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What, Me Worry? A Psychological Perspective on Economic Aspects of Retirement

Elton Pasea is a mutual fund salesman's worst nightmare. . . . He lives quite nicely in Nederland, Texas, on \$1,200 a month: \$700 from Social Security and \$500 from a union pension. He has never owned stocks, bonds, or mutual funds. His life savings of \$33,000 are invested in certificates of deposit. . . . He doesn't have a million-dollar nest egg, and his income isn't at least 70 percent of his preretirement figure. . . . How can the poor wretch possibly be having such a good time?

"When Enough Really Is Enough," *New York Times*,
October 4, 1998

Economists and policymakers worry chronically that people are not saving enough for retirement. Many of the chapters in this volume exemplify that concern. The life-cycle model of saving and spending posits that people save when they are working and dissave during retirement so as to

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maintain a roughly constant level of consumption over their lifetime.¹ However, numerous studies report that consumption declines dramatically after retirement. Although economists have debated the cause of the drop in consumption, most are in agreement that the drop is unplanned, unexpected, and unintended.² For example, one recent article that tests a variety of explanations for the consumption drop concludes that "the only way to reconcile fully the fall in consumption with the life-cycle hypothesis is with the systematic arrival of unexpected adverse information."³ In other words, these authors contend that people save too little for retirement, are surprised by their own postretirement poverty, and are forced to cut back on consumption. Concern about the insufficiency of retirement savings has led to calls for diverse interventions, such as new incentives to encourage saving, increases in social security benefits, and educational initiatives.

An implicit, and thus rarely tested, assumption underlies economists' concerns about the inadequacy of retirement saving: that the decline in consumption following retirement reduces the *well-being* of retirees.⁴ If the drop in consumption were not assumed to reduce well-being, it would undoubtedly be viewed as not particularly disturbing—that is, as little more than an empirical challenge to the life-cycle model.

Although it might seem obvious that well-being depends greatly on consumption, research on the determinants of subjective well-being provides meager support for such a relationship. Studies employing diverse research designs and conducted on a wide range of populations have concluded that people adapt quickly to changes in income and that the relationship between happiness (or life satisfaction) and income is tenuous at best. This suggests that any effect of a postretirement drop in consumption on retiree well-being is likely to be small and transient. These predictions are reinforced by a chorus of critics (as highlighted in the *New York Times* article from which the opening quote was excerpted) who view economists' dire warnings as alarmist and as creating unnecessary angst among policymakers and savers.

1. Modigliani and Brumberg (1954).

2. Bernheim, Skinner, and Weinberg (1997).

3. Banks, Blundell, and Tanner (1998, p. 769).

4. In economics, consumption is not valued per se, but rather as a source of utility. Although many economists have disavowed any link between utility and well-being, it is difficult to draw many normative implications, such as those made by retirement researchers, without assuming that utility is at least strongly correlated with well-being.

Income and Happiness

Most psychological research dealing with the relationship between happiness or subjective well-being (SWB) and economic variables has focused on income rather than consumption, probably because more information is available about income. There are many ways to measure this relationship, for example, across countries at one point in time, across time for one country, or across people within a country. Although each method tends to yield somewhat different results, the overall picture one gains from this diverse body of research is that the relationship between SWB and income is, at best, weak. Most people report that they lead satisfying lives, and measured well-being differs little even when material circumstances differ dramatically.⁵ Thus, while a study of the well-being of 100,000 people from fifty-five countries in which average per capita income ranged from \$120 (Tanzania) to \$32,790 (Switzerland) did find a strong correlation (.58) between per capita GDP and subjective well-being, the correlation was completely eliminated once cross-national differences in respect for human rights were taken into consideration.⁶ Studies of the relationship between SWB and income within a single country typically find positive but small correlations. For example, the correlation between wealth and reported happiness in the United States is only .12.⁷ Finally, there is absolutely no evidence that the average reported SWB in a country increases as average real income increases.⁸ For example, between 1958 and 1987 per capita real income in Japan rose fivefold, but there was no reported increase in subjective well-being.

Most of the research on how changes in income affect SWB has focused on *increases* in income, because incomes have generally tended to increase over time. Few studies have examined people's reactions to decreases in income, except for studies of job loss (which are difficult to interpret because job loss has many consequences that go beyond reduced income). However, other research has found that people adapt remarkably well in the long run to adverse outcomes, such as paralysis or the death of children or spouses, that intuitively seem more devastating than a decrease in income or consumption.⁹ Not only do people adapt rapidly to such

5. Diener and Diener (1996); and Myers and Diener (1995).

6. Diener, Diener, and Diener (1995). See also Veenhoven (1991); and Diener and others (1993).

7. Diener and others (1993).

8. Campbell (1981); Diener (1984); and Easterlin (1974, 1995).

9. Frederick and Loewenstein (1999).

adverse outcomes, but they seem to underestimate their own powers of adaptation.¹⁰

If income accounts for little of the considerable variance in subjective well-being among persons, what factors *do* account for it? Genetic makeup seems by far the most important. According to a recent study of twins, genetic differences account for about 60 percent of the variation in SWB.¹¹ Other important determinants include nonmaterial aspects of life, such as one's social connectedness or whether one has children, and if so, their ages and how well they are functioning.¹² In sum, the psychological research provides little reason to expect a decline in consumption at retirement to have a strong or long-lasting effect on SWB.¹³

Happiness in Retirement

Some research has examined how retirement affects subjective well-being. Are retirees really less happy, as one might expect given the observed decrease in consumption and the belief that consumption is an important

10. Gilbert and others (1998); and Loewenstein and Schkade (1999)

11. Lykken and Tellegen (1996).

12. Michalos (1987).

13. On the face of it, the finding that SWB does not depend much on income seems inconsistent with the great efforts that people make to improve their material circumstances. What might be the reasons for this apparent discrepancy? One possibility is that SWB actually does increase with income but the relationship is obscured by flaws in the measure of well-being. The greatest potential problem results from people's self-norming of SWB scales based on their own range of personal experiences. If people anchor SWB scales according to their own range of experience, then as their experiences change, the interpretation of the scale end points will change in the same direction. For example, although paraplegics rate themselves lower in SWB than people in perfect health, they nevertheless rate themselves higher (3.9 on a 1 to 5 scale) than most people would expect (Brickman, Coates, and Janoff-Bulman, 1978). These high ratings of SWB could mean that they are happy with their lives or it could mean that paraplegics, having experienced the intense misery of becoming paraplegic, have different notion of unhappiness. That is, a 1 on the 1 to 5 scale has a more negative meaning for paraplegics; and a 4 on a scale that is anchored on the bottom by the intense miseries of a paralyzing accident may reflect a much lower level of SWB than a 4 on a similar scale whose low point corresponds to more mundane misery. Such scale-norming would result in an underreporting of actual changes in happiness.

Another possible explanation for the discrepancy is that although people might eventually adapt to a change in income, the transition period could be pleasurable (when income rises) or painful (when it drops). People care a lot about brief periods of pleasure or pain (for example, they care tremendously about the last few minutes or even seconds of plane crash victims' lives), and these transitional periods of pleasure or pain could have considerable motivational force even if they are short-lived. Finally, it is possible that the lack of relationship between SWB and income is not artifactual and that the discrepancy results from people's erroneous belief that such a relationship exists. Many social critics (for example, Scitovsky, 1976) have argued that people overestimate the extent to which money buys happiness, and as a result exert too much time and effort on increasing their incomes relative to other activities that would bring them greater long-term happiness.

determinant of well-being? What factors in addition to differences in income account for differences in happiness? Analogous to the research showing little connection between income and SWB, research on happiness in retirement suggests that SWB drops little, if at all, in retirement, despite reduced income and deteriorating health.

A study of 310 Israeli male retirees, for example, found that 72 percent were satisfied or very satisfied with retirement, mostly because they were pleased to have given up work, they welcomed free time, and they enjoyed activities with family and friends.¹⁴ Preretirement counseling and preparation for retirement had little effect. Satisfaction with free time was affected by level of education, work after retirement, and indoor recreational activities. Family influenced happiness mainly through shared leisure with spouse and contact with family, while rest and tranquillity were affected by state of health. Previous occupation had no effect on satisfaction.

A study of U.S. retirees found that retirement was associated with reduced reported happiness, but that this effect was statistically insignificant once the number of chronic health conditions and recent changes in health were included as controls.¹⁵ The negative relationship between SWB and retirement was also partly due to changes in income, though the effect of income was smaller than for health. According to this study, divorce, separation, and widowhood also reduced SWB, as did unplanned retirement.

A subsequent study based on the same data set found that involvement in activities was important in determining the subjective well-being of retired men, and that poor health reduced well-being largely because it interfered with leisure activities.¹⁶ Another study of the same data found no difference in reported happiness between retired and nonretired men. Voluntary retirees reported being happier than workers, while those who retired because of poor health reported the lowest SWB. Early retirement appeared to be unrelated to reported happiness.¹⁷

Another longitudinal study of 117 men found that well-being improved in the first year of retirement. Also, the factors responsible for overall well-being changed during retirement. Immediately following voluntary retirement, good health and adequate income were principally responsible for

14. Kremer (1985).

15. Beck (1982) This study is based on the National Longitudinal Survey (NLS) cohort of mature men

16. Beck and Page (1988).

17. Crowley (1986) This study used a question directly asking about the respondent's happiness and a composite index scale measuring effect. Knesek (1992) confirmed the finding on early retirement using a different sample and a different measure of happiness.

high SWB. In later years, retirees with an "internal locus of control"—that is, those who felt that they were personally responsible for the events in their lives—had higher subjective well-being.¹⁸ A study of 60 retired certified public accountants found that on the whole they were very satisfied with their activities and work, personal associations, health, and financial situation, the four areas on the Retirement Descriptive Index (developed to measure retirement satisfaction of professionals).¹⁹ Volunteer work also correlated with retirement satisfaction, but length of retirement, reasons for retirement, education, and population of retirement community were not significant predictors of satisfaction. A majority responded that retirement was what they expected.

The research on postretirement well-being, therefore, tells a relatively coherent story. The decline in income associated with retirement reduces well-being modestly, but factors such as health, social contact and networks, preretirement planning, the timing of retirement, and whether retirement was voluntary are considerably more important. Moreover, perhaps because the increase in leisure time compensates for the loss of income, retirees are generally happy and satisfied with their lives both in absolute terms and relative to how they felt prior to retirement.

Our Research

Our focus in this paper is on the impact of retirement on SWB, particularly insofar as retirement is accompanied by a decline in disposable income. If people have undersaved for retirement, and if income is in fact an important determinant of well-being, then one should expect to observe a significant downward shift in well-being among retirees—a decline that is mediated by decreases in income or consumption. Moreover, if the decline in consumption is not anticipated, as recent analyses suggest, then the resultant decline in well-being should also not be anticipated by the retirees themselves. Based on the literature just reviewed, however, we anticipated, to the contrary, that retirees would not experience an unanticipated drop in subjective well-being. We therefore extended our investigation to two additional questions. First, *why* does the decline in dispos-

18. Gall, Evans, and Howard (1997). Reitzes, Mutran, and Fernandez (1996) also found an increase in subjective well-being following retirement. They followed 757 older workers for two years and found lower depression scores and higher self-esteem scores for the part of their sample that retired.

19. Ward, Wilson, and Ward (1994). The index was developed by Smith, Kendall, and Hulin (1969).

able income not affect well-being? For example, do retired persons restructure their lives in ways that downplay the importance of the consumption of market goods? Second, and closely related, what factors *do* influence happiness in retirement? If consumption is not a very important determinant of happiness but other aspects of life are, there is a distinct possibility that non-income-based government interventions—for example, greater funding for senior citizen centers or recreational activities—could have a much greater impact (and at lower cost) than income-based interventions.

To address these questions, we conducted a survey of older male Americans who either were facing retirement or had retired in the previous few years. The survey included items intended to measure subjective well-being and potential financial and nonfinancial determinants of SWB in, and just before, retirement. We report evidence on how happy the retired are compared to people on the verge of retirement, what determines the well-being of both groups and how these determinants differ, whether nonretired persons correctly predict their own well-being in retirement, whether the retired recall their own preretirement happiness accurately, and what types of regrets the retired have regarding their own preparations for and timing of retirement. Even if the retired say that, despite lower levels of consumption, they are as happy as their not-yet-retired counterparts, it is still of interest to learn what they regret about their preparations for retirement, especially if they perceive themselves as having saved too little.

The Survey

The survey, which was self-administered by respondents, consisted of four legal-sized pages of questions. The first section asked nonretired respondents questions about their jobs—their occupation, work experience, and hours worked per week, and how much they liked their work—and about when, if ever, they planned to retire. Retired respondents were asked similar questions about their last job. They were also asked when they retired and why—for example, whether they were forced to retire and whether declining health was responsible.

Next, respondents were asked questions designed to measure various aspects of well-being. For nonretired persons, these questions addressed general happiness; happiness about five specific aspects of life—housing, local area, health, standard of living, and leisure-time activities; whether they expected to be happier or less happy after retirement; and happiness

relative to their friends and acquaintances. For the retired, the questions were similar, except that instead of being asked how happy they expected to be, they were asked how happy they were in retirement relative to before they retired, and also how happy they were relative to their expectations before retirement.

Both groups were then asked to state whether they agreed or disagreed—on a scale from 1 (strongly agree) to 4 (strongly disagree)—with thirty-one statements, twenty-one of which were designed to measure feelings about time and money. Six of these items were taken from a widely used depression scale and were intended as an alternative measure of emotional well-being.

The next section asked respondents whether they agreed or disagreed with twelve statements dealing with possible regrets about preparing for retirement. Nine of these statements dealt with financial aspects of retirement, two with the timing of retirement ("I should have retired [made plans to retire] earlier" and "I should have tried [be trying] to delay my retirement"), and one with planning for free time ("I underestimated the importance of knowing how to use my free time in retirement" and "I believe that knowing how to use my free time will be important in retirement"). Finally, we asked respondents about interactions with family in and out of the area, about when they started to save for retirement (from "during their twenties" to "never"), and about income from various sources.

The Sample

A consumer research firm, Market Facts, administered the survey. Market Facts sent surveys to 500 people aged 60 to 65 who had not retired as of their previous contact with Market Facts, and to 500 people aged 65 to 70 who had retired. The 1,000 people were drawn from Market Facts' Consumer Mail Panel, a sample of approximately 450,000 households nationwide that participate as survey respondents. The sample is meant to be demographically representative of the U.S. population based on such measures as household income, household size, age of head of household, geographic region, and urban-rural location, but it falls far short of being a probability sample of male Americans in these age ranges. As is evident in table 7-1, which presents selected demographic characteristics of the samples, and table 7-2, which presents a breakdown of income sources, respondents have higher mean family incomes than the U.S. average, the composition of that income differs, and minorities are substantially

Table 7-1. *Demographic Characteristics of Not Retired and Retired Samples*

<i>Characteristic</i>	<i>Not Retired (n = 204)</i>	<i>Retired (n = 275)</i>	<i>Significance of difference^a</i>
Age	61.9	67.9	0.001
Married (percent)	81.1	78.8	n.s.
Live alone (percent)	77.5	89.2	0.001
Number of children	2.60	3.10	0.01
Type of work (percent)			
White collar, high status	46.0	39.3	n.s.
White collar, low status	18.7	15.0	n.s.
Blue collar	22.7	25.5	n.s.
Family income (dollars)	66,628	43,392	0.001
Recalled preretirement income (dollars)	...	47,399	...
Years since retirement	...	8.20	...
Plan to retire (percent)	75.5
Expected years to retirement (for those who plan to retire)	3.34
Age stopped working		59.7	...
Geographic region (percent)			n.s.
New England	6.4	5.5	
Middle Atlantic	15.2	12.0	
East North Central	19.6	17.5	
West North Central	9.3	5.8	
South Atlantic	19.6	20.0	
East South Central	3.4	7.3	
West South Central	8.3	9.1	
Mountain	3.9	6.9	
Pacific	14.2	16.0	
Minority status (percent)			n.s.
Hispanic	3.9	2.6	
Asian	1.5	0.0	
Black	1.0	1.8	

Source: Authors' calculations from survey.

a. n.s. indicates not significant.

underrepresented. Not surprisingly, the nonretired report much more wage income and less income from retirement plans, social security, and savings than do the retired.

Response rates among retirees were substantially higher than among workers—275 versus 204—largely because more than half of the "nonre-

Table 7-2. *Income by Source, for Not Retired and Retired Samples^a*

Dollars unless otherwise indicated

<i>Income source</i>	<i>Not retired</i>	<i>Retired</i>
Wages	53,847 (99%) (23,440)	6,721 (41%) (14,799)
Retirement plan		16,119 (88%) (14,879)
Social security		12,794 (97%) (6,759)
Income from savings	11,918 (83%) (18,833)	9,529 (75%) (14,622)
Government benefits	28 (18%) (9,617)	1,308 (17%) (4,256)
Income from relatives	633 (3%) (6,200)	58 (1%) (564)

Source: See table 7-1.

a. Percentages in parentheses refer to fraction of group earning any income from this source.
Dollar amounts in parentheses are standard deviations.

tiress" had retired since their last contact with Market Facts and returned the survey unanswered as they were instructed to do.

Our main sampling goal was to produce comparable samples of nonretired and retired men for comparison, not to produce a random sample of American men. Data in table 7-1 suggest that we achieved this goal. Other than expected age and income differences, the only significant differences between the two samples were in the percent living alone or with only their spouse (which was slightly higher for the retired sample) and the number of children (which was again higher for the retired). Both differences could potentially be explained by the more advanced ages of respondents in the retired sample.

Findings: Happiness

Consistent with other recent research on subjective well-being both among retirees and in the general population, both nonretirees and retirees report high levels of happiness (table 7-3). While some differences between the

Table 7-3. *Happiness by Retirement Status^a*

<i>Measure</i>	<i>Not retired (n = 204)</i>	<i>Retired (n = 275)</i>	<i>Significance of difference^b (p <)</i>
<i>Feelings about life (1 = very unhappy to 4 = very happy)</i>			
1. Overall	3.36 (0.65)	3.46 (0.68)	n.s.
2. Housing	3.55 (0.65)	3.66 (0.59)	0.05
3. Local area	3.45 (0.72)	3.60 (0.62)	0.05
4. Health	3.27 (0.74)	3.01 (0.94)	0.01
5. Standard of living	3.41 (0.63)	3.36 (0.73)	n.s.
6. Leisure activities	3.12 (0.81)	3.39 (0.74)	0.001
7. Happiness relative to friends (1 = much less happy to 5 = much happier)	3.63 (0.76)	3.57 (0.88)	n.s.
<i>Depression measures (-1.5 = less happy to 1.5 = happier)</i>			
8. I feel depressed	1.05 (0.74)	0.87 (0.87)	0.05
9. I enjoy eating and have a good appetite	1.11 (0.61)	0.96 (0.72)	0.05
10. I feel that everything I do is an effort	0.78 (0.75)	0.66 (0.88)	n.s.
11. I feel happy	0.82 (0.65)	0.84 (0.77)	n.s.
12. I feel lonely	1.01 (0.76)	0.89 (0.86)	n.s.
13. I feel hopeful about the future	0.60 (0.77)	0.60 (0.82)	n.s.
14. Aggregate depression measure (-9 = less happy to 9 = happier)	5.41 (2.91)	4.85 (3.59)	0.1
15. Aggregate happiness measure (constructed variable)	0.021 (0.905)	-0.009 (1.069)	n.s.

Source: See table 7-1.

a. Standard deviations are in parentheses.

b. n.s. indicates not significant.

two groups are statistically significant, the average scores are remarkably similar. For example, both groups rate themselves approximately 3.4 on an overall happiness scale from 1 to 4 (row 1, table 7-3).

Although the two groups produce similar responses on overall measures of happiness (see also row 7, table 7-3), some differences are worth noting. The retired are slightly, but significantly, less happy as measured by the aggregate depression measure (row 14). The main causes of this difference are that retired respondents report being more depressed and enjoying eating less than do the nonretired. On measures of specific dimensions of happiness (rows 2 through 6), the retired group reports feeling better than the nonretired about housing, local area, and leisure, but worse about health. Despite a large difference in average incomes, the non-retired and retired groups report similar levels of satisfaction with their standard of living (row 5).

To facilitate analyses of overall well-being, we constructed an aggregate happiness index, which gives equal weight to overall feelings about life, happiness relative to friends, and the happiness measure derived from the depression items.²⁰ The aggregate happiness variable is normalized, with a mean of zero for the combined sample and standard deviation of one. We use the index as our central measure of happiness throughout the remainder of this chapter. Aggregate happiness of the nonretired and the retired (row 15) is almost identical.

In short, there is very little evidence in our sample of any serious drop in happiness following retirement. To the extent that happiness does drop, the cause seems to be a decline in health (row 4). Despite a 35 percent drop in family income, reported satisfaction with standard of living was remarkably similar in the two groups.

What Determines Happiness?

In an attempt to explain happiness, we regressed the happiness index against the respondent's satisfaction with the six aspects of life: work, housing, local area, health, living standard, and leisure. These factors explain about half of the variance in the index—49 percent for the non-retired and 50 percent for the retired (table 7-4). For both samples, feelings about health and living standards are significant and equally important. Leisure is significant for both groups but more important for

20. These component measures are highly correlated ($r_{12} = .42$, $r_{13} = .65$, and $r_{23} = .44$)

Table 7-4. *Impact of Happiness Dimensions on Overall Happiness Measure^a*

<i>Happiness dimension</i>	<i>Not retired</i>	<i>Retired</i>
Satisfaction with (1 = very unhappy to 4 = very happy)		
Work	0.284*** (0.064)	0.046 (0.071)
Housing	0.025 (0.095)	0.114 (0.102)
Local area	0.118 (0.080)	-0.060 (0.092)
Health	0.381*** (0.072)	0.397*** (0.062)
Living standard	0.262** (0.091)	0.225** (0.079)
Leisure	0.211** (0.070)	0.465*** (0.080)
Constant	4.222*** (0.358)	3.895*** (0.388)
<i>Summary statistic</i>		
Number of observations	194	254
R-squared	0.485	0.503
Adjusted R-squared	0.468	0.491

a. Dependent variable is aggregate happiness. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Standard errors are in parentheses.

the retired. For the nonretired sample, feelings about work are also significant.²¹

Two main conclusions emerge from the analysis of the regressions presented in table 7-4. First, living standard does seem to matter—about as much as quality of leisure and feelings about work for those who are working, but less than feelings about health. Whether satisfaction with one's standard of living is correlated with one's income or consumption is, however, unclear. Second, following retirement, satisfaction from leisure

21. A pooled regression including interaction terms (not shown in the table) revealed significant differences between the two groups in the importance of feelings about work, which is more important for the nonretired, and in the importance of leisure, which is much more important for the retired sample.

increases markedly as a determinant of overall happiness. In fact, the difference in satisfaction from leisure between the retired and the nonretired almost exactly offsets the difference in satisfaction from work between the two groups. It is as if leisure was the job of the retired.

Consistent with earlier findings on SWB in the psychology literature, objective variables explain remarkably little of the variance in self-reported happiness (table 7-5). Drawing down on savings (which we thought might be a source of anxiety for people who are saving for retirement or are retired), homeownership (which we thought might confer a sense of security), contact with family in or out of the respondent's local area, marital status, having children, level of education, and age all had insignificant effects on self-reported happiness.²²

For the nonretired, respect on the job has a significant positive effect on happiness. The meaningfulness of this finding is clouded by the fact that "respect at job," the only subjective variable included in this regression, may be picking up differences in optimism or general outlook on life as well as actual effects of job respect on happiness. Contact with family in the area is marginally significant ($p < 0.08$). For the retired, the only statistically significant influence on the happiness index is whether respondents retired voluntarily. The coefficients on whether respondents have children are large but of opposite sign for the two groups and are statistically insignificant, suggesting that people have strong but highly varying reactions to their relations with their children.

We also examined the relationship between happiness and four job categories: white-collar high status, white-collar low status, blue-collar, and other. The overall effects were statistically insignificant. Blue-collar workers were less happy than low-status white-collar workers, who were less happy than high-status white-collar workers, but these differences were not significant. Low-status white-collar workers were the happiest group before retirement but the least happy following retirement, and the difference was statistically significant.²³

Predicted and Remembered Happiness

In addition to asking respondents to report their current happiness, we also asked nonretired respondents to report how they expected their happiness

22. Of course, these regressions should be treated with caution because many of the variables are not truly exogenous but result from decisions. For example, perhaps children have little impact on happiness because those people who want them have them, and those who do not want them do not.

23. The difference was .41, significant at the 5 percent level.

Table 7-5. *Objective Determinants of Overall Happiness Measure^a*

<i>Measure</i>	<i>Not retired</i>	<i>Retired</i>
Income (thousands of dollars)	-0.003 (0.002)	0.005 (0.003)
Draw down savings	-0.259 (0.160)	0.053 (0.148)
Own home	-0.087 (0.275)	-0.159 (0.276)
Contact with family in area (visits per month)	0.015 (0.008)	0.001 (0.008)
Contact with family outside area (visits per month)	0.042 (0.060)	0.004 (0.037)
Children (yes or no)	-0.395 (0.274)	0.275 (0.271)
Married	0.231 (0.223)	0.077 (0.224)
Education (years)	0.030 (0.027)	0.013 (0.029)
Age	0.013 (0.044)	0.010 (0.040)
Hours worked per week	0.000 (0.006)	0.001 (0.007)
Years at job	0.001 (0.005)	0.002 (0.007)
Respect at job (1 = strongly disagree to 4 = strongly agree)	-0.267** (0.093)	0.142 (0.105)
Retired voluntarily		0.417** (0.160)
Constant	-1.796 (2.716)	-2.141 (2.746)
<i>Summary statistic</i>		
Number of observations	164	233
R-squared	0.11	0.08
Adjusted R-squared	0.04	0.03

a. Dependent variable is aggregate happiness. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Standard errors are in parentheses.

to change following retirement, and we asked retired persons how their happiness had changed and how their happiness differed from what they had expected. Response options ranged from "much less happy," which we coded as -2, to "much happier," which we coded as +2. The retired report themselves as substantially happier than they were before they retired: 55 percent say that they are happier (31 percent say *substantially* happier) and only 14 percent claim that they are less happy than they were before they retired (table 7-6).²⁴ They also report that the increase in happiness was not anticipated. Those who are not retired anticipate that they too will be happier in retirement, and to approximately the same extent.

Unless those who are not yet retired are destined to be considerably happier when retired than the currently retired are, these results clash with the findings reported in table 7-3, which show, if anything, that the retired are slightly *less* happy than the nonretired. Retired people report experiencing a .68 increase in happiness, and a .67 increase in actual happiness relative to expected happiness. It follows that they do not remember having expected any increase in happiness. The retired think that the change was unanticipated. Nonretired persons, however, do anticipate a .60 increase in retirement happiness.

While the increase in happiness reported by retired persons is inconsistent with the similar levels of happiness reported by the nonretired and retired respondents, neither of these ways of examining changes in happiness following retirement points to a *decrease* in happiness. If retirees have saved too little and are surprised by their own postretirement poverty, this shortfall either has no impact on their self-reported happiness or is compensated for by other benefits of retirement.

Income

Although both nonretired and retired respondents report high levels of happiness, they may be dissatisfied with their economic situation. Such discontent would be noteworthy even if it had little effect on overall happiness.

Money Anxiety

Our survey contained four questions designed to measure respondents' assessments of the adequacy of their own income. Respondents were asked

24. This finding is consistent with research by Ross and Newby-Clark (1998) showing that people generally think that their lives have gotten better over time.

Table 7-6. Predicted and Recalled Change in Happiness for Not Retired and Retired Persons^a

Measure	Not retired:		Retired	
	expected change	Experienced change	Experienced change	Experienced relative to expected change
Much less happy (-2)	8	9	9	(3%)
Somewhat less happy (-1)	8	29	21	(8%)
About the same (0)	81	86	87	(32%)
Somewhat happier (1)	64	65	90	(33%)
Much happier (2)	41	84	65	(24%)
Summary statistic				
Number of observations	202	273	272	
Mean	0.60***	0.68***	0.67***	
Standard deviation	(0.98)	(1.12)	(1.03)	

a. Mean significantly different from zero: *** $p < 0.001$.

Table 7-7. *Feelings about Adequacy of Income^a*

Measure	Not retired (n = 204)	Retired (n = 273)	Significance of difference ^b (p <)
(-1.5 = strongly disagree to 1.5 = strongly agree)			
1. I have plenty of money to do the types of things that I enjoy	-0.14* (0.96)	0.05 (1.04)	0.05
2. With my current income I have no trouble making ends meet	0.41*** (0.90)	0.45*** (0.93)	n.s.
3. I have sufficient income for my wants and needs	0.38*** (0.83)	0.51*** (0.91)	n.s.
4. I feel anxious about money	-0.32*** (0.91)	-0.47*** (0.94)	0.10
5. Money Anxiety Index: items 4-1-2-3 (-6 strongly disagree to 6 strongly agree)	-0.99*** (2.77)	-1.48*** (3.23)	0.10

a. Standard deviations in parentheses. Mean significantly different from zero: * $p < 0.05$; *** $p < 0.001$.

b. n.s. indicates not significant.

to indicate whether they agreed or disagreed—on a four-point scale from -1.5 (strongly disagree) to +1.5 (strongly agree)—with the following statements: "I have plenty of money to do the types of things that I enjoy"; "With my current income I have no trouble making ends meet"; "I have sufficient income for my wants and needs"; "I feel anxious about money." From the responses to these questions, we created a money anxiety index by subtracting the numerical values of answers to the first three questions from the response to the fourth. The index can vary between -6 and +6.

Means and standard deviations of responses appear in table 7-7, separately for nonretired and retired respondents. The mean response to the first question is close to the midpoint of the scale, though nonretired respondents tend to disagree slightly more that they have plenty of money. The means of the second and third items are significant and positive, indicating that respondents on the average are satisfied with their finances, although some are not. Respondents on average also disagree when asked whether they feel anxious about money. Overall, they disagree with the

Table 7-8. *Determinants of Anxiety about Money^a*

Measure	Not retired	Retired
Income (thousands of dollars)	-0.018*** (0.005)	-0.039*** (0.007)
Age start saving (1 = twenties to 7 = never)	0.408** (0.134)	0.682*** (0.119)
Own home (1 = yes, 0 = no)	-0.848 (0.668)	-0.715 (0.639)
Drawing down savings (1 = yes, 0 = no)	1.298** (0.422)	0.459 (0.360)
Constant	-0.748 (0.893)	-1.978* (0.834)
<i>Summary statistic</i>		
Number of observations	195	257
R-squared	0.16	0.27
Adjusted R-squared	0.15	0.26

a. Dependent variable is Money Anxiety Index. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Standard errors are in parentheses.

view that their income is inadequate. The retired are, if anything, more content about their income and less anxious about money than the non-retired. There is certainly no evidence of a sudden increase in financial anxieties following retirement.

To determine whether people's money anxiety was related to specific circumstances, we regressed the money anxiety index on a variety of variables: respondents' incomes, the age at which they began saving, whether they are homeowners, and whether they are drawing down savings (table 7-8). This analysis produced two clear findings. First, we were able to identify some statistically significant relationships. People with relatively high incomes or who started saving at a relatively early age are less anxious than others. People who are drawing down savings are more anxious, and the effect is particularly striking for those who are not yet retired, presumably because saving is the norm for older workers and dissaving is more acceptable for retirees. The second clear finding is that these variables account for only a small share of the variation in the money anxiety index.

Table 7-9. Mean Values of Regret Variables^a

Regret variable	Not Retired (n = 204)	Retired (n = 273)	Significance of difference ^b (p <)
(-1.5 = strongly disagree to 1.5 = strongly agree)			
I should have made the sacrifices necessary to earn more money for retirement	-0.069 (0.926)	-0.174** (0.989)	n.s.
I should have become more knowledgeable about different savings and investment options	0.153 (0.930)	0.071 (0.941)	n.s.
I should have talked more with my spouse about our financial plans	-0.222*** (0.947)	-0.348*** (0.939)	n.s.
I should have restrained my spending on luxuries and nonessential items	-0.569*** (0.838)	-0.511*** (0.933)	n.s.
I should have gotten more professional help in planning for retirement	-0.216** (0.935)	-0.419*** (0.955)	0.05
I should have spent more time with my family, even if it meant earning less	-0.304*** (0.897)	-0.301*** (0.955)	n.s.
I should have started saving earlier	0.240*** (1.001)	0.221*** (1.022)	n.s.
I should have calculated how much money I would need to save in order to have an adequate retirement income	0.145* (0.935)	-0.125* (0.995)	0.01
I underestimated the importance of money for being happy in retirement	...	-0.147* (0.987)	...
I underestimated the importance of knowing how to use my free time in retirement	...	-0.328*** (0.994)	...
I should have retired earlier	...	-0.888*** (0.806)	...
I should have tried to delay my retirement	...	-0.924*** (0.810)	...

a. Terms in bold are included in composite financial regret variable. Mean significantly different from zero: *p < 0.05; **p < 0.01; ***p < 0.001. Standard deviations are in parentheses.

b. n.s. indicates not significant.

Financial Regrets

Whatever their current happiness or financial anxiety may be, do retirees have regrets about past financial or other decisions? Do retirees and non-retirees differ in this way? To find out, we asked respondents questions designed to identify regrets (table 7-9). We were particularly interested in differences between nonretired and retired respondents in regrets about savings behavior. If retirees had not predicted how poor they would be following retirement, we might expect to observe greater regrets about saving for retirees than for people who are not yet retired.

Neither group expresses much regret. The mean responses tend to be significantly negative, indicating disagreements with the regret statements. Both groups believed that they should have become more knowledgeable about savings and investment options and were significantly more likely to agree that they should have started saving earlier, but both groups also significantly disagreed (on average) that they should have restrained their spending, talked more with their spouse about retirement, or gotten more professional help. Taken together, these opinions indicate some regret about how well the retirement savings strategy was executed but not about how much was saved or about the planning of the strategy.

The most significant difference between the two groups emerged from responses to the statement, "I should have calculated how much money I would need to save in order to have an adequate retirement income." It is startling that the nonretired endorse this statement, but the retired do not. Apparently, the nonretired fear they will have too little wealth when retired, but the retired find they can manage.

The final two rows of table 7-9 show that retired persons also have few regrets about the timing of retirement. They strongly disagree with the statement, "I should have retired earlier" (86 percent disagree or strongly disagree). And 86 percent also disagree with the statement, "I should have tried to delay my retirement."

Why do respondents experience the few regrets they express? To answer this question we used four financial variables—age at which respondents began saving, household income, homeownership, and a dummy variable indicating whether they had drawn down their savings during the previous year (table 7-10)—to explain variations in a financial regret index, equal to the sum of responses to the seven statements in bold in table 7-9. For both nonretired and retired persons, the age at which the respondent began saving has a significant impact on the financial regret index—later onset of saving means greater regrets. Income has a small impact for the

Table 7-10. *Objective Determinants of Financial Regret^a*

Measure	Not retired	Retired
Age started saving	1.091*** (0.241)	1.049*** (0.209)
Income (thousands of dollars)	-0.020* (0.009)	-0.044*** (0.012)
Own home	0.568 (1.236)	-1.055 (1.125)
Draw down on savings	1.711* (0.753)	0.783 (0.634)
Constant	-3.862* (1.656)	-2.811 (1.472)
<i>Summary statistic</i>		
Number of observations	184	236
R-squared	0.158	0.196
Adjusted R-squared	0.139	0.182

a. Dependent variable is financial regret. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$. Standard errors are in parentheses.

nonretired and a larger and more statistically significant effect on the retired: greater income means less financial regret.²⁵ Once again, drawing down savings is associated with increased regret among the nonretired, but the effect on the retired is smaller and not statistically significant.²⁶

Individual Differences

The retired and the nonretired are similar on the average, but they are not identical in their attitudes; and within each group respondents vary widely in their specific attitudes. In this section we examine how respondents divide into groups that share similar opinions about retirement and life satisfaction. We employ "cluster analysis," a technique that finds different

25 Note that the composition of household income is very different before and after retirement (see table 7-2). When we regressed financial regrets against the different income sources, for retirees higher income from retirement plans and from savings significantly reduced financial regrets, but wage and social security income showed no such effects.

26 The differential effect of drawing down savings for the nonretired and retired groups is similar to that observed for the inadequacy of money variable.

groups that give similar answers to specific questions. These responses suggest explanations for observed variations in reported happiness.

We focused on a block of twenty-nine survey questions that deal with subjective beliefs and self-assessments and were presented in exactly the same form to both retired and nonretired respondents.²⁷ Respondents were divided into five clusters, as shown in table 7-11. Each cluster is characterized by a set of diagnostic statements taken from the original list of twenty-nine statements used for the clustering.²⁸ We also obtained a list of significant objective demographic measures, which are displayed below the "subjective" diagnostics. Below these, table 7-11 also provides summary statistics on relative cluster size, mean income, and mean overall happiness index, broken down for the retired and nonretired subgroups in each cluster. None of these "objective measures" determined the clusters; they are listed here only to make the cluster easier to interpret.

The five clusters divide into two "very happy" groups (A and B) and three less happy groups (C, D, and E). However, even the less happy clusters are reasonably happy, averaging about 3 on a scale of 1 through 4. This finding is consistent with the high self-reported happiness level that prevails in the sample. The happiness profile across the clusters is about the same for retired and nonretired respondents, while retirement and the interaction of retirement and happiness are not statistically significant determinants of cluster membership.²⁹ Income is a strong predictor of cluster membership, but only after controlling for retirement.³⁰ Among the nonretired, the highest-income cluster (E) has 35 percent more income than the lowest-income cluster (B), while among the retired the highest (A) has 138 percent more income than the lowest (D).

There is no simple relationship between income and happiness across clusters. Indeed, the cluster with highest overall income (E) is also the least happy. However, the *difference* in income between the retired and

27. The method of clustering is Ward's algorithm. This technique creates clusters so as to maximize variance explained by cluster membership. Looking at how average within-cluster distance measure varies with the number of clusters, we observed a sharp break between the fifth and sixth clusters, which pointed to a five-cluster solution, displayed in table 7-11.

28. These statements are selected by a stepwise linear regression of cluster membership (indexed by a dummy variable) against all twenty-nine individual attitude items, eliminating variables until only the variables with a criterion significance level remain (here the criterion level is .01). This process eliminates statistically redundant predictors and sifts out only those that have independent predictive validity, "holding constant the levels on the other items."

29. A nominal logit analysis shows happiness to be highly significant predictor of cluster membership ($p < .0001$).

30. Specifically, income is a significant predictor of cluster membership among retired respondents ($p < .003$) and marginally significant among the nonretired ($p < .09$).

nonretired subgroups in each cluster is associated with happiness: the "happy" clusters, A and B, exhibit the smallest disparity in income between preretirement and postretirement groups. Of course, the preretirement and postretirement groups are made up of different individuals, so one cannot interpret the difference as a drop in income. Still, the pattern is consistent with the evidence from tables 7-5 and 7-8, which suggests that income is a more important determinant of well-being for the retired than for the nonretired.

Clusters A and B belie Tolstoy's statement that "all happy families are alike." Members of cluster A have the most positive average rating on virtually every question presented in the survey. Two distinct sources of self-reported happiness stand out—no financial regrets and a vigorous enjoyment of life. The lack of regret about financial decisions is consistent with their relatively high income levels, both before and after retirement. Members of cluster B have much lower average income, yet report an almost an equally high happiness rating (in both cases it is close to the 4.0 scale maximum). They do acknowledge being "tight with money" and not having sufficiently investigated saving and investment options, but these signals of financial strain do not interfere with their happiness or with their ability to enjoy whatever consumption they can afford. Comparing clusters A and B, one could say that a high income contributes to a certain smugness in a self-report, but modest income is also compatible with happiness.

The three less happy clusters—C, D, and E—have similar overall happiness ratings but, again, very different "personalities." It is hard to avoid the impression that cluster C is in much better shape than the remaining two. People in this cluster are unhappy about their financial self-control: they believe they should have sacrificed more in the past and are loose with money, and these financial problems interfere with their enjoyment of consumption. Only the fact that they started saving relatively late in life distinguishes them from the rest of the population. Nonetheless, they are especially hopeful about the future and are not depressed. Perhaps careless in the past, they are carefree now.

People in cluster D seem to have been caught unawares by (actual or imminent) retirement. They score lower on most specific measures of happiness and higher on every regret measure than any other group. They alone agree that retirement is unpleasant to think about. They have invested least in learning how to use their time in retirement. The nonretired in this cluster claim not to have a clear idea about how they will spend their time; the retired claim that before they retired they did not have a clear idea of how they would spend their time in retirement.

Table 7-11. *Analysis of Individual Differences for Five Clusters of Respondents^a*

	Cluster A	Cluster B	Cluster C	Cluster D	Cluster E
Key diagnostic statements ($p < 0.01$)					
	-I should have become more knowledgeable about savings and investment options	+I feel happy about life	+I should have made the sacrifices necessary to earn more money for retirement	-I am happy with my standard of living	+I am depressed
	-I am anxious about money	+I am enjoying my free time	+I am hopeful about the future	+Spending money is painful for me	-I feel happy about life
	+I am happy with my leisure time activities	-I don't enjoy activities like eating out or travel, because I think about how much they cost	-I feel depressed	-I am happy with my housing	+I feel lonely
	-I should have spent more time with my family, even if it meant earning less	+I should have become more knowledgeable about savings and investment options	-I am happy with the local area in which I live	-With my current income I have no trouble making ends meet	-I should have become more knowledgeable about savings and investment options
	+I enjoy eating and have a good appetite	+I am tight with money	+I don't enjoy activities like eating out or travel, because I think about how much they cost	+I have plenty of time during the day to do the things I need and want to do	+I feel happy with my standard of living

-I should have talked more with my spouse about our financial plans

-I am tight with money

+Retirement is an unpleasant thing to think about

+With my current income I have no trouble making ends meet

-I feel happy about my health

Significant demographics ($p < .05$)	retired, married, didn't draw down savings, higher education	drew down savings less urban, more children	started saving later	blue collar, started saving later	white collar, live alone, high income
Percent of not retired	16	38	25	7	14
Percent of retired	26	31	19	11	13
Income, not retired (dollars)	79,218	60,065	70,954	65,682	81,547
Income, retired (dollars)	49,750	35,625	28,076	20,893	42,058
Happy, not retired (1-4)	3.70	3.70	3.16	2.82	2.91
Happy, retired (1-4)	3.91	3.86	3.02	3.00	2.65

a. + = agree; - = disagree.

Members of cluster E show that even the affluent can be miserable. They are lonelier and less happy about their health than is any other group. The statement "I am depressed" is their single most diagnostic characteristic. The fact that they are satisfied with their standard of living and have few financial regrets does not save them from having the lowest average score on the benchmark "feel about life" question.

Conclusions

Our main conclusion is that the retired people in our sample discovered, on average, that their income is sufficient to meet their needs. At the same time, the importance of adequate income increases during retirement. These two aspects of our findings are not inconsistent. Before retirement, one has largely adapted to one's current income, and therefore its impact on well-being is slight. Moreover, one is not yet sure whether savings will be sufficient for retirement. All of this may increase overall money anxiety and, simultaneously, disconnect that anxiety from objective financial circumstances.

After retirement, the uncertainty is resolved and one encounters a different financial environment. For most people, the uncertainty is resolved favorably, and they can relax and enjoy their wealth. This is why the happiest and most self-congratulatory of the five clusters (A) is overpopulated by retired people. The minority of retirees who discover that their income is inadequate, by contrast, face new discomforts to which they have to adapt.

These general conclusions should, however, be treated with caution. First, although we tried to collect a sample representative of the general population, timing and financial constraints prevented us from doing so. The sample is more affluent than the general population, and minorities are significantly underrepresented. We do find pockets of unhappiness, such as cluster D, that are associated with blue-collar occupations and very low income in retirement. Our sample is also self-selected to some extent; it consists of people who have agreed to answer surveys sent to them by a firm that collects data mainly for marketers. People who agree to being surveyed may be more content with their lives than those who refuse. But such a bias would probably apply to both the nonretired and the retired.

The second reason for caution in interpretation is that the data were collected at one point in time that reflects one set of nonrepresentative historical circumstances. There may be good reason to suspect that an

unusual confluence of events that have favored current retirees: record increases in housing prices, stock markets, and the most sustained economic boom in postwar history, may affect both their income and their reported happiness.³¹

Third, although we employed diverse measures of subjective well-being, all the measures are vulnerable to scale self-norming and other problems. There is clearly a compelling need for studies that employ such new and diverse measures of subjective well-being as suicide rates, facial measurements, clinical incidence of depression, and rates of psychosomatic ailments. We suspect, however, that such measures will reveal a similar picture of the relationship between SWB and income, and more specifically that these measures will not reveal a postretirement drop in well-being.

Putting aside these caveats, our data, at a minimum, raise the question of whether the furor over the adequacy of retirement savings might possibly be exaggerated. In our sample, we see no evidence of pervasive under-saving; indeed, as noted, the retired were less likely than the not-yet-retired to endorse the statement "I should have calculated how much money I would need to save in order to have an adequate retirement income." If anything, people seem to anticipate greater financial woes than they actually end up experiencing.

Although we failed to observe a significant decline in happiness following retirement, our analyses do show large and significant changes in the *determinants* of that happiness. For the not-yet-retired, job satisfaction and the quality of leisure are the major determinants of reported happiness. Not surprisingly, job satisfaction (at their last job) is not a significant determinant of happiness for retired people, while the quality of leisure becomes an extremely important determinant. This increased importance of quality of leisure is worth keeping in mind when thinking about policies that affect the elderly. Although income maintenance is important, it is only one of many policies (and possibly not the most important or effective).

31. A new study could survey a representative sample over a longer time and incorporate other innovations. We would suggest including more questions about nonfinancial determinants of well-being, such as family relations, interactions with friends, hobbies, and travel, as well as questions about physical functioning. On the financial side, we would also include more questions about wealth as opposed to income. It would also be interesting to ask retired persons to recall not only their earlier well-being, but also earlier values of explanatory variables (we only asked about past income). If we sampled nonretired persons again, we would ask them to predict postretirement values of explanatory variables. Finally, we would ask respondents to evaluate directly the relative desirability of different policies involving retirement, such as those to promote savings or to enhance the quality of retirees' lives through nonfinancial policies.

tive) that could augment the well-being of retirees. In addition to policies that maintain incomes, other effective policies might seek to improve the quality of leisure directly. For example, the mother of one of the authors is retired and living by herself in the suburbs. Currently, she plays Ping-Pong regularly in the town hall, takes subsidized yoga classes at the public school, and spends hours in the public library. Later, when she becomes too old to drive, she may use the shuttle service offered by the town for its senior citizens. It seems likely that these types of services increase her well-being far more than would an increase in income equivalent to the marginal cost of the services. Further research on the financial and nonfinancial determinants of well-being in retirement could help inform such initiatives.

In closing, it may be worth mentioning that the story of Mr. Pasea in the epigraph to this chapter seems to have struck a responsive chord in at least some readers. A Daniel Smith, for example, wrote in response that "I chose to live in Manhattan rather than in Nederland, Texas, so my retirement income requirements are obviously higher than Mr. Pasea's. But the same basic rules apply. You can get by on a lot less when you're retired, without really depriving yourself of anything important. . . . If I had known earlier how much 'wealth' derives from such simple pleasures, I would have retired a lot sooner."³²

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