

"NEW MONEY, AN OLD MAN/LADY AND "TWO'S COMPANY": Subjective Welfare
in the NORC General Social Surveys, 1972-1982

James A. Davis

National Opinion Research Center
and
Harvard University

February 1983

This research was supported by the National Science Foundation Grant SOC-7703279.

ABSTRACT

The nine surveys, dozens of variables, and more than ten thousand cases in the NORC General Social Surveys, 1972-1982, allow one to test a variety of cross-sectional and over-time hypotheses about Subjective Welfare (Happiness). I used discrete multivariate analyses to test five hypotheses: (1) the Economist's prediction that Happiness is a function of income; the Sociologist's hypotheses that Happiness is a function of (2) rank on various evaluated dimensions and (3) number of social ties; and the Psychologist's hypotheses that Happiness is affected by (4) social comparisons and (5) adaptation. None of the five is supported impressively, but ~~three~~ three variables emerge as good cross-sectional predictors--Race (Blacks are less Happy, but not necessarily because of discrimination), Marital Status (all categories of nonmarried are less happy) and Financial Change (those whose finances are improving are happier, those whose finances have turned for the worse are less happy). When Marital Status and Recent Financial Change are used in a year-to-year social indicator model, fluctuations in the predictors produce significant but small changes in Happiness.

Introduction

"Taken all together, how would you say things are these days-- would you say that you are very happy, pretty happy, or not too happy?"

Among the 13,581 U.S. adults answering this question in NORC's nine General Social Surveys from 1972 to 1982:

- . . . 34 percent answered "very happy"
- . . . 53 percent answered "pretty happy"
- . . . 13 percent answered "not too happy"

Such "happiness questions" may generate grist for cartoonists (e.g., Public Opinion, October/November 1982, p. 31) and near apoplexy for humanists but they have led to a substantial body of sober research. Smith (1979) reviews Happiness data from nearly 50 surveys between 1946 and 1977, concluding (p. 21):

. . . happiness is a reasonably adequate and reliable measure of psychological well-being and consequently . . . should give reasonably accurate estimates of the relative changes in well-being over time.

Several data-based monographs have appeared (Andrews and Withey 1976; Bradburn 1969; Campbell 1981; Campbell, Converse, and Rodgers 1976; Davis 1965; Gurin, Veroff, and Feld 1960; Veroff, Douvan, and Kulka 1981). At least one scholarly journal, Social Indicators Research, publishes articles on the topic in most issues. The fourth edition of NORC's Annotated Bibliography of Papers Using the General Social Surveys (Smith, 1982) contains 115 citations, 15 percent of the total, for the mnemonic, HAPPY.

Such sustained and widespread effort has not, alas, produced consensus on the factors that influence (correlate with) happiness. Instead, we have a collection of perennial hypotheses drawn from several disciplines. Among them are (1) the economist's hypothesis, income, the sociologist's hypotheses, (2) rank and (3) social ties and the psychologist's hypothesis (4) social comparison and (5) adaptation.

Economists, with their usual mixture of naivete and ultrasophistication, assume happiness is a function of Income--the more money you have, the

happier you are (Vaughan and Lancaster, 1980). Economists prefer the euphemisms, "utility" or "subjective welfare function" and they disagree on whether the relationship is linear and on the exact definition of income, but most economists would consider the hypothesis obvious.

Sociologists tend to broaden the list of predictors. Our discipline seems obsessed by stratification but we view it as multidimensional. Thus, sociological doctrine suggests that high scores on any evaluated variable (income, occupational prestige, ethnicity, good looks, etc.) should produce greater happiness. A second proposition, dating back to Durkheim, says that the greater the number of social ties, the greater the happiness. The prediction is that isolates should be less happy than those involved with family, friends, neighbors, organizations, etc.

While economics and sociology suggest specific variables, social psychology adds two hypotheses about how these variables work.

The social comparison or reference group hypothesis (Merton and Kitt 1950) says, in effect, stratification variables affect happiness through ranks rather than score levels, i.e., we become happier when we are not merely doing well but when we are doing better than others. Easterlin (1973, 1974) pointed out an ironic implication: since adding a constant to everyone's score has no effect on anyone's rank, across the board increases in national wealth (GNP) will not increase happiness--if income affects happiness and the comparison hypothesis is correct. Duncan (1975) reported data from 1955 and 1971 Detroit Area Study samples which seem to confirm Easterlin: income satisfaction correlated with income percentile in both years but satisfaction did not increase in the 16-year interval despite a substantial rise in real income.

The other social psychological hypothesis, adaptation level (Campbell, Converse, and Rodgers 1976, p. 165) is associated with the psychologist Harry Helson. It says constant stimuli come to have a psychological value of zero.

For example, when one joins a cocktail party the noise level seems excessive but after a while one "adapts" and is no longer aware of the racket. When applied to predictors of happiness, adaptation suggests changes in level of relevant predictors should relate to happiness but not long term values. For example, if looks are relevant and the hypothesis is correct, having a face lift should increase happiness while being overly tall or overly short should not.

The psychologists have given us hypotheses which are not only subtle but also contradictory. If the reference group hypothesis is correct, predictors should show cross-sectional correlations but no relationship with change in means, while if the adaptation hypothesis is correct, predictors should show correlations with change but low or nil cross-sectional relationships.

The five hypotheses may be arranged this way:

A. Stratification variables

- . The economic hypothesis: happiness varies with income, period
- . The sociological hypothesis: happiness varies with any evaluated dimension

B. Solidarity

- . The sociological hypothesis: the more social ties, the greater the happiness

C. Psychological mechanisms

- . The comparison hypothesis: the higher the rank on an evaluated variable, the greater the happiness
- . The adaptation hypothesis: increases in scores on an evaluated variable are associated with greater happiness

Happiness data are not only pertinent for testing a variety of social science hypotheses, they are strategic for the "social indicator" movement, an alliance of academic researchers and policy analysts that has grown during the last 15 years (Land 1982). The Happiness question is a classic example of the "subjective indicators" that loom so large in the ideology of this movement.

Indicator advocates argue that the national economic accounts system must be supplemented by systematic readings of subjective indicators of "the quality of life." This argument entails at least two empirical assumptions. First, the argument assumes Hypothesis 1, the economist's hypothesis, is false. If happiness is a function of income, "period," all we need to do is estimate the coefficient for income and happiness, after which we can track happiness from econometric models. Second, however, it assumes subjective indicators are not totally subjective, but are related to objective variables that (a) change and (b) might be influenced by public policy. If, for example, happiness is an hereditary, hormonal phenomenon (e.g., "temperaments"), there is no reason to look for annual or even decennial fluctuations and no reason to expect that public policy decisions, wise or unwise, will affect it. The comparison hypothesis, as Duncan noted, is particularly troubling for indicator advocates. If it is correct, the level of happiness in a society is fixed and not amenable to manipulation. Conversely, the adaptation hypothesis implies the need to monitor relevant predictor variables closely.

The NORC General Social Surveys, nine national, personal interview samples from 1972 to 1982 (Davis and Smith 1982) provide a unique opportunity to pit these propositions against each other. Each GSS is a national sample of about 1,500 cases (multi-stage probability since 1977, modified probability 1972-74, and a combination during the transition years 1975-76) designed to estimate results for English speaking persons 18 years of age and older, living in noninstitutional quarters in the continental United States. The happiness question appeared each year along with a variety of stratification and solidarity items. The GSS also includes separate questions relevant to the reference group and adaptation hypotheses for one variable, income. Since the nine surveys were carried out at the same time each year (February and March), non-seasonal year to year fluctuations can be studied over a decade.

We are now ready to state the aims of this paper: a multivariate analysis of GSS data, cross-sectionally and over-time, aiming to find the strongest correlates of happiness and assess changes in their system from 1972 to 1982--in the light of the economic, sociological, and psychological hypotheses and the interests of the social indicator movement.

Stratification Variables

I chose eight GSS items to explore Hypotheses 1 and 2, that happiness increases with income and standing on the evaluated variables, (a) the three main components of current socioeconomic status (Education, Occupational Prestige, and Family Income), (b) a measure of parental SES (Father's Occupational Prestige), (c) three psychological mechanism questions (parental family's comparative income, current comparative income, and recent financial change) and Race. The item wordings, categories, marginal proportions, and bivariate relations with Happiness appear in Table 1.

At first glance the data in Table 1 appear to support the sociological hypothesis of multiple dimensions. In each case the higher standing goes with a greater proportion "Very Happy." Greater happiness is associated with a Better Financial situation rather than a Worse one; Above Average income rather than Below Average; white rather than Black race; higher family incomes; higher occupational prestige (Hodge-Siegel-Rossi scores); above average parental income rather than Below Average; higher prestige father's occupation; and more years of schooling.

Each of the associations is statistically reliable at the .05 level, even after a rule-of-thumb correction for clustering in the sample design (Table 1b). Here and throughout this paper I adjusted significance tests under the conservative assumption that the effective N was two-thirds the raw data N.

But many of the differences seem small. For four of the eight items the gap in "Very Happy" between the highest and lowest category is less than

TABLE 1

RANK AND SUBJECTIVE WELFARE (BIVARIATES): Higher Ranks are Associated More Happiness but the Magnitudes Vary (GSS 1972-80)

(a) Percentage Tables							
Variables	Proportion "Very"	(N)	Column Proportion	Variable	Proportion "Very"	(N)	Column Proportion
<u>Recent Financial Change:</u> "During the last few years, has your financial situation been getting..."				<u>Occupational Prestige:</u> Hodge-Siegel-Rossi Scale			
Better	.417	(4648)	.389	48-82	.390	(2908)	.241
Stayed the same	.340	(4726)	.395	36-47	.358	(3555)	.294
Worse	.211	(2585)	.216	29-35	.318	(1944)	.161
	N=	11959*	1.000	0-28	.302	(3669)	.304
						12076*	1.000
<u>Current Comparative Income:</u> "Compared with American families in general, would you say your family income is..."				<u>Parental Family's Comparative Income:</u> "Thinking about the time when you were 16 years old, compared with American Families in general then, would you say your family income was ..."			
Above average	.425	(1858)	.200	Above average	.381	(1449)	.156
Average	.370	(5089)	.547	Average	.362	(5274)	.567
Below average	.253	(2350)	.253	Below average	.313	(2574)	.277
	N=	9297*	1.000		N=	9297*	1.000
<u>Race</u>				<u>Father's Occupational Prestige:</u> Hodge-Siegel-Rossi Scale			
White, other	.359	(10601)	.886	46+	.353	(2350)	.253
Black	.215	(1358)	.114	33-45	.369	(4322)	.465
	N=	11959*	1.000	0-32	.332	(2625)	.282
						9297*	1.000
<u>Family Income:</u> Previous year				<u>Education:</u> Years completed			
\$20,000+	.429	(2235)	.230	16+	.381	(1705)	.142
10,000-19,999	.358	(3540)	.364	13-15	.352	(2034)	.169
5,000- 9,999	.316	(2200)	.227	12	.348	(4035)	.335
Under 5,000	.263	(1737)	.179	0-11	.317	(4263)	.354
	N=	9712*	1.000			12037*	1.000

*N's in these tables vary because (1) not all items appear in each GSS (2) no answers and inapplicables for that item and (3) in a few cases the data are collapsed from a larger cross-tab with missing cases for other variables. For each item here except Family Income, the maximum N (GSS72-80) would be 12120, for Family Income (GSS73-80) it is 10507. No Answer and Inapplicable counts for each item, standing alone, are as follows: Financial change = 117, Race = 0, Current Relative Income = 101, Family Income = 765, Occupational Prestige = 1120, Relative Income Age 16 = 42, Father's Occupation = 1702, Education = 43.

(b) Goodness of Fit for Percentage Tables in (a)

Likelihood Ratio

Correlate	N	d.f.*	Chi-Square*	Criterion**	Triviality***
Recent Financial Change	11959	2	328.3	8.99	0.22
Current Comparative Income	9297	2	155.9	8.99	0.36
Race	11959	1	118.1	5.76	0.39
Family Income	9712	3	131.9	11.72	0.58
Occupational Prestige	12076	3	63.8	11.72	1.48
Parental Family's Comparative Income	9297	2	25.1	8.99	2.22
Father's Occupational Prestige	9297	2	15.8	8.99	3.53
Education	12037	3	25.0	11.72	3.77

* for the model (Correlate) (Happiness = "Very" v. Other)

** .05 criterion multiplied by 1.5 as conventional adjustment for clustering

*** = Number of GSS surveys required to make these data statistically significant. See text (equation 1) for explanation.

10 points. Furthermore, we are dealing with extremely large samples even by the standards of survey research. In Table 1 the raw N's range from 9,297 to 12,076 and the adjusted N's from 6,198 to 8,051. Our design has the power to detect very small departures from the null hypotheses. Thus it is possible that all our results are statistically significant but substantively trivial.

In sum, we could use an index of magnitude for the associations. To avoid the endless desert of the literature on "measures of association for polytomous contingency tables" I will use a simple adjustment for chi-square. The rationale is this: for any particular table the value of chi-square is a function of N and of effect size. Given any particular effect, the larger the N, the larger the chi-square. And for any chi-square, the smaller the N which generates it, the larger the effect. Therefore the number of cases necessary to obtain significance for a particular chi-square will serve as a crude measure of effect size. Equation (1) shows the calculation:

$$\text{Triviality} = \frac{\text{Criterion value of chi-square}}{\text{Observed value of chi-square}} * \frac{N}{1,500} \quad (1)$$

Consider, for example, Recent Financial Change in the top row of Table 1b. The likelihood ratio chi-square for its bivariate association with Happiness is 328.3 with an N of 11,959 and 2 degrees of freedom. Since the cluster adjusted .05 criterion value for 2 degrees of freedom is 8.99 (5.991 * 1.5), we divide 8.99 by 328.3 to get .0274. This says our association would still be significant with an N about 3 percent as large as ours. More exactly, .0274 * N = 11,959 = 327.7. Our result would be significant with an N as small as 328. To put this number into perspective, we divide it by 1,500, the size of a single GSS and the traditional size of many national surveys. Since 327.7/1,500 equals .22, we can say our result would be detected by a sample about one-fifth the size of a GSS. I will call the adjusted chi-square a "triviality index" since large values suggest results which are substantively trivial even when statistically reliable.

The right hand column in Table 1b gives Trivialities for the eight stratification variables. While each association is significant, the trivialities range from .22 to 3.77. For four of the items (Occupational Prestige, Parental Family's Comparative Income, Father's Occupational Prestige, and Education) the effects are so small the association would not be significant in a sample the size of a single GSS. At the opposite pole three of the items (Recent Financial Change, Current Comparative Income, and Race) have trivialities such that they would be captured in designs a third the size of a single GSS.

Are these magnitudes "large" or "small?" The question is unanswerable except by comparison. If one takes the classic father-son occupational mobility table from OCGI (professionals and managers vs. sales and clerical vs. crafts vs. operatives, service and labor vs. farm) one gets a triviality of .11. Similar cross-tabs for achievement variable pairs such as Education and Occupation, Occupation and Income, etc. on national samples give trivialities ranging from .038 to .176 for ten tables. Since these associations have tantalized sociology for two decades, I will arbitrarily say a score of less than .20 marks a "substantial" association, one greater than 1.00 is "trivial" and values between .20 and 1.00 are "moderate." By this yardstick four of the associations in Table 1 are moderate and four are trivial.

Since stratification variables are interrelated, it is necessary to move on to multivariate analyses before drawing firm conclusions on the hypotheses. First, let us examine the three central variables in current, objective SES--Education, Occupational Prestige, and Income--cross-tabulating them simultaneously against Happiness. The result is clear: Income is important, Education and Occupation are not. Table 2 gives the details.

TABLE 2

DETAILS OF TEST MODELS FOR 1=EDUCATIONAL ATTAINMENT BY 2=OCCUPATIONAL
PRESTIGE BY 3=FAMILY INCOME BY 4=SUBJECTIVE WELFARE:

Among Education, Occupation, and Income,
Income is clearly the best predictor

(a) Test Models (N = 9,692)*								
	Effect				H1	H2	H3	H4
Interactions with £4	1	2	3	4	-	-	-	-
	1	2		4	-	-	-	-
			3	4	-	-	-	-
		2	3	4	-	-	-	-
Associations with £4	1			4	M	-	M	M
		2		4	M	M	-	M
			3	4	M	M	M	-
All possible effects among predictor items	1	2	3		M	M	M	M
Likelihood Ratio Chi-Square					56.10	58.80	69.00	154.75
d.f.					54	57	57	57

*Cell entries: M = fitted marginals, - = Assumed absent (odds ratio set to 1.00). All models allow one-variable skews.

(b) Tests and Comparisons

Issue or Hypothesis	Test	Chi-Square	d.f.	Criterion*	Sig**	Triviality
Interactions involving Subjective Welfare	H1	56.10	54	107.80	ns	12.42
Net Associations with Subjective Welfare						
Educational Attainment	H2 v. H1	2.70	3	11.72	ns	28.05
Occupational Prestige	H3 v. H1	12.90	3	11.72	Yes	5.87
Family Income	H4 v. H1	98.65	3	11.72	Yes	0.77

*.05, multiplied by 1.5 to correct for clustering.

**Statistical significance. ns = not significant, Yes = significant at .05 level.

I tested three models using iterative proportional fitting (Goodman 1978). The model H1 deletes all interactions involving Happiness and models H2, H3, and H4 also delete the three predictors one at a time. Table 1b says H1 fits very well. The chi-square is not significant and the Triviality is a largish 12.41. Thus, there is little temptation to explore hypotheses of status consistency or investment return (Davis 1982). When associations between SES variables and Happiness are dropped one at a time:

Educational attainment is no longer significant and has a high triviality score of 28.05.

Occupational prestige is statistically significant, but its triviality score, 5.87 is far beyond the 1.00 line. It would require almost six GSS's to detect the effect.

Family income is statistically significant and its triviality score, .77, while larger than the bivariate value, .58 in Table 1b, is moderate.

In sum, Educational attainment and Occupational Prestige are not important correlates of Subjective Welfare, but Family Income is.

Three other items in Table 1 allow us to explore the psychological hypotheses as applied to income:

- (A) The item Current Comparative Income confronts the reference group hypothesis directly by asking whether the respondents family income is above average, average or below average, "compared with American families in general." If the reference group hypotheses is true, this item should be associated with Happiness when Family Income is controlled and it should tend to wash out the effect of Family Income.
- (B) The item, Recent Financial Change confronts the adaptation hypothesis directly by asking whether the respondent's financial situation has been getting better, getting worse, or stayed the same "during the last few years." If the adaptation hypothesis is correct, it should show a partial association with Happiness and tend to wash out the effect of Family Income.
- (C) A combination of Current Comparative Income and Parental Family's Comparative Income allows one to test a mating of the reference group and adaptation level hypotheses. For example, if we were to find those who were "below average" originally and "above average" today especially happy, we might attribute it to change in rank.

Table 3 puts all these questions simultaneously in a five variable cross-tab including plain old Family Income, the four psychological items, and Happiness. Although the possibilities are complex, the results are clear cut, as shown in Table 3.

TABLE 3

DETAILS OF TEST MODELS FOR 1=PARENTAL FAMILY'S COMPARATIVE INCOME BY 2=FAMILY INCOME BY 3=RECENT FINANCIAL CHANGE BY 4=CURRENT COMPARATIVE INCOME BY 5=SUBJECTIVE WELFARE: For income, recent change dominates

(a) Test Models (N = 9,516)*											
	Effect					H1	H2	H3	H4	H5	
Interactions with £5	1	2	3	4	5	-	-	-	-	-	
	1	2	3	4	5	-	-	-	-	-	
	1	2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
	1	2	3	4	5	-	-	-	-	-	
	1	2	3	4	5	-	-	-	-	-	
	1	2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
		2	3	4	5	-	-	-	-	-	
Associations with £5	1				5	M	-	M	M	M	
		2			5	M	M	-	M	M	
			3		5	M	M	M	-	M	
				4	5	M	M	M	M	-	
All possible effects among predictor items	1	2	3	4		M	M	M	M	M	
						Chi-Square	113.0	120.7	140.2	249.3	133.6
						d.f.	98	100	101	100	100

*See notes to Table 2 for explanation of layout and notation.

(b) Tests and Comparisons

Issue or Hypothesis	Test	Chi-Square	d.f.	Criterion*	Sig	Triviality
Interactions involving Welfare	H1	113.0	98	182.74	ns	10.26
Net Associations with Welfare						
Parental Comparative Income	H2 v. H1	7.7	2	8.99	ns	7.40
Occupational Prestige	H3 v. H1	27.2	3	11.72	Yes	2.73
Recent Financial Change	H4 v. H1	136.3	2	8.99	Yes	0.42
Current Comparative Income	H5 v. H1	20.6	2	8.99	Yes	2.77

*.05, multiplied by 1.5 to correct for clustering.

- (A) The data provide little or no support for the reference group hypothesis. Although Current Comparative Income has a significant bivariate association with Subjective Welfare (Triviality = .36), in the multivariate results the association, while significant, has the trivial magnitude of 2.77. Furthermore, the data provide no support for the intergenerational version. Since H1 fits the data very well (Triviality = 10.26) we can reject the hypothesis that Subjective Welfare is

involved in interactions and hence reject the hypothesis of change in rank (Davis 1982).

- (B) While Family Income has a significant effect, for all practical purposes it is washed out by the psychological variables, as its triviality equals 2.73.
- (C) The data provide strong support for the adaptation level hypothesis. Recent Financial Change is the only one of the four predictors to show a non-trivial effect (.42) in the multivariate analysis.

Putting Race aside, but only momentarily, the results for stratification variables are as follows:

Recent changes in family income have a moderate association with subjective welfare (happiness) controlling for a variety of stratification variables.

Objective income, current income comparisons, intergenerational income comparisons, educational attainment, and occupational prestige have only trivial associations with subjective welfare when Recent Financial Change is controlled.

Solidarity

Turning to the second sociological hypothesis--happiness increases with social ties--I chose seven GSS items as measures of social attachments, (1) Marital Status, (2) Household size, (3) Membership in voluntary Associations, and frequency of socializing, (4) "(at) a bar or tavern," (5) "with relatives," (6) "with someone who lives in your neighborhood," and (7) "with friends who live outside the neighborhood." Sociological theory predicted higher levels of subjective welfare among the married, those not living alone, the joiners, and the more sociable. Table 4 gives the bivariate results.

The results are diverse, with triviality scores (Table 4b) ranging from .21 to 16.80. In order of apparent strength:

Marital Status:	Married people are more likely to be Happy, while each of the three nonmarried categories shows about the same level of subjective welfare (triviality = .21)
Household Status:	Persons living alone are less Happy than persons in families of size two, but Happiness

TABLE 4
SOCIAL TIES AND SUBJECTIVE WELFARE (BIVARIATES): The Immediate Family Seems Most Important

(a) Percentage Tables						
Variables	Proportion "Very"	(N)	Column Proportion	Variable	Proportion "Very"	Column Proportion
<u>Marital Status</u>				<u>Relatives:</u> "How often do you spend a social evening with relatives?"		
Single	.217	(1680)	.140	Once a week		
Married	.405	(8012)	.670	or more	.366	(1780) .371
Divorced, Separated	.194	(1112)	.093	Once or several		
Widowed	.230	(1155)	.097	times a month	.332	(2565) .342
	N=	11959*	1.000	Less than monthly	.336	(2147) .287
						7492* 1.000
<u>Household Size</u>				<u>Neighbors:</u> "How often do you spend a social evening with someone who lives in your neighborhood?"		
1	.228	(1488)	.153	Once a week		
2	.411	(2939)	.303	or more	.331	(2116) .283
3	.338	(1776)	.183	Once or several		
4	.363	(1708)	.176	times a month	.368	(2064) .276
5 or more	.337	(1801)	.185	Less than monthly	.340	(3300) .441
	N=	9712*	1.000			7480* 1.000
<u>Bars and Taverns:</u> "How often do you go to a bar or tavern?"				<u>Friends:</u> "How often do you spend a social evening with friends who live outside the neighborhood?"		
Once a week				Once a week		
or more	.255	(820)	.110	or more	.345	(1613) .216
Once or several				Once or several		
times a month	.293	(1211)	.162	times a month	.356	(3037) .406
Once or several				Less than monthly	.336	(2833) .379
times a year	.321	(1553)	.208			7483* 1.001
Never	.393	(3875)	.520			
		7459*	1.000			
<u>Voluntary Associations:</u> "Here is a list of various kinds of organizations. Could you tell me whether or not you are a member of each type?"						
Belongs to 2						
or more	.379	(3306)	.285			
Belongs to 1	.356	(1992)	.269			
Belongs to None	.291	(2116)	.446			
		7414*	1.000			

*See note to Table 1. Maximum N's for Marital Status and Household Size are 12120, for Voluntary Associations, 7488, for others, 7542. No Answers are Marital Status = 1, Household size = 5, Bars and Taverns = 56, Voluntary Associations = 16, Relatives = 23, Neighbors = 36, Friends = 33.

(b) Goodness of Fit for Percentage Tables in (a)*

Likelihood Ratio

Correlate	N	d.f.	Chi Square	Criterion	Sig.	Triviality
Marital Status	11959	3	451.2	11.72	yes	0.21
Household Size	9712	4	154.5	14.23	yes	0.60
Bars and Taverns	7459	3	87.57	11.72	yes	0.67
Associations	7414	2	45.23	8.99	yes	0.98
Relatives	7492	2	8.05	8.99	no	5.58
Neighbors	7480	2	7.09	8.99	no	6.32
Friends	7483	2	2.67	8.99	no	16.80

*See notes to Table 1.

is lower in families of three or more than in families of two (triviality = .60)

Bars and Taverns: People who never go to bars and taverns are Happier (triviality = .67)

Voluntary Associations: People who belong to one or more organizations are Happier than people who belong to none (triviality = .98)

Sociability: The three "social evening" items are unrelated to Happiness. The effects are not significant and the trivialities are all greater than 5.0.

Again we turn to multivariate analysis to sort things out. Table 5 summarizes the results from six analyses like those in Table 2 and 3.

TABLE 5
MULTIVARIATE ANALYSES OF SOLIDARITY VARIABLES,
RACE, AND RECENT FINANCIAL CHANGE
It boils down to Marital Status
(Table entry = Triviality score)

Variable	Bivariate**	Table					
		I	II	III	IV	V	VI
Marital Status	.21*	.37*	.25*	.12*	.21*	.21*	.20*
Recent Financial Change	.22*	.27*		.29*			
Race	.39*	.93*					
Household size	.60*	1.48	2.49		1.73	1.68	1.65
Bars and Taverns	.67*		1.07				
Voluntary Associations	.98*			2.14			
Relatives	5.58ns				3.61		
Neighbors	6.32ns					8.64ns	
Friends	16.80ns						3.35

* = Triviality score less than 1.00

ns = not statistically significant at the .05 level

** from Table 1 or Table 4

Table 5 may be read down the columns (to see the triviality scores for each variable in a particular cross-tab) or across the rows (to see the triviality scores for a particular variable in various cross-tabs). Moving from the top row to the bottom:

Marital status and Recent Financial Change retain moderate associations with Subjective Welfare across a variety of controls.

The Race effect almost, but not quite, reaches triviality when Marital Status and Recent Change are controlled. (More on that in the next section.) All other measures of solidarity--Household size, Bars and Taverns, Voluntary Associations, Relatives, Neighbors, and Friends--have only trivial associations with Subjective Welfare when Marital Status is controlled. Shifts between the bivariate and multivariate magnitudes seem to be mostly due to the characteristics of single people. Singles are much more likely to frequent bars and taverns and much less likely to visit friends outside the neighborhood or belong to voluntary associations.

In sum:

Marital Status has a moderate association with Subjective Welfare. Once it is controlled all other social solidarity predictors shrink to trivial magnitudes.

Race, Marital Status, and Recent Financial Change

Of the 15 predictor variables in Tables 1 and 4, Table 5 tells us only three merit further scrutiny, Marital Status, Recent Financial Change, and Race. Table 6a shows what happens when all three are cross-tabulated against Subjective Welfare simultaneously.

TABLE 6a

DETAILS OF TEST MODELS FOR 1=RACE BY 2=MARITAL STATUS BY
3=FINANCIAL CHANGE BY 4=SUBJECTIVE WELFARE:
All three predictors contribute

(a) Test Models (N = 11,959)*								
	Effect				H1	H2	H3	H4
Interactions with £4	1	2	3	4	-	-	-	-
	1	2		4	-	-	-	-
			3	4	-	-	-	-
		2	3	4	-	-	-	-
Associations with £4	1			4	M	-	M	M
		2		4	M	M	-	M
			3	4	M	M	M	-
All possible effects among predictor items	1	2	3		M	M	M	M
	Ratio Chi-Square				18.07	80.14	384.55	287.12
	d.f.				17	18	20	19

*See notes to Table 3 for explanation of layout and notation

(b) Tests and Comparisons

Issue or Hypothesis	Test	Chi-Square	d.f.	Criterion*	Sig	Triviality
No interactions with £4	H1	18.07	17	41.38	no	18.26
Net Associations with Welfare						
Race	H2 v. H1	62.07	1	5.76	Yes	.74
Marital Status	H3 v. H1	366.48	3	11.72	Yes	.25
Financial Change	H4 v. H1	269.05	2	8.99	Yes	.27

The main results are:

The data can be fitted easily without assuming any interactions (although inspection suggests the effects are a bit smaller among Blacks).

Marital Status and Recent Financial Change retain their labels as moderate, with triviality scores of .25 and .27.

Race retains its level as moderate, but its triviality score increases from .39 in Table 1 to .74. Thus, part of the Race difference in subjective welfare is due to Marital Status and Recent Financial Change.

Table 6b shows us these associations in the more traditional form of a percentage table. It gives the proportion "Very Happy" for the model H1 in Table 6a. One may read it across rows, up and down columns, or by comparing adjacent values connected by arrows.

TABLE 6b

RACE, MARITAL STATUS, FINANCIAL CHANGE, AND SUBJECTIVE WELFARE:
Data for Table 6 in percentage form*
(Proportion "Very Happy")

Financial Change	Race	Marital Status							
		Single	N	Married	N	Widowed	N	Divorced, Separated	N
"Better"	White	.277		.483		.314		.273	
	/	/	(622)	/	(3132)	/	(197)	/	(288)
	Black	.183		.352		.210		.180	
			(78)		(232)		(35)		(64)
"Same"	White	.227		.416		.259		.223	
	/	/	(535)	/	(2758)	/	(532)	/	(317)
	Black	.146		.293		.169		.143	
			(101)		(299)		(81)		(105)
"Worse"	White	.133		.272		.155		.131	
	/	/	(276)	/	(1425)	/	(269)	/	(252)
	Black	.082		.178		.096		.080	
			(70)		(166)		(41)		(86)

*Fitted data for model H1 in Table 7

Reading:

. . . up and down the columns, Happiness increases with favorable financial changes. For example, among Married whites, 48 percent are "very happy" among those whose finances are "better." By contrast among the "worse," the figure is 27 percent.

. . . along the diagonal arrows, one sees consistent Race differences. Consider, for example, the "Married, Betters." In this otherwise euphoric group, 48 percent of the whites are Very Happy compared with 35 percent of the Blacks.

. . . across the rows, one sees a distinctly higher level among the married but very little difference among the three other categories. For example, among the "White Betters," 48 percent of the Married are Very Happy, as are 27 percent of the Divorced-Separated, 28 percent of the Single and 31 percent of the Widowed. In the fitted data the Widowed are a tad happier than the Single or the Divorced-Separated, but the striking result is the similarity among the three nonmarried groups.

At the extremes: almost half of the Married, white, "Better" express unqualified Happiness in contrast with less than 10 percent of the nonmarried, "Worse," Blacks.

Because the four variables have a plausible causal order (Race → Marital Status → Financial Change → Subjective Welfare) and the Race effects seem partly mediated by the others, we can gain additional insight into these numbers by systems (path) analysis.

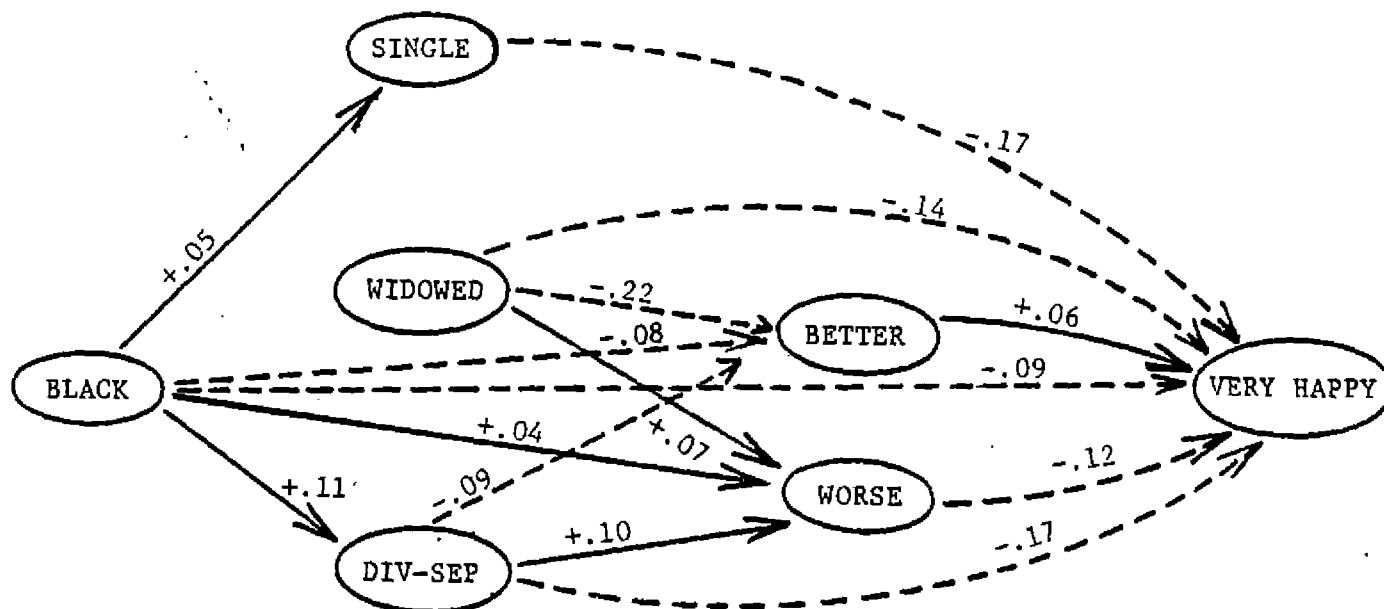
TABLE 6c
FLOW GRAPH ANALYSIS OF DATA IN TABLE 6a

Prior Difference	Effect on . . .									
	Marital Status			Financial Change			Very Happy			
	Single	Widowed	Div.-Sep.	Better	Worse	B-W	Direct	Indirect	Total	
Black (v. white)	\hat{d}	+.048*	+.021	+.107*	-.081*	+.045*	-.126	-.093*	-.042	-.135
	2σ	.026	.022	.026	.032	.030		.028		
Single (v. married)	\hat{d}				.003	.003	.000	-.173*	.000	-.173
	2σ							.026		
Widowed (v. married)	\hat{d}				-.216*	+.068*	-.284	-.142*	-.021	-.163
	2σ				.031	.033		.032		
Div-Sep (v. married)	\hat{d}				-.090*	+.099*	-.189	-.167*	-.016	-.183
	2σ				.036	.035		.031		
Better (v. same)	\hat{d}							+.060*		+.060
	2σ							.024		
Worse (v. same)	\hat{d}							-.115*		-.115
	2σ							.024		

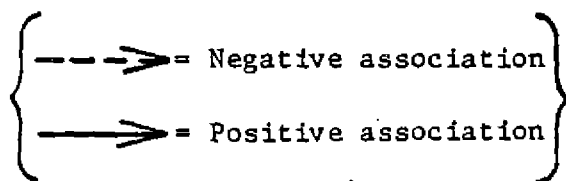
Entries headed \hat{d} are fitted (variance weighted) conditional percentage differences. For example, the -.093 in the top row, third column from the right is to be interpreted as saying that averaged across marital statuses and financial change categories the proportion Very Happy is 9.3 percentage points smaller among Blacks.

*Indicates the coefficient exceeds its two-sigma confidence level (below each entry). Estimated sampling variances were multiplied by 1.5 to correct for clustering.

FIGURE 1
STATISTICALLY SIGNIFICANT EFFECTS FROM
TABLE 6c IN FLOW GRAPH FORM



REFERENCE CATEGORY White Married Same "Pretty Happy," "Not Too Happy"



The first variable is Race. Controlling for Marital Status and Recent Financial Change Black Americans average 9 percentage points lower than whites in terms of the category "Very Happy." Furthermore, they are more likely to possess other traits that lower subjective welfare. Blacks are significantly more likely to be Single, Divorced or Separated, and to report their finances as "Worse." They are less likely to report their finances as "Better." These intervening characteristics operate to exacerbate the Race difference in Happiness. Applying path principles we find the total Race difference con-

sists of $-.093$ direct and $-.042$ operating through Marital Status and Recent Financial Change, for a total of $-.135$. Thus, about one-third ($.042/.135 = .311$) of the race difference is explained by Marital Status and Financial Change.

The race differences reported here confirm other analyses of GSS data (Clemente and Sauer 1976; Cramer 1979) and the results in other national samples (Bradburn 1969, pp. 46-49; Davis 1965, p. 85; Campbell, Converse, and Rodgers 1976, pp.447-449; Veroff, Douvan, and Kulka 1981, pp. 431-438). Thus, Campbell, Converse, and Rodgers report gross percentage differences of 14, 17, 11, and 14 for the years 1957, 1963, 1971, and 1972 using the same Happiness question. These are so close to our bivariate difference of 13.5 for the late 1970s, we can say Black-white differences in subjective welfare have been virtually constant at around 14 points for the last quarter century.

Why do the races differ in Subjective Welfare? Table 6c, of course, says it is not solely due to Marital and Financial Change differences, Tables 2 and 3 seem to rule out other SES-variables, and Table 4 seems to rule out sociability differences. Furthermore, I doubt that the well-known racial differences in urbanization and region explain the difference since most studies suggest they have little effect on Subjective Welfare.

It doesn't take much "sociological imagination" to come up with an hypothesis--the residual difference is due to racial discrimination. It seems obvious that Blacks are less Happy because they feel discriminated against. The idea is not so obvious, however, that a data test is out of order. Luckily, appropriate data are available. The 1982 GSS contains a special supplementary study of Black Americans (funded by the National Science Foundation with A. Wade Smith as principal investigator). This project allowed NORC to increase its Black sample to 510 cases instead of the 150 in a typical GSS and to include special questions on race matters. Three, in particular, seem to get at perceived racial discrimination:

"Do you feel that a black person who has the same education and qualifications can get as good a job as a white person, almost always (13 percent), sometimes (54 percent) or almost never (33 percent)?"

"If a black person has the same qualifications as a white person, do you feel he or she can make as much money, almost always (13 percent), sometimes (55 percent) or almost never (32 percent)?"

"Do you think opportunities for blacks to get ahead have improved in the last five years (48 percent), remained the same (32 percent), or gotten worse (20 percent)?"

These marginals for the 500 case sample suggest most Blacks see considerable progress but a long way to go.

If the discrimination hypothesis is correct, these perceived discrimination items should correlate with Subjective Welfare in the Black sample. Table 7 gives the results.

Our perfectly obvious hypothesis is not supported by the data. The job discrimination and change in opportunity items show no relationship with Happiness while the Income Discrimination item (which is not significant but would be moderate if it were based on a full GSS worth of cases) goes in the opposite direction. If anything, Blacks who perceive income discrimination are happier! Controlling for Marital Status or Recent Financial Change does not alter the conclusion: while Blacks are less Happy, the difference can not be easily explained by perceived racial discrimination.

Turning to the second variable in the model: although marital status is associated with Recent Financial Change (contrasted with the Married, the Widowed, Divorced, and Separated--but not the Single--are more likely to say "Worse" and less likely to say "Better"), its association with Subjective Welfare is mostly direct. Unfavorable financial trends depress the Happiness of the ex-married about two points in addition to a direct effect of roughly 15 points.

TABLE 7

PERCEIVED DISCRIMINATION AND SUBJECTIVE WELFARE AMONG
BLACK AMERICANS IN GSS 1982: Happiness is
unrelated to perceived discrimination

(a) Job Discrimination

"Do you feel that a black person who has the same education and qualifications can get as good a job as a white person?"

Answer	Proportion "Very Happy"	N
"Almost Always" or "Sometimes"	.199	(332)
"Never"	.200	(165)

Chi-Square = 0.001, Criterion = 5.76, Triviality = 1908.48

(b) Income Discrimination

"If a black person has the same qualifications as a white person, do you feel that he or she can make as much money?"

Answer	Proportion "Very Happy"	N
"Almost Always" or "Sometimes"	.176	(340)
"Never"	.247	(158)

Chi-Square = 3.262, Criterion = 5.76, Triviality = 0.59

(c) Change in Opportunities

"Do you think the opportunities for blacks to get ahead have improved in the last five years, remained the same, or gotten worse?"

Answer	Proportion "Very Happy"	N
"Better"	.215	(237)
"Same"	.175	(160)
"Worse"	.190	(100)

Chi-Square = 1.020, Criterion = 8.99, Triviality = 1.95

The greater happiness of the married has been reported in several GSS analyses (Clemente and Sauer 1976; Glenn 1975b, 1980; Glenn and Weaver 1979; Spreitzer, Snyder, and Larson 1975; Ward 1978), analyses of other U.S. national samples (Davis 1965, p. 84; Gurin, Veroff, and Feld 1960, pp. 230-238; Veroff, Douvan and Kulka 1981, p. 150) and in comparable samples from nine European nations (Veehoven 1983). The U.S. Marital Status effect appears stronger than the European ones, consistent with Veehoven's suggestion that

marital status makes a bigger difference in more modern nations (although there is no trend in the size of the coefficients in the GSS samples from 1972 to 1982).

As in the previous discussion of race, the marital status difference is "obvious" but difficult to pin down. It is sometimes argued that marriage, being voluntary, "selects" for personality traits that promote happiness. Our data cast doubt on the idea because Single people, most of whom will get married, Widowed people, whose marital status is "hardly their fault," and the Divorced and Separated, who might be seen as less gifted interpersonally, all have about the same happiness levels (see Table 6c). Presumably the explanation lies in some characteristics of married life rather than of married people. Our analysis also seems to rule out Race, SES, and extra-familial sociability as explainers.

Furthermore, the difference does not appear to come from pride in progeny. Although almost all Americans report only the sunniest experiences as parents (Campbell, Converse, and Rodgers 1976, p. 343), married people with children at home are less Happy than those living as pairs (Glenn 1975a, Glenn and Weaver 1979). Our own analysis of Household Size illustrates. Table 8 gives the cross-tabulation (fitted data) of Marital Status, Financial Change, Household Size, and Subjective Welfare. The effect is trivial in magnitude (Table 5) but statistically significant. Married people in household sizes of three or more are about seven points less likely to say "Very Happy." True enough, but the effect of household size is exactly the same for the Single and the Ex-married. If we test for a Marital Status, Household Size, Happiness interaction by fitting the model (1,2,3)(1,2,4)(1,3,4) for the data in Table 8, the discrepancy is not significant (chi-square = 25.0991, criterion = 43.30, Triviality = 13.796). Since the additional family members are not likely to be children among the single and less likely to be children among the ex-married, it appears it is not the "childness" of children that

TABLE 8

1=RECENT FINANCIAL CHANGE BY 2=MARITAL STATUS BY 3=HOUSEHOLD
 SIZE BY 4=SUBJECTIVE WELFARE: Two seems to be company
 (Proportion Very Happy*)

Marital Status	Recent Financial Change	Household Size		
		One	Two	Three or More
Married	Better	-	.527	.447
		(10)	(1091)	(2260)
	Same	-	.452	.375
		(14)	(1196)	(1850)
	Worse	-	.305	.242
		(3)	(531)	(1060)
Single	Better	.279	.308	.244
		(236)	(154)	(313)
	Same	.223	.248	.193
		(172)	(148)	(317)
	Worse	.132	.149	.113
		(99)	(66)	(184)
Ex-married	Better	.287	.310	.242
		(302)	(112)	(176)
	Same	.237	.256	.195
		(597)	(184)	(260)
	Worse	.140	.154	.112
		(302)	(150)	(202)

*Fitted data for the model (1,2,3)(1,4)(2,4)(3,4). Chi-Square = 12.705, Criterion = 31.539, N = 11,995. Triviality = 19.82. (Widowed and Divorced/ Separated have been combined in the percentage display.)

lowers happiness but the sheer head count. The data suggest "two's company and three's a crowd" regardless of the kin relationships involved.

Having ruled out SES, Race, personality selection, and the presence of children per se, what remains to explain the greater Happiness of the Married? Among the possibilities area satisfaction at having met a social criterion and greater access to the consolations of the bedroom. The reader is invited to suggest others.

The third predictor, Recent Financial Change, is equally important but was discussed in detail earlier. We merely remind the reader that change in income is more important than income level. This finding is of theoretical interest but it also whets our appetite for studying year to year changes

since the GSS decade was one where the financial progress of Americans turned negative after several decades of boom.

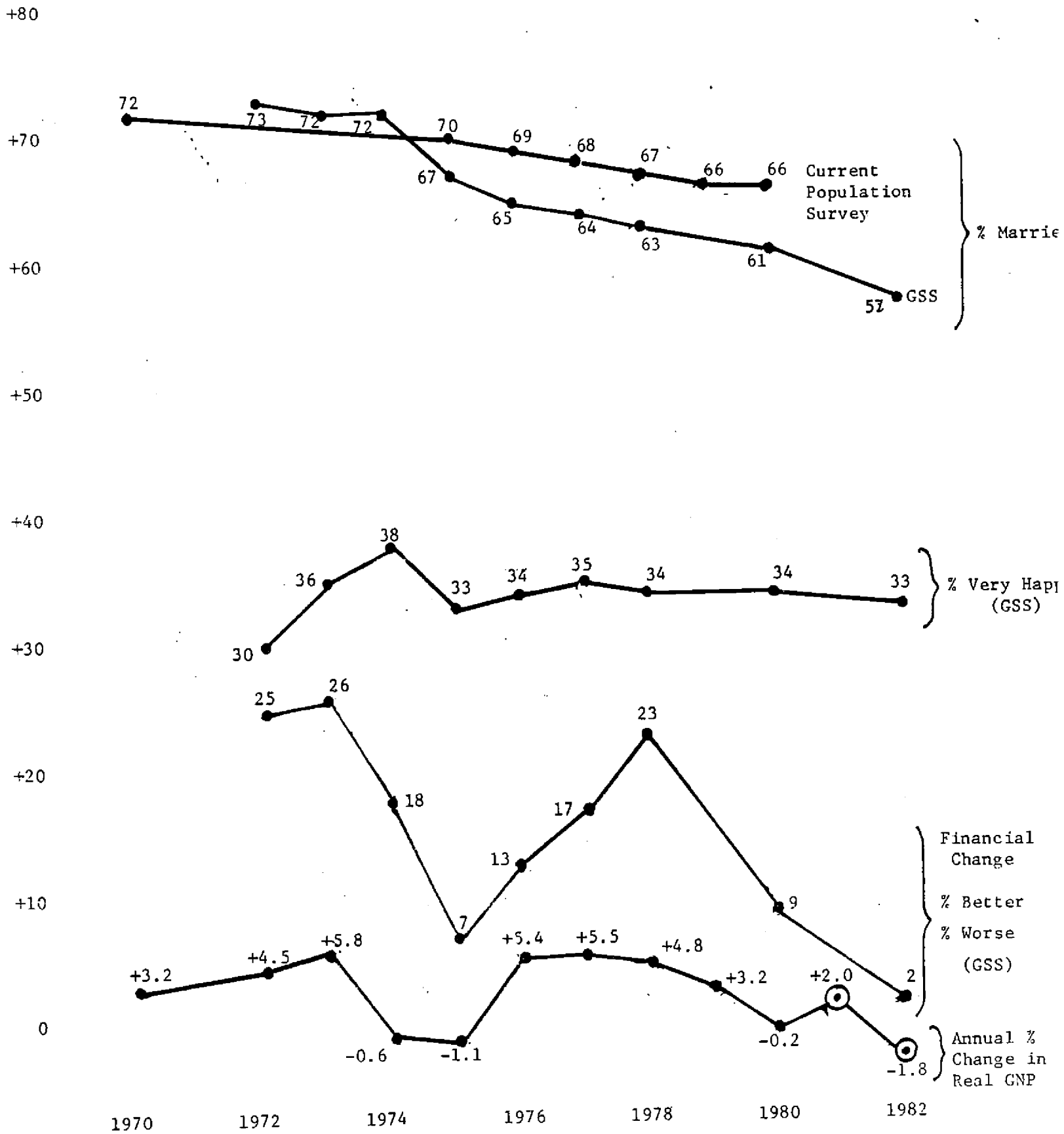
In sum, Race, Recent Financial Change, and Marital Status have statistically independent and roughly equal effects on Subjective Welfare. At the extremes there is an approximately 40 point gap between white-married-better and Black-nonmarried-worse. The Race effect is exacerbated but not explained by the intervening variables, Marital Status and Recent Financial Change, but appears not to be easily explained by perceived racial discrimination. While the Marital Status effect is plausible and replicated by many independent investigations, the data tell us very little about exactly why it occurs.

Year-to-Year Changes

So far the analysis has supported the Social Indicator position. Happiness is not solely a function of income and it is related to "objective" aspects of life which might be amenable to social policy influence--if we knew more about how they work. The third requirement, that the variable system show short run change, is easily tested since each of the key variables appears in nine surveys from 1972 to 1982. However, I will drop Race since the racial composition of the U.S. population does not change appreciably over a decade. Figure 2 plots trends in Marital Status, Recent Financial Change, and Subjective Welfare.

At the top we see a steady decline in the proportion Married. In the GSS it drops from .73 in 1972 to .57 in 1982, an essentially linear decrement of about two points per year. Current Population Survey (CPS) data (Bureau of the Census, p. 37) agree. The change is a complex function of age composition, divorce and remarriage rates, age at first marriage, and differential mortality (Cherlin 1981) but the net result is simple: each year a smaller proportion of the adult population is currently married. According to our model, this trend should push Happiness down steadily throughout the decade.

FIGURE 2
TRENDS IN SOCIAL INDICATOR MODEL VARIABLES: 1970-1982



At the bottom of Figure 2 we see the irregular fluctuations for Recent Financial Change. Since "Better" and "Worse" usually move in opposite directions, I combined them into a single index by subtracting Worse from Better. A positive score means Gainers outnumber Losers. The index starts at +25 in 1972, reaches its high point, +26, in 1973, drops sharply to +18 and then +7 in 1974 and 1975, climbs back up to +13, +17, and +23 in 1976-7-8, and finally skids down to +9 and +2 in 1980 and 1982. The curve below it shows comparable "objective" economic data, annual percentage change in the GNP in 1972 dollars (U.S. Bureau of the Census 1970-80, p. 421; 1981 and 1982 from newspaper reports). The two economic measures are essentially parallel, with peaks in the early and late 70s and troughs in the middle 70s and early 80s. Indeed, they have every reason to agree since the Financial Change item was developed in the University of Michigan Consumer Finance surveys, where it has been used since 1956.

Both prior variables appear to change during the period. Indeed, unpublished NORC research suggests that Financial Change and Family size are among the more changeable GSS items. When the triviality index is applied to 111 GSS mnemonics that appeared in a series with readings in both 1972 and 1982, Family Size ranks 11th and Recent Financial Changes ranks 14th in order of volatility.

What about the dependent variable, Subjective Welfare? Its trend line appears in the middle of Figure 2. Happiness increased in the early 70s, dropped five points from 1974 to 1975 and then fluctuated narrowly between 33 and 35 percentage points (for "Very") thereafter. This pattern does not match that of either predictor, but since they show different patterns, we need multivariate analysis to pursue the matter.

We can obtain the necessary figures by breaking the data down into pairs of adjacent years and cross-tabulating Year by Marital Status by Recent

Financial Change by Subjective Welfare. Figure 3, for the years 1974-75, illustrates.

FIGURE 3
CHANGES IN SUBJECTIVE WELFARE, 1974 TO 1975

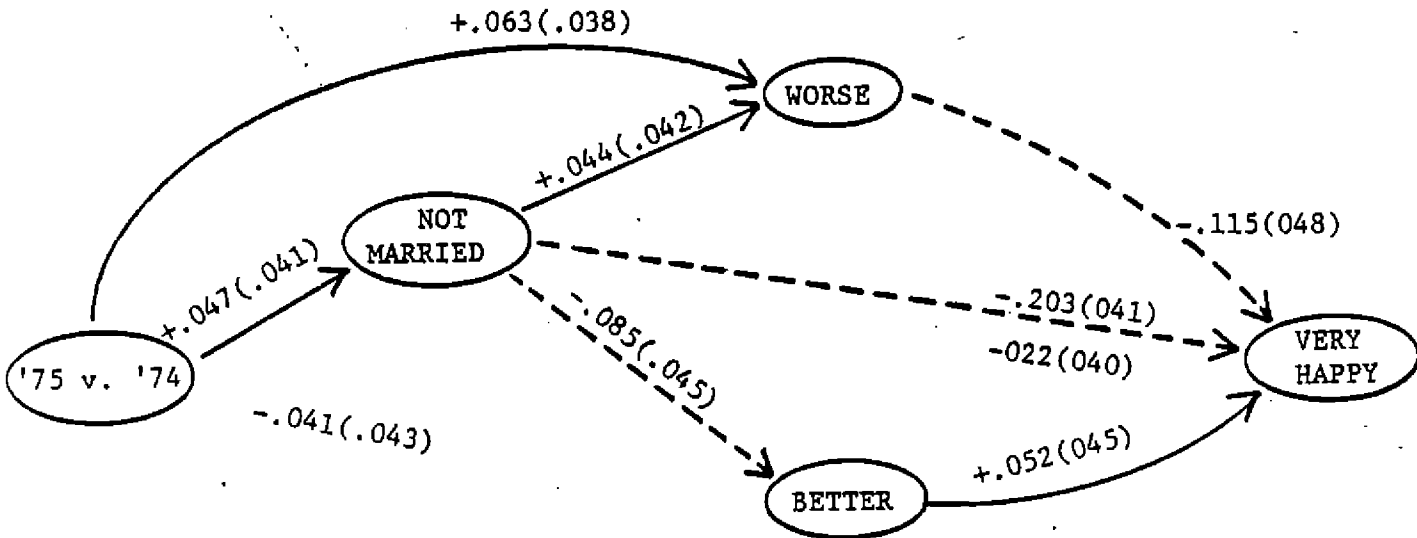


Figure 3 resembles Figure 1 except that (a) race is collapsed out, (b) the source variable is the dictotomy 1974 v. 1975, (c) Single, Widowed, and Divorced/Separated have been combined into one category, Not Married, and (d) the two-sigma confidence interval (cluster adjusted by multiplying the estimated sampling variance by 1.5) appears in parentheses after each coefficient.

When variables are specified with Time as the source, path principles may be applied to work out the various changes since an association between Year and variable X is the same thing as "change in X." Thus, from 1974 to 1975:

The proportion NOT MARRIED increased a significant $+.047$.

The proportion WORSE increased $+.065$, of which:

$+.002 = (.047 * .044)$ is due to changes in NOT MARRIED

$+.063$ is not explained

The proportion BETTER decreased $-.045$, of which:

$-.004 = (.047 * -.085)$ is due to changes in NOT MARRIED

$-.041$ is not explained

The proportion HAPPY decreased $-.041$, of which:

$-.010 = .047 * [-.203 + .044 * -.115] + (-.085 * .052)$
is due to changes in NOT MARRIED

$-.009 = (.063 * -.115) + (-.041 * .052)$ is due to
changes in WORSE and BETTER

$-.022$ is not explained

In other words, between the late Winter of 1974 and the later Winter of 1975, the proportion NOT MARRIED increased significantly, which produced a one point decline in Happiness (directly and via Recent Financial Change); the proportion WORSE increased significantly and the proportion BETTER declined with borderline significance while the two financial categories together produced a one point decline in Happiness; there was an across-the-board residual decline in Happiness of $-.022$, which was not significant; and the three components together produced a four point drop in Subjective Welfare.

Table 9 gives similar data for eight pairs of adjacent years and the 1973-82 period. To interpret them we shall consider in turn (a) residual changes (b) effects of Marital Status, (c) effects of Financial Change, (d) total modeled effects and (e) total changes.

First, consider the column headed "Residual" in the middle of Table 8B. It is the net effect of time on Subjective Welfare, controlling for variables in the model. When such residuals are significant, the implication is that we have specification problems, i.e., something outside the model is producing nonrandom changes in the dependent variable. Seven of eight residuals are insignificant and their magnitudes, one to two points, are about what one would expect from random sampling. The exception, a significant five point residual jump in Happiness from 1972 to 1973 has a plausible technical explan-

TABLE 9
YEAR TO YEAR CHANGES (1972-1982) FOR MODEL IN FIGURE 3: Most years
show significant but small shifts

(a) Changes in Predictors *					
From	To	Proportion		Proportion	
		Married	"Better"***	"Worse"***	
1972	1973	-.010	-.008	-.016	
1973	1974	-.002	-.025	+.053*	
1974	1975	-.047*	-.041	+.063*	
1975	1976	-.021	+.011	-.056*	
1976	1977	-.011	+.025	-.009	
1977	1978	-.010	+.031	-.033	
1978	1980	-.023	-.068*	+.068*	
1980	1982	-.039	-.030	+.039	
1973	1982	-.148*	-.093*	+.125*	

* = exceeds its two sigma confidence interval

** net of Marital Status

(b) Changes in "Very Happy"*							
From	To	Raw Data	Modeled effects		Predictors		
			Total	Residual	Total	Financial	Marital
1972	1973	+.054*	+.050	+.052*	-.002	.000	-.002
1973	1974	+.020	+.014	+.021	-.007x	-.006x	-.001
1974	1975	-.051*	-.040	-.022	-.018x	-.009x	-.009x
1975	1976	+.013	+.006	+.001	+.005x	+.009x	-.004
1976	1977	+.007	+.012	+.012	.000	+.002	-.002
1977	1978	-.004	-.005	-.008	+.003	+.005	-.002
1978	1980	-.005	-.002	+.013	-.015x	-.011x	-.004
1980	1982	-.007	-.009	+.003	-.012x	-.006x	-.006
1973	1982	-.027	-.034	+.025	-.059x	-.028x	-.031x

* = exceeds its two sigma confidence interval

x = level of predictor category changed significantly

ation (Smith 1979, p. 27; Schuman and Presser 1981, p. 42-44). Beginning in 1973, a question on marital happiness was added to the GSS immediately preceding the general happiness question. Since marital happiness is strongly related to general happiness, most respondents give very positive ratings on marital happiness, and most respondents are married, there is a case to be made that this this context effect boosted Happiness marginals from 1973 on.

Second, consider Marital Status. The left hand data column in Table 9a shows only one significant decline, 1974-75, although the change is negative in each year and the cumulative drop, 1972 to 1982, totals $-.163$. Applying these changes to the coefficients we get the effects of changing Marital Status on Happiness in each year, shown in the right hand column of Table 9b. The decline in proportion married nudged happiness down each year, but only in the third decimal--simply because we are multiplying small changes by less than enormous coefficients and the product of decimals is always smaller than the original components.

Third, consider the combined Recent Financial Change categories. Year-to-year changes are statistically significant in four out of eight adjacent years and the causal effect on Happiness (second from right hand column, Table 9b) averages a bit less than one point (mean = $.008$) when the changes are significant. Thus, a significant shift in Recent Financial Change usually nudges Happiness up or down about one point.

Fourth, consider the total modeled effect, the sum of the Marital and Recent Financial Change effects. In the one year when both are significant and in the same direction, 1974-75, they lower Happiness almost two points ($-.018$), in the three years when Finances move significantly negatively and Marital Status has a nonsignificant negative effect, their combined effect averages about one point ($-.011$), and in other years the combined effect is in the third decimal.

Fifth and finally, we look at the total effect, the combination of residuals and effects from the model. Comparing entries in the third and fourth data columns in Table 9b, we see the residual, although not significant, is usually as large as the modeled effect and often opposite in sign. Consequently, there is no consistent relationship between the modeled change and the total change. In other words, even though the effects of the model are statistically significant and the residual is not, as often as not the residual is large enough to dilute the modeled effects.

What does all this come to? Our model produces significant and plausible effects on Happiness levels, while the residual change is insignificant and random. But since the modeled effects are not terribly strong from year to year and in some years the components work in opposite directions, change in Happiness is about half noise and half modeled effects. Consequently the modeled effects do not consistently explain the direction or size of the year to year shifts in Happiness.

If, however, we take a longer time span, things look different. For example, from 1973 to 1982 (dates which hold the context effect constant), the proportion married dropped $-.148$, the proportion Better dropped $-.093$, the proportion Worse rose $+.125$, and these changes applied against the coefficients give a modeled effect of $-.059$, which dominates the residual of $+.025$ and interprets the total drop in Happiness of $-.034$.

In sum, while the model "works" very well technically, year to year changes in its driving variables are not large enough to make it terribly useful in understanding annual fluctuations in Happiness. However, for longer periods of time, where secular trends have a chance to cumulate, the model seems to provide a decent amount of illumination on trends in Subjective Welfare.

Summary and Conclusion

The goal has been to capitalize on the large samples, diverse content and 10 year span of NORC's General Social Survey to sort out a number of hypotheses regarding Subjective Welfare (Happiness).

On the positive side, we managed to find three variables--Race, Marital Status (Married v. Not Married) and Recent Financial Change (Better v. Same v. Worse) which show statistically significant, independent, and non-trivial effects on Subjective Welfare. Moving from cross-sectional to year-to-year analysis, we found shifts in Marital Status and Recent Financial Change produced significant impacts on fluctuations in Happiness.

On the negative side, none of our theoretical hypotheses came off well. The most disappointing was the Sociological (Durkheimian) prediction that Happiness increases with the number of social ties. Clearly the married are happier than the nonmarried but none of the other ties showed nontrivial associations, family size depresses happiness after size two, and the sociability measure that works best is a negative association between Happiness and barhopping.

At first glance, the second Sociological hypothesis, that happiness increases with rank, appeared to do better. Income showed a non-trivial effect as did Race, while Occupational Prestige showed a significant, although trivial association. Closer scrutiny dispels the optimism, since it is hard to claim support for the general proposition when (a) the Sociologists' darlings, occupation and education have no important effects, and (b) while the Race difference is clear cut, one may debate whether Race is a "rank" variable in a non-caste society.

The failures of the other rank variables and the relative success of Income necessarily means the Economist's hypothesis receives some support.

Further support comes from the "Euro-barometer" research program (Commission of the European Communities 1982, p. 5). Polls in ten European nations (Belgium, Denmark, France, Germany, Greece, Holland, Ireland, Italy, Luxembourg, and the United Kingdom) all show that Income has a significant association with "on the whole, are you very satisfied, fairly satisfied, not very satisfied or not at all satisfied with the life you lead?" while educational attainment does not. Although the economist's hypothesis does better than the "any-rank" hypothesis, the equally strong effects of Marital Status and Race argue against simple Economic determinism. Thus, for example, Single Blacks who are doing "Better" are less happy than Married Whites whose finances are "Worse."

As for the two psychological hypotheses, comparisons and adaptation, the data yielded a standoff. In the case of Income the "adaptation level" hypothesis clearly dominates the reference group approach. Yet the case of Marital status argues against adaptation as a pervasive mechanism. Most married GSS respondents have been so for many years, yet the difference between Single and Married is strong.

All in all, the results for the various theoretical predictions have not been such as to embarrass the famous, mythical "dust bowl empiricist."

Turning finally to Subjective Welfare as a Social Indicator, the results are less disappointing but not unproblematical. On the one hand, the analysis produces a reliable model which couples a "subjective indicator" to plausible "objective" antecedents, produces measureable changes from year to year, and has nonsignificant change residuals. On the other hand, the amount of change in the exogenous variables is not enough so the model actually drives the direction of shift in Subjective Welfare from year to year. Rather, the model seems to show more promise for sorting out secular trends.

REFERENCES

- Andrews, Frank M., and Stephen B. Withey. 1976. Social Indicators of Well-Being: Americans' Perceptions of Life Quality. New York: Plenum.
- Bradburn, Norman. 1969. The Structure of Psychological Well-Being. Chicago: Aldine Publishing Company.
- Bureau of the Census. 1981. Statistical Abstract, 102d edition. Washington D.C.
- Campbell, Angus. 1981. The Sense of Well-Being in America: Recent Patterns and Trends. New York: McGraw-Hill Book Company.
- Campbell, Angus; Philip E. Converse; and Willard L. Rodgers. 1976. The Quality of American Life: Perceptions, Evaluations, and Satisfaction. New York: Russell Sage Foundation.
- Cherlin, Andrew J. 1981. Marriage, Divorce, Remarriage. Cambridge, Massachusetts: Harvard University Press.
- Clemente, Frank, and William J. Sauer. 1976. "Life Satisfaction in the United States" Social Forces 54 (March):621-631.
- Commission of the European Communities. 1982. "Euro-barometre No. 17: Public Opinion in the European Community in Spring 1982." Brussels: rue de la Loi, 200-1049.
- Cramer, Richard M. 1979. "Family Strength and Family Satisfaction: Some Racial Comparisons." University of North Carolina Newsletter 64 (April):9-13.
- Davis, James A. 1965. Education for Positive Mental Health. Chicago: Aldine Publishing Company.
- _____. 1975. "Analysing Contingency Tables with Linear Flow Graphs: D Systems." Pp. 111-45 in David Heise (ed.), Sociological Methodology 1976. San Francisco: Jossey-Bass.
- _____. 1982. "Achievement Variables and Class Cultures: Family, Schooling, Job, and Forty-Nine Dependent Variables in the Cumulative GSS." American Sociological Review 47 (October):569-586.
- Davis, James A., and Tom W. Smith. 1982. General Social Surveys, 1972-1982: Cumulative Codebook. Chicago: National Opinion Research Center.
- Duncan, Otis D. 1975. "Does Money Buy Satisfaction?" Social Indicators Research 2:267-274
- Easterlin, Richard. 1973. "Does Money Buy Happiness?" The Public Interest 30:3-10.
- _____. 1974. "Does Economic Growth Improve the Human Lot? Some Empirical Evidence" in P. A. David and M. W. Reder (eds). Nations and Households in Economic Growth. New York: Academic Press.

- Glenn, Norval D. 1975a. "Psychological Well-Being in the Postparental Stage: Some Evidence from National Surveys." Journal of Marriage and the Family 37 (February):105-110.
- _____. 1975b. "The Contribution of Marriage to the Psychological Well-Being of Males and Females." Journal of Marriage and the Family 37 (August):594-600.
- _____. 1980. "Further Evidence on the Well-Being of Persons Remarried After Divorce." Journal of Family Issues (September).
- Glenn, Norval D., and Charles N. Weaver. 1979. "A Note on Family Situation and Global Happiness." Social Forces 57 (March):960-967.
- Goodman, Leo A. 1978. "Analyzing Qualitative/Categorical Data". Cambridge, Massachusetts: Abt Books.
- Gurin, Gerald; Joseph Veroff; and S. C. Feld. 1960. Americans View Their Mental Health. New York: Basic Books.
- Land, Kenneth C. 1982. "Social Indicators: Past Developments and Prospects For the Future." Annual Review of Sociology, 1983. Palo Alto, California: Annual Reviews, Inc. (in press).
- Merton, Robert K., and Alice S. Kitt. 1950. "Contributions to the Theory of Reference Group Behavior" in R. K. Merton and P. F. Lazarsfeld, Continuities in Social Research, Studies in the Scope and Method of 'The American Soldier'." Glencoe, Illinois: Free Press, pp. 40-105.
- Rodgers, Willard. 1982. "Trends in Reported Happiness Within Demographically Defined Subgroups, 1957-78." Social Forces 60 (March): 826-42.
- Schuman, Howard, and Stanley Presser. 1981. Questions and Answers in Attitude Surveys: Experiments on Question Form, Wording, and Context. New York: Academic Press.
- Smith, Tom W. 1979. "Happiness: Time Trends, Seasonal Variations, Inter-survey Differences, and Other Mysteries." Social Psychology Quarterly 42:18-30.
- Smith, Tom W. 1982. "Annotated Bibliography of Papers Using the General Social Surveys," 4th edition. Chicago: National Opinion Research Center.
- Spreitzer, Elmer; Eldon E. Snyder; and David Larson. 1975. "Age, Marital Status, and Labor Force Participation as Related to Life Satisfaction." Sex Roles 1 (September):235-247.
- Vaughan, Denton R., and Clarise G. Lancaster. 1980. "Income Levels and Their Impact on Two Subjective Measures of Well-Being: Some Early Speculations From Work in Progress." 1979 Proceedings of the Social Statistics Section, American Statistical Association, Washington, D.C., pp. 271-276.

Veenhoven, Ruut. 1983. "The Growing Impact of Marriage." Social Indicators Research 12:49-63.

Veroff, Joseph; Elizabeth Douvan; and Richard A. Kulka. 1981. "The Inner American: A Self-Portrait from 1957 to 1976." New York: Basic Books, Inc.

Ward, Russell A. 1978. "Never-Married in Later Life." Journal of Gerontology 34 (November):861-869.