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Happiness: Time Trends, Seasonal Variations, Intersurvey Differences, and Other Mysteries*

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This paper examines trends in psychological well-being in the United States since the Second World War. To measure these trends, a long series of surveys with questions on subjective, personal happiness are analyzed. To test the adequacy of this measure, its association with more complex measures of well-being (e.g., the Bradburn Affect Balance scale and the Andrews and Withey life-feeling scale) was examined, and its testiretest stability determined. Both indicated that happiness might serve as a suitable indicator. Variations in question wording were examined in the happiness series. Differences were found that prevented all wordings being used in a uniform, single series, but the general trends were detectable by using the two main variations as parallel series. Possible seasonal and context effects were alsofound that further complicated the analysis of happiness. With the effects of variant wordings, seasons, and contexts taken into consideration, it appears that happiness rose from the late forties to the late fifties, then fell until the early seventies, and then, possibly after some rebound, remained stable from the early seventies to the present.

One of the prime goals of the social indicators movement has been to move beyond the measurement of demographic and economic facts (e.g., number of babies or cars produced) into quality-oflife measurements. One major aim has been to create a measure that would summarize the level of psychological wellbeing as the real per capita GNP summarizes economic well-being. Despite its difficulty, this challenge has been taken up by a number of social scientists, such as Norman Bradburn, Hadley Cantril, Frank Andrews, Stephen Withey, Angus Campbell, Philip Converse, and Willard Rodgers. They have devised a series of sophisticated measures to tap psychological well-being: the Bradburn affectbalance scale; the Cantril self-anchoring striving scales; the Andrews and Withey life-feeling scale; and the Campbell, Converse, and Rodgers indexes of general affect and well-being. (See Bradburn, 1969; Cantril, 1965; Andrews and Withey, 1976; and Campbell *et al.,* 1976).

In this paper, however, the primary focus is not upon these sophisticated measures of psychological well-being, but upon the most common measure—direct, single-item evaluations of personal happiness, e.g., "Taking all things together, how would you say things are these days—would you say that you're very happy, pretty happy, or not too happy these days?" The reason for selecting such simple measures over the more elaborate ones is their availability. Between 1946 and 1977 nearly fifty surveys have asked national samples to evaluate how happy they are. Only one of the more refined measures reaches back before the 1960's (Cantril's self-anchoring striving scales start in 1959) and most have been developed only in the last half-dozen years. In addition, of the more sophisticated measures, only one has been replicated more than a few times (the Cantril scales again, with six usages). Because of the much longer time period covered and the greater density of observations afforded by the happiness item, this measure was used as the main social indicator of time trends in psychological well-being.

METHODOLOGICAL CONSIDERATIONS

Having decided to chart trends in psychological well-being, the question arises whether single-question indicators of happiness are adequate. One way to measure the validity of the happiness measure is to

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HAPPINESS

Table 1. Happiness and Other Global Well-Being Measures

Measuresa	Study	Coeff cients Gamma	Pearson's r
Happiness (S2) x Affect Balance Scale	NORC458-WAVE I	.45	
Happiness (S2) x Affect Balance Scale	NORC458-WAVE lll	.51	
Happiness (S3) x Affect Scaleb	SRCELEC72		
Happiness (S2) x Affect Balance Scale	CNS		
Happiness (S2) x Life Satisfaction	CNS		
Happiness (S3) x Life Satisfaction	SRCQEMP69		
Happiness (S3) x Life Satisfaction	SRCQEMP72		
Happiness (S3) x Life Satisfactionb	SRC811		
Happiness (S3) x Life Satisfaction	SRCELEC72		
Happiness (S3) x Index of General Affectb	SRC811		
Happiness (S3) x Life Scale	SRCELEC72		
Happiness (S3) x Life Scale	SRCELEC72		
Happiness (S3) x Happiness, 7-pt. (E) c			
Happiness (S3) x Life Scale			

SRCELEC72

SRCELEC72

	na
	.41
	.55
	.83
	.85
	na
	.68
	na
	.76
	.74
	na
	na

Note: na = not available.
NORC = National Opinion Research Center
SRCELEC = Election Studies, Center for Political Studies. Survey Research Center
CNS = Continuous National Surveys (NORC)
SRC = Survey Research Center, University of Michigan
SRCQEMP = Quality of Employment Surveys (SRC) aFor question wordings, see Appendix 1.
bCampbell, *et al.*. 1976.
CAndrews and Withey, 1976.

	.39
	na
	.50
	.37
	.40
	.56
	.54
	.50
	.42
	.52
	.55

.54

.57

.59

examine its association to more precise and general indices that both measure more aspects of psychological well-being and capture more of the variance. In Table I we see that happiness has strong and stable associations with several measures of life satisfaction and general (or global) well-being. The correlation (Pearson's r) ranges between .37 and .50 with the effect balance scale, between .40 and .56 with various life-satisfaction items, and stands at .54 with the index of general affect, at .58 with happiness feelings, and at .59 with the life-feeling scale. This strong and stable association with various other well-being measures indicates that happiness taps the same general continuum that they do.

One limitation of the happiness item is that it does not capture all of the variance because responses are restricted to three categories. It has been shown that three response categories typically reveal only 80-90°io of the total variance, while seven response categories reveal almost 1005'o of it (Andrews and Withey, **1976:86).** This point will be discussed further when variations in question wordings are considered.

A second limitation of the happiness questions is that they may measure positive experiences and feelings more so than negative ones. This is of importance since Bradburn has demonstrated that positive affect and negative affect are largely unrelated and that net well-being rests on the sum impact of positive and negative affect (Bradburn, **1969).** While the independent impact of positive and negative life as

pects is not disputed, it is questionable whether happiness really measures positive inputs more than negative inputs. Bradburn found no differences between the correlation of happiness and positive and negative affect. On Wave I of his panel survey of selected metropolitan areas, he found happiness and positive affect correlated .34 (gamma), and happiness and negative affect correlated g = -.33. On Wave III, happiness correlated g = + .38 with both positive and negative affect. In addition, on the Continuous National Survey (CNS), positive and negative affect correlated at almost identical levels with happiness (r = .26 for positive, and -.25 for negative).

However, Andrews and Withey (1976) found that the correlation of happiness to positive affect was stronger than to negative affect (r = .39 vs. -.31). They also found a similar difference between their happiness feeling measure and positive and negative affect (r = .36 vs. -.30). Since they furthermore found a smaller but similar difference between their life feeling scale and affect (r = .36 vs. -.32), it may be that positive affect generally has a greater influence on this global measure of well-being than does negative affect. In any event, it is clear that if happiness taps the positive more than the negative, the difference is not great and the associations with both sides of lif* are substantial.

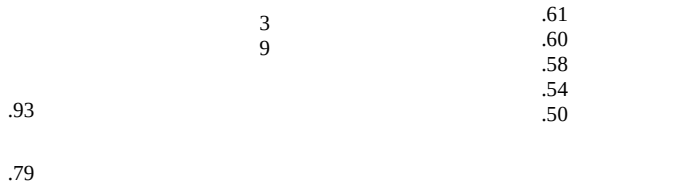
The reliability of the happiness measure is shown by its stability over time. The 1972 General Social Survey (GSS) yielded a correlation of r = .60 between the measure of happiness on the initial interview and the reinterviews one month later. Bradburn and Caplovitz (1965) found a correlation of r = .48 in his sample communities over a seven-month span and later (Bradburn, 1969) found a test-retest correlation of r = .4X over a nine month span in a different set of communities. Campbell *et al.* (1976) found a slightly weaker r of .3X in their reinterview over eight months. Given that changing life experience would cause some real change in happiness over the intervening periods, these moderate to strong associations indicate that respondents understand the question, are responding to it in a personally meaningful and nonrandom manner,

and are referring to their general, current level of well-being rather than to daily changing highs and lows.

The stability of the happiness measures is further placed in perspective by comparison with the stability of other items. On the 1972 GSS, stability measures were calculated for a wide range of items besides happiness. From Table 2, which ranks the results, we see that happiness falls in the middle range on stability. Ranked at the top are standard demographics that either could not have changed (e.g., state lived in when 16) or were extremely unlikely to have changed (e.g., years of education). Because of misreporting or misrecordings at one or both times, even these measures have an association that is less than unity. These are followed by a number of attitude items about which respondents apparently had firmly formed opinions. Next comes three questions on personal evaluations, financial and job satisfaction and happiness. Bringing up the rear are evaluations of the trust, fairness, and helpfulness of people (misanthropy), and a series of questions on civil liberties for Communists, socialists, and homosexuals. Happiness compares quite closely to the other two personal evaluations, while falling below some attitude items and above others. In sum, it appears that happiness shows a high enough level of temporal stability to indicate that it is being meaningfully and consistently understood by respondents (see also Wilson, 1967:294; and Robinson and Shaver, 1969:17).

Table 2. Stability Measures on Selected Items (1972 General Social Survey: Test/Retest)

Unchanging background items	Attitudes toward crime	Other attitudes	Abortion attitudes	Financial satisfaction	HAPPINESS	Job satisfaction	Misanthropy	Stouffer civil liberties
Number of Questions	6	6						
Pearson's r (Mean)								



Another criticism of happiness measures (and other general well-being measures) is that they do not capture respondents' true happiness, but suffer from a positivity bias. In several ways this is true. American culture has a basically positive orientation. Positive antonyms are heavily favored over their negative counterparts (Zajonc, 1968). After all, we ask how happy people are, not how miserable. Another indicator of our positive bent is the consistent expression that our future will be better than our past. Cantril's personal rankings for the future are consistently around one rung higher than for the present (Watts and Free, 1976). Whether this orientation comes from human nature, American culture, objective reality, other factors, or a combination is beyond our scope, but it is clear that Americans generally express themselves in positive terms and rate their well-being similarly.

Another aspect of positivity bias appears when people are asked to compare their happiness to others'. Both when asked to compare themselves to their neighbors and to the average, people rate their own well-being above that of the reference group (Goldings, 1954-1955, and Campbell *et al.,* 1976).

A final and potentially more significant indicator of positivity bias indicates that people inflate their happiness level because it is socially desirable to be happy. Happiness is clearly the social norm, and there may also be a behavioral norm for the expression of happiness. As a result, there is reason to believe that respondents may inflate their personal happiness in order to conform socially. Some evidence for this comes from a comparison of a split national sample of Catholics in which part of the interviews were conducted in person and the other part filled out a selfadministered questionnaire. Of the 44 questions compared, 31 showed no significant differences, 10 showed a significantly higher amount of socially preferred responses on the personal interview (as predicted) and three showed a significantly lower amount of socially preferred responses (contrary to the hypothesis). The happiness item showed the largest social acceptance bias, with the personally interviewed sample replying "very happy" 36% of the time and the selfadministered sample answering "very happy" only 23% of the time—a 13% difference (Sudman, 1967).

This social acceptance bias potentially has great impact on the marginal trends in happiness (or other global measures) if either the social norm of happiness changed over time or the magnitude of the social acceptance effect varied. For example, if Americans' propensity towards happiness declined (i.e., if the norm weakened or vanished) then the pressure to conform socially by inflating happiness would weaken or disappear. As a result, the rather large effect suggested by the Catholic split sample would diminish. This would in turn produce an apparent decline in the proportion "very happy" when in fact what was happening was the decline in bias. Lacking any better information, we will ignore this disquieting possibility in the subsequent analysis and assume that all positivity biases are constant.

From the preceding analysis it appears that happiness is a reasonably adequate and reliable measure of psychological well-being and consequently that happiness should give reasonably accurate estimates of the relative changes in wellbeing over time.

TRENDS OVER TIME

Turning to the data, we see in Table 3 the happiness marginals for the two standard happiness questions that have been asked over the last 30 years. The AIPO item asks

variants of the question, "In general, how happy would you say that you are—very happy, fairly happy, or not happy?" (See Appendix I for details on question wordings.) The SRC-NORC questions are variants of "Taking things all together, how would you say things are these days—would you say you're very happy, pretty happy, or not too happy these days?" Clearly both questions tap the same topic—subjective rankings of personal happiness—and are even similar in having the same number of response categories and the sameresponse, "very happy," at the positive end of the

Table 3. Happiness Marginals, 1946-1977 (National Samples)

Proportionsb

nf P"hlic Oninion (Gallup)

Note: AIPO = American Institute ~ SRC = Survey Research Center, University of Michigan NORC = National Opinion Research Center GSS = General Social Survey, NORC SRCOMNI = SRC Omnibus Survey SRCELEC = SRC Election Survey, Center for Political Studies CNS = Continuous National Survey, NORC SRCMH = SRC Mental Health Survey aSee Appendix 1: Question Wording. bMissing cases and "don't knows" excluded from analysis. ~From *The Gallup Poll* Jan. 14, 197.1 Proportions dBased on weighted data. eCombines telephone and in-person interviews.

calculated from published data.

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Study	Date	Versiona		
Very	Pretty	Not too	All	
AIPO369	4/46	A2		
.392	.509	.086		
.013	3,104			
AIPO399	6/47	A3		
.385	.549	.066	—	
AIPO410T	12/47-1148	Al		
.427	.476	.083		
.014	1,416			
AIPO418	5/48	A5		
.365	.550	.087		
.011	1,782			
AIPO425K	9/48	A6		
.443	.442	.115	—	
AIPO508	11/52	A7		
.474	.433	.079		
.013	2,980			
AIPO569	8/56	A5		
.505	.444	.039		
.024	2,240			
AIPO570	9/56	A6		
.538	.414	.048	—	
AIPO571	9/56	A6		
.525	.421	.054	—	
AIPO580	3/57	A4		
.534	.433	.033	—	
AIPO675	7/63	A6		
.472	.484	.044	—	1,555
AIPO735	9- 10/66	A6		
.516	.453	.031	—	1,569
AIPO736	10/66	A6		
.463	.467	.069	—	1,588
AIPO	~12/70	A6		
.443	.495	.062	—	1,471
SRC422	3/57	Sl		
.347	.541	.112	—	2,451
NORC160	5/63	S2		
.321	.514	.165	—	1,501
NORC630	5/64	S2		
.383	.480	.137	—	1,489
NORC760	10/64	S2		
.371	.521	.107	—	1,966
NORC857	6/65	S2		
.298	.531	.172	—	1,468
SRC811	7-8/71	S3		
.288	.612	.099	—	2,147d
GSS72	2-3/72	S2		
.303	.532	.165	—	1,599
SRCOMNI	4-5/72	S3		
.267	.648	.086	—	1,254
NORC5046	11/72	S2		
.269	.595	.136	—	1,459
SRCELEC	11172-2173	S3		
.218	.675	.107	—	1,056
GSS73	Fairly/	Not Very/ 3/73	Not at	S2
.359		.511	.131	— 1,496
CNS-I N		4-5/73		S2
.331		.537	.132	— 723
CNS-2		5-6/73		S2
.328		.549	.124	— 647
CNS-3		6-7/73		S2
.330 3,050		.495	.174	— 642
CNS-4		7-8/73		S2
.293		.525	.182	— 615
CNS-5		8-9/73		S2
.308		.502	.186	— 639
CNS-6		9-10/73		S2
.286		.551	.163	— 630
CNS-7		10-11/73		S2
.323 1,505		.540	.137	— 681
CNS-8		11-IV73		S2
.290		.549	.161	— 696
CNS-9		1/74		S2
.274		.551	.175	— 696
CNS-10		2/74		S2
.231		.574	.195	— 692
CNS-II		3-4/74		S2
.280 1,969		.572	.148	— 610
CNS-12		5/74		S2
.328 2,184		.547	.125	— 656
GSS74		3/74		S2
.379 1,606		.490	.131	— 1,476

GSS75	3/75	S2		NORC4239	9/76	S2		
.329	.541	.131	—	.361 1,481	.518	.121	—	1,313
NORC5059	7/75	S2		GSS77	2-3/77	S2		
.318	.496	.186	—	.348 581	.532	.119	—	1,524
GSS76	2-4/76	S2						
.341	.534	.125	—	q 1,499				
SRCOMNle	4-5/76	S3						
.286	.605	.110	—	1,520				
SRCMH	6-8/76	S3		,				
.310	.583	.107	—	2,207				

HAPPINESS

Response Categories
Example la

Proportions

SRC422	AIPO580	NORC160	AIPO675
Example 2			
Not Too/Not Very	.112	.033	
.165	.044		
Pretty/Fairly	.541	.433	
.514	.484		
Very/Very	.347	.534	
.321	.472		
(2,451) (1,606) (1,501)			
(1,555)			

AIPO569	AIPO570	AIPO571	
Not at All		.013	—
Not Very		.039	.048 .054
Fairly		.444	.414 .421
Very		.505	.538 .525
		(2,240)	(1,969) (2,184)
Example 3		NORC5059A	NORC5059B

scale. These similarities do not mean that the two standard happiness questions produce similar marginals(and indeed they do not), but do indicate that they measure the same underlying continuum—personal happiness.

In Table 4, these and other differences in response categories are examined in detail. Example I shows that the substitution of "fairly" for "pretty" leads more people to classify themselves as "very" happy. Apparently "fairly" is perceived as a less positive ranking than "pretty." When forced to chose between "fairly" versus "very" rather than "pretty" versus "very," more people switch to the "very" category since the middle choice does not appear sufficiently positive. This effect is reasonably stable across time. The ratio between "very" happy responses on the two versions is 1.54 in 1957, and 1.47 in 1963. At the other end of the scale it appears that both "not happy" and "not very happy" are more negative responses than "not too happy." The less negative category as a result attracts between 3.3 and 3.75 times the number of respondents as do the AIPO categories. The lack of attraction held by extreme negative categories is confirmed by Example 2. There the addition of the category "not at all happy" to the negative side of "not very happy" captures few

respondents (.013). In addition, the extension of the negative end of the scale fails to draw people towards that end of the scale. The "not at all happy" category simply breaks down the small "not very happy" group into the negatively and very negatively oriented, and does not draw more people into the "not very happy" group.

This same thing happens in Example 3, when the category "not at all happy" is appended to the negative end. The unhappy group is broken down into the negative and very negative, but a greater share of respondents is not drawn towards the negative pole. The opposite occurs around the positive end of the scale. Here the addition of the response "completely happy" not only draws people from the "very happy" category, but also shifts people from the "pretty happy" category into the "very happy" category. This indicates two effects: first, that among the people replying "very happy" there is a group that would choose an even more positive response, such as "completely happy," if only one were offered; and second, that among those replying "pretty happy" there is a group that resists choosing "very happy" because they do not consider themselves in the happiest or top category. When this constraint is removed by the creation of a new top category

Table 4 Variations in Res nse Cate vies on H nes3

pa	R	appl					
Not at All		.044		Pretty		.381	.496
Not Too		.126		Very		.309	.318
				Completely		.138	
			.186			(585)	(581)

aResponses for SRC422 and NORC160 to the left of the slash; for AIPO580 and AIPO675, to the right.

24

.26
.89
.59
.05
.55
.12
.15
.24

.97
.82
.17

Table 5. Trends in Happinessa

Series/Number of Observations

AIPO (14)
AIPO (10)
AIPO (5)
SRC-NORC (31)
SRC-NORC (10)
SRC-NORC (22)
SRC-NORC (26)
CNS (12)
GSS (6)
SRC (5)
NORC (3)
GSS (Adjusted)e (6)
NORC (Adjusted)f (3)
SRC-NORC (Adjusted)f (14)
av~rvinals in Table 4.

Modelb	Linear Change (Per Annum)	r2

("completely"), about one-fourth of the "pretty happy" group switches into the "very happy" category. Altogether these comparisons underscore (1) the artificiality or relativeness of marginal responses, since they are a product of the number of response categories employed and the descriptors attached to those categories; (2) that the three categories used do not capture all of the potential variance (as noted above); and (3) that most of the uncaptured variance apparently exists along the positive end of the scale.

Looking first at the AIPO happiness trends, we find that over the whole AIPO series there was a net change in the positive direction of almost one-half a percentage point per year (Table 5).' This linear component is not especially strong, however, the r2 with time being only .26. Instead of capturing one linear time series Figure I suggests that the AIPO series describes two trends. Happiness generally advanced from the late forties to the late

fifties. As Table 5 shows, this trend had a strong linear component (r2 = .89), indicating that the proportion "very happy" rose at the rate of 1.4 percentage points per annum. Sometime between 1957 and 1963 (the lack of intervening data points makes it impossible to specify more exactly), the rise in happiness peaked and began to decline. From 1957 to 1970 the linear component indicates a drop in happiness of a little over one-half a percentage point yearly. Besides being more

5.4

,,/t ,, , -]

Years

.0044 .0137
-.0058 -.0020 -.0062 .0104 .0097
-.0482

.0231

1946-1970
1946- 1957
1957- 1970
1957-1977
1957-1972C
1972—1977d
1971-1977
1973-1974
1972-1977
1971- 1976
1972-1976
1972-1977
1972-1976
1971-1976

Category

Very	Linear Component
Very	Linear Component
Very	Linear Component
Very	Linear Component
Very	Linear Component
Very	Linear Component

Very	Linear Component	
Very	Linear Component	
Very	Nonlinear	
Very	Nonlinear	
Very	Linear	
Very	Constant	
Very	Linear	.0148
Very	Linear Component	.0061

' By concentrating on the Very Happy category we minimize, but do not eliminate, the response category effects noted above.

FIGURE I
Trends in Happiness, 1946-1977

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bFirst, no change or constant models were fitted to the series. If the constant model proved inadequate to explain the series, a linear change model was fitted to the series. Three results could come from this test. The data could come out as showing a linear trend with no significant variation, as having a significant linear component but also having a significant amount of unexplained variation, or as showing no significant linear trend. For the details of the statistical tests applied here, see Taylor (1976). Standard deviations multiplied by 1.414 to adjust for clustering effect of multi-stage sampling.

Through end of 1972.

dStarts with November 1972 (SRCELEC and NORC 5046).

eAdjusted for context effect (see text).

Excluding CNS.

gradual than the rise in the fifties (whence comes the net positive direction in the whole series), this decline showed more variation from the linear (r2 = 59). An examination of the SRC-NORC happiness trend for the same period (19571971) shows a reasonably parallel linear component with a decline of -.41 percentage point yearly compared to the -.58 percentage point decline for the AIPO series. In addition to showing a slightly steeper slope, the AIPO trend also has a stronger linear component than the SRC-NORC series. The lesser linearity in the SRC-NORC figures is also evident in the non-linear trend shown by the "not too happy" series, compared to the linear component in the AIPO "not very happy" series.) Despite these differences the two series both indicate a secular decline in happiness from 1957 to the early seventies.

Examining the entire SRC-NORC series, we find only the barest hints of readily apparent trends. Over the whole span there is a significant linear component showing a decline in the proportion "very happy" of -.2 percentage point per annum. However, this linear component is very small, the r2 with time being only .05. There is some indication that a stronger linear decline was occurring beteen 1957 and 1972. Over these years happiness was falling at -.62 percentage point yearly, and the r2 equalled .55. There is tentative evidence that during the seventies happiness is again shifting in direction and beginning to rise. The data indicate a linear trend with a rise of .97 percentage point per year, but the component is not strong (r2 = .15). Starting from the low point indicated by the marginals in late 1972, the trend through 1977 shows a slightly steeper (1.04 percentage points per annum) but a weaker (r2 = .12) linear component. This linear component disappears entirely, however, if the two low points at the end of 1972 are excluded and only the 1973-1977 points are examined.2

In brief, it appears that in general during the seventies happiness showed considerable bounce but little net trend.

To examine this interpretation further an analysis was made of some of the chief subseries during these years, the NORC and SRC house series, and within NORC the CNS, GSS, and other NORC series. This closer examination reveals that the CNS data provide one of the major sources for variation in the seventies. The twelve CNS points show a 10percentage-point range in the proportion of "very happy." This large variation does not appear to be random, but rather to follow a seasonal flow, with happiness highest in the spring, declining slowly in the summer and fall, and then falling to a winter low before revival in the following spring. It was possible to test this seasonal interpretation with other data from the CNS. Bradburn's affect balance scale was also asked each month. As Table 6 shows, there was relatively little variation in the affect balance scores, and little duplication of the happiness seasonal trend (r = .31 between

the two time series). Looking at the positive affects scale separately, however, reveals a close similarity between the happiness and positive-affect trends (time series r = .83). Interestingly, negative affect shows much less seasonal variation than does positive affect, and what variation does occur is parallel to the positive trends rather than opposite to it (time series r = .66). Because of these similarities in trends between the positive and negative scales, there is little change in the net difference between them and therefore the affect balance scale shows little variation. Using a total affect scale instead of the affect balance scale (i.e. adding the scale items together rather than subtracting the number of negative items from the sum of positive items), we see a clear duplication of the happiness trend (time series r = .86). This serial correlation between happiness and total affect as opposed to affect balance is somewhat

[2] By choosing the apparent low point in the fall of 1972 as the end point for the first series (1957-1972) and the starting point for the 1972-1977 series we may be capitalizing on an outlier to produce a small linear component in what is really a nonlinear trend. The fact that the SRCELEC point is exceptionally low (see this point in the following discussion of reasons for high variation in the seventies) and that the 1972-1977 trend almost disappears without this point (the linear component falling to .64 percent and the Into .07) supports this possibility.

Source: CNS

surprising since happiness has a moderate individual level association with affect balance (r = .37) but no relationship to total affect (r = .00). It appears that people are on the average happier when things tend to happen (e.g., in spring versus winter), but that the individual happiness is a function of the +/- balance of the things happening. However, one other global measure of well-being on CNS, life satisfaction, fails to duplicate the pattern shown by happiness and affect. Life satisfaction shows no clear seasonal pattern (being constant) and has a time series correlation with happiness of only r = .25. In sum, from the CNS data there appears to be a true seasonal fluctuation in well-being as measured by happiness, positive affect, negative affect, and total affect. Affect balance is, however, calculated in such a way as to lessen or remove this variation. Life satisfaction, showing no significant variation, does not closely conform to this seasonal pattern.

Given that a seasonal pattern appears on happiness and some other measures, the question arises whether this is a stable and enduring (true) seasonal trend related to climate and other repeating factors, or an artifact of the single year covered-by the CNS data. Certainly the latter possibility can not be easily dismissed, since basing a recurring seasonal trend on only a single cycle of observations is a hazardous generalization. Furthermore, the year captured by CNS was hardly uneventful. It was especially hallmarked by imposition of the Arab oil embargo from October, 1973, until March 18, 1974. It is

7.80
7.66
7.57
7.40
7.55
7.64
7.81
7.70
7.63
7.65
7.60
7.79

not inconceivable that this event accounted for the drop in happiness in the months of January and February as the embargo's impact took hold and that the embargo's lifting accounted for the revival of happiness in the spring of 1974.

There is unfortunately no comparably rich data source to test the seasonal hypothesis on, but certain fragmentary evidence supports the seasonal interpretation. First, both Bradburn (1969:84) and Andrews and Withey (1976:273) find evidence of similar seasonal variations (spring ups, and falVwinter downs) in their data. Second, studies of moods show

a similar variation (Springer and Roslow, 1935). Third, suicide figures have consistently shown a seasonal pattern, but the suicide pattern is the opposite of what one might expect, with the suicide rate rising in the spring and falling in the winter. It has been suggested that the *disparity* between the happiness of normal people and that of psychologically seriously disturbed people widens in the spring, when the happiness of the normal population rises, and that this widening gap leads to an increase in suicides among the seriously disturbed (Dublin, 1963:56-60). Other evidence, however, fails to support the hypothesis. Happiness responses on the 1972 GSS conducted in February and March were compared with responses from the subsample reinterviewed one month later. Since the reinterviews were conducted during the beginning of the hypothesized spring upswing, it was predicted that there would be a net shift towards happiness in the ranking. Instead,

Table 6. Seasonal Variation in Affect

Cycles	Affect	Mean Positive Affect	Mean Negative Affect	Mean Total Affect	Mean Balance Affect
1	3.40	1.59		5.00	4.80
2	3.23	1.58		5.01	
3	3.29	1.71		4.71	
4	3.05	1.65		4.69	
5	3.12	1.57		4.67	
6	3.15	1.50		4.87	
7	3.32	1.52		4.67	
8	3.18	1.48		4.39	
9	3.01	1.38		4.42	
10	3.02	1.39		4.46	
11	3.03	1.43		4.73	
12	3.26	1.46			

72.8% gave the same response, 14.0~o reported less happiness, and only 13.2% gave higher rankings.3 In another attempt to detect a seasonal shift from late winter to early spring, all GSS cases from 1972 to 1977 were grouped by date of interview. Both when grouped by month (February/March/April) and by thirds there was no association between time of interview and level of happiness.4 In sum, the hypothesis that happiness (and conceivably other measures of global wellbeing) follows a seasonal rhythm is plausible, but not proven.

Another source of the large variations is shown in Figure 2. It appears that NORC surveys in general (GSS, CNS, and the other NORC points) record higher levels of happiness than do SRC surveys. Furthermore, it appears that among NORC surveys the GSS series produces higher happiness than do other NORC surveys. In Table 7 a direct survey-to-survey comparison is made between the seven pairs of surveys that occur at approximately the same point in time. In three of the five comparisons between SRC and NORC, the NORC survey reports a significantly higher proportion "very happy" (by .051 in November, 1972, .055 in spring, 1976 and .051 in summer, 1976). In the spring 1972 comparison, a similar but smaller difference appears (.036, not significant). Only between the employed-persons samples (GSS73 and SRCQEMP) does NORC show less happiness (-.035, not significant). Within the NORC series, the GSS reports more people

"very happy" than CNS does at both points of comparison although only once is the difference significant.

3 Based on the slightly lower happiness levels reported by Campbell (personal communication) from telephone interviews versus in-person interviews, one might expect the reinterviews conducted by telephone to result in lower happiness levels. However, in a comparison of in-person and telephone reinterviews, Bradburn (1969) found no differences by reinterview method.

4 It should be stressed that this does not represent a controlled experiment. The date of interview was not randomly chosen but was a function of two main factors: (1) when an interviewer was available to start covering a segment, and (2) in the case of the full probability samples in 1977 and half of 1975 and 1976, the accessibility of the respondent.

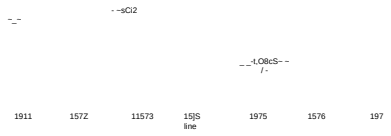

FIGURE 2.
Trends in Happiness, 1971-1977 by HouselSurvey.

While one might be tempted to offer a house-effects explanation of this difference, or to posit that somehow the small differences in wording between the NORC and SRC versions created the difference, the more promising candidate is a context effect. In the 1973 through 1977 GSS's the general happiness question was immediately preceded by a marital happiness question, "Taking things all together, how woul d you describe your marriage? Would you say that your marriage is very happy, pretty happy, or not too happy?" This question is strongly correlated with general happiness (gamma = .754, GSS73-77 pooled) and the responses are very positive (.674 report having a "very happy" marriage versus only .420 being "very happy" in general). The strength of the relationship between marital and general happiness, the magnitude of the positive rankings of marital happiness, and the similarity in form suggest that the placement of the marital happiness question immediately prior to the general happiness question might induce a positivity effect in the ratings of general happiness.

To test for this possible context effect, general happiness was cross-tabulated with marital status and survey year (1972 versus 1973-1977). Since only currently married respondents were asked the marital happiness question, unmarried respondents, would never have been influenced by the item. As a result, if this item has

Table 7. Selected Comparisons in Happiness Marginals

Studies	Date	Proportions Very Happy
A	~1/7~	.303
GSS72	.267J	
SRCOMNI	.269	
NORC5046	.218J	
SRCELEC	3361	
GSS73b	.371J	
SRCQEMP	3591	
GSS73	.331J	
CNS-I	.379	
GSS74	.280J	
CNS-I1	.34	
GSS75	.286J	
SRCOMNI	.361	
NORC4239	.310J	
SRCMH		

Differences (T~ - T2)	Probabilitya
2-3172 4-5172	
11/72	
11/72	
3/73	
Winter, 72/73	
3/73 4-5173	
3/74 3-4174	
3/76 4-5176	
9/76 6-8176	
	.036

.051

-.035

.028

.099

,055C

051

.130

.034

.250

.641

.002

.020

.027

surveys. Further, since the marital happiness item occurred just two questions before the general happiness item on both NORC 5059 and NORC 4239 (with the equally positive variable of self-rated health in between), it is possible

inflated the general happiness reported by married people, the difference between the general happiness of married and unmarried respondents should be greater in 1973-1977, when the married people responded in the context of the marital happiness question, than in 1972, when no such context effect would have existed. In fact, the data do suggest a context effect: the difference between married and unmarried respondents was .163 in 1972, and .209 in 1973-1977—a difference in differences of .046. This effect cannot be accepted unreservedly, however, because it is statistically significant only at the .068 level. However, if we did accept this as a real context effect, the married respondents' proportion of "very happy" would have to be reduced by this amount. Multiplying the proportion married (.678) by this effect (-.046) gives an estimated reduction of -.032 in the proportion very happy for the 1973-1977 GSS's. This would reduce and in most cases eliminate any significant difference between GSS and CNS or SRC (and CNS is excluded from analysis) the SRC-NORC adjusted series shows a weak linear component (r7 = .17) with a rise in the proportion "very happy" of .61 percent points annually. Since, however, none of these series except GSS control for the probable seasonal effects these must be considered suspect. By choosing points from

that general happiness is likewise inflated in these cases. Adjustment for such a probable effect would bring NORC 4239 and SRCMH into line. That leaves only the higher happiness on NORC 5046 versus SRCELEC72. No context effect appears likely here.5 Possibly the fact that the SRCELEC survey extended into the seasonally low months of January and February explains the difference (only CNS, in February, 1974, comes close to the low level reached by this SRCELEC point), or alternatively the SRCELEC point may just be a low outlier.

Taking the seasonal and context effects into account, it is little wonder that the happiness series in the seventies shows a high degree of variability. When the probable context effects are adjusted for, the nonlinear trend shown by the GSS series disappears and a constant model fits the data. Similarly with the residual NORC surveys an indicated sharp linear increase of 2.3 percent points annually is trimmed to 1.5 percent points per annum when adjusted for context effects. When these adjusted values are used with SRC points

5 An examination of the probable context effect on all other studies, AIPO, SRC, and NORC did not reveal any other likely candidates.

aAdjusted for multi-stage sampling by multiplying standard deviations by 1.414. bUniverse is employed people working 20 hours or more. CHalf of the SRC intervie~vs were conducted by phone and half by in-person interview. The telephone sample resulted in a proportion of .279 "very happy" vs. a proportion of .293 from in-person interviews. The difference is not statistically significant, but the difference between the in-person GSS survey and the in-person half of the SRC survey is only .048 instead of .055.

surveys conducted at approximately the same time each year it was possible to construct two series with more than two points in which the seasonal effect was controlled for. For the JulyAugust periods we have SRC811 in 1971, CNS-4 in 1973, NORC 5059 in 1975, and SRCMH in 1976, for which the points (.288, .293, .318, .310, respectively) fit a constant model.6 A second series of surveys taken in April-May periods consisted of SRCOMNI in 1972, CNS-1 in 1973
CNS-12 in 1974, and SRCOMNI in 1976 (personal interviews for SRCOMNI 1976), for which the points (.267, .331, .328, .293, respectively) also fit a constant model. Thus, with controls for both season and context effects, it appears that happiness has been hovering around a constant level since 1972.

To summarize, it appears that happiness rose between the late forties and the late fifties. During the sixties there appears to have been a decline in happiness, although at a slower rate than the rise in the fifties. This drop reached its bottom by the early seventies.7 The trend since then is hard to separate from the variation, but it appears that happiness has shown no clear trend.

Given this description of the trends in happiness, the question arises, what caused these changes in the level of psychological well-being? Rather than speculating at this point about possible causation, let us specify two methods that might be pursued to arrive at an answer. One approach is the time-series correlation technique, which attempts to fit other time-series trends to the happiness figures. This method is used extensively in econometrics, and has been used to good advantage in the studies of presidential popularity (Mueller, 1970; Stimson, 1976; Kernell, 1978). A second useful technique is to fit a change model to happiness, such that changes in happiness can be examined in relation to changes in prior, independent variables such as cohort or education (see Davis, 1975 and Smith, 1976). Hopefully, the application of these techniques will permit us to say not only how happiness changes as it moves across time, but also why.8

6 See Table 5, note b, on tests employed here.

7 The decline in psychological well-being in the sixties is also supported by the trend in Cantril's national scale and the drop in life satisfaction from 1968 to 1972. It is not, however, supported by the steady level of Cantril's personal scale or by the stable happiness trend of middle-aged Catholics, and is even contradicted by the rise in happiness among employed people between 1969/70 and 1972/73. The data (not shown here) are available from the author.

g See Davis (unpublished) and Easterlin (1974).

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APPENDIX

Question Wordings

A. Happiness: AIPO Standard

In general, how happy would you say you are—very happy, fairly happy, or not very happy? ("Not at all" additional precoded response)

In general, how happy would you say that you are—very happy, fairly happy, or not very happy? ("Not at all" additional pre coded response)

In general, how happy would you say you are—very happy, fairly happy, or not at all happy? A3

In general, how happy would you say you are—fairly happy, very happy, or not very happy? A4

In general, how happy would you say you are—very happy, fairly happy, not very happy, or not at all happy?

In general, how happy would you say you are—very happy, fairly happy, or not happy? ("Not at all" additional preceded response)

In general, how happy would you say you are—very happy, fairly happy, or not happy? A7

A]

AS

B. Happiness: SRC/NORC Standard

Taking things all together, how would you say things are these days—would you say you're very happy, pretty happy, or not too happy these days? .....

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Version Taken all together (altogether), how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy? S

Taking all things together, how would you say things are these days—would you say that you're very happy, pretty happy, or not too happy these days? S3

C. Happiness: NORC Variant

Taken all together, how would you say things are these days—would you say that you are . . . completely happy, very happy, moder ately happy, slightly happy, or not at all happy. (CARD used)

D. Happiness: AIPO Variant

Please tell me how far up the scale or how far down the scale you would rate how happy you are in general. (5+, 4+, 3+, 2+, 1+, - 1, -2, -3, -4, -5)

E. Andrews' and Withey's 7-Point Happiness Item (G32)

A6 How do you feel about how happy you are?
Card lists following responses:
1. Delighted, 2. Pleased, 3. Mostly Satis
fied, 4. Mixed (about equally satisfied
and dissatisfied), 5. Mostly Dissatisfied,
6. Unhappy, 7. Terrible,
A. Neutral (Neither Satisfied nor dis
satisfied)
B. I never thought about it.
Sl C. Does not apply to me.

i