# Does Economic Growth Improve the Human Lot? Some Empirical Evidence

RICHARD A. EASTERLIN

UNIVERSITY OF PENNSYLVANIA

Over a decade ago, Moses Ambramovitz published an essay, "The Welfare Interpretation of National Income and Product," in a predecessor volume to this one, honoring another distinguished Stanford economist (Abramovitz, 1959). Abramovitz concluded that "we must be highly skeptical of the view that long term changes in the rate of growth of welfare can be gauged even roughly from changes in the rate of growth of output," and called for "further thought about the meaning of secular changes in the rate of growth of national income and empirical studies that can fortify and lend substance to analysis [pp. 21, 22]."\*

This paper is offered in the spirit of this little-heeded call. It brings together the results of surveys of human happiness that have been conducted in

- <sup>1</sup> A differing conclusion, perhaps more representative of the profession at large, is reached by Nordhaus and Tobin (1972): "Is growth obsolete? We think not. Although GNP and other national income aggregates are imperfect measures of welfare, the broad picture of secular progress which they convey remains after correction of their most obvious deficiencies [p. 24]."
- \* M. Abramovitz, "The welfare interpretation of secular trends in national income and product." In *The Allocation of Economic Resources: Essays in Honor of Bernard Francis Haley* (M. Abramovitz *et al.* eds.), Stanford, California: Stanford Univ. Press, 1959.

nineteen countries, developed and less-developed, during the period since World War II, to see what evidence there is of an association between income and happiness. Are the wealthy members of society usually happier than the poor? What of rich versus poor countries—are the more developed nations typically happier? As a country's income grows during the course of economic development, does human happiness advance—does economic growth improve the human lot?

Happiness is not confined, of course, to economic well-being. Abramovitz noted that "since Pigou ... economists have generally distinguished between social welfare, or welfare at large, and the narrower concept of economic welfare," with "national product ... taken to be the objective, measurable counterpart of economic welfare [p. 3]." Happiness corresponds to the broader of these two concepts, that of social welfare, or welfare at large. However, as Abramovitz points out, economists have normally disregarded possible divergences between the two welfare concepts, and operated on Pigou's dictum "that there is a clear presumption that changes in economic welfare indicate changes in social welfare in the same direction, if not in the same degree [p. 3]." It is this dictum, as applied to the study of economic growth, that is the central concern of this paper. Is there evidence that economic growth is positively associated with social welfare, i.e., human happiness?

The term "happiness" is used intermittently, albeit loosely, in the literature of economics. To my knowledge, however, this is the first attempt to look at the actual evidence. The initial section of this paper is devoted to a somewhat lengthy discussion of the concept and measurement of happiness, as the term is used in this study. The second section presents the results of the empirical analysis, and the third, an interpretation of the findings. The conclusions, in brief, are that the evidence supports Abramovitz's skepticism of a positive correlation between output and welfare, and for a good reason. The increase in output itself makes for an escalation in human aspirations, and thus negates the expected positive impact on welfare.

## 1. The Concept and Measurement of Happiness

#### a. Concept

The basic data used here are statements by individuals on their subjective happiness. These self-reports are sometimes designated "avowed" or "reported" happiness to underscore the possibility that they may not accurately

<sup>2</sup> It is used, for example, in welfare economics by Mishan (1968): "If, for instance, welfare is used as a synonym for happiness ... [p. 504]." Similarly, Little (1950) comments: "And, according to our present definition of 'welfare' (= 'happiness') ... [p. 30]." In a recent economics text, Eckaus (1972) writes: "What is the economic system supposed to do? The answer that it should contribute to human happiness is as good a start as any [p. 7]."

reflect the true state of the respondents' feelings. This possibility will be examined shortly.

The data are of two types. The first consists of the responses to a Gallup-poll-type survey in which a direct question of the following sort was asked: "In general, how happy would you say that you are—very happy, fairly happy, or not very happy?" Sometimes this was preceded by a question asking the respondent to state "in your own words, what the word 'happiness" means to you."

The other set of data comes from a more sophisticated procedure, devised by Cantril (1965) in a pioneering study of the hopes, fears, and happiness of persons in 14 countries of the world. Since Cantril's study figures prominently in the following analysis, it is worth quoting him at some length. He starts with a general description of the technique he calls the "Self-Anchoring Striving Scale":

A person is asked to define on the basis of *his own* assumptions, perceptions, goals, and values the two extremes or anchoring points of the spectrum on which some scale measurement is desired—for example, he may be asked to define the "top" and "bottom," the "good" and "bad," the "best" and the "worst." This self-defined continuum is then used as our measuring device.

While the Self-Anchoring Striving Scale technique can be used on a wide variety of problems, it was utilized in this study as a means of discovering the spectrum of values a person is preoccupied or concerned with and by means of which he evaluates his own life. He describes as the top anchoring point his wishes and hopes as he personally conceives them and the realization of which would constitute for him the best possible life. At the other extreme, he describes the worries and fears, the preoccupations and frustrations, embodied in his conception of the worst possible life he could imagine. Then, utilizing a nonverbal ladder device [showing a scale from 0 to 10], symbolic of "the ladder of life," he is asked where he thinks he stands on the ladder today, with the top being the best life as he has defined it, the bottom the worst life as he has defined it.

The actual questions, together with the parenthetical instructions to interviewers, are given below:

1. (A) All of us want certain things out of life. When you think about what really matters in your own life, what are your wishes and hopes for the future? In other words, if you imagine your future in the *best* possible light, what would your life look like then, if you are to be happy? Take your time in answering; such things aren't easy to put into words.

PERMISSIBLE PROBES: What are your hopes for the future? What would your life have to be like for you to be completely happy? What is missing for you to be happy? [Use also, if necessary, the words "dreams" and "desires."]

OBLIGATORY PROBE: Anything else?

(B) Now, taking the other side of the picture, what are your fears and worries about the future? In other words, if you imagine your future in the *worst* possible light, what would your life look like then? Again, take your time in answering.

PERMISSIBLE PROBE: What would make you unhappy? [Stress the words "fears" and "worries."]

OBLIGATORY PROBE: Anything else?

Here is a picture of a ladder. Suppose we say that the top of the ladder (POINT-ING) represents the best possible life for you and the bottom (POINTING) represents the worst possible life for you.

(C) Where on the ladder (MOVING FINGER RAPIDLY UP AND DOWN LADDER) do you feel you personally stand at the *present* time? Step number\_\_\_\_\_\_\_\_[pp. 22–23, italics in original].\*

This technique thus yields a rating by each individual of his personal standing on a scale from 0 (the worst possible life) to 10 (the best possible life), where "worst" and "best" are defined by each person for himself. The survey also asked for current evaluations of past and prospective personal standings, plus a similar set of evaluations by each individual of the situation of the nation as a whole. In the present analysis, use will be made only of the rating by each individual of his personal happiness at the time of the survey, since this is relevant to subjective well-being, and reports on one's feelings at the moment are likely to be more accurate than those on how one might feel or did feel in other situations.

Although the procedures differ in the Gallup poll and Cantril approaches, the concept of happiness underlying them is essentially the same. Reliance is placed on the subjective evaluation of the respondent—in effect, each individual is considered to be the best judge of his own feelings. He is seen as having a frame of reference that defines for him the range from unhappy to happy states of mind. His summary response—whether in terms of broad categories of happiness, as in the Gallup poll, or in terms of a numerical rating from 0 to 10, as in Cantril's approach—is a statement of his present position within that frame of reference.

The approach has a certain amount of appeal. If one is interested in how happy people are—in their subjective satisfaction—why not let each person set his own standard and decide how closely he approaches it? The alternatives of obtaining evaluations by outside observers or seeking to use objective indicators of happiness inevitably run into the problem of what observers or what indicators one should rely on. Moreover, despite the use of ratings based on a scale that varies from one individual to the next, it is possible to make meaningful comparisons. For example, consider two population groups. These might be two segments of a national population at a given time, say rich and poor, or the populations of an entire country at two different times, or the populations of two different countries at a given time. Whatever the

<sup>\*</sup> Patterns of Human Concerns by Hadley Cantril. Rutgers University Press, New Brunswick, New Jersey (1965).

case, it is of interest to ask whether on the average individuals in the first population differ significantly from those in the second in how high they rate themselves in terms of personal happiness, even though the scale being applied differs within each population and between the two. After all, in opinion surveys on the relative merit, say, of presidential aspirants, the criteria used by respondents in forming their evaluations doubtless differ. Indeed, it is of interest to ask whether there are systematic differences in the criteria used for the evaluations (a point we shall look into later). It may be argued, of course, that political opinion polls are of value because of their implications for prospective behavior of the respondents. But perhaps the same may be said of opinions on personal happiness—might not individuals with a low personal happiness rating be expected to behave differently from those with a high personal rating?

At the same time, a number of reservations on the meaningfulness of the data come to mind. There is first the question of the relevance of the happiness concept to populations differing widely in cultural characteristics. It is true that the present approach allows each individual to define his own standard of happiness. But is the idea itself present in all cultures? One indication that it is the observation by Inkeles (1960) that happiness, in contrast to certain other concepts relating to emotional states, "may be translated fairly well from one language to another ... [p. 15]." Cantril (1965) devoted considerable effort to this translation issue:

One of the problems that had to be overcome was translating the original questions from English into the various languages used. In some cases this was by no means an easy task, and considerable time was spent with experts to be sure the translation contained the precise nuances wanted. One of the methods often utilized in this translation process was to have someone who knew the native language, as a native, for example, an Arab, and who also was completely fluent in English translate our questions into Arabic. Then someone whose native language was English but who had a perfect command of Arabic would translate the Arabic back into English so a comparison could be made with the original question and, through discussion and further comparisons, difficulties could be ironed out.

Translations from English had to be made into the following twenty-six other languages which we list here alphabetically: Arabic, Bengali, Cebuano, German, Gujarati, Hausa, Hebrew, Hindi, Ibo, Ilocano, Ilongo, Malayalam, Marathi, Oriya, Polish, Portuguese, Serbo-Croatian, Slovenian, Spanish, Tagalog, Tamil, Telugu, Urdu, Waray, Yiddish, and Yoruba [p. 26].\*

Apparently the effort paid off, for the nonresponse rate was generally low. To judge from this experience, happiness is an idea that transcends individual cultures.

<sup>\*</sup> Patterns of Human Concerns by Hadley Cantril. Rutgers University Press, New Brunswick, New Jersey (1965).

Moreover, the considerations affecting personal happiness in different cultures turn out to be quite similar. In his survey, Cantril found that typically certain hopes and fears were more frequently expressed than others. Here, for example, is a tabulation he prepared of the things mentioned most frequently by Americans in discussing their hopes, and the proportion of the sample mentioning each item (Cantril, 1965, p. 35):\*

Own health	40%
Decent standard of living	33
Children	29
Housing	24
Happy family	18
Family health	16
Leisure time	11
Keep status quo	11
Old age	10
Peace	9
Resolution of religious problems	8
Working conditions	7
Family responsibility	7
To be accepted	6
An improved standard of living	5
Employment	5
Attain emotional maturity	5
Modern conveniences	5

To facilitate handling such data, Cantril (1965, p. 36) further classified the items listed above into nine "general" categories of personal hopes:

Economic	65%
Health	48
Family	47
Personal values	20
Status quo	11
Job or work situation	10
International situation, world	10
Social values	5
Political	2

Hopes relating to economic matters appear to be foremost in the minds of Americans, but clearly do not exhaust the content of happiness.

Similar classification of the replies for other countries enabled Cantril to compare the personal hopes of people in widely differing national and cultural circumstances (Table 1). What stands out is that hopes regarding economic,

<sup>\*</sup> Patterns of Human Concerns by Hadley Cantril. Rutgers University Press, New Brunswick, New Jersey (1965).

TABLE 1
PERSONAL HOPES BY COUNTRY, CA. 1960<sup>a, b</sup>

	Personal hopes									
Country	Economic	Family	Health	Values and character	Job/work	Social	International	Political	S	
Brazil	68	28	34	14	8	1	1	_		
Cuba	73	52	47	30	14	4	3	15		
Dominican										
Republic	95	39	17	15	25	2		9		
Egypt	70	53	24	39	42	9	2	4		
India	70	39	4	14	22	8	_			
Israel	80	76	47	29	35	10	12	2		
Nigeria	90	76	45	42	19	14	_			
Panama	90	53	43	26	26	3		1		
Philippines	60	52	6	9	11	5	_	_		
United States	65	47	48	20	10	5	10	2		
West Germany	85	27	46	11	10	3	15	1		
Yugoslavia	83	60	41	18	20	4	8	_		

<sup>&</sup>lt;sup>a</sup> From *Patterns of Human Concerns* by Hadley Cantril, Rutgers University Press, New Brunswick, New Jersey (1965) <sup>b</sup> Percentage of population mentioning hopes that fall in indicated category. Sum of percentages exceeds 100 percent lents mention hopes falling in more than one category.

family, and health matters repeatedly dominate the perceptions of happiness by individuals in the various countries, with economic concerns typically the most frequently mentioned. Needless to say, the specific nature of these concerns often differs (some evidence on this regarding economic aspirations is presented toward the end of this essay), and there are undoubtedly variations among people within countries as well. If one looks at a like tabulation for personal fears rather than hopes, a similarity among countries again appears, though the relative importance of the categories changes somewhat (e.g., typically health increases in relative importance). On reflection, the similarity in the results for different countries is plausible. In all cultures the way in which the bulk of the people spend most of their time is similar—in working and trying to provide for and raise a family. Hence the concerns that they express when asked about happiness are similar.

#### b. Measurement Problems

Let us turn to some technical issues regarding the data. For one thing, there is the question of the stability of the replies. Are emotional states so highly variable that the replies to questions about personal happiness tend to fluctuate widely over short periods of time, with the ups and downs of daily life? This problem has been studied by comparing the results of surveys of the same population run at short intervals. The conclusion, reported by Robinson and Shaver (1969, p. 17), is that "[o]ne of the most impressive features of the questions ... is the stable test–retest reliabilities they exhibit." This result is confirmed by the data used here. Two surveys by the American Institute of Public Opinion (AIPO) containing a happiness question were taken within two weeks of each other in September 1956. The results were virtually identical. A third poll taken six months later still showed very little change (see Table 8 below).

Another important issue is the validity of self-reports on happiness. Are people capable of assessing their own emotional states? One test, though hardly a definitive one, is to examine the consistency of self-reports with evaluations by outside judges—peers, professional psychologists, and so on. The results of such tests are summarized as follows by Wilson (1967):

Data from these several studies suggest that judges agree poorly among themselves, that judges vary in the extent to which they agree with self-ratings, and that few judges agree closely with self-ratings. At the same time, the data show that most judges agree with self-ratings to some extent and that the pooling of judges' estimates increases the agreement with self-ratings. These facts would seem, if anything, to support the validity of self-ratings [p. 295].\*

\* From W. Wilson, "Correlates of avowed happiness," *Psychological Bulletin* **67**, 1967, 294–306. Copyright 1967 by the American Psychological Association and reproduced by permission.

Comparisons have also been made between self-reports on happiness and measures presumed to be indicative of happiness, e.g., indicators of physical health, and between self-reports on happiness and measures of other psychological states such as depression and self-esteem (Bradburn, 1969, p. 39; Robinson and Shaver, 1969, pp. 26–31). In both cases the self-reports show significant correlations with the other measures of the type expected. In all of these comparisons, there is inevitably the question of what is to be taken as the ultimate arbiter of "happiness." Perhaps the most that can be said is that the general consistency of self-reports with the other bases of evaluation bolsters one's confidence in the ability of people to assess with some validity their own feelings.

The result bears also on another issue—whether a person is likely to report his true feelings to an anonymous interviewer. The fact that the self-reports check out fairly well with other bases of evaluation suggests that the replies are reasonably honest. Indeed, in view of the considerable success in obtaining reports on such matters of intimate concern as personal income and sex, it might be felt that there would be no serious problem in getting people to state how happy they are. However, one possibly important source of bias exists. In formulating replies to survey questions, respondents are influenced by considerations of what they believe to be the proper or socially desirable response (Davis, 1965).<sup>3</sup> Thus, if the social norm is that happiness is a good thing, there might be a tendency toward an upward bias in the replies due to considerations of social desirability.

Again, there have been attempts to test for this factor. Comparisons have been made between replies given to an interviewer and the responses on a self-administered questionnaire, the presumption being that one is likely to be more honest in the latter situation. Also, correlations have been run between people's statements of their happiness and their tendencies toward social conformity, as measured by standard psychological tests. Sometimes the tests suggest some influence of social desirability in the replies; sometimes they do not (Bradburn, 1969, p. 38; Wilson, 1967, p. 295).

Of course, if all responses were similarly biased, there would be no real problem for the present study. The concern here is with the relation of happiness to income, and the real question is whether there may be differential bias in the replies by income level. Is it likely, for example, that rich people would feel that they were expected to reply that they are "very happy," and conversely for poor people? On reflection it is not wholly certain what reply people might think was expected of them. While most respondents might feel that the social norm is that "money makes one happy," there is the

<sup>&</sup>lt;sup>3</sup> Cf. Edwards (1957). Recent work by Block (1965) and Rorer (1965) suggests that the importance of this factor in biasing survey results has been exaggerated.

possibility that others would be influenced by the notion of the "carefree, happy poor." The expected bias in the replies would clearly be different depending on which is perceived as the social norm. Beyond this there is the question of the universality of the norm. Has "the" norm been the same in the United States since 1946, or has it perhaps been altered by public attention in the 1960s to the "poverty problem"? Is the norm the same in 19 different countries ranging over the various continents of the world?

It is also pertinent to consider the context in which the happiness question is asked. If one were asked his income and then, immediately following, how happy he was, the respondent might link the two questions, and his awareness of a social norm might bias his reply. In the Gallup poll surveys used here, however, the happiness question is intermixed with 50 or more survey questions, most of which deal with current events, usually political. The question on economic status comes at the end of these surveys along with other inquiries as to personal characteristics. Under these circumstances, the respondent, in formulating his reply to the happiness question, is not likely to feel the interviewer is regarding him as a "rich person" or as "a poor person" and to answer the way he thinks such a person "ought" to answer. The Cantril survey is specifically focused on people's feelings—their hopes, fears, and how happy they are. Even in this case, however, the question on economic status comes at the end of the survey. It is far from clear that in considering questions a respondent would feel himself especially cast in the role, say, of a poor person, as distinct from that of one who is young or married or has any one of a number of other personal characteristics.

Finally, it is instructive to note the effect of variations in the wording of the happiness question. The National Opinion Research Center (NORC) has asked a question similar to that in the AIPO surveys, but the happiness categories differ as follows:

	(1)	(2)	(3)
AIPO	Very happy	Fairly happy	Not very happy
NORC	Very happy	Pretty happy	Not too happy

The first and third categories are virtually alike. It seems reasonable to suppose, however, that many individuals would consider the NORC's rating (2), "pretty happy," closer to (1) and farther from (3) than the AIPO's rating "fairly happy." Hence, one might expect that some respondents who chose category (1) in the AIPO poll would have chosen (2) in the NORC poll, and

some who chose (2) in the AIPO poll would have chosen (3) in the NORC poll. The results of polls taken at similar dates confirm this expectation—the percentage in group (1) tends to run lower and the percentage in group (3) runs higher in the NORC polls (see Table 8, panels A and B). Moreover, a shift of this type is common to all income classes, with no systematic difference in magnitude.<sup>4</sup> The direction of the shift and the consistency by income level suggest that respondents throughout the population are placing similar interpretations on the question asked and are answering, at least to some extent, in terms of their real feelings.

However, when all is said and done, the possibility of differential bias in the replies by income level cannot be ruled out, though the magnitude remains uncertain, and this qualification must be borne in mind in interpreting the findings presented here. My own feeling is that while such bias may exist, it is not significant enough to invalidate the conclusions on the association between income and happiness. Perhaps the most important basis for this judgment is the impressive consistency of the results in a variety of times and places with widely differing cultural and socioeconomic circumstances.

#### 2. The Evidence

## a. Within-Country Comparisons

Does greater happiness go with higher income? Let us look first at the comparative status of income groups within a country at a given time.

Table 2 presents the data from the most recent survey of the American population, conducted in December 1970. Of those in the lowest income group, not much more than a fourth report that they are "very happy." In the highest income group the proportion very happy is almost twice as great. In successive income groups from low to high the proportion very happy rises steadily. There is a clear indication here that income and happiness are positively associated.

How typical is this result? Tables 3–5 summarize the results of 29 additional surveys. Sixteen of these surveys are of the Gallup-poll type; 13, of the Cantril type. Ten of the surveys relate to the United States between 1946 and 1966; 19 to other countries, including 11 in Asia, Africa, and Latin America. The classifications by socioeconomic status tend to differ among the surveys and are typically broad and nonnumerical, consisting of designations such as

<sup>&</sup>lt;sup>4</sup> This statement is based on a comparison of the 1963 AIPO data, shown here in part in Table 10, with the NORC data (from a somewhat more restricted population) in the work of Bradburn (1969, p. 45). I am grateful to William H. Kruskal for suggesting this comparison.

"poor," "wealthy," "lower class," and "upper class." But the results are clear and unequivocal. In every single survey, those in the highest status group were happier, on the average, than those in the lowest status group.

Income (in \$1000)	(1) Very happy	(2) Fairly happy	(3) Not very happy	(4) No answer
All classes	43	48	6	3
15+	56	37	4	3
10-15	49	46	3	2
7–10	47	46	5	2
5-7	38	52	7	3
3-5	33	54	7	6
Under 3	29	55	13	3

<sup>&</sup>lt;sup>a</sup> Data from AIPO Poll of December 1970.

TABLE 3

Percentage Not Very Happy in Lowest and Highest Status Groups,
United States, 1946–1970<sup>a</sup>

		Lowest status	group	Highest status gr		
Date	Number of groups	Designation	N.V.H. (%)	Designation	N.V.H. (%)	N
Apr. 1946	4	Poor	11	Wealthy	3	3151
June 1947	4	Poor	9	Wealthy	0	3088
Dec. 1947	4	Poor	12	Wealthy	3	1434
May 1948	4	Poor	10	Wealthy	0	1800
Aug. 1948	4	Poor	15	Wealthy	4	1596
Nov. 1952	3	Poor	12	Average +	8	3003
Jan. 1960	3	Low income	6	Upper income	2	2582
July 1963	6	Income < \$3000	10	Income = $$15,000 +$	0	3668
Oct. 1966	6	Income < \$3000	6	Income = $$15,000 +$	0.3	3531
Dec. 1970	6	Income < \$3000	13	Income = $$15,000 +$	4	1517

<sup>&</sup>lt;sup>a</sup> Data from Table 2 and AIPO polls 369, 399, 410, 418, 425, 508, 623, 675, and 735. In No. 623 (Jan. 60), the responses were on a scale ranging from -5 to +5. For the present purpose, all negative values were classified as "not very happy (N.V.H.)." Comparisons among surveys are of uncertain reliability because of variations in the specific question asked and in the group designations.

 $<sup>^{</sup>b} N = 1517.$ 

TABLE 4

Percentage Not Very Happy in Lowest and Highest Status Groups, Seven Countries, 1965"

	Lowest status group	group	Highest status group	•	
Number of groups	Designation	N.V.H. <sup>b</sup>	Designation	N.V.H. <sup>b</sup>	×
	Very poor	19	Upper, upper middle, middle	4	1179
	Lower middle, lower	19	Upper, upper middle	7	1255
	Lower/middle	15	Middle/upper	9	200
	Lower middle, lower	15	Upper, upper middle	\$	200
	Lower/middle	20	Middle/upper	10	202
	Lower	27	Upper	9	1228
	Lower middle, lower	42	Upper, upper middle	10	1166

a Data from World Survey III, 1965.b Not very happy.

TABLE 5

Personal Happiness Rating in Lowest and Highest Status Groups, Thirteen Countries, ca. 1960°.

	(1)	(2)	(3)	(4)	(5)	(9)	(7)	<u>®</u>
		Number	Lowest status group	dn	Highest status group	dn	Difference, high minus	
Country	Date	groups	Designation	Rating	Designation	Rating	Rating [(6)-(4)]	×
United States	Aug. 1959	'n	Lower economic	6.0	6.0 Upper economic	7.1	1:1	1549
Cuba	AprMay 1960	3	Lower socioeconomic	6.2	High, upper middle	6.7	0.5	992
					socioeconomic			
Israel	Nov. 1961-June 1962	3	Lower income	4.0	Upper income	6.5	2.5	1170
West Germany	Sept. 1957	ю	Lower economic	4.9	Upper economic	6.2	1.3	480
Japan	Fall 1962	3	Lower, middle lower	4.3	Upper, upper middle	5.8	1.5	972
			socioeconomic		socioeconomic			
Yugoslavia	Spring 1962	4	Lower, farmer	4.3	Upper, nonfarmer	0.9	1.7	1523
Philippines	Spring 1959	4	Lower economic	4.1	Upper economic	6.2	2.1	200
Panama	JanMar. 1962	2	Lower socioeconomic	4.3	Upper socioeconomic	0.9	1.7	642
Nigeria	Sept. 1962-spring 1963	7	Lower socioeconomic	4.7	Upper socioeconomic	5.8	1.1	1200
Brazil	Late 1960-early 1961	S	Lower socioeconomic	3.9	Upper socioeconomic	7.3	3.4	2168
Poland	Spring 1962	5	Unskilled	3.7	White-collar	4.9	1.2	1464
India	Summer 1962	4	Income < R75	3.0	Income > R301	4.9	6.1	2366
Dominican Republic	Apr. 1962	7	Lower socioeconomic	1.4	Upper socioeconomic	4.3	2.9	814
Average				4.2		0.9	8.1	

Data from Cantril, 1965, pp. 365–377.
 Minimum: 0; maximum: 10.

This finding is corroborated by the results of other studies of happiness and related emotional states. In an article published 10 years ago, Inkeles (1960) concluded:

Those who are economically well off, those with more education or whose jobs require more training and skill, more often report themselves happy, joyous, laughing, free of sorrow, satisfied with life's progress. Even though the pattern is weak or ambiguous in some cases, there has not been a single case of a *reversal* of the pattern, that is, a case where measures of happiness are inversely related to measures of status, in studies involving fifteen different countries—at least six of which were studied on two different occasions, through the use of somewhat different questions. There is, then, good reason to challenge the image of the "carefree but happy poor" [p. 17, italics in original].\*

Similar conclusions are reached by Bradburn (1969), Robinson and Shaver (1969), Wilson (1967), and Gurin *et al.* (1960). In a comprehensive study surveying the literature on mental health, Davis (1965, p. 68) reported that "study after study shows that mental health is positively related to socioeconomic status in a variety of measures of mental health and SES."

In addition to classification by income level, data on happiness are sometimes available by characteristics such as sex, age, race, education, and marital status. While the association of happiness with income is the most pervasive, some other patterns are apparent, though not without exception. Perhaps the firmest is a positive association between happiness and years of schooling. There is also some suggestion that the young are happier than the old, married persons than unmarried, and whites than blacks. Where the data permitted multivariate analysis, the independent association of income and happiness has been confirmed (Bradburn, 1969, p. 294; Gurin *et al.*, 1960, p. 221; Robinson and Shaver, 1969, pp. 19–23). Also, the available evidence indicates low happiness levels among the unemployed and those on relief.

Inevitably, a question arises as to the direction of causality. Does higher income make people happier? Or are happier people more likely to be successful, i.e., receive higher income? It would be naïve to suppose that the issue is an either/or one. But emotional states are noticeably absent among the many factors usually cited by economists in explaining income differences. Factors such as education, training, experience, innate ability, health, and inheritance are among those principally mentioned. It might be felt that emotional well-being is implicit in the ability factor, or perhaps in that of health, though health is usually taken to refer to physical well-being. But it is doubtful that one would expect the influence of emotional well-being on earnings to stand out as clearly as in the simple bivariate comparisons shown

<sup>\*</sup> A. Inkeles, "Industrial man: The relation of status to experience, perception and value," *American Journal of Sociology* 66: 1960, 1–31. Published by the University of Chicago Press; Copyright 1960, 1961 by the University of Chicago.

here. Moreover, for some countries, some of the status designations, such as "upper class," are essentially hereditary. To argue that happiness causes such class differences is akin to arguing that, where happiness is correlated with age, happiness causes the age differences. Finally, as we have seen, when people are asked about the things that make them happy or unhappy, personal economic concerns are typically foremost [Table 1; cf. also Gurin et al. (1960, pp. 22–28)]. The worries of less-happy respondents differ most from those who are more happy in their emphasis on financial security [(Gurin et al., 1960, p. 29; Wessman, 1956, pp. 213, 216); cf. also Table 11 below]. On the whole, therefore, I am inclined to interpret the data as primarily showing a causal connection running from income to happiness.<sup>5</sup>

## b. International Comparisons

What happens when one looks at cross-sectional differences among countries? Are richer countries happier countries? Let us examine the Cantril data first, since that study made the greatest effort to assure comparability of approach among the various countries.

Table 6 presents the average personal happiness ratings for each of fourteen countries, along with figures on real GNP per capita. Cantril's own reading of these data is that they show a positive association between income and happiness and he presents correlation results to this effect (Cantril, 1965, p. 194). He generalizes this into a five-stage scheme, reminiscent of Rostow's stages of growth, to describe the phases of emotional well-being through which a country passes in the course of economic development (Rostow, 1960; Cantril, 1965, Chapter XV). However, as with Rostow's classification, countries do not fall neatly into one or another stage. One's confidence in the generality of the scheme is further undermined by the following passage, which concludes the presentation of the stage scheme:

It should be noted in passing, however, that people in some cultures or subcultures may seem to qualify for placement in this fifth [highest] stage of "satisfaction and gratification" who have not gone through earlier stages of development but appear to outside observers to be stuck at relatively primitive levels. The Masai of Kenya and Tanganyika might be regarded as such a pocket of contentment within their microcosm. There is, of course, every likelihood that once the boundaries of such a microcosm are penetrated by "advanced" cultures with the aspirations they intrude into people's minds, then the people within such a microcosm will alter the standards by means of which they judge satisfaction and revert to an earlier stage of development [ibid., p. 310, italics added].\*

<sup>5</sup> In interpreting the association between mental health and socioeconomic status, Davis (1965, pp. 74–77) leans in this direction also.

The point that for some countries some of the status designations are essentially hereditary also indicates that we are dealing here in substantial part with "permanent income" differences, and that the results cannot be dismissed on the grounds that they are dominated by transitory influences.

		TABI	E 6			
Personal	Happiness Fourteen				PER	Head,

Country	Period of survey	(1) Rating of personal happiness (min: 0; max: 10)	(2) Real GNP per head 1961 (\$U.S.)
United States	Aug. 1959	6.6	2790
Cuba	AprMay 1960	6.4	516
Egypt	Fall 1960	5.5	225
Israel	Nov. 1961-June 1962	5.3	1027
West Germany	Sept. 1957	5.3	1860
Japan	Fall 1962	5.2	613
Yugoslavia	Spring 1962	5.0	489
Philippines	Spring 1959	4.9	282
Panama	Jan Mar. 1962	4.8	371
Nigeria	Sept. 1962-spring 1963	4.8	134
Brazil	Late 1960-early 1961	4.6	375
Poland	Spring 1962	4.4	702
India	Summer 1962	3.7	140
Dominican Republic	Apr. 1962	1.6	313
Average		5.0	

<sup>&</sup>lt;sup>a</sup> Data in column (1) from Cantril, 1965, p. 184; data in column (2), except for West Germany, from Rosenstein-Rodan, 1961, pp. 118, 126, 127; data in column (2) for West Germany from Table 7.

To judge from this paragraph, some cultures or subcultures may "have it made" before they are touched by, or as long as they can remain free from, economic development.

Actually the association between wealth and happiness indicated by Cantril's international data is not so clear-cut. This is shown by a scatter diagram of the data (Fig. 1). The inference about a positive association relies heavily on the observations for India and the United States. [According to Cantril (1965, pp. 130–131), the values for Cuba and the Dominican Republic reflect unusual political circumstances—the immediate aftermath of a successful revolution in Cuba and prolonged political turmoil in the Dominican

<sup>&</sup>lt;sup>b</sup> For sample sizes see Table 5.

<sup>&</sup>lt;sup>6</sup> Actually Cantril (1965, pp. 193–194) uses a somewhat different measure of socio-economic development, of which the GNP data shown here are one component.

<sup>\*</sup> Patterns of Human Concerns by Hadley Cantril. Rutgers University Press, New Brunswick, New Jersey (1965).

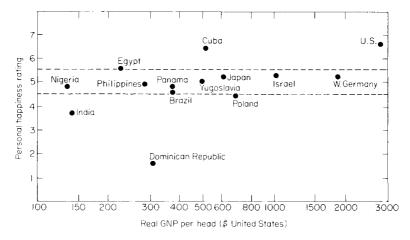


Fig. 1. Personal happiness rating and GNP per head, 14 countries, ca. 1960. (Source: Table 6.)

Republic]. What is perhaps most striking is that the personal happiness ratings for 10 of the 14 countries lie virtually within half a point of the midpoint rating of 5, as is brought out by the broken horizontal lines in the diagram. While a difference of rating of only 0.2 is significant at the 0.05 level, nevertheless there is not much evidence, for these 10 countries, of a systematic association between income and happiness. The closeness of the happiness ratings implies also that a similar lack of association would be found between happiness and other economic magnitudes such as income inequality or the rate of change of income.

Of course, picking and choosing among points is a dubious practice. What one can perhaps safely say is this: In the within-country data shown in Table 5, the difference in happiness rating between low- and high-status groups averages almost 2 points, and for only 1 of the 13 countries is the difference less than 1 point. In contrast, in the comparison of national averages shown in Table 6, the ratings for 10 of 14 countries lie within a range of 1.1 points. The tenfold range in per-capita income covered by these countries almost surely exceeds the typical income range between low- and high-status groups covered in the within-country data. The happiness differences between rich and poor countries that one might expect on the basis of the within-

<sup>&</sup>lt;sup>7</sup> The comparability of the Cuban data is further qualified by the fact that the survey was confined to the urban population. For Egypt, the coverage of the rural population was quite limited, and the survey is labeled by Cantril (1965, pp. 346–347) as a "preliminary pilot investigation".

country differences by economic status are not borne out by the international data.

The other principal sources of international data are of the Gallup-poll type. In this case, the effort to secure comparability in asking the happiness question, which was only one of many questions, was less than in Cantril's study. In 1965, however, a survey obtained responses to a uniform inquiry in seven different countries. The results of this, plus that of a 1958 survey in Japan and a 1966 survey in the United States, are reported in Table 6.

There are four countries represented in both Tables 6 and 7—the United States, West Germany, Japan, and the Philippines. One's confidence in the data is bolstered by the striking similarity in the results. In both cases the United States appears much happier than West Germany, and West Germany slightly happier than the Philippines. The Japanese data in Table 7 are least

TABLE 7

Percent Distribution of Population by Happiness,
Nine Countries, 1965°

Country	Very happy	Fairly happy	Not very happy	Other	N	Real GNP per head 1961
Great Britain	53	42	4	ı	1179	\$1777
United States <sup>b</sup>	49	46	4	2	3531	2790
West Germany	20	66	11	3	1255	1860
Thailand	13	74	12	1	500	202
Japan <sup>c</sup>	_ 8	31	13	5	920	613
Philippines	13.5	73	13.5	0	500	282
Malaysia	17	64	15	4	502	552
France	12	64	18	5	1228	1663
Italy	11	52	33	4	1166	1077

<sup>&</sup>lt;sup>a</sup> Happiness data are from World Survey III, 1965, except those for the United States and Japan, which are from Table 8 and the 1958 survey of Japanese national character, respectively. GNP data are from Rosenstein-Rodan, 1961, except those for Great Britain, France, West Germany, and Italy. For these countries GNP was estimated to bear the same proportion to the United States figure as that shown by the geometric mean estimates by Gilbert *et al.*, 1958, p. 36, extrapolated from 1955 to 1961 by the per-capita volume indexes in OECD, 1970, p. 11.

comparable with those of the other countries, but even the relative position of Japan vis-à-vis the other three is not much different in Table 7 from that in Table 6.

<sup>&</sup>lt;sup>b</sup> 1966.

<sup>&</sup>lt;sup>c</sup> 1958. (Question read "not happy" rather than "not very happy.")

What association between happiness and income is indicated by the Table 7 data for all nine countries? The results are ambiguous. The four lowest income countries are neither at the top nor at the bottom of the Table, but are clustered in the middle. This result cannot be attributed to the younger age of the populations in these countries, for it shows up in comparisons for individual age classes. (This is true also of the data in Table 6.) If there is a positive association between income and happiness, it is certainly not a strong one. In contrast, in the within-country comparisons by economic status, shown in Tables 3 and 4, the happiness differences are clear and consistent. The conclusion indicated by the Gallup-poll data is thus consistent with that shown by the Cantril data.

International happiness comparisons for 1946 and 1949 are given by Cantril (1951, p. 281), Wessman (1956, p. 166), and Inkeles (1960, p. 13). These are confined to a few Western European countries and their overseas descendants. The comparability of the questions is uncertain, but for what it is worth, the results are similar to those shown above—if there is a positive association among countries between income and happiness it is not very clear.

The international data are intriguing in various respects. For example, notice the high position of Great Britain compared with the United States in Table 7. This result is a persistent one, to judge from the polls mentioned in the preceding paragraph. Also, in those polls Canada and Australia show levels of happiness comparable in magnitude to Great Britain and the United States. There is also a noteworthy closeness in the results for the four Asian countries shown in Table 7. Perhaps there are cultural influences in the international happiness data, though one should hesitate before lumping together Thailand, Malaysia, the Philippines, and Japan as having a common culture. Of course, even if there are cultural influences, they would not necessarily systematically bias the relation of happiness to income indicated by the international data. Suppose, for example, one were to argue that cultural biases are obscuring a strong positive relation between income and happiness among countries. This implies that, ceteris paribus, in poorer countries cultural influences operate systematically to elevate happiness as compared to richer countries, an implication which seems doubtful in view of the cultural heterogenity among countries within both the rich and poor categories.

#### c. National Time Series

What one would like most, of course, is historical series on happiness as countries develop. The crucial question is: "Will raising the incomes of all increase the happiness of all ...?" (Inkeles, 1960, p. 18). Unfortunately, as is too often the case, time series data are in short supply. In addition, comparability over time is impaired by variations in the wording of the happiness

question. It was possible, however, to put together a series for one country, the United States, covering intermittent dates from 1946 through 1970. (Three of these dates, in 1956–1957, are only six months apart, and demonstrate the point made earlier regarding the short-run stability of the survey results.) In the first seven surveys the happiness classification was the same—"very happy," "fairly happy," or "not very happy." In the last three, "not happy" was used instead of "not very happy." This more negative designation of the lowest happiness category resulted, for the lowest happiness class, in a downward bias compared with the earlier data, and for the middle "fairly happy" category, in a corresponding upward bias. However, the "very happy" class seems comparable over all 10 surveys and reliance is therefore placed on the trend shown by this category. Fortunately, it is possible to utilize as a check happiness data obtained by NORC and Cantril, which overlap the AIPO data in the period when the change in AIPO question wording occurred.

TABLE 8
PERCENT DISTRIBUTION OF POPULATION BY HAPPINESS,
UNITED STATES, 1946–1970<sup>a</sup>

		A. AIPC	) Polls		
Date	Very happy	Fairly happy	Not very happy	Other	N
Apr. 1946	39	50	10	1	3151
Dec. 1947	42	47	10	1	1434
Aug. 1948	43	43	11	2	1596
Nov. 1952	47	43	9	1	3003
Sept. 1956	53	41	5	1	1979
Sept. 1956	52	42	5	1	2207
Mar. 1957	53	43	3	1	1627
July 1963	47	48	5 <sup>b</sup>	1	3668
Oct. 1966	49	46	$4^b$	2	3531
Dec. 1970	43	48	$6^b$	3	1517

B. NORC Polls						
Date	Very happy	Pretty happy	Not too happy	N		
Spring 19	57 35	54	11	2460		
Dec. 196	53 32	51	16	1501		
June 196	55 30	53	17	1469		

<sup>&</sup>lt;sup>a</sup> Data from Table 2 and AIPO Polls 369, 410, 425, 508, 570, 571, 580, 675, and 735. NORC data from Bradburn, 1969, p. 40.

<sup>&</sup>lt;sup>b</sup> Question read "not happy" rather than "not very happy."

The upper panel of Table 8 presents the results of the 10 AIPO surveys covering 1946–1970. From 1946 through 1956–1957, the proportion "very happy" drifts slowly but steadily upward. There is then a noticeable decline between 1957 and 1963, and a second one from 1966 to 1970. By 1970 the proportion "very happy" is just about the same as in 1947. If one views the period as a whole, there is a noticeable swing, but little indication of any net trend up or down.<sup>8</sup>

The finding of a downturn between 1957 and 1963 runs into the difficulty that the question wording changed between these two dates, though as indicated this should not have affected the "very happy" replies. However, three NORC polls were taken independently around this time. As noted earlier, the happiness categories in the NORC polls differ from those in the AIPO polls. Our interest, however, is in the change over time shown by the NORC polls (Table 8, panel B). The results confirm those shown by the AIPO polls—a decline in happiness between the late 1950s and mid-1960s. (The exact timing is obviously open to question because of the intermittent nature of both sets of survey data.) Further support is provided by two United States surveys reported by Cantril (1965, p. 43) which show a decline in the national average personal happiness rating between 1959 and 1963 from 6.6 to 6.2.

To a limited extent, it is possible to follow the trends for individual income groups. Table 9 presents the data for the first four surveys, which appear to

TABLE 9							
PERCENT	Very	Нарру	BY	Size	OF	INCOME,	
Į	JNITED	STATES	. 19	946-1	952	a	

Date	All classes	Average+ and wealthy	Average	Poor
Apr. 1946	39	47	43	34
Dec. 1947	42	52	46	37
Aug. 1948	43	54	50	37
Aug. 1948	43	51	51	37
Nov. 1952	47	51	51	42

<sup>&</sup>lt;sup>a</sup> Data from AIPO Polls 369, 410, 425, and 508.

have had roughly consistent income classifications. (Unfortunately, no subdivision by income is available for the three 1956–1957 surveys.) To judge from the data in Table 9, there was a common advance in happiness in all major income groups through 1952.

<sup>&</sup>lt;sup>8</sup> The Gallup article on the 1970 survey reported that there was an upward trend over the last quarter century, apparently because a comparison was made only between the first and last surveys shown in Table 8 above.

The surveys relating to the period of declining happiness show a rather interesting difference from this pattern (Table 10). Whereas the national average shows a slight rise between 1963 and 1966, the data by income class show a decline for the poorest groups. Thus the slight rise shown by the

	7	ΓABLE	10			
PERCENTAGE						INCOME,
Un	IITED S	States,	196	3–197	$0^a$	

Date	All classes	\$15,000+	\$10,000- 14,999	\$5 <b>000</b> – 9999	\$3000- 4999	Under \$3000
July 1963	47	59	50	50	46	40
Sept. 1966	49	67	62	50	42	34
Dec. 1970	38	56	49	43	33	29

<sup>&</sup>quot; Data from Table 2 and AIPO Polls 675 and 735.

national average reflects an upward movement for the higher income groups which more than offsets the decline among the lower. (Could this be partly due to the national prominence given to the poverty problem at this time?) Between 1966 and 1970, however, all income classes show a noticeable decline, and in 1970 there is no class which is higher than it was in 1963.

Certainly, one must be cautious about drawing any strong conclusions from the limited United States time series studied here. As in the case of the international cross sections, however, it seems safe to say that if income and happiness go together, it is not as obvious as in the within-country cross-sectional comparisons.

## 3. Interpretation

## a. Theory

Why do national comparisons among countries and over time show an association between income and happiness which is so much weaker than, if not inconsistent with, that shown by within-country comparisons? To economists, long accustomed to dealing with anomalies such as these, the possible relevance of Duesenberry's "relative income" explanation of the celebrated United States income-savings paradox will immediately spring to mind [(Duesenberry, 1952), cf. also Brady and Friedman (1947)]. The basic idea was stated quite simply by Karl Marx over a century ago: "A house may be large or small; as long as the surrounding houses are equally small it

satisfies all social demands for a dwelling. But if a palace rises beside the little house, the little house shrinks into a hut." 9

Suppose one assumes, following Duesenberry, that the utility a person obtains from his consumption expenditure is a function, not of the absolute level of his expenditure, but of the ratio of his current expenditure to that of other people, that is,

$$U_i = f \left[ \frac{C_i}{\sum a_{ij} C_i} \right],$$

where  $U_i$  and  $C_i$  are the utility index and consumption expenditures, respectively, of the ith individual,  $C_j$  is consumption of the jth individual and  $a_{ij}$  is the weight applied by the ith consumer to the expenditure of the jth (Duesenberry, 1952, p. 32). In the simplest case, in which the expenditures of every other person are given equal weight, the utility obtained by a given individual depends on the ratio of his expenditure to the national per-capita average. The farther he is above the average, the happer he is; the farther below, the sadder. Moreover, if the frame of reference is always the current national situation, then an increase in the level of income in which all share proportionately would not alter the national level of happiness. A classical example of the fallacy of composition would apply: An increase in the income of any one individual would increase his happiness, but increasing the income of everyone would leave happiness unchanged. Similarly, among countries, a richer country would not necessarily be a happier country.

The data are presently too limited to warrant pushing this line of explanation very far, and the illustration above is certainly too simple. An intriguing research issue, for example, is the appropriate values of the  $a_{ij}$ 's [which can be viewed as a variant of the sociologist's problem of "reference groups" (Merton, 1968, Chaps. X and XI)]. Any given individual in the population does not give equal weight to all others in forming his reference standard; among other things, "peer group" influences play a part. Thus, the reference standard of a rich man probably gives disproportionate weight to the consumption of his well-to-do associates vis-à-vis persons living in poverty, and conversely for the reference standard of the poor man.

Nevertheless, the general form of the argument remains valid. Despite peer group influences, there is a "consumption norm" which exists in a given society at a given time, and which enters into the reference standard of virtually everyone. This provides a common point of reference in self-appraisals of well-being, leading those below the norm to feel less happy and those above the norm, more happy. Over time, this norm tends to rise with the

<sup>&</sup>lt;sup>9</sup> As quoted by Lipset (1960, p. 63). I am grateful to Leonard Berkowitz for bringing this to my attention.

general level of consumption, though the two are not necessarily on a one-to-one basis.

Other possible interpretations of these data come to mind. For example, emphasis might be placed on external diseconomies of production. At a given time, it might be argued, the rich are better able to avoid these sources of "ill-fare" and hence are happier. But over time and across societies increases in income are largely or wholly offset by a corresponding growth in pollution, congestion, and so forth.

A radical interpretation of the data might emphasize power as the key factor in happiness. At any given time those who have more power (the rich) are happier. But over time and across societies, increases in income have not been accompanied by a wider diffusion of power among the various socioeconomic strata (the Establishment persists), and hence happiness has not grown.

## b. Evidence for a "Relative Income" Interpretation

There are a number of reasons why an interpretation based chiefly on "relativity" notions seems more plausible. First, a certain amount of empirical support has been developed for the relative income concept in other economic applications, such as savings behavior and, more recently, fertility behavior and labor force participation (Duesenberry, 1952; Easterlin, 1973, 1969; Freedman, 1963; Wachter, 1971a, b). Second, similar notions, such as "relative deprivation," have gained growing theoretical acceptance and empirical support in sociology, political science, and social psychology over the past several decades (Berkowitz, 1971; Davies, 1962; Gurr, 1970; Homans, 1961; Merton, 1968; Pettigrew, 1967; Smelser, 1962; Stouffer et al., 1949). Indeed, to scholars vitally concerned with professional reputation in a competitive field of learning, it should hardly come as a surprise that relative status is an important ingredient of happiness. Third, historical changes in the definition of poverty attest to the importance of relative position in society's thinking on this matter. For example, Smolensky (1965, p. 40) has pointed out that estimates of "minimum comfort" budgets for New York City workers throughout the course of this century "have generally been about one-half of real gross national product per capita." [cf. also Fuchs (1967), Rainwater (unpublished paper), Tabbarah (1972).]

By no means least important are the statements in the surveys of the respondents themselves on what they take to comprise happiness. These statements overwhelmingly emphasize immediate personal concerns, such as adequacy of income, family matters, or health, rather than broader national or social issues such as pollution, political power, or even threat of war. Furthermore, economic worries appear to be especially important among lower income persons. Table 11, for example, reports on the "one thing"

	TABLE 11	
RELATION OF	ECONOMIC STATUS AND MAJOR	Worries,
	UNITED STATES, 1946 <sup>a, b</sup>	

	Economic status (percent)				
Major worry	Upper	Middle	Lower		
My family and children	20	20	24		
Health (personal and family)	19	21	18		
Financial worries, money	6	12	22		
Security, job, future	13	17	12		
World and national conditions	7	6	4		
Work conditions	7	5	3		
Personal traits	3	2	2		
Housing	2	1	1		
Miscellaneous	9	7	5		
Nothing	13	10	10		
No answer	5	7	5		
	104	108	106		
Sample size	195	637	1506		

<sup>&</sup>lt;sup>a</sup> From A. E. Wessman, A psychological inquiry into satisfactions and happiness. Ph.D. dissertation in psychology, Princeton Univ. Princeton, New Jersey, 1956.

worried about most by Americans of upper, middle, and lower economic status in a 1946 survey. For all three groups worries about economic, family, and health matters predominate. However, the item on which the three groups most markedly differ is that labeled "financial worries, money." Such concerns increase significantly as economic status declines.

Finally, there is evidence that consumption norms vary directly with the level of economic development. Here, from Cantril's survey (1965, pp. 205, 206, 222), are some statements by Indians on their material aspirations, and, for comparison, those of Americans:

INDIA: I want a son and a piece of land since I am now working on land owned by other people. I would like to construct a house of my own and have a cow for milk and ghee. I would also like to buy some better clothing for my wife. If I could do this then I would be happy. (thirty-five-year-old man, illiterate, agricultural laborer, income about \$10 a month)

<sup>&</sup>lt;sup>b</sup> The question asked was "What one thing do you worry about most?" Percentages add to more than 100 because some respondents gave more than one answer.

INDIA: I wish for an increase in my wages because with my meager salary I cannot afford to buy decent food for my family. If the food and clothing problems were solved, then I would feel at home and be satisfied. Also if my wife were able to work the two of us could then feed the family and I am sure would have a happy life and our worries would be over. (thirty-year-old sweeper, monthly income around \$13)

INDIA: I should like to have a water tap and a water supply in my house. It would also be nice to have electricity. My husband's wages must be increased if our children are to get an education and our daughter is to be married. (forty-five-year-old house-wife, family income about \$80 a month)

INDIA: I hope in the future I will not get any disease. Now I am coughing. I also hope I can purchase a bicycle. I hope my children will study well and that I can provide them with an education. I also would sometime like to own a fan and maybe a radio. (forty-year-old skilled worker earning \$30 a month)

UNITED STATES: If I could earn more money I would then be able to buy our own home and have more luxury around us, like better furniture, a new car, and more vacations. (twenty-seven-year-old skilled worker)

UNITED STATES: I would like a reasonable enough income to maintain a house, have a new car, have a boat, and send my four children to private schools. (thirty-four-year-old laboratory technician)

UNITED STATES: I would like a new car. I wish all my bills were paid and I had more money for myself. I would like to play more golf and to hunt more than I do. I would like to have more time to do the things I want to and to entertain my friends. (Negro bus driver, twenty-four-years old)

UNITED STATES: Materially speaking, I would like to provide my family with an income to allow them to live well—to have the proper recreation, to go camping, to have music and dancing lessons for the children, and to have family trips. I wish we could belong to a country club and do more entertaining. We just bought a new home and expect to be perfectly satisfied with it for a number of years. (twenty-eight-year-old lawyer)\*

It is a well-accepted dictum among social scientists other than economists that attitudes or "tastes" are a product of the socialization experience of the individual. What more eloquent testimony could be provided than the foregoing statements? Cantril (1965) puts it this way:

People in highly developed nations have obviously acquired a wide range of aspirations, sophisticated and expensive from the point of view of people in less-developed areas, who have not yet learned all that is potentially available to people in more advanced societies and whose aspirations concerning the social and material aspects of life are modest indeed by comparison [p. 202].\*

In a comprehensive survey of long-term trends in American consumption, Brady has pointed out that "today, the great majority of American families

<sup>\*</sup> Patterns of Human Concerns by Hadley Cantril. Rutgers University Press, New Brunswick, New Jersey (1965).

live on a scale that compares well with the way wealthy families lived 200 years ago" [cf. Davis et al., 1972, p. 84, italics added]. But, as the above statements show, the typical American today does not consider himself wealthy. His consumption standards are not those of his colonial predecessors; rather they are formed by his personal experience with the human condition as evidenced in contemporary America. The same is true of the typical Indian living in modern India. Material aspirations or tastes vary positively with the level of economic development. Moreover, these changes in tastes are caused by the process of income growth itself (though the causeeffect relation may run both ways). As a result of secular income growth, the socialization experience of each generation embodies a higher level of living and correspondingly generates a higher level of consumption standards. Even within the life cycle of a given generation, the progressive accretion of household goods due to economic growth causes a continuous upward pressure on consumption norms. This upward shift in standards (tastes) tends to offset the positive effect of income growth on well-being that one would expect on the basis of economic theory. Dramatic supporting evidence is provided by the results of a survey of recent experience in Taiwan, analyzed by Freedman (unpublished paper):

While economic growth has increased income levels, it has, at the same time, expanded consumption possibilities with the result that present incomes seem no more adequate relative to needs. Only 20 percent of the respondents said their financial position had improved during the last five years, although real per capita income increased about 40 percent during that period [p. 38].

It would be premature to assert that "everything is relative," but it is hard to resist the inference that relative considerations play an important part in explaining the evidence presented here.

## c. An Analogy<sup>10</sup>

The present interpretation may be clarified by an analogy with comparisons of height. Americans today are taller than their forebears and than their contemporaries in present-day India. Suppose, however, that representative samples of Americans and Indians in 1970 were asked the following question: "In general, how tall would you say that you are—very tall, fairly tall, or not very tall?" It seems reasonable to suppose that this question would elicit a similar distribution of responses in the two countries, even though on an objective scale most Americans are, in fact, taller than most Indians. The reason for the similar distributions would be that, in answering, individuals

<sup>&</sup>lt;sup>10</sup> My colleagues, Stefano Fenoaltea and John C. Lambelet, have contributed importantly to the development of the argument in this section.

in each country would apply a subjective norm of "tallness" derived from their personal experience. The reference standard in terms of which Americans would evaluate "tallness" would be larger than that applied by Indians, because Americans have grown up in and live in a society in which persons are generally taller. An American male 5 ft 9 in. in height living in the United States, though tall on an international scale, is not likely to feel tall. By the same token, Americans today are not likely to feel taller than their forebears, because today's standard of reference is higher.

What, then, are the "facts" of tallness? By an objective scale, current-day Americans are, indeed, taller. If, however, one is interested in *feelings* about height, the truth is quite possibly different. Today's Americans may not, on the average, feel any taller than do contemporary Indians or than their ancestors did. The reconciliation between the "objective facts" and "subjective states of mind" lies in the mediating role of the social norm for height, which enters together with one's actual height in determining feelings of tallness. This norm varies among societies both in time and space, and is a direct function of the heights typical of these societies.

The situation with regard to happiness is like that for height, but with one critical difference. It is similar in that each individual, in evaluating his happiness, compares his actual experience with a norm derived from his personal social experience. It is different in that there is no objective scale of measurement for happiness, independent of the individual. On the contrary, the concern is precisely with subjective states of mind. One may attempt to use "objective" indexes such as consumption, nutrition, or life expectancy to infer happiness. Or one may seek to gauge well-being from various behavioral indicators, for example, measures of the prevalence of social disorganization (delinquency, suicide, and so forth). Ultimately, however, the relevance of such measures rests on an assumed connection between external manifestations and internal states of mind—in effect, on a model of human psychology. And if it is feelings that count, there is a real possibility that subjective reports may contradict the "objective" evidence. To social scientists, and especially economists, this can be frustrating. As Mishan (1969) observes,

[t]here is a temptation . . . to lose patience with human cussedness and to insist that if both the Smith family and the Jones family receive a 10 percent increase in their "real" income they are better off, even if they both sulk at the other's good luck. But while this may be salutary morals, if welfare is what people experience there is no escape for us in honest indignation [p. 82].\*

On the contrary, there are good psychological reasons why people may not feel better off, even though they "should." This is because the standard with

\* E. J. Mishan, Welfare Economics: Ten Introductory Essays, 2nd ed. New York: Random House, 1969. Copyright 1969 by Random House, Inc.

reference to which evaluations of well-being are formed is itself a function of social conditions. As these conditions "improve," the norm tends to advance along with people's actual experience. Economic analysis has been able, for a long time, to resist the uncomfortable implications of this mechanism, by assuming that tastes are given and/or are unmeasurable. For many of the short-term problems with which economists have traditionally been concerned, this may not be seriously damaging. But with the growth in concern about long-term economic growth, on the one hand, and in evidence on people's feelings and aspirations, and the factors governing them, on the other, one can only wonder whether this view will be much longer defensible.

## 4. Summary and Concluding Observations

The concern of this paper has been with the association of income and happiness. The basic data consist of statements by individuals on their subjective happiness, as reported in thirty surveys from 1946 through 1970, covering nineteen countries, including eleven in Asia, Africa, and Latin America. Within countries there is a noticeable positive association between income and happiness—in every single survey, those in the highest status group were happier, on the average, than those in the lowest status group. However, whether any such positive association exists among countries at a given time is uncertain. Certainly, the happiness differences between rich and poor countries that one might expect on the basis of the within-country differences by economic status are not borne out by the international data. Similarly, in the one national time series studied, that for the United States since 1946, higher income was not systematically accompanied by greater happiness.

As for why national comparisons among countries and over time show an association between income and happiness which is so much weaker than, if not inconsistent with, that shown by within-country comparisons, a Duesenberry-type model, involving relative status considerations as an important determinant of happiness, was suggested. Every survey that has looked into the meaning of happiness shows that economic considerations are very important to people, though by no means the only matters of concern. In judging their happiness, people tend to compare their actual situation with a reference standard or norm, derived from their prior and ongoing social experience. While norms vary among individuals within a given society, they also contain similar features because of the common experiences people share as members of the same society and culture. Thus, while the goods aspirations of higher status people probably exceed those of lower status people, the dispersion in reference norms is less than in the actual incomes

of rich and poor. Because of this, those at the bottom of the income distribution tend to feel less well off than those at the top. Over time, however, as economic conditions advance, so too does the social norm, since this is formed by the changing economic socialization experience of people. For the same reason, among different societies at a given time, there tends to be a rough correspondence between living levels and the social norm. As a result, the positive correlation between income and happiness that shows up in within-country comparisons appears only weakly, if at all, in comparisons among societies in time or space. Various pieces of evidence were noted in support of this interpretation.

In a sense, these results are a testimony to the adaptability of mankind. Income and aspirations in time and space tend to go together, and people seemingly can make something out of what appears, in some absolute sense, to be a sorry lot. At the same time, the conclusions raise serious questions about the goals and prospective efficacy of much social policy. As sociologist George C. Homans remarks (1961, p. 276) regarding similar findings on another subject, "[t] hings like this have persuaded some people who would prefer to believe otherwise that any effort to satisfy mankind is bound to be self-defeating. Any satisfied desire creates an unsatisfied one."

The present results do not necessarily imply that a redirection of attention is needed from economic growth to income redistribution as a vehicle for improving welfare. The data themselves give no indication that international differences in happiness are systematically related to inequality. And the theoretical relationship is uncertain—if relative positions were unchanged and income differences halved, would happiness be greater? It is at least plausible that sensitivity to income differences might be heightened, so that lower income people might suffer as much in the new situation from an income spread of 50% as they previously had from a spread of 100%. If this were so, then subjective welfare would be unchanged.

The only sure conclusion is that we need much more research on the nature and causes of human welfare. Bradburn (1969, p. 233) makes the point simply and effectively: "Insofar as we have greater understanding of how people arrive at their judgments of their own happiness and how social forces are related to those judgments, we shall be in a better position to formulate and execute effective social policies."

The present analysis also points to a clear need for research on the formation of preferences or tastes. Economists have generally insisted that the determination of tastes is not their business. But on this matter there are hopeful signs of change in economists' tastes themselves. Katona (1951, 1971), Morgan (1968), Strumpel (1973), and their associates at the Survey Research Center in Michigan have been doing pioneering studies on this subject [cf. also Pfaff (1973)]. In the 1950s, Siegel (1964) did some

little-noticed work modeling the formation of aspirations. A central tenet of Galbraith's (1958, 1967) assault on economic theory has been the "dependence effect," that tastes are subject to substantial manipulation by the business system. Recently, Houthakker and Pollak (to be published, Chapter 2) have initiated a formal inquiry into habit formation.

In the area of growth economics, the present findings raise doubt about the importance of the "international demonstration effect." If those in rich and poor countries shared a common scale of material aspirations, then countries higher on the scale of actual income should show a higher level of happiness. At the same time, the within-country cross-sectional findings, indicating a similarity in the aspirations of members of the same society, lend support to the concept of an internal demonstration effect.<sup>12</sup>

Economists' models of economic growth tend uniformly to exclude tastes as a variable.<sup>13</sup> But it is possible that not only are tastes affected by economic growth, but that taste changes serve as a spur to growth, in the manner suggested by Mack some years ago (1956). Thus one might conceive of a mutually reinforcing interaction between changes in tastes and changes in per capita income, which, *ceteris paribus*, drives the economy ever onward and per capita income ever upward.

Another interesting analytical possibility opened up by recognition of taste changes is in the relation of economic changes to political behavior. Recent work on the causes of political agitation and revolution has stressed the importance of disparities between the aspirations of the population and their fulfillment (Davies, 1962; Gurr, 1970). Since economic goods form such an important part of human concerns, a growth model which included material aspirations as a variable might incorporate also the political consequences of unfulfilled expectations, and possible feedback effects of any resultant political activity on the growth process itself.

Finally, with regard to growth economics, there is the view that the most developed economies, notably the United States, have entered an era of satiation. Economic growth, it is said, tends to eventuate in the "mass con-

<sup>&</sup>lt;sup>11</sup> The present view of taste formation, while not precluding the mechanism stressed by Galbraith, is different and broader. This is shown clearly by the height analogy, where the norm is seen to change as a function simply of the social experience of individuals, without any overt attempt at manipulation by persons or organizations in the society.

<sup>&</sup>lt;sup>12</sup> In a five-country study of attitudes toward ways of life, Morris found much greater differences among countries than among economic classes within countries. The study, however, was confined to college students, and economic status referred to the income group of parents (Morris, 1956, Chap. 4).

<sup>&</sup>lt;sup>13</sup> An exception is Hagen's work (1962), based on McClelland's *n*-achievement motive (McClelland, 1961). It should be noted that achievement motivation, which relates to goal-striving, differs from level of aspiration, the concern here, which refers to goal-setting.

sumption society" (Rostow, 1960), the "affluent society" (Galbraith, 1958), the "opulent society" (Johnson, 1967), or the "post-industrial society" (Bell, 1970). The present analysis raises serious doubts whether the United States is in such an era, or, indeed, whether such a terminal stage exists. Long-term fluctuations aside, the present generation is not noticeably more advanced over its predecessor than has been the case for over a century—the long-run growth rate of per-capita income has been remarkably steady since at least the first half of the nineteenth century (Davis et al., 1972, Chap. 2). The view that the United States is now in a new era is based in part on ignorance of the rapidity of growth in the past. Consider the following statement: "The advancement of the arts, from year to year, taxes our credulity, and seems to presage the arrival of that period when human improvement must end" [as quoted by Davis et al. (1972, p. 177)]. This was made by Henry L. Ellsworth, Commissioner of Patents, in 1843! Similarly, a writer in the Democratic Review of 1853 predicted that electricity and machinery would so transform life that fifty years thereafter: "Men and women will then have no harassing cares, or laborious duties to fulfill. Machinery will perform all work—automata will direct them. The only task of the human race will be to make love, study and be happy." 14 Brady's recent work catalogs in great detail the myriad advances in food, clothing, housing, transportation, and style of life in general that followed one upon the other throughout the nineteenth century (Davis et al., 1972, Chap. 2). Is there any reason to suppose that the present generation has reached a unique culminating stage in this evolution, and the next will not have its own catalog of wonders, which, if only attained, would make it happy? An antimaterialistic cultural revolution may be in the making, but it seems dubious that a major cause is an unprecedented affluence which American society has recently attained. If the view suggested here has merit, economic growth does not raise a society to some ultimate state of plenty. Rather, the growth process itself engenders ever-growing wants that lead it ever onward.

#### **ACKNOWLEDGMENTS**

This paper was made possible by the opportunities and facilities offered by the Center for Advanced Study in the Behavioral Sciences, Stanford, California, where I was a Fellow in 1970–1971. It is not possible to acknowledge all those from whom I benefitted while at the Center, but special appreciation must be expressed to Elliot Aronson, Leonard Berkowitz, David Krantz, William H. Kruskal, Amos Tversky, and Stanton Wheeler. I am also grateful to Jack Meyer for statistical assistance. This research was partially supported by NSF grant GS-1563.

<sup>14</sup> As quoted by Ekirch (1944, p. 120). I am grateful to Joseph S. Davis for bringing this to my attention.

A first draft of this paper was circulated during the academic year 1971–1972, and elicited many valuable and instructive reactions. It has been possible to take account of only a few comments in this revision, and for these I am especially grateful to Paul A. David, Stefano Fenoaltea, Henry A. Gemery, J. Robert Hanson, Alex Inkeles, John C. Lambelet, and Melvin W. Reder.

#### REFERENCES

- Abramovitz, M. (1959) The welfare interpretation of secular trends in national income and product. In *The Allocation of economic resources: Essays in honor of Bernard Francis Haley* (M. Abramovitz *et al.*). Stanford, California: Stanford Univ. Press.
- AIPO Poll (December 1970) Reported in San Francisco Chronicle, January 14, 1971.
- Bell, D. (1970) Unstable America. Encounter 34: 11-26.
- Berkowitz, L. (1971) Frustrations, comparisons, and other sources of emotion arousal as contributors to social unrest. Multilith.
- Block, J. (1965) The challenge of response sets. New York: Appleton.
- Bradburn, N. M. (1969) The structure of psychological well-being. Chicago, Illinois: Aldine.
- Brady, D. S., and Friedman, R. (1947) Savings and the income distribution. Studies in income and wealth, Vol. 10, pp. 247–265. New York: National Bureau of Economic Research.
- Cantril, H. (1951) *Public opinion*, 1935–1946. Princeton, New Jersey: Princeton Univ. Press.
- Cantril, H. (1965) The pattern of human concerns. New Brunswick, New Jersey: Rutgers Univ. Press.
- Davies, J. C. (1962) Toward a theory of revolution. *American Sociological Review* 37: 5–18. Davis, J. A. (1965) *Education for positive mental health*. Chicago, Illinois: Aldine.
- Davis, L. E., Easterlin, R. A., and Parker, W. N., (eds.) (1972) American economic growth: An economist's history of the United States. New York: Harper.
- Duesenberry, J. S. (1952) Income, saving and the theory of consumer behavior. Cambridge, Massachusetts: Harvard Univ. Press.
- Easterlin, R. A. (1969) Towards a socio-economic theory of fertility. *In Fertility and family planning: A world view* (S. J. Behrman, L. Corsa, Jr., and R. Freedman, eds.), pp. 127–156. Ann Arbor: Univ. of Michigan Press.
- Easterlin, R. A. (1973) Relative economic status and the American fertility swing. In *Social structure, family life styles, and economic behavior* (E. B. Sheldon, ed.). Philadelphia, Pennsylvania: Lippincott for Institute of Life Insurance.
- Eckaus, R. S. (1972) Basic economics. Boston, Massachusetts: Little, Brown.
- Edwards, A. L. (1957) The social desirability variable in personality assessment and research. New York: Holt.
- Ekirch, A. A. (1944) The idea of progress in America, 1815–1860. New York: Columbia Univ. Press.
- Freedman, D. S. Consumption of modern goods and services and their relation to fertility: A study in Taiwan. Unpublished paper.
- Freedman, D. S. (1963) The relation of economic status to fertility. *American Economic Review* **53**: 414-426.
- Fuchs, V. R. (1967) Redefining poverty and redistributing income. *The Public Interest* 8: 88–95.
- Galbraith, J. K. (1958) The affluent society. Boston, Massachusetts: Houghton.
- Galbraith, J. K. (1967) Review of a review. The Public Interest 9: 109-118.

- Gilbert, M. et al. (1958) Comparative national products and price levels. Paris: OECC.
- Gurin, G., Veroff, J., and Feld, S. (1960) Americans view their mental health. New York: Basic Books.
- Gurr, T. R. (1970) Why men rebel. Princeton, New Jersey: Princeton Univ. Press.
- Hagen, E. E. (1962) On the theory of social change: How economic growth begins. Homewood, Illinois: Dorsey Press.
- Homans, G. C. (1961) Social behavior: Its elementary forms. New York: Harcourt.
- Houthakker, H. S., and Pollak, R. A. (to be published) The theory of consumer's choice. San Francisco, California: Holden-Day.
- Inkeles, A. (1960) Industrial man: The relation of status to experience, perception, and value. *American Journal of Sociology* **66**: 1–31.
- Johnson, H. G. (1967) *Money, trade, and economic growth.* Cambridge, Massachusetts: Harvard Univ. Press.
- Katona, G. (1951) Psychological analysis of economic behavior. New York: McGraw-Hill.
- Katona, G., Strumpel, B., and Zahn, E. (1971) Aspirations and affluence. New York: McGraw-Hill.
- Lipset, S. M. (1960) Political man: The social bases of politics. Garden City, New York: Doubleday.
- Little, I. M. D. (1950) A critique of welfare economics. London and New York: Oxford Univ. Press.
- McClelland, D. C. (1961) The achieving society. Princeton, New Jersey: Van Nostrand-Reinhold.
- Mack, R. P. (1956) Trends in American consumption and the aspiration to consume. *American Economic Review* **46**: 55–68.
- Merton, R. K. (1968) Social theory and social structure, 1968 ed. New York: Free Press.
- Mishan, E. J. (1968) Welfare economics. *International encyclopedia of the social sciences*, Vol. 16, pp. 504–512. New York: Macmillan.
- Mishan, E. J. (1969) Welfare economics: Ten introductory essays, 2nd ed. New York: Random House.
- Morgan, J. N. (1968) The supply of effort, the measurement of well-being, and the dynamics of improvement. *American Economic Review* **58**: 31–39.
- Morris, C. (1956) Varieties of human value. Chicago, Illinois: Univ. of Chicago Press.
- Nordhaus, W., and Tobin, J. (1972) Is growth obsolete? In *Economic growth*, 5th Anniversary Series, National Bureau of Economic Research, pp. 1-80. New York: Columbia Univ. Press.
- OECD (1970) National accounts statistics: 1950–1968. Paris: Organisation for Economic Cooperation and Development.
- Pettigrew, T. F. (1967) Social evaluation theory: Convergences and applications. *Nebraska Symposium on Motivation* (D. Levine, ed.). Lincoln: Nebraska Univ. Press.
- Pfaff, M. (1973) Economic life styles, values, and subjective welfare: A comment. *In Social structure, family life styles, and economic behavior* (E. B. Sheldon, ed.). Philadelphia, Pennsylvania: Institute of Life Insurance.
- Rainwater, L. A decent standard of living: Subsistence vs. membership. Unpublished paper.
- Robinson, J. P., and Shaver, P. R. (1969) Measures of social psychological attitudes (Appendix B to Measures of political attitudes). Ann Arbor, Michigan: Survey Research Center, Institute for Social Research.
- Rorer, L. G. (1965) The great response-style myth. *Psychological Bulletin* **63**: 129–156.
- Rosenstein-Rodan, P. N. (1961) International aid for underdeveloped countries. *Review of Economics and Statistics* 43: 107-138.

Rostow, W. W. (1960) The stages of economic growth. London and New York: Cambridge Univ. Press.

- Siegel, S. (1964) Level of aspiration and decision making. In *Decision and choice: Contributions of Sidney Siegel* (A. H. Brayfield and S. Messick, eds.). New York: McGraw-Hill.
- Smelser, N. J. (1962) Theory of collective behavior. New York: Free Press.
- Smolensky, E. (1965) The past and present poor. *The concept of poverty* (First Report of the Task Force on Economic Growth and Opportunity), pp. 35–67. Washington, D. C.: Chamber of Commerce of the United States.
- Stouffer, S. A., et al. (1949) The American soldier: Adjustment during wartime life, Vol. I. Princeton, New Jersey: Princeton Univ. Press.
- Strumpel, B. (1973) Economic life styles, values, and subjective welfare—An empirical approach. In *Social structure, family life styles, and economic behavior* (E. B. Sheldon, ed.). Philadelphia, Pennsylvania: Lippincott for Institute of Life Insurance.
- Tabbarah, R. B. (1972) The adequacy of income: A social view of economic development. Journal of Development Studies. 8: 57-76.
- Wachter, M. L. (1971a) A labor supply model for secondary workers. Discussion Paper No. 194, Revised. Wharton School of Finance and Commerce, Univ. of Pennsylvania.
- Wachter, M. L. (1971b) A new approach to the equilibrium labor force. Discussion Paper No. 226. Wharton School of Finance and Commerce, Univ. of Pennsylvania.
- Wessman, A. E. (1956) A psychological inquiry into satisfactions and happiness. Ph.D. dissertation in psychology, Princeton Univ. Princeton, New Jersey.
- Wilson, W. (1967) Correlates of avowed happiness. Psychological Bulletin 67: 294-306.
- World Survey III (1965) International Data Library and Reference Service, Survey Research Center, Univ. of California, Berkeley.

#### ADDITIONAL BIBLIOGRAPHY

- Arrow, K. J., and Scitovsky, T. (eds.) (1969) *Readings in welfare economics*. Homewood, Illinois: Irwin.
- Baumol, W. J. (1952) Welfare economics and the theory of the state. Cambridge, Massachusetts: Harvard Univ. Press.
- Bradburn, N. M., and Caplovitz, D. (1965) Reports on happiness. Chicago, Illinois: Aldine.
   Brenner, B. (1971) Mental well-being: Conceptual framework. Annual meeting of the American Sociological Association, 66th, Denver, Colorado, August 1971, revised paper.
- Dalkey, N. C., and Rourke, D. L. (1971) Experimental assessment of delphi procedures with group value judgments. R-612-ARPA. Santa Monica, California: The Rand Corporation.
- Dalkey, N. C., Lewis, R., and Snyder, D. (1970) Measurement and analysis of the quality of life: With exploratory illustrations of applications to career and transportation choices. RM-6228-DOT. Santa Monica, California: The Rand Corporation.
- Easterlin, R. A. (1968) Economic growth: An overview. *International encyclopedia of the social sciences*, Vol. 4, pp. 395–408. New York: Macmillan.
- Freedman, D. S. Consumption aspirations as economic incentives in a developing economy—Taiwan. Unpublished paper.
- Graff, J. deV. (1957) Theoretical welfare economics. London and New York: Cambridge Univ. Press.
- Harsanyi, J. C. (1953–1954) Welfare economics of variable states. *Review of Economic Studies* 21: 204–213.

Inkeles, A. (1969) Making men modern: On the causes and consequences of individual change in six developing countries. *American Journal of Sociology* **75**: 208–225.

Lewin, K., et al. (1944) Level of aspiration. In *Personality and the behavior disorders* (J. McV. Hunt, ed.). New York: Ronald Press.

Linder, S. B. (1970) The harried leisure class. New York: Columbia Univ. Press.

Lingoes, J. C., and Pfaff, M. Measurement of subjective welfare and satisfaction. Unpublished paper.

Mishan, E. J. (1967) The costs of economic growth. New York: Praeger.

Schnore, L. F., and Cowhig, J. D. (1959–1960) Some correlates of reported health in metropolitan centers. *Social Problems* 7: 218–226.

Veblen, T. (1934) Theory of the leisure class. New York: The Modern Library.

Weisskopf, W. A. (1964) Economic growth and human well-being. Quarterly Review of Economics and Business 4: 17-29.

Wessman, A. E., and Ricks, D. F. (1966) Mood and personality. New York: Holt.