is sufficient to invalidate the development and use of perceptual indicators. Suggestions are made concerning methodological research needed to support the development of indicators of perceived well-being. It is noted that the materials and results developed in the author's research on Americans' perceptions of life quality may be useful for suggesting approaches to the development of indicators of perceived life quality relevant to other cultures.

### I. INTRODUCTION

There is near-universal agreement that promotion of individual well-being, at least in the long run, is one of the legitimate goals – perhaps the most important goal – of the modern state. Under the optimistic plans of the First and Second United Nations Development Decades, there were hopes – some of which are being fulfilled – of substantially increasing the well-being of hundreds of millions of individuals in developing countries. But the promotion of individual well-being is not limited to developing countries; each of the more developed countries also is seeking to achieve increases in the well-being of its people. In short, promotion of individual well-being is a worldwide phenomenon.

With the growing recognition of actual and incipient global shortages of food and other critical resources, the hopes of the 1960's are being tempered by a new sense of the limits to growth imposed by the size and nature of our planet. In the mid-1970's issues concerning the *maintenance* and *re-distribution* of individual well-being may well become of as great

concern as the promotion of *increased* well-being. However, whether the focus is on enhancement, maintenance, or redistribution, the basic concern is with the well-being of individuals.

Well-being is broadly conceived to mean the 'level' of life quality – i.e., the extent to which pleasure and satisfaction characterize human existence and the extent to which people can avoid the various miseries which are potentially the lot of each of us.

Relatively little is *scientifically* known about such broadly conceived well-being – either in the makeup of its constituent parts, or in the conditions and influences which tend to bring it about. This is not to say, however, that people have not been concerned about the topic. Legions of philosophers and poets and religious leaders and revolutionaries, over several thousand years, have offered their insights on how to achieve the 'good life'. However, the tools of modern social science – rigorous conceptualization, valid measurement, broadly representative data, and sophisticated analysis – have only recently begun to be adequate to permit exploration of individual well-being.

We would submit that the worldwide movement toward the development, monitoring, and increased use of social indicators is evidence of a desire to measure, understand, and influence individual well-being. The current movement to collect and collate an increasingly broad range of social indicators, a movement underway in most of the more developed countries, some of the developing countries, and in several international organizations, represents an exciting attempt to begin applying the insights and methods of science to this age-old human concern.

Social indicators currently being developed can be classified into two broad types, sometimes referred to as 'objective' and 'subjective'. In general, the former consist of counts of various types of phenomena, whereas the latter are based on people's perceptions and feelings.

To date, most efforts at developing social indicators have focused on the 'objective' indicators. One purpose of this paper is to suggest that the 'objective' measures are only indirect measures of individual well-being and that more direct *perceptual* measures also need to be developed, measured, monitored over time, analysed, and interpreted. We suggest that these measures provide a vitally important complement to the 'objective' measures which are currently receiving what may be a disproportionate share of time, energy, and attention.

This is not the first time the potentially useful role of perceptual measures has been suggested<sup>1</sup> and a variety of arguments have been marshaled both for and against them. A second purpose of this paper is to discuss some of these arguments in the light of some recent research on perceived life quality.

A third purpose of this paper is to suggest a series of methodological steps, some of them already implemented in our own current research, which – if carried out in a variety of countries – would begin to provide some of the basic knowledge needed for expanded effort at measuring and monitoring measures of perceived life quality.

While some methodological suggestions can be made, based on current experience, it is certainly not the case that all problems have been recognized and solved. Nevertheless, the time seems appropriate for conveying our solutions to some of the problems, and our recommendations regarding others, in hopes that the development and use of social indicators of perceived life quality can be explored more rapidly and in an increasing range of cultural settings.

#### *A. Two Types of Social Indicators*

As noted above, social indicators are sometimes classified into two broad types, depending on whether the indicator provides a direct measure of individuals' reactions. Those that are based on reports from individuals about their own perceptions, feelings, responses, and the like are sometimes referred to as 'subjective' measures. Other indicators, such as crime rates, population densities, and unemployment figures, which are ultimately based on counting the occurrences of given phenomena, are often contrasted with the subjective measures, and are called 'objective' indicators.

While there is undoubtedly a real distinction, worth preserving, between these two types of indicators, the terms 'subjective' and 'objective' carry unfortunate connotations. Given that science values objectivity and eschews subjectivity, it is easy to suppose that the 'subjective' indicators are not as valid or useful as the 'objective' ones. However, to believe this would be to pre-judge the situation. Data on relative validities are only now being accumulated, and issues of relative usefulness have hardly been explored. There are, however, some reasons to believe that the 'subjective' indicators provide at least as objective measures of what they in-

tend to assess as do the 'objective' indicators of what *they* try to assess, and, furthermore, that some of the 'objective' indicators are rather heavily weighted with subjective elements.

Given the implicit bias in the terms 'subjective' and 'objective', it would be desirable to shift to more neutral descriptors. Unfortunately, no ideal pair of terms has occurred to this writer, though a partial solution would be to replace 'subjective' with 'perceptual'. Perceptual indicators then, would be those which are based upon individuals' own perceptions, and which indicate individuals' evaluations, feelings, or other attitudes.

### *B. Short-Term Goals in Constructing Social Indicators*

Before proceeding to describe why indicators of perceived life quality seem to deserve more development effort, and suggesting how the deficiency might be remedied, it may be useful to sketch some general goals which we would set for the construction of both perceptual and 'objective' indicators. These goals set the context within which our comments about perceptual indicators are to be considered.

There have been many proposals for functions which social indicators might fulfill. Some of these seem to have higher priority than others because they lay the groundwork for subsequent work, because they seem immediately feasible, and because they promise to provide useful results in the near future.

We believe highest priority should go toward developing sets of indicators which assess the current state of individual well-being, or 'level' of life quality. Ideally, there would emerge two complementary sets of indicators – one consisting of perceptual indicators, the other of 'objective' indicators. Each would be a limited yet comprehensive set of coherent and significant indicators, monitorable over time, and disaggregatable to the level of the relevant social unit.<sup>2</sup> Given such sets of indicators, the basic task of monitoring levels of individual well-being could begin.

As good data about levels of individual well-being begin to accumulate, and as we begin to learn about differences in well-being between groups, between locations, and at different times, *then* it becomes reasonable to inquire about the causes and results of such differences. Of course, concern for these matters suggests a whole new array of investigations, which may themselves lead to the development of additional social indicators.

The conception here, at least with respect to changes in well-being

across time, is analogous to the sets of 'leading', 'coincident', and 'lagging' indicators developed by economists for monitoring business cycles. From another perspective, one could consider the development of indicators of well-being as the development of a set of 'dependent variables' whose sources of variation and whose impacts are subsequently to be explained.<sup>3</sup>

## II. PERCEPTUAL INDICATORS: ARGUMENTS FOR AND AGAINST

### A. *Why Develop Perceptual Indicators?*

One important reason for attempting to develop a series of perceptual indicators is that they provide *direct* measures of individuals' evaluations of their own well-being. It seems only reasonable to find out from the individuals a social system is designed to serve how they perceive their lives under that system. The 'objective' indicators which count rooms per person, or per capita income, or the number of automobiles or television sets, cannot be said to provide this same direct indication about how people feel about the conditions of their lives. In fact, there is reason to believe that there exists only a loose linkage between the objective conditions of people's lives and individuals' perceptions of well-being. One frequently cited example notes the generally improving material and economic conditions experienced by Blacks in the United States during the early part of the 1960's, and the simultaneous increase in manifestations of discontent, which culminated in the urban riots of the latter part of the decade.

A second reason for developing perceptual indicators is that they permit 'cross sector' comparisons – a form comparison which is necessary for resource allocation, yet difficult to make with 'objective' measures. We have found it feasible to ask people for their evaluations of various life concerns, and to show, for example, that the typical American feels substantially more positive about his family than his local police and courts. Although there are 'objective' social indicators relevant to both the family 'sector' and local justice 'sector', it is not clear how to compare them within the same framework. How does one compare the meaning of a given divorce rate to the meaning of a given crime rate? The problem with the 'objective' measures in this case is that they involve the counting of different, non-comparable, entities and the resulting indicators are on

distinct dimensions. The perceptual indicators, in contrast, are on the same dimension.

A third reason for developing indicators of perceived well-being is that they provide a check on the adequacy of the range of a set of 'objective' measures. Without data from perceptual measures, it becomes very difficult to decide which of an almost infinite array of potential 'objective' indicators deserve measurement. Through the development of perceptual indicators, however, one can empirically determine the aspects of life that do, in fact, concern individuals, and how these aspects relate to their sense of well-being. In short, knowledge about perceptions of life quality can play a significant role in setting priorities for the development of 'objective' social indicators.<sup>4</sup>

Implicit in the above discussion is the assumption that perceptual indicators can serve at least two major functions. One is a 'basic knowledge' function. With sufficient data we hope to be able to achieve a better understanding of the causes and conditions which lead to individuals' feelings of well-being, and of the effects of such feelings on their behavior. Such knowledge would clearly be useful in designing social programs whose goal is the enhancement of individual well-being. Lawmakers, government bureaucrats, and other societal decisionmakers already make numerous decisions based on their notions of the kinds of conditions that promote individual well-being. There are, however, substantial uncertainties, and fundamental differences of opinion, as to which of these often-contradictory notions are right. New scientific knowledge in such areas would be helpful.

Another function which perceptual indicators could play is of more immediate and short-range impact. They could be used to identify 'problems' especially meriting attention, bureaucratic study, and (possibly) societal action. As noted above, perceptual indicators can be used for making cross-sector comparisons. Sectors which receive below average evaluations may merit special attention to determine why they are evaluated relatively poorly and what improvements might be made. Also, perceptual indicators could be used to identify population subgroups which express below average well-being, either in general or with respect to specific sectors. These groups may deserve special attention. Thirdly, by observing changes in perceptual indicators across time, specific sectors – or population groups – that are improving or declining at unusual rates could be identified and given special attention.

If perceptual indicators hold the promise suggested here, why are they not in wider use? We suspect the situation can be attributed to (1) concerns about possible weaknesses of perceptual indicators, (2) the absence, until recently, of appropriate social science techniques which permit their development and implementation, and (3) the fact that the social indicator movement is itself a relatively new phenomenon and has only recently generated interest in measures of perceived life quality.

In this paper we focus attention on the first of these reasons – concerns about possible weaknesses. The next section reviews the major weaknesses sometimes mentioned by critics of perceptual indicators and comments on the extent to which each represents a real problem.

### *B. Concerns about Perceptual Indicators*

Based on an informal, but rather extensive, scanning of recent writings and comments about social indicators, we find that the major arguments against the use of perceptual measures can be classified into four broad categories. Each category represents a distinct cluster of methodological concerns having to do with the following issues: (1) validity, (2) interpretation, (3) completeness, and (4) utility. We consider them in the order presented.

(1) Concerns about the validity of perceptual indicators. The validity concerns focus on the possibility that it may not be possible to obtain good measures of how people evaluate their lives and its various components. Several different reasons are sometimes cited: (a) most people have not really thought about their reactions and hence cannot answer questions which ask about these reactions; (b) although people could give answers, they won't, for reasons related to invasions of privacy; (c) although people can and will give answers, the answers they give will be biased; (d) perceptions vary too rapidly and are too unstable to measure reliably.

Some of the research which my colleague Stephen Withey and I have been doing on perceptual indicators speaks directly to these validity issues. Our data come from four nationally representative probability samples of the American adult population – about five thousand respondents in all – who have been interviewed during the past two years.<sup>5</sup>

These respondents were asked how they felt about a large number<sup>6</sup> of concerns (such as their house, their family, their freedom and indepen-

dence) and about their life as a whole, and were presented a card containing a variety of possible answers. The card contained seven scaled answers – ranging from ‘Delighted’ to ‘Terrible’, and also three off-scale answers which were: “Never thought about it”, “Does not apply to me”, and “Neutral – neither satisfied nor dissatisfied”.

The empirical finding is that very few people – generally less than one percent and never more than a few percent – chose the “Never thought about it” answer. Nearly all respondents provide answers to questions of this type quickly and with apparent ease. (The typical respondent answered these questions at the rate of three or five questions per minute.) Thus the first concern about validity – that people cannot respond – seems to not be a significant problem.

The second concern – that people won’t respond even if they can – also appears not to be a major problem. While it is true that not all the people selected to be in the sample actually became respondents, the proportion who refused after they had been contacted was about 15%. Furthermore, the proportion of people refusing to respond to our questions on perceptions of life quality was not higher than what is typical in other surveys of our Institute for Social Research. While one would, of course, like to obtain data from the 15% who refuse to participate, their absence does not seriously distort results for the general population, and their absence does not seem to be the result of attempting to ask about well-being.

The third concern – that people will give biased answers – can be considered from several perspectives. One analysis from our own research suggests that differences between people in their tendency to bias answers and in their response styles, taken together, accounted for no more than about 10% of the variance in their answers. The portion of variance attributed to differences in tendency to bias alone, then, must be less than 10%. In contrast, about 65% of the variance in their answers appeared to be valid variance. Our analyses showed single items to have validity coefficients ranging from 0.69 to 0.87, with a median at 0.81. Combining several items which assess the same concern, a standard survey technique, resulted in estimated validities of approximately 0.9 – i.e., consisting of approximately 80% valid variance<sup>9</sup>

A second piece of evidence comes from a different study, conducted by Campbell, Converse, and Rodgers, which included a psychological scale on social desirability bias. They found that differences in the tendency to



bias answers to make them appear more socially desirable generally explained from 1.5 to 3.0 percent of the variance in people's answers, and in no case did they observe a relationship accounting for as much as 5 percent.<sup>8</sup> Our data show similar results.

Our general conclusion is that bias may be present in small degree, but is not a major determinant of the answers people give. Social desirability bias may indeed produce a minor shift (probably, though not necessarily, in the 'positive' direction) in the mean response of a group. When making decisions based on the absolute level of a score, one may wish to consider the possible influence of this bias. However, since the influence of bias seems not to be large, and probably does not change rapidly, this small shift is essentially irrelevant when the interest is in comparing perceptual indicators across time for the same population. In this case the bias in the measures is cancelled out when the comparison is computed.

The final concern about validity – that perceptions of life quality vary rapidly in time and are too unstable to yield dependable indications – can also be addressed by present data. Our research indicates that while people are not perfectly consistent in the answers they give at different times to identical questions about their lives, they are reasonably so. About five months after one of our national studies, we telephoned a random subsample of 300 respondents and repeated a few of the questions they had answered earlier. At both times they could choose answers from the seven-category Delighted-Terrible scale described earlier, or one of the three off-scale categories. Slightly over 80% of the respondents chose either the same category or one immediately adjacent to the one they had chosen five months earlier. Since we suspected that some of the shifts represented real changes in people's lives, we also asked these respondents "Compared to six months ago, do you think your life as a whole now is better, worse, or about the same?" When we looked at just those who said their life was "about the same", we observed a still higher proportion of people giving stable answers. Thus we find that people's answers – at least over a five month interval – tended to be rather stable, and it seems that the concern about rapid variation in perceptions is not matched by the facts.

We do not say measures of perceived life quality are perfect; we know they are not. Our point, however, is that presently available techniques of questionnaire construction and interviewing, combined with methods

of scale construction which help to eliminate idiosyncracies associated with responses to any single item, can produce measures of perceived life quality with sufficient validity to justify our time, effort, and attention.

(2) Concerns about the interpretation of perceptual measures. When we turn to the interpretation of perceptual indicators, we again find a number of different concerns being expressed: (a) One cannot understand what a respondent means by an answer because each person is unique and will be influenced by different factors; (b) one cannot compare different cultural groups because each group has its own criteria for evaluation; and (c) one cannot compare even the same group at different times because the criteria for evaluation may change over time.

These concerns can be considered from both a phenomenological and an empirical perspective. The phenomenological perspective notes that a person's feeling of 'delight' or 'satisfaction' or 'unhappiness' – or whatever else may be the feeling – engendered by some aspect of his life is itself a significant fact. For the person himself, the mixture of different feelings he has about life is an important part of what his life *is*. And if enhancement, maintenance, and/or redistribution of well-being is a significant concern of society, as we have argued, then the lives people are actually experiencing are worth knowing about. Thus from one perspective the simple content of the expressed feeling provides an interpretation for the perceptual indicator. From this perspective, one would say that differences between people, between groups, or between times in the mechanisms which produce perceptions, while interesting, do not diminish the reality of the perception itself.

Alternatively, one can take an empirical approach and begin to investigate the extent to which individuals, groups, and times actually vary in the factors which influence the perceptions, in how those perceptions interrelate to one another, and in how specific perceptions are integrated into more global ones. Research which is specifically oriented toward quality of life and which speaks to these issues is very limited and much more could (and probably should) be undertaken. Cantril's work is perhaps the most extensive cross-national study (Cantril, 1965). His conclusion, after surveying feelings about life concerns in thirteen countries, is one of remarkable underlying similarities among the world's peoples:

It is abundantly clear ... that at the present stage of human and societal development, the vast majority of people's hopes and fears revolve around the complex of personal

well-being, and this is rather simply and genuinely defined: a decent standard of living; opportunities for children; technological advances; good health; a good job; decent housing; a happy home life; better educational facilities.... An improved sense of social and political responsibility; of being useful to others, and the aspiration for self-development are mentioned by at least 5 percent of the total population sampled. (Cantril, 1967, pp. 145-6.)

Our own research, while restricted to people in the United States, has taken a careful look at differences among various demographically defined subgroups of the American population. Within that more limited range of groups, it is notable that the same statistical model which did fairly well at simulating how individuals in the general population might 'add up' life satisfactions also worked fairly well for individuals in each of 22 different subgroups we examined.<sup>9</sup> Furthermore, these results were replicated when the model was cross-validated on different respondents who participated in a subsequent nationally representative survey.

Another series of analyses in our research focused on the structure of perceptions about different aspects of well-being. (This structure can be derived from observed interrelationships among affective evaluations of different life concerns.) We found that a reasonable and meaningful structure could be identified, and that this structure, with only minor modifications, appeared in comparable but different national samples – i.e., it was highly replicable. We also examined the congruence of the structure derived from data representing the whole population with structures from ten different sub-populations.<sup>10</sup> While some differences could be noted, the general pattern was one of similarities.

Thus our results are in general agreement with Cantril's conclusions and suggest that there are broad similarities across people, both in the structure of their perceptions of life components and in how they integrate those perceptions in evaluating well-being. While we certainly would not contend that there is no variation among people – there is abundant scientific and anecdotal evidence to the contrary – the broad similarities among Americans seem sufficient to provide a basis on which to build and interpret a set of perceptual indicators of American life. Whether this same result will occur for subgroups within other nations, and whether it will occur cross-nationally, has yet to be determined. Cantril's results, however, hold out hope for the existence of substantial cross-national similarities.<sup>11</sup>

As yet we have said nothing about the possibility that the criteria by which well-being is evaluated may change over (relatively long) periods

of time. We know of no empirical studies which speak to this issue, but grant that this is a possibility. Our hunch, however, is that perceptual indicators can be developed which focus on relatively enduring aspects of life, such as family, housing, community, government, self-accomplishment, independence and freedom. Although the specific details and procedures of life may change, we would guess that sets of indicators based on more general phenomena such as these would continue to be relevant to assessments of well-being. Furthermore, to the extent changes do occur, we would guess that they would occur slowly enough to permit an on-going program of indicator measurement to adapt as needed. In short, because indicators can be tied to relatively enduring phenomena, and because changes are likely to be gradual, we do not see social change as likely to make perceptual indicators uninterpretable. On the contrary, the existence of an extensive set of well-being indicators would likely make possible a much better understanding of social changes which may occur.

Although we feel that we can currently ascribe adequate interpretability to perceptual indicators to justify their further development, it is clear that their meaningfulness will be enhanced as more is learned about their causes and their results. These areas surely deserve attention. However, as indicated previously, we would give first priority to the development of the well-being indicators themselves.

(3) Concern about the completeness of perceptual indicators. The third major issue which is sometimes raised regarding perceptual indicators points to the seemingly infinite range of possible human concerns and the difficulty of knowing when one should stop trying to measure more of them.

Our research on perceptual indicators has something to say about this problem as well. In the course of our work we have developed interview items which assess people's affective evaluations of about one hundred different aspects of their lives.<sup>12</sup> The range of concerns is very broad and is itself based on a still larger list of some 800 concerns derived from 'free answer' questions in previous surveys and a series of structured interviews. The concerns range from very personal to national matters, and include both life domains (such as house or job) and evaluative criteria (such as accomplishment, attractiveness, and independence). These items, in different overlapping subsets, have been administered to various national samples and local groups of the American population. Based on the statistical covariation of the items, they can be mapped into a three di-

mensional space in such a way that items that show strong covariation are located close together in the space, and those showing little covariation are remote from one another.<sup>13</sup>

We find that about a dozen of these items, taken together and appropriately combined, can explain 50 to 60% of the variation in an index of perceived overall life quality (i.e., multiple correlations are in the range 0.7 to 0.8). Furthermore, of the approximately 100 concerns on which we have data, none is effective in raising this explanatory power. And perhaps of even greater interest is the finding that essentially *any* dozen concerns – so long as they are well distributed in the three-dimensional space – will explain a substantial portion of the variation in perceived life quality.

According to our estimates of the validity of the measures (described earlier), we have explained approximately three quarters of the *valid* variance in our index of perceived life quality – virtually all that is potentially explainable with the less-than-perfect validities of the predictors. And we have found a variety of alternative ways to do this, each of which uses a rather limited number of predicting measures.

Thus it would appear that while Americans' concerns that relate to perceptions of life quality may show practically infinite variation, that variation occurs largely within a conceptual space whose major features have been mapped and identified. Given representation of a modest number of these conceptual areas in a measuring instrument, one can arrive at a rather good estimate of an individual's feelings about his general well-being.

We feel that empirical results such as these begin to provide an answer to worries about the vast range of possible perceptual indicators. If the goal is to assess individuals' perceptions of well-being, our data suggest that about a dozen heterogeneous measures can cover the essential ground. Of course, if one seeks a more detailed reading, either for achieving more focused predictions or for policy-making purposes, one may indeed wish to probe more extensively. But the terrain is apparently not limitless, and its broad features begin to be known.

Obviously, these results are based only on data from American respondents, and it would be important to determine whether the finding that a limited set of heterogeneous concerns is sufficient to explain perceptions of global life quality would be replicated in other cultures. But the data

we have at present suggest that finding out when to stop increasing the range of perceptual indicators is a solvable – and partially solved – problem, and is not likely to present an insurmountable barrier to the assessment of perceived life quality.

(4) Concerns about the utility of perceptual indicators. The fourth major set of concerns about perceptual indicators focuses upon their utility. Three concerns are sometimes mentioned: (a) even if one knows how satisfied or dissatisfied people are, this is essentially irrelevant since people may be ignorant about the true impact of various life conditions; (b) even if one knows how satisfied or dissatisfied people are, this is not useful because the relationship between individual satisfaction and societal welfare is not known; (c) collecting perceptual measures requires such great expense and difficulty that they are not worth the trouble given the availability of cheaper alternative measures.

In support of the first concern, critics of perceptual indicators sometimes point to medical phenomena such as smoking: people may be very satisfied with the cigarettes they smoke so long as they remain ignorant of, or disregard, the increased likelihood of contracting lung cancer. Or one could imagine an opposite example: people may be distressed by pornographic displays so long as they remain ignorant of, or disregard, studies which show pornography to have few adverse effects. The basic logic is that people do not know what is good or bad for them and hence they are not qualified as judges of life conditions.

While it is true that the impacts of various life conditions are not known in great detail to everyone, it is our position that this does not constitute an adequate reason for neglecting perceptual indicators of well-being. It remains true that people's perceptions, however uninformed they may be, are real to the person involved, and that people act on the basis of them – a lot of cigarettes are sold, and movies banned, despite research evidence which fails to support such actions. What is proved by these examples is that perceptual indicators, *by themselves*, do not provide an adequate basis for societal decision making. But this has not (to our knowledge) been seriously proposed. While it is inappropriate to assume that each individual has all the knowledge necessary to make informed judgments about all aspects of his life, most observers would agree that it is at least as inappropriate to assume that some outside 'group of experts' can – or should – make all judgments for each individual.

The second concern – that perceptual indicators may not be useful because the relationship between individual satisfaction and societal welfare is not known – could be summarized by the philosophical query whether it is better to be Socrates unhappy or a pig contented.

One approach to this concern is to note that societal welfare – at least as we conceive it – has as its ultimate payoff and manifestation continuously high levels of individual well-being, and that an important component of individual well-being is individuals' own *sense* of well-being. If these two premises are accepted, then it becomes reasonable to try to measure individuals' perceptions of life quality, because they are a constituent part (but not the only part) of the basic phenomenon.

Taking a more empirical approach, one might note that the accumulation of basic data on individuals' perceptions of life quality, coupled with other data relevant to societal welfare, perhaps including such matters as societal stability, adaptability, innovativeness, and long-term survival, is as yet almost totally lacking. Despite the intriguing comparison involving Socrates and the pig, it is not at all clear that contented people necessarily produce a lazy or sick society, nor is it clear that discontented people produce an achieving or viable society. (However until we begin to collect the kinds of perceptual indicators that might enlighten us on these matters these uncertainties will continue.)

Finally, we need to face the concerns about costs and the related matter of alternative measures. It has been said that survey data are expensive and difficult to collect, particularly if one wants information on many small local populations. Such statements are both somewhat true and somewhat naive.

After an initial investment in getting a program of monitoring perceptual indicators established, the per-interview cost of an ongoing program would be much lower than the costs of a one-shot survey, owing to the repeated use of standardized sampling techniques, instruments, interviewing procedures, and analyses. Furthermore, use of specialized techniques possible within an ongoing program – such as telephone interviews of some respondents, mail-back forms, and the like – may further reduce costs.

Some governments already are using survey techniques to gather a variety of data in cost-effective ways. These governments are at national provincial, and local levels, and are in both the more- and less-developed

countries. Assessing perceptions of life quality does not seem to be an operation so fundamentally different from other topics for which governments use surveys as to suggest surveys could not be made cost effective here also.

As for the existence of alternative measures, it is certainly true that other ('objective') indicators or life quality are being, or could be, collected. As noted previously, however, these other measures are not really alternatives to the perceptual measures. They do not provide the same kind of direct indications of individual well-being, as this is perceived by the individuals themselves.

Furthermore, the 'objective' measures are themselves subject to virtually all of the same methodological concerns which we have been discussing with respect to the perceptual measures: there are real issues with respect to their validity, interpretation, completeness, and utility. A recent study of the United Nations Research Institute for Social Development is instructive in this regard. Its report includes these summary statements:

As a pilot study, UNRISD organized an enquiry in two Cretan villages on indicators of local progress. The purpose was to test typical national and international indicators at the local level.... The preestablished set of indicators was selected from the list officially proposed for evaluation of progress in the Second United Nations Development Decade.... The following main conclusions emerged: (1) The nature of the overall change that may be taking place can give a sense of growth or a sense of decline.... (2) A number of the proposed indicators are too crude to deal with local realities and require refinement.... (3) The local inhabitants were not agreed among themselves as to what constitutes progress.... (4) The significance of an indicator can depend very much upon the local context.... (Scott *et al.*, 1973, p. 27).

In short, under actual field conditions, there arose rather substantial problems in applying traditional (and official) 'objective' indicators to assess changes in the quality of life in a local setting.

Of course, pointing to problems in the 'objective' indicators does not by itself provide a significant rationale for undertaking the measurement of perceptual indicators. However, it may provide a much needed element of balance when making judgments about priorities for social indicator development.

### III. DEVELOPMENT OF PERCEPTUAL INDICATORS OF WELL-BEING

If the development of a series of perceptual indicators of the level of life



quality makes sense, as we have suggested, a reasonable next question is How might one proceed to do this? This concluding section provides some suggestions.<sup>14</sup>

The questions that need to be answered to generate the basic knowledge on which to build an adequate series of indicators of perceived well-being include the following:

What are the concerns of a given set of people? (By 'set of people' we refer to the people of a given country, region, location, culture, subculture, group, etc.)

Which of these concerns are relevant to these individuals' sense of general well-being? What is the relative potency of each concern?

How do the relevant concerns relate to one another? Which concerns tend to covary? Which are statistically distinct? What is the structure of these people's perceptions?

Can one understand these people's perceptions of their general well-being in terms of their evaluations of particular concerns? How good is the prediction? What is the system by which these people seem to combine evaluations of particular concerns to evaluate individual well-being? How many different concerns need to be considered?

How stable are these individuals' evaluations of particular concerns? How stable is the evaluation of their general well-being?

With what validity can one assess these people's evaluations of particular concerns and general well-being? To what extent do these people bias their answers? To what extent can these people easily identify and report their feelings?

How comparable are these people to other relevant groups of people – with respect to all of the questions above?

What are the costs and difficulties of collecting perceptual measures from these people?

As some readers will recognize, it is to questions such as these that our

own research on social indicators has been addressed. We think we can answer these questions for adult Americans and for major subgroups within the American population.

We have found perceptions of life quality to be a surprisingly tractable set of phenomena. We found a relatively simple, and replicable structure of perceptions, which did not vary enormously among the major subpopulations we examined; we found we could measure people's evaluations of life as a whole, and of particular concerns, rather easily, and with quite satisfactory validities, and that these evaluations were quite stable across time; we found that evaluations of concerns seemed to be combined by individuals in rather simple ways (i.e., additively and linearly) in arriving at overall evaluations of well-being; and we found that rather good predictions of individuals' sense of general well-being could be achieved using their evaluations of only a small number of concerns, and that the precise concerns used to make the prediction were less important than the coverage of the concerns represented.

On the basis of our results, we can suggest broad, efficient, and reasonably valid ways of assessing perceptions of the 'level' of life quality for a rather wide range of American groups.

The empirical results from our American respondents seem sufficiently straightforward, meaningful, and potentially useful to suggest the desirability and feasibility of exploring perceptions of life quality using a somewhat similar methodology in other cultures. The instruments developed in the course of our work stand ready to be modified, as appropriate, and tested in other settings. Key components include sets of items assessing individuals' affective evaluations of a wide range of possible life concerns, various measures of individuals' sense of general well-being, and a variety of alternative, but essentially equivalent, scale formats for collecting these evaluations. Depending on the situation, one could use these instruments in either a personal interview or paper-and-pencil-questionnaire type of data collection. The time required for data collection could range from a relatively short 10–15 minutes up to about an hour. On several occasions we have successfully incorporated our materials as one part of a larger general purpose sample survey. In addition to the basic data collection instruments and procedures, our work may prove helpful in suggesting useful analytic approaches, and in providing a set of empirical results with which findings from other cultures can be compared.

While there will undoubtedly be some additional cost and effort required to establish in other cultures the foundation of knowledge on which a set of perceptual indicators of individual well-being could be built, we believe the undertaking would be well worthwhile. In addition to the potential usefulness of perceptual measures for gaining new understanding about the causes and impacts of changes in well-being, and for policy and decisionmaking at many levels within a society – uses which have been mentioned previously in this paper, we feel indicators of perceptual well-being could come to have another more general, more pervasive, and perhaps more significant impact. They describe individuals' reactions to fundamental human concerns. Parallel series of such indicators, monitored in a broad range of countries, could help to teach the people of this planet what we have in common. It is such common understandings of common concerns that generate the support for cooperation and sharing of burdens on which our mutual survival and prosperity may ultimately depend.

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#### NOTES

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<sup>1</sup> Extensive discussions supporting the use of what are here called 'perceptual measures' appear in Campbell and Converse (1972) and Dalkey (1972).

<sup>2</sup> For references to literature which suggest these criteria and an explicit discussion of the various criteria included, see Andrews (1973, pp. 4–6).

<sup>3</sup> Some progress toward the above goals is already evident. With respect to developing 'objective' indicators specifically focused on individual well-being, the *List of Social Concerns* recently published by OECD (OECD, 1973) is the result of perhaps the most extensive international effort at collaboration in this area. Many individual nations also have projects oriented toward these same goals. With respect to developing perceptual indicators of well-being, the methodological work of the writer and his colleague Stephen Withey is perhaps the most general (Andrews and Withey, 1974a, b). Other projects also focusing on perceptual indicators include groups led by Angus Campbell, Phillip Converse, and Willard Rodgers, also at the University of Michigan, (Campbell

*et al.*, in preparation), a group in England led by Mark Abrams and John Hall (Abrams, 1974), and a consortium of four national groups which jointly directed the Scandinavian Survey (Allardt, 1973).

<sup>4</sup> An interesting observation can be made on this matter based on our data from American respondents. Our results indicate that evaluations of self and family, among others, are important components for most individuals in the quality of their life as a whole. These concerns, however, typically receive little or no attention in reports based on 'objective' social indicators, or in proposals for developing 'objective' social indicators. (Note their absence, for example, in *Social Indicators 1973* (Executive Office of the President, 1973) and *List of Social Concerns* (OECD, 1973), both of which are rather sophisticated documents of their kind.) Furthermore, our data indicate that evaluations of these concerns are typically somewhat more positive than evaluations of the concerns typically assessed by objective indicators, and that without representation of self and family in a set of indicators one might conclude that quality of life was lower than people actually perceive it to be.

<sup>5</sup> Some of our results are published in Andrews and Withey (1974a); other results appear in Andrews and Withey (1974b). Two book-length reports presenting the complete findings are currently in preparation.

<sup>6</sup> The number of concerns varied from sample to sample. Altogether about 100 different concerns have been investigated.

<sup>7</sup> These analyses appear in Andrews and Withey (1974b).

<sup>8</sup> Campbell *et al.* (in preparation), Chapter 4.

<sup>9</sup> The subgroups were defined in terms of age, sex, education, marital status, race, income, socioeconomic level, or employment status. These results appear in Andrews and Withey (1974b).

<sup>10</sup> These groups included men, women, blacks, four different age groups, two groups extreme with respect to socioeconomic status, and a group of married white employed men in their middle years with children living at home.

<sup>11</sup> Campbell *et al.* (in preparation, Chapter 3) also examined perceptual structures in their data on Americans' assessments of life quality. While their structures appear different from ours, this seems attributable to their having data on fewer concerns. However, for the concerns they assessed, they found substantial similarities – as we did – in perceptual structures among different groups in the American population. Furthermore, they note that their results from Americans show substantial similarities to some British data.

<sup>12</sup> These are listed in Exhibit 2 of Andrews and Withey (1974a).

<sup>13</sup> Several such maps appear in Andrews and Withey (1974b).

<sup>14</sup> It should be noted that we do not presume to address in this section all of what might be done in developing perceptual indicators. Rather, we confine our comments to development of measures of perceived current well-being. Such measures do not represent all, or even a majority of possible perceptual measures. Included in the literature of the social indicator movement are suggestions that one might measure hopes, fears, anxieties, expectations, aspirations, needs, wants, values, demands, fulfillments and many other subjective qualities. Strong arguments can be made for each. However, everything cannot be done at once, and since individual well-being is the major social goal, we give priority to developing measures of it. Good measures of the level of well-being, once developed, could then play a central role in attempts to understand how other phenomena – both internal and external to the individual – affect, or are affected by, his sense of well-being.

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