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LIFE CYCLE WELFARE: TRENDS AND DIFFERENCES

ABSTRACT. A cohort analysis of United States General Social Science Survey data since 1972 reveals that the life cycle trend in average happiness is remarkably flat. Throughout the life course, however, whites are typically happier than blacks, and more educated persons are happier than their less educated counterparts. In recent years the black-white differential has narrowed moderately, and – although there is no consistent difference by gender – the happiness of females has declined relative to males. Some psychologists assert that happiness is largely determined by genetic or personality traits, but the persistence of life cycle differences by race and education suggests that external socio-economic circumstances are important influences on happiness.

KEY WORDS: education, gender, happiness, life cycle, race, socio-economic factors.

Do people get happier as they move through the life cycle? Are there differences by gender, race, and level of education? If so, how persistent are these differences? If the same people tend to be happy from one time to the next, does this mean, as some psychologists have suggested, that happiness is largely determined by personal traits, and that external social and economic circumstances are not very important? These are the questions to which this paper is addressed.

BACKGROUND, DATA, AND METHODOLOGY

Although there is a voluminous literature on subjective well-being (Diener, 1984; Veenhoven, 1993), surprisingly little has been done to study change over the life cycle. A few studies have followed individuals in their retirement years. These typically find little trend in subjective well-being (Palmore, 1981). An early study covering the full life cycle, using cohort data like those used here, reached inconclusive results, probably because of data incomparabilities and a small number of observations (Rodgers, 1982).

The most common approach is to infer life cycle patterns from cross section observations on happiness classified by age. These studies give mixed results. Some find that happiness increases over the life cycle (Mroczek and Kolarz, 1998); others, that there is a u-shaped relation, troughing around age 40 (Oswald, 1997; Blanchflower and

Oswald, 2000); and yet others, no relation at all (Myers, 1992). To my knowledge there is only one panel study that follows individuals of different initial ages over a period of some length – about ten years – and this reports no trend in happiness (Costa et al., 1987).

The mixed results from cross section studies should come as no surprise, because they fail to consider the possibility that the cross sectional relationship of happiness to age may vary over time. A survey of cross sectional studies by Linda George (1992) finds that in the United States before the 1970s older persons were less happy than younger; in recent surveys, however, older persons are happier. This finding is consistent with the changing relative fortunes of older and younger cohorts since World War II (Easterlin, 1987). Hence, depending on the calendar year chosen, cross sectional studies may lead to quite different conclusions regarding the life cycle trend in happiness (cf. also Campbell, 1981, ch. 12).

Surprisingly, little effort has been made to use the well-established technique of demographic analysis in which birth cohorts are followed as they age from one year to the next. A birth cohort is a group of individuals born in the same year or period – thus, the birth cohort of 1931–40 comprises all persons born in those years. The life cycle experience of a birth cohort is found by linking appropriate age data for successive years. For example, to trace the life cycle pattern here of the happiness of the birth cohort of 1931–40 I link the average happiness reported for those ages 32–41 in the 1972 General Social Survey (GSS) to that of those ages 33–42 in the 1973 survey; 34–43 in the 1974 survey; and so on.

The present paper updates a previous co-authored paper based on this technique (Easterlin and Schaeffer, 1999), and extends it by subdividing cohorts by gender, race, and level of education. The data from the United States General Social Survey now make it possible to follow cohorts over about 25 years of the life span. Because I have cohorts starting at younger, middle, and older ages in 1972, the first year of the GSS, it is possible to form an impression of change over the entire life cycle, by bringing together the various segments of life cycle experience. For younger cohorts, in subdividing a cohort by level of education, I start the analysis at the ages after which the educational distribution stabilizes.

The technique used here is sometimes labeled a "synthetic" cohort technique to distinguish it from a "panel" study in which an identical group of individuals is followed over their life course. As mentioned, there is only one published panel study that covers as much as ten years

of the life span (Costa et al., 1987); in contrast, the synthetic cohort approach used here covers twenty-four years. Each of the two life cycle techniques has its special problems. The panel approach suffers from growing attrition, because of the difficulty of locating the same individual from one year to the next. A synthetic cohort approach does not have this problem, because it is based on representative national surveys conducted annually. However, the composition of a synthetic cohort will be affected somewhat by international immigration and emigration. Both approaches experience attrition due to mortality as a cohort ages. Also, in each approach, year-to-year variation in the data may reflect, not only age-related influences, but so-called "period" effects, changes associated with conditions at a particular point in time, such as an economic boom. Despite these shortcomings, either approach seems considerably better for inferring change over the life course than cross sectional age data, because each follows essentially the same group of persons over a sizeable segment of the life span. The special advantage of the synthetic cohort technique is that it can be widely applied where survey data are available, and typically spans a longer segment of the life cycle.

Happiness is measured here by one's response to the following question: "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?" (National Opinion Research Center, 1999, p. 171). To avoid relying on any single response category in the analysis, I have arbitrarily coded the three possible responses 4, 2, and 0, respectively, and computed the mean value.[1]

Measurement issues such as the reliability and validity of happiness replies, whether respondents report their true feelings, and possible biases resulting from the context in which the question is asked, have been extensively studied in the literature (see Diener, 1984; Veenhoven, 1993). The general conclusion of such assessments is that subjective indicators such as those used here, though not perfect, do reflect respondents' substantive feelings of well-being – in the words of psychologist Ed Diener (1984, p. 551), the "measures seem to contain substantial amounts of valid variance."

In addition to meaningfulness there is the question of comparability of such measures. As phrased, the happiness question leaves each person free to define well-being as he or she pleases. How, then, can the happiness of persons be compared? The essence of the answer, suggested by responses to queries as to the sources of happiness, is this: in most people's lives everywhere the dominant concerns are making a

living, family life, and health, and it is these concerns that ordinarily determine how happy people feel (Easterlin, forthcoming). Thus, comparisons among groups of people are meaningful, because of the similarity of life goals throughout the population.

RESULTS

What do we find when we apply the birth cohort approach to the GSS happiness data?

The cohort as a whole. The life cycle pattern of happiness is simple and straightforward – it is remarkably flat. For each of five birth cohorts ranging from that of 1951–60 as it ages from its twenties to early forties through the cohort of 1911–20 as it goes from its fifties to late seventies and early eighties, the picture is much the same (Figure 1). Putting together the various segments of life cycle experience leads to the conclusion that, on average, happiness is constant over the life course.

The lack of a life cycle trend in happiness is supported by regressions of happiness on age for each cohort – there is none with a statistically significant slope (Table I, line 1). A pooled regression with cohort dummy variables added also shows no significant coefficient on time. This result from synthetic cohorts is the same as that obtained from the aforementioned panel study that compared subjective well-being at the beginning and end of a ten-year period for each of five birth cohorts ranging in initial age from 25–34 to 65–74 (Costa et al., 1987).

Trends and differentials within cohorts. The overall temporal stability for the cohort as a whole, however, masks some notable differences and trends among groups within each cohort. The analysis that follows is based on three- or five-year moving averages to minimize the effect of small sample size when ten-year birth cohorts are subdivided by race, gender, or education.

Most striking is the difference in happiness between whites and blacks. In every cohort at every date, whites are happier than blacks (Figure 2). There is, however, a tendency toward a narrowing over time of the black–white difference. This convergence is largely due to a significant uptrend in the happiness of blacks in all cohorts, excepting only the cohort of 1921–30 which has no significant trend (Table I, line 2a). It is possible that this common uptrend for black cohorts at
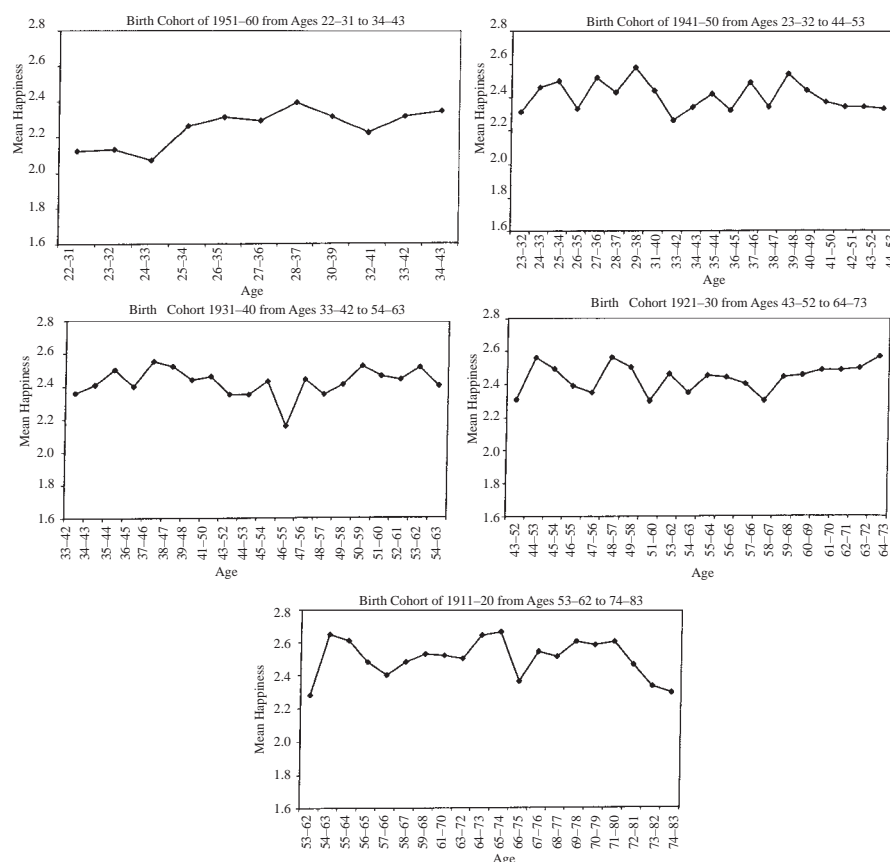
Figure 1. Happiness over the life cycle.

different stages of the life cycle is due to period influences, such as a narrowing of the black–white income gap between the 1970s and 1990s. An alternative hypothesis is that the life cycle trend for blacks is typically upward.

There is also a persistent difference in happiness by level of education. Throughout the life cycle those with more education are typically happier than those with less (Figure 3). The gap is not as great as that between blacks and whites, but it occurs in every cohort most of the time. In contrast to the black–white differential, there is little change in the magnitude of the gap – happiness does not consistently trend up or down over the life cycle for either educational group (Table I, lines 3a, 3b). The life cycle flatness in happiness characteristic of the cohort as a whole appears to be true for those with both more and less education.

TABLE I

Regression coefficient: mean happiness against time for specified birth cohort and population

Population	Birth cohort				
	1911–20	1921–30	1931–40	1941–50	1951–60
1. All persons	−0.005	0.004	0.002	−0.004	0.007
2. Race (5 yr moving average)					
a. Black	0.019*	−0.005	0.024*	0.009*	0.024*
b. White	0.004*	0.004*	−0.003	−0.007*	0.003
3. Education (3 yr moving average)					
a. Greater than high school	−0.010*	0.010*	−0.001	−0.005	−0.001
b. High school or less	−0.003	−0.002	−0.001	−0.009	−0.028*
4. Gender (3 yr moving average)					
a. Male	0.002	0.016*	0.000	0.003	0.025*
b. Female	−0.009*	−0.007*	−0.004*	−0.012*	0.002

*t-statistic $\geq |2.0|$.

Note: The number of observations is 21 for each population group in each cohort except as follows: cohort of 1941–50 by education, $n = 10$; cohort of 1951–60, $n = 13$ except by education, $n = 6$.

When one turns to gender, the picture is somewhat mixed. Happiness differences between males and females vary from one cohort to another, and, within a cohort, from one time to another (Figure 4). Simply stated, there is no consistent difference in happiness by gender. Over time, however, the happiness of women declines relative to men in every cohort. In the 1970s women are usually happier than men; by the 1990s the reverse is the case (compare the left-hand and right-hand observations in each panel of Figure 4). The fitted trends for females are negative and statistically significant in every cohort but one; those for men are usually positive, though only two of five are significant (Table I, lines 4a, 4b). Period influences common to all cohorts may account for this pattern; alternatively, the overall stability in the population as a whole in life cycle happiness may reflect countervailing trends for males and females.

These findings on happiness trends and differences over the life cycle are generally consistent with those of a recent analysis of 1972–1998 GSS data by Blanchflower and Oswald (2000). Though the authors do
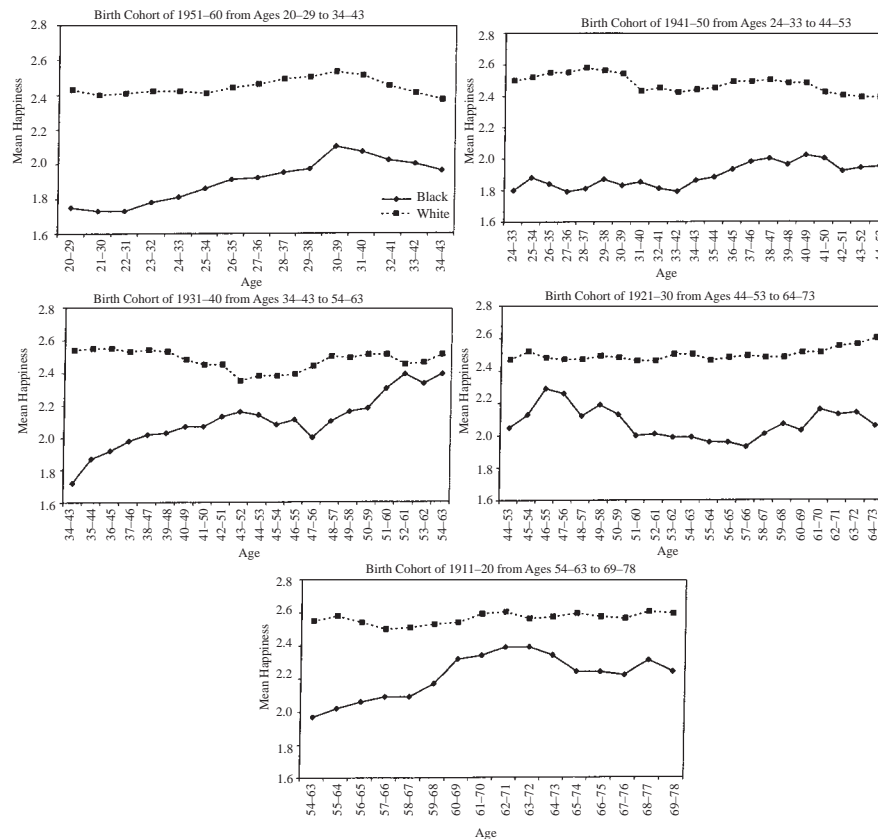
Figure 2. Life cycle happiness by race (5 year moving averages).

not separate cohorts, they find in a pooled multiple regression that, other things constant, whites and more educated persons are significantly happier than others. They also find that blacks have trended upward relative to whites, and females downward relative to males.

Cohort differences. There is, finally, the question of whether the cohorts themselves differ in their average level of happiness. The cohort differences are not great, and fall short of significance. Yet it is noteworthy that in the population as a whole and in every one of the six population subgroups, happiness is, on average, somewhat higher in older than younger cohorts (compare the values in the left-hand column of Table II with those in the right-hand column). Data limitations prevent systematic comparison of cohorts at the same age, but it seems
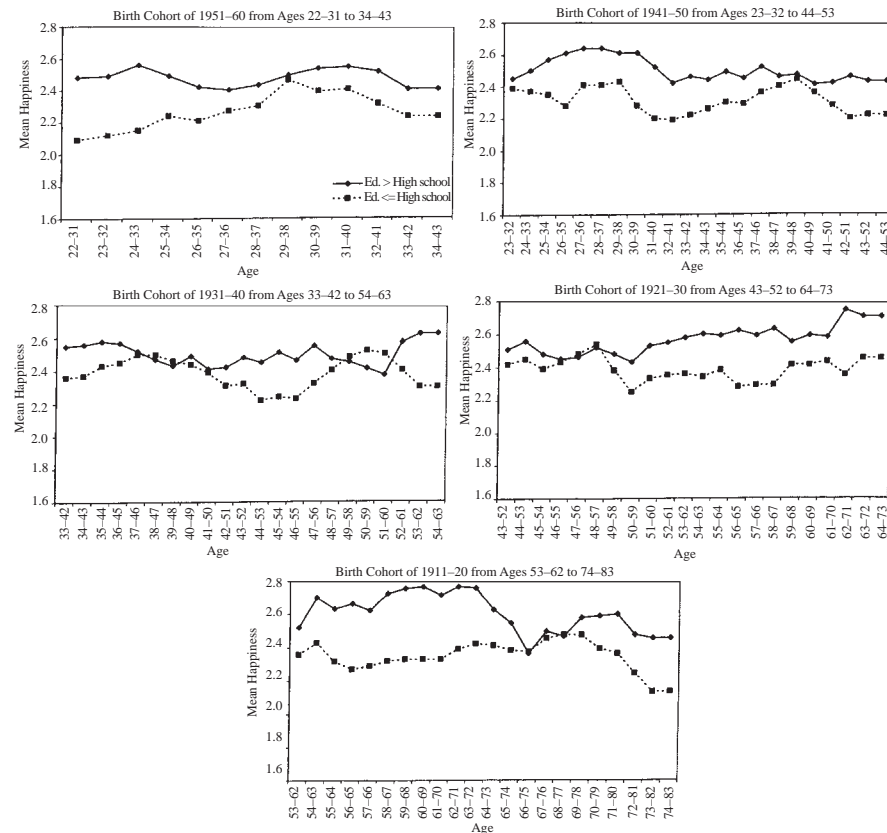
Figure 3. Life cycle happiness by level of education (3 year moving averages).

safe to say that the lower happiness of younger cohorts is not an age phenomenon, because, as we have seen, within each cohort there is usually no trend associated with age. It is possible that the lesser happiness of the more recent cohorts reflects the more difficult life circumstances that they have encountered compared with their predecessors (Easterlin, 1987).

CONCLUDING REMARKS

Over the life course, happiness appears to be remarkably constant in the population as a whole. There are, however, persistent differences among population groups – whites are typically happier than blacks and more educated persons happier than less educated. In recent years, the black–white differential has narrowed moderately. Also, although
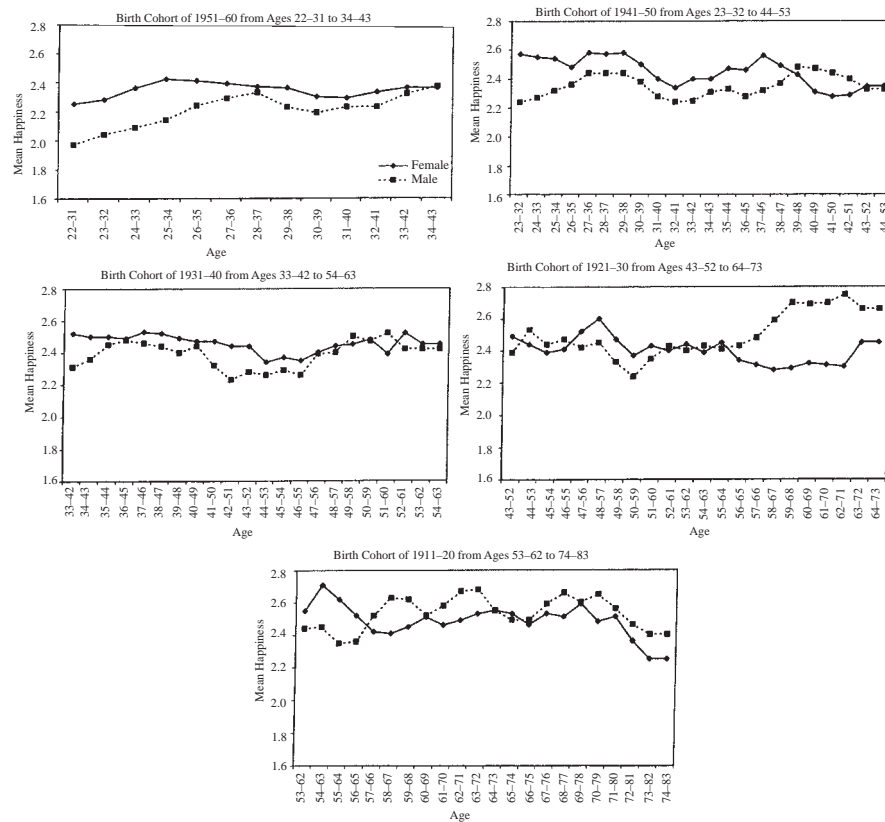
Figure 4. Life cycle happiness by gender (3 year moving averages).

there is no consistent difference in happiness by gender, the happiness of females has worsened somewhat relative to males.

The persistence over the life cycle in happiness differentials by race and education means that there is a tendency for the same persons to be happy from one time to the next. Psychologists who have followed individuals over time have also observed stability in happiness differences. Some have concluded from this stability that happiness is largely or wholly determined by genetic and/or personality differences and that social and economic conditions (sometimes called "objective," "environmental," or "external" factors) are not important influences on subjective well-being. Kammann (1983, p. 18), for example, asserts flatly that "objective life circumstances have a negligible role to play in a theory of happiness." Lykken and Tellegen (1996, p. 186), under the title "Happiness is a stochastic phenomenon," report that "the heretability of the stable component of subjective well-being approaches 80%."

TABLE II

Mean happiness for specified birth cohort and population

Population	Birth cohort				
	1911–20	1921–30	1931–40	1941–50	1951–60
1. All Persons	2.49	2.44	2.43	2.40	2.36
2. Race					
a. Black	2.21	2.08	2.10	1.89	1.90
b. White	2.56	2.50	2.48	2.48	2.44
3. Education					
a. Greater than high school	2.70	2.57	2.50	2.45	2.47
b. High school or less	2.44	2.39	2.39	2.30	2.32
4. Gender					
a. Male	2.52	2.51	2.40	2.34	2.38
b. Female	2.48	2.40	2.45	2.45	2.35

See note to Table I.

Costa and his co-authors (1987, p. 54) say that "objective circumstances appear to be limited in the magnitude, scope, and particularly duration of their effects on psychological well-being, which, in the long run is likely to reflect instead stable characteristics of the individual." Myers and Diener (1995, p. 10) state that "happiness and life satisfaction are similarly available to the young and old, women and men, blacks and whites, the rich and the working class."[2]

One wonders if the unwitting effect of such claims may be to discourage needed research into socio-economic determinants of well-being. Consider the life cycle patterns revealed here. I have noted the apparent decline in the well-being of women relative to men in every cohort. Could this be due to new economic and social pressures on women that have emerged in recent decades? Why are blacks as a group persistently less happy over the life cycle than whites? I doubt anyone seriously considers this explicable in terms of the inherent nature of race. Are we witnessing in the black–white differential the manifold ways – biological, genetic, personality, and others – in which social stratification operates over the life course? Is the recent trend towards a narrowing of race differences indicative of a reduction in social stratification influences? Why are the more educated happier than the less educated? Does the educational system channel individuals into higher and lower income tracks and in so doing, create persistent differences in well-being? The answers to such questions call for serious research

on the effects on well-being of social and economic circumstances during the life course, and also of socio-economic factors on genetic and personality traits. To downplay the causal role of socio-economic circumstances is to close the door on some of the most important and intriguing issues in the study of subjective well-being.

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NOTES

[1] Oswald (1997, p. 1817, n. 5) is critical of studies that examine only one happiness category, such as the percentage very happy. Scoring techniques like that used here covering each of the various categories are common in the literature (cf. Herzog et al., 1982; Veenhoven, 1993).

[2] Some studies by psychologists are more cautious. For example, in perhaps the most careful and comprehensive survey to date of personality and subjective well-being, one finds the authors stating that external conditions do not "totally," "simply," "only" or "solely" determine subjective well-being. See Diener and Lucas, 1999: "The alternative explanation that stability in SWB results *totally* from stability in people's external conditions is not borne out . . . " "People do not *simply* weigh the effects of various external circumstances to arrive at SWB judgments . . . " ". . . theories that focus *only* on external influences on SWB ignore a substantial source of variation in happiness reports." "Happiness is not determined *solely* by the resources one has or by the circumstances in which one lives" (pp. 214, 215, 227, italics added).

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