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THE RISING WELL-BEING OF THE YOUNG

David G. Blanchflower and Andrew J. Oswald

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## **The Rising Well-Being of the Young**

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## **Abstract**

Many observers believe that times are growing harder for young people in Western society. This paper looks at the evidence and finds that conventional wisdom appears to be wrong. Using the U.S. General Social Surveys and the Eurobarometer Surveys, the paper studies the reported happiness and life-satisfaction scores of random samples of young men and women. The data cover the USA and thirteen European countries. Our main finding is that from the 1970s to the 1990s the well-being of the young increased quite markedly. A number of possible explanations are considered.

# **The Rising Well-Being of the Young**

David G. Blanchflower and Andrew J. Oswald

## 1. Introduction

Many commentators believe that life in the industrialized nations is getting tougher for the young. They point to increased youth unemployment, the rise in young male suicides, the widening of the income distribution, the spreading use of drugs, and the high rate of divorce and of young single parenthood. But is so pessimistic a view justified? The evidence in this paper paints a different picture. The paper documents a rising level of happiness among young people in Western countries. It then discusses possible explanations for that secular trend.

This paper uses the numbers that people report when, in surveys, they are asked questions about how happy they feel and how satisfied they are with various aspects of their lives. There are obvious limitations to such statistics. Nevertheless, there seem reasons to look at data on reported well-being.

1. There is a large psychology literature that takes seriously the answers people give to 'happiness' questions in surveys. Readable introductions include Argyle (1987) and Myers (1993). It would be extreme to argue that economists know more about human psychology than do psychologists.
2. People's reported well-being levels are correlated with observable events that appear consistent with genuine happiness. For example, those who report high happiness scores tend to smile and laugh more, and to be rated by other people as happier individuals (Diener, 1984, Pavott et al, 1990, Watson and Clark, 1991, and Myers, 1993).
3. Reported well-being levels are correlated with scores obtained in standard psychiatric and mental stress tests.
4. The structure of well-being equations is similar in different countries over different periods. This is consistent with the idea that something systematic is being picked up in such data.
5. If the object is to study well-being, what people say about how they feel seems unlikely to

contain zero information.

There are statistical sources that have for years collected individuals' answers to questions about well-being. These responses have been studied intensively by psychologists, studied a little by sociologists, and largely ignored by economists. Some economists will defend this neglect by emphasising the unreliability of such data, but most are probably unaware that statistics of this sort are available, and have not thought of how empirical measures for the theoretical construct called 'utility' might be used in their discipline<sup>1</sup>.

Easterlin (1974) was one of the first economists to study data over time on the reported level of happiness. His paper's main concern is to argue that individual happiness appears to be similar across poor countries and rich countries. This finding, the author suggests, means that we should think of people as getting utility from a comparison of themselves with others close to them. Happiness, in other words, is relative.

On whether there is a trend in well-being over time, Easterlin's paper concludes: "... in the one time series studied, that for the United States since 1946, higher income was not systematically accompanied by greater happiness" (p.118). This result, that GDP growth may have little or no effect on well-being, has become well-known. Unfortunately, it is not obvious that Easterlin's data actually support it. For example, his longest consistent set of happiness levels show the following for the percentages of Americans saying they were "very happy" and "not very happy" (the highest and lowest of three bands into which they could place themselves):

<u>Date</u>	<u>% Very Happy</u>	<u>% Not Very Happy</u>	<u>N</u>
1946	39	10	3151
1947	42	10	1434
1948	43	11	1596
1952	47	9	3003
1956	53	5	1979
1957	53	3	1627

*Source: Table 8 of Easterlin (1974) using United States AIPO poll data*

Other data given by Easterlin -- splicing together surveys with breaks and changes in definition -- produce a different answer. But the above is the longest consistent series and might be thought to command the most weight. A discussion of Easterlin's work is contained in Blanchflower, Oswald and Warr (1993) and Veenhoven (1991). The former finds a statistically significant time trend in the year dummies of two decades of pooled US cross-sections.

The paper is divided into sections. Section 2 examines data from the United States. It shows that reported well-being levels among the young rise from the early 1970s to the early 1990s. Section 3 studies European data, also from the early 1970s to the present. Life satisfaction data for a dozen countries reveal the same pattern as in the USA: the young report growing levels of well-being over time. Section 4 of the paper begins to explore why this might be. It considers various potential explanations:

- (i) the cessation of the Cold War and thus increased chance of peace in young people's lifetime;
- (ii) declining discrimination against women and black people;
- (iii) changing education levels and the nature of work;
- (iv) changing marital and personal relationships;
- (v) the growth of consumer goods designed primarily for the young.

The fourth of these is the one upon which the paper eventually focuses. It shows that the increasing happiness of young unmarried individuals explains the bulk of the upward movement in the full sample of young people. Section 5 concludes.

## 2. Happiness in the USA from the 1970s

This paper begins with an examination of information from the General Social Surveys of the United States for 1972-1993, which have for decades been interviewing people about their levels of happiness. These surveys are of randomly selected individuals. Many issues -- not just well-being -- are covered in the surveys. GSS data have been collected annually in all but three of the years from 1972 to the early 1990s (no data are available for 1979, 1981 or 1991). The size of the sample averages approximately fifteen hundred individuals per annum. Different people are interviewed each year: the GSS is not a panel<sup>2</sup>.

Are young Americans getting happier or less happy over time? Answers are available to the 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? (1994 GSS Cumulative Codebook, Question 157).*

If young people use language in approximately the same way as they did twenty years ago (if not, our paper's analysis is potentially severely flawed), it should be possible to learn something about their changing sense of well-being.

The interpretation of people's well-being answers is difficult. It raises philosophical questions that cannot be resolved in this paper. Our approach is pragmatic. The later analysis assumes that individuals accurately know their own happiness or utility. What they cannot do is to convey that to an interviewer in a way that is free of error. The errors can be viewed as arising from the fact that individuals do not know the common scale that the interviewer ideally wishes them to use. Thus the respondents presumably implicitly use different scales (as they might if they were being asked to say whether they were very tall, fairly tall or not too tall, rather than to state their height in inches). On this assumption, there is useful information in these data if it is possible to aggregate across individuals' answers.

The three parts of Table 1 break happiness answers into the responses for the whole sample, those over the age of thirty, those under thirty and those under thirty and married. The first thing that is noticeable is that "pretty happy" is the typical answer, and that "not too happy", which is the lowest score people can assign themselves, is given by slightly more than a tenth of the population. It is clear that in the whole sample there has been little alteration in reported well-being over two decades. This is in the spirit of Easterlin (1974). However, slightly fewer people in the 1990s say they are "not too happy". There is also a small trend drop in the numbers saying "very happy". For the under-30s, however, there have been more noticeable changes. Over the period, a declining number of young people say that they are not too happy (from approximately 14% in the 1970s to 10% in the 1990s), and slightly more state that they are pretty happy than did so in the 1970s. In working with well-being data, a change from 14% to 10% is a



large movement. There is, nevertheless, little sign of a time trend in the answer "very happy". The proportion of young respondents saying this was around 30% both early in the 1970s and in the early 1990s.

Although the effect is not marked, for both the under-30s and over-30s, unhappiness is dropping secularly in the USA. The data are becoming more skewed -- away from low happiness scores -- over time. Table 1 reveals that the category "pretty happy" is expanding while "not too happy" is shrinking. Nevertheless, the effect is not dramatic, this is a comparatively small number of years, and the "very happy" category also shrinks slightly. Interestingly, as the last columns of Table 1 show, growth in happiness seems to have occurred most among the young unmarried. We return to this later in the paper.

These are raw data. They may be being moulded predominantly by a population that is changing its composition. To control for that, a more formal statistical method is required.

Table 2 is a form of regression equation in which the happiness answers of survey respondents are explained by the list of variables shown in the table. Because happiness is measured by the ordering of "very happy" down to "pretty happy" and "not too happy", it is not possible to employ a simple method such as ordinary least squares. The equation is instead an ordered logit. The dependent variable can be viewed as the probability of reporting a high happiness score. In principle, the coefficients in ordered logit equations cannot routinely be read in the way possible in an OLS regression (because the estimated coefficients have to be weighted by changes in densities). However, our calculations suggest that in practice this is not a severe problem.

The columns of Table 2 provide separate happiness equations for two groups: those under the age of thirty and those of greater than or equal to thirty. Pooling from 1972 to 1993, the total sample size is approximately 28,000 Americans. Of these, approximately one quarter are aged under thirty.

A number of personal characteristics are controlled for in Table 2. Reported happiness is higher among women, whites, married individuals and those in school or full-time work. There

is a strong U-shaped age effect, which is captured by the quadratic in Table 2. A literature on this kind of age-curve effect now exists, including Warr (1992) and Clark et al (1993). On average, happiness is lowest around approximately the end of one's twenties. Unemployment and marital breakdown are large sources of -- or more precisely correlates with -- unhappiness. Years of schooling is strongly positively correlated with reported well-being: the educated are happier. In the second and fourth columns of Table 2 it is clear, as might be expected, that well-being is greater where (family) income is higher<sup>3</sup>.

For this paper, the main conclusion is found in the patterns in Table 2's time-trend variables. Holding other factors constant, the young show a noticeable upward movement in reported well-being through the years. The trend term is effectively fitted through separate year dummies, as shown in Figure 1. Figure 1 suggests that the trend terms for young people and old people are not being driven by one or two especially influential years.

If it is possible to trust these kinds of data, therefore, young Americans became steadily happier over the decades from the 1970s. By contrast, older people in the USA apparently have not been getting happier through time. For those over thirty, the time trends in the third and fourth columns of Table 2 are small and negative.

Perhaps unexpectedly, the inclusion of family income in the equation (as in columns 2 and 4 of Table 2) has only small effects on most of the other coefficients. This suggests that the well-being derived from these characteristics is not complementary with income. In other words, the effect of income may be additively separable.

The coefficient on the time trend is reduced, in columns 2 and 4 of Table 2, by the inclusion of family income. It would be surprising if this did not happen. Prices have risen over the period, so a family income of \$40,000 means less in real terms in the later years of the sample.

### 3. Life satisfaction in Europe from the 1970s

There is similar information for most of the nations of Europe. Hence it is possible to test whether young Europeans also report rising levels of well-being.

Although economists seem rarely to have used the Eurobarometer Survey Series, these surveys ask:

*"On the whole, are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the life you lead?"*

Answers are available for random samples, from 1973 to 1992, of approximately 1000 people per year per country. The nations are Belgium, Denmark, West Germany, Greece, Spain, France, Ireland, Italy, Luxembourg, The Netherlands, Portugal and Great Britain. Surveys have been held twice a year in each European Community country. Because of their late entry to the EC, there is no full run of data for Spain, Portugal and Greece. A valuable source of information about the Eurobarometer surveys is the study by Inglehart (1990), who uses them to examine changing cultural values<sup>4</sup>.

Figures 2 and 3 plot the proportion of Eurobarometer respondents saying, respectively, that they are "very satisfied" and "not at all satisfied" with their lives<sup>5</sup>. Various age-groups are represented. As in the case of the USA, it is the young who stand out. From Figure 2, there was in the mid-1970s comparatively little difference among age groups in the percentage of people saying they were "very satisfied" with their lives. Approximately 20% of individuals gave this answer. Through time, the data fan out. Those in the youngest group, the under-twenties, end the data period with approximately 28% giving the very satisfied answer. The over thirties show much less increase: by 1992 approximately 23% said they were very satisfied. This widening in the inequality of life-satisfaction occurs especially strongly from the middle of the 1980s, but the underlying trend exists throughout the two decades. As can be seen, the upward trend is strongest for the under-twenties but still visible for the under-thirties.

A similar picture emerges from dissatisfaction data. Figure 3 plots the percentage of individuals giving the answer "not at all satisfied" with life. A sharp drop over the period is visible for young Europeans. By the start of the 1990s, less than three per cent give this answer. The downward trend is again greater the younger the subsample. For those over thirty, the trend is flat across these two decades. Thus the low-satisfaction responses tell the same story as the

high-satisfaction ones. Across these years, well-being apparently increases disproportionately among young individuals.

Table 3 is an ordered logit for life satisfaction in the European nations. The sample size is approximately 370,000. It includes both those who work and those who are retired or look after the home. The equations pool the individual Eurobarometer surveys from 1973 to 1992. To control for personal characteristics, the regressors include variables for male, self employed, manual worker, white collar, holding an executive job, retired, housewife, student or military, unemployed, the age and age squared of the respondent, a set of age left school (ALS) dummies, a further variable for studying, a set of marital status dummies, and country dummies where France is the omitted category. Table 3 reveals that in a cross-section the degree of satisfaction with life is greater among women, those who work for themselves, those in non-manual jobs, and the highly educated. Being unemployed is associated with a heavily depressed level of life satisfaction. The same is true of those who are divorced or separated.

Table 3 reports four life-satisfaction equations. Column 1 is for the full sample. There is a small positive time trend. In other words, through the two decades from the early 1970s, Europeans of given ages became more satisfied with their lives. The remaining three columns disaggregate by age group. They break the data into subsamples for the under-twenties, the under-thirties, and those over thirty. For each of these groups, the structure of a satisfaction equation is similar, in the sense that variables enter with approximately the same signs and sizes. What is noticeable in Table 3 is the difference in the time trend across these equations. The coefficient on the under-twenties column is approximately 0.02 while that on the over-thirties column is 0.003<sup>6</sup>. As in the simple time-series plots, therefore, the young are experiencing faster growth in life satisfaction than the old, even after holding constant other factors.

One feature of Table 3 is the apparently large differences in reported well-being across nations. The coefficients on country dummies vary from 2.05 for Denmark to -0.38 for Greece. It should be borne in mind that these are pure cross-section effects. Such divergent numbers are likely to reflect cultural and linguistic differences. This may stem partly from the difficulty of

translation (words like happiness, contentment and satisfaction have subtle distinctions in English, and in other languages). It is not necessarily all variation in language. As Inglehart (1990) points out, Switzerland makes an ideal laboratory to test this. German-speaking Swiss, French-speaking Swiss, and Italian-speaking Swiss all express higher satisfaction levels than do native Germans, French and Italians. There is something intrinsically nicer about Switzerland. Nevertheless, it seems unwise to take too literally the country dummy coefficients.

Do all these European countries have youth who are becoming more contented? It is not possible to answer this by looking at Table 3's pooled equation. Hence Table 4 disaggregates by nation. It reports the time trends on life-satisfaction equations estimated for each country separately. Separate results by age and education group are included. In all except Belgium and Southern Ireland, the well-being gradient is greater for those under thirty than over thirty.

One other point is worth recording. Taking the under-30s in the thirteen countries, in each nation except Great Britain and Northern Ireland there is a positive and statistically significant upward time trend over the most recent decade of 1983 to 1992 (results not reported). Why the British Isles misses out on this recent growth of well-being among the young is a puzzle.

#### 4. Looking for the source of young people's growing well-being

Young people in the West say they are becoming relatively happier and more satisfied with life. This section tries to understand why.

One possibility is that the *cessation of the Cold War* has raised young people's well-being by diminishing the likelihood of war with the former USSR. This is a difficult hypothesis to address convincingly. However, one approach (suggested to us by Rafael Di Tella) is to test whether those nations closest to the ex-Soviet Union have the largest upward trend in well-being. The underlying argument is that distance -- for example for Britain and to a greater extent the USA -- from the old communist bloc gave some safety in the event of war. Nations contiguous to the USSR should have been most vulnerable and ought thus to show recently the greatest increase in youth well-being. Table 4 can be used to explore this. However, it reveals little

correlation between the time trend in happiness and distance from the old USSR. Germany, for example, both borders the Eastern bloc and had one of the smallest increases in youth well-being. Portugal, despite being relatively far from the Eastern bloc, had a strong rise in young people's satisfaction.

Table 5 suggests that the upward happiness of youth is not because of *declining discrimination* against women or blacks. The well-being trend is strong for men; it is not merely young women who have become happier. For the United States, the GSS reveals that from the 1970s to the 1990s there has been a rapid increase in black men's reported well-being, but part of the rise has been among older black men<sup>7</sup>. Young white men, moreover, have enjoyed improved well-being -- especially relative to older white men. Among over-30s whites, there was actually a small decline among those giving the answer very happy (from 37% in the 1970s to 35% in the 1990s). More formally, the coefficient on the final column of Table 5 (Male nonwhite under 30) is not large enough to explain the whole improvement in young people's well-being.

Another potential argument is that the increasing contentment of the younger generation is somehow linked to *work or education*. Table 6 suggests that this is unlikely to be the explanation. Both employed and non-employed groups of young men show -- in columns three and four of Table 6 -- a positive time trend. The trend is in fact greater for those out of work. The first two columns of Table 6 find that better-educated men have a time trend of 0.04 compared to less than 0.02 for the less-educated. This seems worth knowing. However, the ranking is reversed for women. While further exploration in this area might yield insights, our judgment is that the reason for growing youth happiness will probably not be found here.

It is well-known that, over the last two decades, marriage has become less common in both the US and Europe (as Table 7 shows). Does *the changing nature of marital relationships* have a role to play in the growth of young people's happiness?

Consider Table 8, which breaks down the trends in happiness scores of Americans by marital status. The highest happiness level is very happy (denoted 3); the medium level is pretty happy (2); the lowest level is not too happy (1). Data are presented for two periods. The first

runs from 1972-1984. The second is from 1985 onwards.

Table 8 uncovers a simple fact. It is predominantly the unmarried who account for the rise in reported happiness among young people in the USA. In the first half of the period, 21.3% of young unmarried people gave the survey answer "very happy". In the following decade, 26.1% said they were very happy. This contrasts noticeably with the data for married young men and women. In the first half of the period, for example, 36.8% of married people said they were very happy. In the second half, an almost unchanged 36.6% did so.

For this to be persuasive, a broadly similar effect would have to be found at the bottom of the happiness distribution, namely, for those giving the lowest score of 1. Apparently it is. According to Table 8, in 1972-1984, 17.5% of unmarried young Americans said they were not happy; for the period 1985 onwards, this number fell to 11.1%. The trend for married people was also down, but less steeply. In the early period, 9.6% of young people reported themselves as not happy, which had become 6.2% by the later period of 1985 on. There was a slight overall rise, therefore, in the reported happiness of young married Americans from the 1970s to the 1990s. However, this was dwarfed by the considerable change in non-married young people's happiness. The conclusion appears to be that the trend of rising well-being among young Americans is explained largely by what happened among a single sub-sample -- those not married.

Rather less appears to have happened to the well-being of those older than thirty. Table 8 shows that the percentages giving the answer very happy (level 3) altered little between the periods. There was an improvement, nevertheless, at the lower end of the happiness distribution (level 1). For both the married and non-married, the numbers giving the lowest happiness score fell approximately three percentage points.

Table 9 provides the same message using an ordered logit for US data. An extended set of variables is included<sup>8</sup>. As well as the findings discussed earlier in the paper, this specification shows that reported happiness for both age groups is lower among those whose parents divorced (by the time the respondent was 16 years of age) and those who state that their "finances are

getting worse". For the young the number of siblings and the number of children enter negatively but are insignificant for the older age group. In the first column of Table 9, the time trend for married older people enters with a coefficient of approximately -0.004. It is not possible, at normal confidence levels, to reject the null of zero. Thus life-satisfaction has been flat or slightly declining through time for the over-30s married sub-sample in the United States. For older unmarrieds, the time trend is also negative and statistically significant. In the fourth column of Table 9 there is evidence of a strong upward movement in well-being levels. This is for the young non-married sub-sample. The coefficient is 0.0131 with a standard error of 0.0049. By contrast, in column 3 of Table 9, the time trend for married young men and women is -0.0025 with a standard error of 0.0055.

To begin to explore the possible causes of the rising well-being of the young in Europe, Table 10 contains life-satisfaction ordered logits. They are for four sub-groups. There is a positive time trend for three of these -- employees, students/those on military service, and the unemployed. For the remaining category, that of housewives and the retired (at this age, presumably predominantly because of poor health), there is a slight downward trend in life satisfaction. The sample in the second column of Table 10 is approximately 13,000, so this is unlikely to be a chance result generated by inadequate sample size.

Another way to divide the data is by education. Table 11 does so. "Low education" is defined as those who left school at age 18 or less. "High education" is the group who left school when older. Here, in columns 1 and 2 of Table 11, it emerges that in Europe it is the high-education young who are the ones experiencing the most rapid increase in well-being. In fact, individuals with high education who are older than age 30 show up with a negative time trend. For them, average life satisfaction fell over the two decades of the data. Thus education may be somehow connected to the phenomenon of rising youth well-being. But the major force appears to lie elsewhere.

Table 12 successfully replicates for Europe the main finding from the US data. The time trend in well-being is predominantly because the unmarried have become more content. Whether



using measures for European life satisfaction or European happiness (available for 1975-1979 and 1982-1986 only), the time trend in well-being in Table 12 is more than five times larger for those young people who are not married.

These findings appear to provide evidence against another possible explanation for the trend in young people's well-being. It might be argued -- as Nick Crafts has suggested to us -- that this era has seen particular growth in *new consumer goods aimed at the young*. If this were the reason for young men and women's greater reported happiness, however, it would presumably show up as strongly for married as for non-married people. It seems that the rise in youth well-being in the West is not somehow the product of changed income or consumption patterns.

A further form of evidence for these conclusions is included as Tables 13-15. Using the General Social Surveys, it estimates equations for other kinds of satisfaction answers. In these surveys, Americans are asked how satisfied they are with their financial situation, job, friends, family, hobbies, health and city. The exact form of the questions are reported at the end of Tables 13 and 14. Tables 13-15 provide ordered logit equations for these. In Table 13, there is no evidence of an upward time trend -- for the young or old -- in satisfaction with finances or job. But Table 14 is more interesting. The second column, which is for young people's satisfaction with their family life, uncovers a statistically significant positive time trend. Of the seven aspects of life covered in Tables 13 and 14, young people's satisfaction with family is the only one that is rising through time. In Table 15 we report further ordered logits for those under the age of 30 for satisfaction with a) friends and b) family according to whether the individual was married or not. Here we find a positive and significant coefficient on the time trend in both cases for the unmarried, whereas the two coefficients are insignificant and considerably smaller in magnitude for the married. These Tables might be viewed as corroborative evidence for the paper's suggestion that rising youth happiness is connected to changes in marriage and relationships.

## 5. Conclusions

This paper is an attempt to understand what has been happening to the well-being of young people in the US and Europe. It studies what random samples of people say about their own levels of happiness and satisfaction with life. Economists are not experienced at interpreting the patterns in such data. Nevertheless, there may be something to be learned from this kind of information.

The main finding of the paper is a potentially surprising one. Young Americans and Europeans seem to be getting happier through time. In 1972, for example, 16% of young Americans reported themselves as "not too happy" and 30% said that they were "very happy". By 1990, 9% of young Americans were not too happy and 33% were very happy. Older people in the USA, by contrast, report numbers that are little changed. For Europe, the paper uncovers similar evidence. Life satisfaction has been growing noticeably faster in the under-thirty age group. This result emerges in pooled microeconomic data for thirteen European nations, and in eleven of them individually.

The evidence suggests, therefore, that in the West the well-being of the young is rising. Explaining why is more difficult. This paper has not got to the bottom of the phenomenon. On balance, we believe it is not explained by the decline in the chance of war with the Eastern bloc, falling discrimination, changing education and work, or the rise of youth-oriented consumer goods. The paper demonstrates that most of the increase in young people's well-being is to be found in the group who are unmarried. It may be that young men and women have benefited from society's recently increased tolerance of those living outside marriage, and from their consequent ability to live in less formal relationships. While this is not an explanation, it suggests that the ultimate answer is somehow connected to the role of family life and personal freedom. Perhaps this hunch will help future researchers to find an answer.

The paper produces some other findings. As in earlier work on US data alone (Blanchflower, Oswald and Warr, 1993), happiness and life satisfaction are greatest among women, whites, married people, the highly educated, and those with high income. It is especially low among the unemployed. Well-being is U-shaped in age. In principle, the methods in the

paper provide tools for a kind of happiness calculus that might be able to be used to measure the underlying utility value of all kinds of characteristics and life events. Before that, however, economists have more to learn about the strengths and weakness of well-being data.

Endnotes

- <sup>1</sup>. For a brief discussion of the quantitative literature that exists on well-being see Appendix 2.
- <sup>2</sup>. Further details of the GSS are presented in the data appendix.
- <sup>3</sup>. Where family income was missing its value was imputed and a dummy variable was included to identify where this was done. It was never significantly different from zero.
- <sup>4</sup>. Further details of the Eurobarometer Surveys are presented in the data appendix.
- <sup>5</sup>. The full sets of responses to this question by country are reported in Appendix 2.
- <sup>6</sup>. Due to the very different *levels* of happiness across groups the logit mapping is a reasonable transformation to a comparable scale. This allows us to draw comparisons of the relative orders of magnitude of the logit coefficients across equations. Thanks are due to Richard Freeman for this suggestion
- <sup>7</sup>. In an equation for blacks only, the time trend has a coefficient of .0206 (t=3.9) whereas for older black men (=30 years) the coefficient was .0154 (t=2.5).
- <sup>8</sup>. In addition to the variables used in earlier tables we also include controls for the number of siblings, religion, the number of children, household size, and whether the respondent's parents were divorced when the respondent was aged 16. We included a variable that identified whether one or both of the parents had died when the respondent was aged 16, but it was always insignificantly different from zero and hence was excluded. Further we used two variables suggested to us by Jim Davis and used in Davis (1984) to represent a (qualitative) measure of income and a change in financial circumstances. In the former case the respondents were asked "compared with American families in general, would you say your family income is far below average, below average, average or above average"? In the latter case the question was "during the last 5 years has your financial situation been getting better, worse or has it stayed the same"? Unsurprisingly income buys happiness.

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## Data Appendices

### 1. The US General Social Surveys 1972-1993

The General Social Surveys have been conducted by the National Opinion Research Center at the University of Chicago since 1972. Interviews have been undertaken during February, March, and April of 1972 to the present. There were no surveys in 1979 and 1981. There are approximately 25,000 completed interviews. The median length of the interview is about one and a half hours. Each survey is an independently drawn sample of English-speaking persons 18 years of age or over, living in non-institutional arrangements within the United States. Block quota sampling was used in 1972, 1973, and 1974 surveys and for half of the 1975 and 1976 surveys. Full probability sampling was employed in half of the 1975 and 1976 surveys and the 1977, 1978, 1980, 1982-1988 surveys. In this book we make use of data from 1974, because of the unavailability of earnings data in 1972 and 1973.

The initial survey, 1972, was supported by grants from the Russell Sage Foundation and the National Science Foundation. NSF has provided support for the 1973 through 1978, 1980, and 1982 through 1987 surveys. NSF will continue to support the project. Supplemental funding for 1984-1991 came from Andrew M. Greeley.

The items appearing on the surveys are one of three types: Permanent questions that occur on each survey, rotating questions that appear on two out of every three surveys (1973, 1974, and 1976, or 1973, 1975, and 1976), and a few occasional questions such as split ballot experiments that occur in a single survey. In recent years the GSS has expanded in two significant ways. First, by adding annual topical modules that explore new areas or expand existing coverage of a subject. Second, by expanding its cross-national collaboration. Bilateral collaboration with the Zentrum fuer Unfragen, Methoden and Analysen in the Federal Republic of Germany dates from 1982. In 1985 the first multinational collaboration was carried out with the United States, Britain, Germany, Italy, and Australia. The 1985 topic was the role of government and included questions on a) civil liberties and law enforcement, b) education and parenting, c) economic regulation, and d) social welfare and inequality. The 1986 topic was social support

covering information of contact with family and friends and hypothetical questions about where one would turn for help when faced with various problems. The 1987 topic was social inequality dealing with social mobility, intergroup conflicts, beliefs about reasons for inequality, and perceived and preferred income differentials between occupations.

## 2. The Eurobarometer Surveys: 1973-1992

The European Commission organized these surveys, which have been held approximately annually since 1970. The usual sampling method was nationwide stratified quota samples of individuals older than 14. Summing across years, approximately 35,000 individuals were interviewed from each of Belgium, Britain, Denmark, France, Germany, Southern Ireland, Italy, and The Netherlands. Slightly smaller samples are available from Northern Ireland, Portugal and Spain. The surveys collect both attitudinal information and standard data on personal characteristics. Most of the econometric analysis in the paper uses data from 1973 to 1992, providing a total sample of approximately 370,000 people.

### Appendix 1: Background Notes

There is a literature on the quantitative social science of well-being. Much of the work appears in the journal Social Indicators Research and in a variety of psychology journals. Recent research on well-being includes Andrews (1991), Fox and Kahneman (1992), Thomas and Hughes (1986), Inglehart (1990), and Veenhoven (1991, 1993). Although little-read by economists, the pioneering work on the statistical study of well-being includes Cantril (1965), Andrews and Withey (1976), Andrews and Inglehart (1978), Campbell, Converse and Rodgers (1976), Campbell (1981), Davis (1984), Diener (1984), Douthitt et al (1992), Larsen, Diener and Emmons (1984), Smith (1979), Shin (1980) and Weaver (1980). Argyle (1989) is an introduction to the literature. Myers (1993) is informal and especially easy to read, and has extensive references to the technical literature. Economists interested in dipping into these writings might also look at Andrews (1991), Mullis (1992) and Warr (1987 and 1990a,b).

Birdi et al (1994), Clark et al (1996) and Warr (1992) show that job satisfaction is U-shaped in age, and give other results.

Hirsch (1976) and Easterlin (1974) are well-known sceptics of the value to society of increased real national income. Oswald (1997) discusses recent evidence. Early British results on the distress caused by unemployment are due to Peter Warr (1978 onwards), Jackson et al (1983) and Warr et al (1988). The findings are now conventional in the psychology literature but probably still not well-known among economists (see, however, Clark and Oswald, 1994). Important early work in the economics literature was done by Bjorklund (1985) and Edin (1988).

If well-being depends upon relative income, most of economists' tax theory is wrong or incomplete. Some of the few attempts to change this are Boskin and Sheshinski (1978), Layard (1980) and Oswald (1983). Clark and Oswald (1996) finds evidence for relative wages in satisfaction equations.

International well-being comparisons using the multi-national International Social Survey Programme are given in Birdi et al (1996), Blanchflower (1997) and Blanchflower and Freeman (1997). Blanchflower (1997) specifically looks at the well-being of the young. Recent

work by Di Tella, MacCulloch and Oswald (1996) suggests that macroeconomic variables may help explain movements in happiness in a country. Blanchflower, Oswald and Warr (1993) is an earlier look at adult well-being using the United States GSS. It also reports information about the time trend in job satisfaction in Britain and the USA. Blanchflower and Oswald (1997) estimates well-being equations for various countries showing that, other factors held constant, the self-employed appear to be happier and more satisfied with their jobs than employed people. The paper also uses a British birth cohort sample to estimate a well-being equation based on a ten-point life satisfaction scale.

## Appendix 2. Life satisfaction by country

Life satisfaction	Year																			
	73	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	
<b>France</b>																				
Not at all satisfied	5	7	7	7	8	8	9	8	7	5	7	6	7	6	7	5	7	6	9	
Not very satisfied	18	17	21	22	21	22	22	22	22	17	19	21	20	21	19	26	15	16	18	
Fairly satisfied	62	60	60	60	59	58	58	61	59	62	61	61	61	61	62	64	64	64	60	
Very satisfied	16	16	12	12	12	11	10	10	12	15	13	11	12	12	13	14	14	14	14	
N=38516	2198	2391	2555	2246	2122	997	984	979	979	2130	1993	2000	1994	1970	1986	1981	4016	1998	1986	1990
<b>Belgium</b>																				
Not at all satisfied	2	3	3	3	3	2	2	3	3	4	4	7	3	5	4	3	3	2	3	
Not very satisfied	6	7	7	7	7	9	7	8	10	12	14	15	14	17	13	17	10	9	8	
Fairly satisfied	49	52	52	48	47	48	48	54	50	57	61	55	61	60	56	57	59	60	55	60
Very satisfied	44	38	38	42	42	42	43	35	36	27	21	23	22	18	27	23	28	29	34	29
N=36791	1261	2510	2026	1975	2004	964	970	929	929	2151	1991	2029	2004	1974	1978	2020	3967	1925	2056	2057
<b>Netherlands</b>																				
Not at all satisfied	1	2	2	2	2	1	1	1	2	1	2	1	2	1	1	1	1	0.5	1	1
Not very satisfied	5	7	8	6	5	5	4	4	5	5	6	5	6	6	6	6	4	5	4	5
Fairly satisfied	53	56	51	52	48	48	48	48	47	48	53	48	54	54	53	53	48	49	46	45
Very satisfied	41	36	40	41	45	47	48	46	46	46	40	46	38	39	39	40	47	46	49	50
N=36941	1451	1974	2012	1977	2065	1013	977	1084	1084	2260	2030	1993	2032	2011	1948	2005	3987	2092	2032	1998
<b>Germany</b>																				
Not at all satisfied	2	2	2	2	2	2	2	2	3	2	3	2	2	2	2	1	1	2	2	1
Not very satisfied	16	17	17	14	13	11	12	12	16	14	15	13	16	13	13	14	9	8	9	11
Fairly satisfied	66	67	61	62	64	63	69	64	64	66	66	66	64	65	67	61	64	64	64	64
Very satisfied	17	14	21	22	21	24	17	17	17	18	16	19	18	20	18	24	25	27	26	24
N=37838	1931	1995	1985	1984	1972	985	989	966	966	2387	2029	2008	2005	2051	1932	2045	4387	2061	2058	2068
<b>Italy</b>																				
Not at all satisfied	7	11	13	10	12	12	11	9	9	8	9	9	9	8	9	5	5	6	4	7
Not very satisfied	28	30	29	29	25	30	27	24	24	24	24	25	25	22	23	24	17	18	16	18
Fairly satisfied	57	51	49	52	53	50	54	54	54	54	57	56	53	60	55	55	63	60	61	62
Very satisfied	8	8	8	9	10	9	10	10	14	13	10	11	12	11	13	15	16	15	19	14
N=39149	1888	2099	1959	2172	2197	1173	1112	1181	1181	2314	2058	2148	2162	2186	2078	2070	4111	2078	2076	2087
<b>Luxembourg</b>																				
Not at all satisfied	2	5	3	1	2	1	1	1	1	3	2	2	2	2	2	1	1	1	1	1
Not very satisfied	9	12	7	9	11	5	7	5	5	7	6	7	6	5	3	11	5	6	5	5
Fairly satisfied	49	49	59	52	50	61	58	53	53	53	54	56	52	53	55	50	57	47	46	54
Very satisfied	40	34	31	38	37	33	35	40	40	37	38	36	40	40	39	37	37	47	48	41

N=11578	329	595	557	644	608	295	297	300	694	591	590	596	595	577	593	1195	599	931	992
<b>Denmark</b>																			
Not at all satisfied	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Not very satisfied	4	4	5	4	4	4	4	4	4	4	4	3	3	4	9	4	3	2	3
Fairly satisfied	45	49	43	42	39	44	41	36	39	40	37	37	37	41	42	38	36	36	34
Very satisfied	51	47	50	54	56	51	55	59	57	55	58	59	59	54	48	57	61	61	63
N=36209	1197	1961	1926	1994	1977	1063	985	996	2187	2015	1953	1997	2007	1982	2006	3995	1984	1994	1990
<b>Eire</b>																			
Not at all satisfied	2	3	3	4	4	5	3	4	3	7	5	6	6	8	7	7	3	4	4
Not very satisfied	6	8	9	7	7	11	11	13	10	12	10	12	12	14	18	10	9	9	11
Fairly satisfied	39	51	52	48	48	47	52	49	49	50	51	54	54	53	48	50	53	46	48
Very satisfied	53	38	36	40	41	37	34	34	38	31	33	29	28	24	27	34	35	41	37
N=36255	1197	1993	1980	1998	2000	994	1004	997	2174	1980	1996	2004	1994	1988	1993	3941	2022	2001	1999
<b>GB</b>																			
Not at all satisfied	3	4	5	4	3	3	4	5	4	4	3	4	4	3	4	3	3	4	4
Not very satisfied	11	11	2	11	10	11	8	10	9	10	10	10	10	11	17	9	10	9	11
Fairly satisfied	59	52	52	51	56	59	52	52	51	56	55	55	56	55	52	53	57	56	54
Very satisfied	27	36	32	36	30	27	37	36	32	36	32	31	30	31	28	35	29	31	31
N=38148	1006	1152	1050	2149	1985	1006	1152	1050	2149	1985	2095	2168	2037	1960	2018	3831	2085	2112	2061
<b>N. Ireland</b>																			
Not at all satisfied	4	4	4	4	3	4	4	5	3	4	3	4	3	5	4	4	2	3	3
Not very satisfied	9	11	11	13	10	10	15	11	8	10	9	7	8	8	16	7	11	10	9
Fairly satisfied	55	59	59	56	56	53	49	58	57	56	56	54	56	55	47	53	54	53	49
Very satisfied	32	25	25	27	31	32	31	26	31	30	32	36	33	32	33	36	33	35	41
N=10719	592	611	611	596	608	307	297	306	591	625	633	646	640	636	636	1164	631	600	600
<b>Greece</b>																			
Not at all satisfied								22	13	15	13	13	13	16	12	12	15	11	11
Not very satisfied								20	25	22	23	24	19	23	26	20	21	35	34
Fairly satisfied								38	44	46	47	46	46	43	46	47	47	47	47
Very satisfied								19	18	18	17	16	21	18	16	21	17	8	9
N=10719								998	2182	1994	1998	1985	1992	1994	1981	3993	2004	1990	1995
<b>Spain</b>																			
Not at all satisfied											7	6	6	5	6	3	4	3	4
Not very satisfied											22	20	21	21	25	18	18	17	20
Fairly satisfied											47	47	47	46	46	57	53	55	53
Very satisfied											24	27	27	28	24	22	24	24	23
N=16913											988	1980	1998	1998	2002	3964	1990	1998	1993
<b>Portugal</b>																			
Not at all satisfied											16	10	7	7	9	7	8	6	6

Not very satisfied  
Fairly satisfied  
Very satisfied  
N=16864

28	25	22	30	23	18	20	19
53	60	66	51	65	67	67	69
3	5	6	9	5	7	7	6
989	1986	1972	1983	3971	1975	1991	1997

Table 1. Happiness over time, USA, 1972-1996 (%)

Year	All ages			Age >=30			Age < 30			Age <30 and not married		
	Not too Happy	Quite Happy	Very Happy	Not too Happy	Quite Happy	Very Happy	Not too Happy	Quite Happy	Very Happy	Not too Happy	Quite Happy	Very Happy
1972	17	53	30	17	52	31	16	57	27	21	64	15
1973	13	51	36	13	49	39	14	58	28	18	64	18
1974	13	49	38	13	47	41	15	56	29	21	63	16
1975	13	54	33	13	53	35	14	58	28	19	63	18
1976	13	53	34	12	53	35	14	53	33	24	53	24
1977	12	53	35	12	51	37	13	59	28	14	63	23
1978	10	56	34	9	56	35	11	57	33	15	61	23
1980	13	53	34	13	52	35	14	56	29	17	58	25
1982	15	55	31	14	54	33	16	59	25	21	59	19
1983	13	56	31	12	56	32	14	57	29	14	59	27
1984	13	52	35	13	50	37	12	59	29	15	62	23
1985	11	60	29	12	59	29	9	62	29	12	62	26
1986	11	56	32	11	55	33	12	60	29	16	57	27
1987	13	57	29	13	57	30	14	60	27	17	62	22
1988	9	57	34	10	55	35	7	61	32	10	65	24
1989	10	58	33	10	57	33	10	60	30	11	59	31
1990	9	58	33	10	57	33	7	58	35	7	68	25
1991	11	58	31	12	56	32	9	65	27	10	66	24
1993	11	57	32	12	56	32	9	63	29	6	69	26
1994	12	59	29	12	58	30	12	63	25	15	67	18
1996	12	58	30	12	56	31	11	62	27	12	66	22

Source: General Social Survey, NORC.

Notes: Answers to the question: "taken all together, how would you say things are these days -- would you say you are very happy, pretty happy or not too happy?".



Table 2. Happiness Ordered Logits - USA. Standard errors in parentheses.

	Age <30	Age <30	Age =30	Age =30
Time trend	.0166 (.0041)	.0091 (.0044)	-.0002 (.0022)	-.0116 (.0025)
Male	-.2871 (.0541)	-.3012 (.0543)	-.1984 (.0323)	-.2030 (.0324)
Black	-.7814 (.0725)	-.7379 (.0730)	-.4610 (.0424)	-.4125 (.0426)
Other non-white	-.2018 (.1539)	-.1641 (.1543)	-.0016 (.1002)	.0332 (.1003)
Part-time	-.1615 (.0725)	-.1166 (.0766)	-.0514 (.0510)	.0175 (.0515)
Job but absent	-.1672 (.1791)	-.1659 (.1790)	-.2358 (.0911)	-.2238 (.0911)
Unemployed	-.6889 (.1134)	-.6624 (.1137)	-.7881 (.0943)	-.6692 (.0949)
Retired			-.0076 (.0498)	.0791 (.0505)
In school	.0947 (.0901)	.1727 (.0914)	-.2146 (.1516)	-.0902 (.1523)
Keeping house	-.0778 (.0774)	-.0183 (.0782)	-.1145 (.0417)	-.0261 (.0425)
Other	-.0093 (.2729)	.0559 (.2735)	-.6644 (.1122)	-.5145 (.1128)
Age	-.2751 (.1329)	-.2099 (.1338)	-.0089 (.0061)	-.0129 (.0061)
Age <sup>2</sup>	.0054 (.0027)	.0040 (.0028)	.0001 (.0000)	.0002 (.00001)
Years schooling	.1157 (.0122)	.1084 (.0123)	.0446 (.0044)	.0288 (.0046)
Married	.5894 (.0602)	.5468 (.0608)	.8122 (.0528)	.6910 (.0538)
Widowed	-.1307 (.4406)	-.0768 (.4403)	-.2452 (.0664)	-.2540 (.0664)
Divorce	-.3918 (.1262)	-.3692 (.1263)	-.1390 (.0643)	-.1297 (.0644)
Separated	-.8090 (.1515)	-.7868 (.1519)	-.2655 (.0884)	-.2491 (.0885)
Log family income		.1508 (.0288)		.2243 (.0198)
cut1	-4.0566 (1.5753)	-2.0173 (1.6320)	-1.2484 (.1902)	.5152 (.2479)
cut2	-.9852 (1.5744)	1.0657 (1.6318)	1.5749 (.1901)	3.3525 (.2491)
N	6819	6819	21472	21472
Pseudo R <sup>2</sup>	.0485	.0510	.0412	.0444
Chi <sup>2</sup>	615.75	647.74	1691.8	1823.62
Log likelihood	-6042.5	-6026.5	-19672.8	-19606.9

Notes: equation also includes 8 Census area dummies and, where log family income is included, ase cases where mean family income was imputed.

Table 3. Life Satisfaction Ordered Logits - Europe. Standard errors in parentheses.

	Overall	Age <20	Age <30	Age =30
Time trend	.0066 (.0006)	.0196 (.0023)	.0169 (.0012)	.0034 (.0008)
Male	-.1270 (.0076)	-.0544 (.0224)	-.1171 (.0131)	-.1293 (.0095)
Self-employed 2	.3105 (.0278)	.1434 (.2359)	.1578 (.0673)	.3424 (.0307)
Self-employed 3	.1455 (.0233)	.2768 (.1748)	.0671 (.0605)	.1567 (.0253)
Manual	-.0462 (.0201)	-.0615 (.1336)	-.2132 (.0515)	-.0276 (.0221)
White collar	.1259 (.0207)	-.0324 (.1388)	-.0536 (.0523)	.1756 (.0229)
Executive	.3271 (.0241)	-.1310 (.1909)	.1752 (.0608)	.3503 (.0264)
Retired	.0563 (.0215)	-.1785 (.1857)	-.2942 (.0930)	.1064 (.0227)
Housewife	.0486 (.0206)	-.1971 (.1471)	-.1595 (.0544)	.0814 (.0225)
Student/Military	.1397 (.0305)	-.0335 (.1351)	-.1394 (.0567)	-.0869 (.0782)
Unemployed	-.9665 (.0242)	-1.1715 (.1373)	-1.1982 (.0545)	-.9420 (.0295)
Age	-.0454 (.0012)	-1.0698 (.2310)	-.1965 (.0175)	-.0319 (.0021)
Age <sup>2</sup>	.0005 (.0000)	.0285 (.0068)	.0033 (.0004)	.0005 (.0000)
ALS 15	.0700 (.0121)	-.0291 (.0638)	-.0108 (.0299)	.0644 (.0135)
ALS 16	.1479 (.0119)	.1306 (.0578)	.0630 (.0271)	.1597 (.0139)
ALS 17	.2340 (.0136)	.1480 (.0643)	.1538 (.0290)	.2456 (.0161)
ALS 18	.2832 (.0128)	.2067 (.0668)	.1746 (.0280)	.3084 (.0150)
ALS 19	.2724 (.0176)	.1883 (.0958)	.1814 (.0337)	.2970 (.0217)
ALS 20	.3293 (.0197)	.4434 (.2187)	.2331 (.0386)	.3535 (.0235)
ALS 21	.3781 (.0215)	.4355 (.2397)	.2507 (.0414)	.4243 (.0259)
ALS >=22	.2827 (.0122)	.2400 (.0758)	.2464 (.0296)	.2857 (.0138)
Studying	.3030 (.0248)	.2168 (.0580)	.2176 (.0333)	.2567 (.0594)
Married	.3053 (.0101)	.2097 (.0224)	.3847 (.0178)	.3050 (.0135)
Live together	.0369 (.0206)	-.0200 (.0641)	.1368 (.0292)	.0007 (.0305)
Divorce	-.5792 (.0231)	-1.1528 (.0955)	-.5973 (.0707)	-.5722 (.0256)
Separated	-.7265 (.0338)	-1.0049 (.3178)	-.6432 (.0814)	-.7164 (.0378)
Widowed	-.3257 (.0163)	-.6949 (.3623)	-.5517 (.1089)	-.3102 (.0182)
Belgium	.9210 (.0145)	.8073 (.0521)	.9826 (.0269)	.8969 (.0172)
Neths	1.4938 (.0148)	1.2348 (.0549)	1.5094 (.0276)	1.4988 (.0176)
Germany	.6052 (.0143)	.0047 (.0505)	.3803 (.0270)	.6884 (.0169)
Italy	-.1609 (.0142)	-.3512 (.0483)	-.1571 (.0264)	-.1682 (.0169)
Luxembourg	1.2885 (.0209)	.7975 (.0730)	1.1277 (.0396)	1.3458 (.0246)
Denmark	2.0542 (.0150)	1.7368 (.0557)	2.0482 (.0285)	2.0651 (.0177)
Eire	1.0596 (.0149)	.5961 (.0471)	.9047 (.0267)	1.1251 (.0181)
GB	.9714 (.0146)	.5922 (.0523)	.8561 (.0278)	1.0185 (.0173)
NI	1.0735 (.0218)	.5024 (.0710)	.8651 (.0392)	1.1681 (.0263)
Greece	-.3825 (.0165)	-.4659 (.0573)	-.3484 (.0309)	-.3987 (.0195)
Spain	.4067 (.0189)	.3393 (.0607)	.4622 (.0341)	.3759 (.0228)
Portugal	-.3173 (.0184)	-.4169 (.0609)	-.2300 (.0340)	-.3813 (.0220)
cut1	-3.1037 (.0356)	-12.8934 (1.9671)	-5.3165 (.2023)	-2.7274 (.2023)
cut2	-1.4792 (.0350)	-11.2165 (1.9669)	-3.6327 (.2017)	-1.1201 (.2017)
cut3	1.3002 (.0350)	-8.3124 (1.9664)	-.7586 (.2014)	1.6294 (.2014)
N	371440	32887	108574	262866

Pseudo R <sup>2</sup>	.0730	.0623	.0739	.0741
Chi <sup>2</sup>	59826.06	4272.66	17274.11	43393.8
Log likelihood	-379787.5	-32178.6	-108215.1	-
271016.6				

Notes: excluded categories are age left school <15, single, France and self-employed farmers, fishermen (skippers). Self-employed 2=professional self-employed (lawyers, accountants etc), self-employed 3=Business self-employed (owners of shops, craftsmen, proprietors etc.).

Table 4. Life satisfaction ordered logits by country and level of education. Coefficients and t-statistic on time trend.

	<i>Under 30 years of age</i>		<i>30 years of age and over</i>	
	<i>Less educated</i>	<i>More educated</i>	<i>Less educated</i>	<i>More educated</i>
All	.0183 (15.07)	.0094 (4.98)	.0061 (8.13)	.0094 (10.54)
France	.0255 (7.25)	-.0031 (0.51)	-.0009 (0.41)	.0035 (1.28)
Belgium	-.0403 (10.88)	-.0578 (7.76)	-.0311 (13.79)	-.0304 (10.54)
Neths	.0355 (8.10)	.0283 (3.75)	.0142 (5.78)	.0157 (5.14)
Germany	.0256 (6.18)	.0273 (4.63)	.0329 (14.35)	.0355 (13.33)
Italy	.0705 (20.50)	.0499 (8.86)	.0379 (17.70)	.0417 (16.86)
Lux	.0398 (5.89)	.0358 (3.21)	.0206 (5.18)	.0199 (3.95)
Denmark	.0312 (7.60)	.0207 (2.99)	.0205 (7.96)	.0260 (8.26)
Eire	-.0171 (4.93)	-.0249 (4.99)	-.0259 (11.30)	-.0261 (9.79)
GB	.0106 (2.85)	.0105 (2.28)	.0045 (2.10)	.0061 (2.58)
NI	.0346 (4.94)	.0414 (4.59)	.0244 (5.40)	.0238 (4.82)
Greece	.0200 (2.86)	.0187 (1.42)	-.0243 (5.55)	-.0138 (2.61)
Spain	.0261 (1.93)	-.0256 (1.20)	-.0015 (0.17)	.0050 (0.49)
Portugal	.1234 (7.90)	.0729 (3.41)	.0761 (7.94)	.0756 (7.29)

All equations include 5 marital status dummies, 9 labor force status dummies, age and its square, gender dummy and 10 schooling dummies (3 if age left school <18 and 5 if over 17). The overall equations also include 12 country dummies.

"Less educated" = age left school <18. "More educated" = age left school = 18 years.

Source: Eurobarometer Surveys

Table 5. Happiness Ordered Logits - USA. Standard errors in parentheses.

	Male	Female	Male <30	Female <30	Non-white<30	Male non-white <30
Time trend	.0107 (.0029)	-.0036 (.0027)	.0274 (.0061)	.0076 (.0057)	.0461 (.0102)	.0721 (.0162)
Male					.0968 (.1276)	
Black	-.4210 (.0572)	-.6133 (.0474)	-.5840 (.1135)	-.8989 (.0948)		
Other non-white	.1347 (.1249)	-.1890 (.1125)	-.1168 (.2319)	-.2620 (.2064)		
Part-time	-.2031 (.0739)	.0021 (.0522)	-.3166 (.1224)	-.0869 (.0991)	-.3513 (.1947)	-.6508 (.3180)
Job but absent	-.1994 (.1123)	-.2381 (.1182)	-.3157 (.2566)	-.0022 (.2534)	-1.3557 (.4572)	-1.3822 (.7341)
Unemployed	-.8882 (.0860)	-.5635 (.1339)	-.8462 (.1384)	-.4556 (.2103)	-.6895 (.2348)	-1.0675 (.3114)
Retired	-.0637 (.0731)	.0113 (.0717)				
In school	.0648 (.1064)	.1705 (.1001)	-.0484 (.1280)	.2127 (.1289)	-.3006 (.2078)	-.7514 (.3248)
Keeping house	-.5053 (.1875)	-.0667 (.0409)	-.1946 (.3706)	-.0635 (.0855)	.1075 (.1689)	.2764 (.5702)
Other	-.6952 (.1433)	-.4896 (.1525)	-.5311 (.4079)	.4094 (.3672)	-.1662 (.4474)	-.8668 (.6922)
Age	-.0176 (.0067)	-.0121 (.0051)	-.2822 (.1982)	-.2561 (.180)	-.3221 (.3106)	-.6731 (.4896)
Age <sup>2</sup>	.0003 (.00007)	.0002 (.00005)	.0049 (.0040)	.0053 (.0037)	.0062 (.0064)	.0119 (.0102)
Years schooling	.6461 (.0541)	.6258 (.0529)	.6064 (.0901)	.5768 (.0828)	.5481 (.1431)	.7839 (.2460)
Married	-.5355 (.1099)	-.3598 (.0713)	-.4033 (.8468)	-.0656 (.5126)	.5480 (.1430)	-1.2712 (1.276)
Widowed	-.3344 (.0832)	-.3069 (.0677)	-.4028 (.2318)	-.3924 (.1515)	-1.4963 (.7378)	-.2517 (.6850)
Divorce	-.4270 (.1213)	-.5181 (.0926)	-.7156 (.2865)	-.8341 (.1796)	-.1874 (.3025)	-.8099 (.5334)
Separated	.0301 (.0056)	.0726 (.0060)	.1278 (.0180)	.1106 (.0168)	-.7864 (.2687)	.1282 (.0549)
cut1	-1.6807 (.1779)	-1.1370 (.1589)	-4.2549 (2.3420)	-3.5082 (2.1443)	-3.9647 (3.685)	-8.6271 (5.779)
cut2	1.2486 (.1775)	1.7056 (.1590)	-1.0446 (2.3405)	-.5387 (2.1434)	-1.0874 (3.684)	-5.4934 (5.770)
N	12431	15860	3117	3702	1207	493
Pseudo R <sup>2</sup>	.0417	.0438	.0469	.0502	.0448	.0782
Chi <sup>2</sup>	978.73	1326.7	266.3	350.7	104.31	73.1
Log likelihood	-11255.7	-14483.6	-2703.2	-3318.7	-1112.2	-430.6

Notes: equation also includes 8 Census area dummies. 'Non-white' includes black and other non-whites.

Table 6. Happiness Ordered Logits - USA. Standard errors in parentheses. Men Under age 30.

	Less educated	More educated	Employed	Not employed
a) Men				
Time trend	.0174 (.0085)	.0427 (.0092)	.0219 (.0070)	.0464 (.0129)
Black	-.5743 (.1407)	-.6137 (.1980)	-.5485 (.1361)	-.7239 (.2114)
Other non-white	.1227 (.3019)	-.5318 (.3683)	.1945 (.2727)	-1.0106 (.4400)
Part-time	-.4084 (.1723)	-.3296 (.1822)	.0007 (.2785)	
Job but absent	-.5507 (.3356)	-.0653 (.3985)	.3203 (.2582)	
Unemployed	-.8702 (.1597)	-.8693 (.2872)		
In school	-.3820 (.2066)	.1758 (.1761)		.7192 (.2029)
Keeping house	-.1961 (.4045)	-.3982 (.8685)		.5628 (.3855)
Other	-.3137 (.4742)	-1.4257 (.7613)		.2204 (.4299)
Age	-.7160 (.2545)	.2321 (.3988)	-.3411 (.2358)	-.2440 (.4163)
Age <sup>2</sup>	.0144 (.0052)	-.0062 (.0080)	.0060 (.0048)	.0048 (.0088)
Married	.4835 (.1232)	.7598 (.1346)	.6506 (.0989)	.3478 (.2294)
Widowed	.1323 (.1034)	-1.6998 (.4355)	-.6184 (.9492)	1.2845 (.9788)
Divorce	-.6056 (.2957)	-.0302 (.3754)	-.2067 (.2567)	-1.3381 (.5580)
Separated	-.9051 (.3602)	-.3759 (.4854)	-.5876 (.3082)	-1.5296 (.8921)
Years schooling	.0595 (.0425)	.1788 (.0388)	.1263 (.0200)	.1380 (.0424)
cut1	-9.8783 (3.0271)	2.0978 (4.8428)	-4.7224 (2.835)	-2.8441 (4.715)
cut2	-6.8431 (3.0207)	5.6521 (4.8454)	-1.4792 (2.833)	.3148 (4.713)
N	1744	1373	2430	687
Pseudo R <sup>2</sup>	.0398	.0547	.0322	.0848
Chi <sup>2</sup>	129.8	129.0	139.41	110.7
Log likelihood	-1567.-0	-1114.7	-2096.5	-597.6

b) Females -- coefficients and standard errors on a time trend from a separate equation for females

.0099 (.0075)      .0027 (.0089)      .0123 (.0076)      .0037 (.0087)

Notes: equation also includes 8 Census area dummies. 'Non-white' includes black and other non-whites. 'Less educated is <13 years of schooling. "More educated" is =13 years schooling.



Table 7. The Decline in Marriage Among Young and Old in the US and Europe

## % Married among those less than thirty

	<i>1970s</i>	<i>1980s</i>	<i>1990s</i>
USA	53.8%	41.6%	36.5%
Europe	46.7%	33.1%	25.3%

## % Married among those greater than or equal to thirty

	<i>1970s</i>	<i>1980s</i>	<i>1990s</i>
USA	72.5%	61.4%	57.3%
Europe	85.0%	73.1%	70.1%

Source: General Social Surveys and Eurobarometer Surveys.

Note: Only three years are available for the 1990s. European wide weights are imposed to obtain the European estimates.

Table 8 Distribution of Happiness Scores for Young Americans.

**Proportions saying 1 (not too happy) to 3 (very happy).***a) Under-30 year olds 1972-1984*

Happiness	Married	Not married
1 (not too happy)	0.096	0.175
2 (pretty happy)	0.535	0.612
3 (very happy)	0.369	0.213

*b) Under-30 year olds 1985-1992*

	Married	Not married
1 (not too happy)	0.062	0.111
2 (pretty happy)	0.572	0.628
3 (very happy)	0.366	0.261

*c) =30 year olds 1972-1984*

	Married	Not married
1 (not too happy)	0.090	0.209
2 (pretty happy)	0.499	0.562
3 (very happy)	0.411	0.229

*d) =30 year olds 1985-1992*

	Married	Not married
1 (not too happy)	0.068	0.172
2 (pretty happy)	0.532	0.616
3 (very happy)	0.401	0.212

Source: General Social Surveys.  
Only three years are available for the 1990s.

Table 9. Happiness and marriage

	Married >=30	Not married >=30	Married <30	Not married <30	All
Time trend	-.0041 (.0023)	-.0069 (.0032)	-.0025 (.0055)	.0131 (.0049)	-.0031 (.0017)
Part-time	.0777 (.0591)	.1597 (.0821)	.2068 (.1272)	-.1720 (.0939)	.0712 (.0393)
Job but absent	-.0604 (.1094)	-.2073 (.1389)	-.1146 (.2600)	-.4763 (.2341)	-.1591 (.0766)
Unemployed	-.4844 (.1291)	-.5141 (.1202)	-.5085 (.2110)	-.4000 (.1388)	-.4660 (.0684)
Retired	.1563 (.0672)	-.0842 (.0783)	n/a	n/a	.0682 (.0482)
In school	-.0643 (.2057)	.2244 (.2105)	.2477 (.2186)	.2047 (.1035)	.3329 (.0704)
Keeping house	.1488 (.0509)	-.1896 (.0737)	.2198 (.1050)	-.2268 (.1369)	.0142 (.0358)
Other	.1679 (.1529)	-.8031 (.1401)	1.0325 (.6569)	-.0030 (.3241)	-.2879 (.0967)
Male	-.0588 (.0393)	-.2586 (.0486)	-.2919 (.0870)	-.3251 (.0674)	-.1817 (.0257)
Black	-.5157 (.0609)	-.1935 (.0611)	-.6641 (.1349)	-.5664 (.0955)	-.4265 (.0369)
Other non-white	.1108 (.1076)	-.0038 (.1415)	.1763 (.2236)	-.2207 (.1737)	.0354 (.0719)
Parents divorced resp=16	-.1375 (.0605)	-.1847 (.0682)	-.2111 (.1010)	-.1174 (.0814)	-.1705 (.0363)
Years schooling	.0177 (.0060)	.0434 (.0074)	.0927 (.0191)	.0609 (.0184)	.0316 (.0043)
Age	.0068 (.0094)	-.0158 (.0098)	.1507 (.2348)	-.3725 (.1693)	-.0107 (.0044)
Age2 * 102	.0031 (.0091)	.0272 (.0088)	-.0027 (.0047)	.7594 (.0035)	.0209 (.0046)
Income far below average	-.4625 (.0992)	-.7122 (.0858)	-.6087 (.2044)	-.4866 (.1392)	-.6076 (.0553)
Income below average	-.2996 (.0455)	-.3013 (.0502)	-.4082 (.0914)	-.2855 (.0807)	-.3136 (.0289)
Income above average	.1227 (.0419)	.1635 (.0685)	.0376 (.1112)	.3267 (.0916)	.1404 (.0315)
Income far above average	.3126 (.1124)	.0843 (.1737)	-.5468 (.4049)	.0383 (.2589)	.1669 (.0857)
Married	n/a	n/a	n/a	n/a	.6168 (.0363)
Widowed	n/a	-.2702 (.0758)	n/a	.3474 (.4398)	-.4127 (.0551)
Divorce	n/a	-.1288 (.0615)	n/a	-.1894 (.1315)	-.2311 (.0475)
Separated	n/a	-.2983 (.0864)	n/a	-.4023 (.1583)	-.3939 (.0689)
Finances getting better	.2818 (.0375)	.3541 (.0525)	.3904 (.0850)	.3671 (.0752)	.3288 (.0265)
Finances getting worse	-.5927 (.0446)	-.5416 (.0541)	-.5079 (.1121)	-.5817 (.0925)	-.5681 (.0308)
# siblings	.0057 (.0053)	-.0023 (.0066)	-.0246 (.0131)	-.0243 (.0122)	-.0025 (.0037)
# children	-.0229 (.0099)	.0266 (.0123)	-.0736 (.0390)	-.1147 (.0513)	-.0033 (.0074)
Protestant	.3482 (.0726)	.1919 (.0817)	.2493 (.1322)	.3568 (.0947)	.2984 (.0436)
Catholic	.2578 (.0766)	.0952 (.0877)	.1227 (.1436)	.3394 (.1018)	.2103 (.0465)
Jewish.	.2124 (.1255)	-.5290 (.1703)	.1974 (.3478)	-.1474 (.2482)	-.0162 (.0882)

Other.	.1973 (.1343)	.0151 (.1589)	.5053 (.2789)	.0653 (.1949)	.1636 (.0851)
cut1	-2.0672 (.2744)	-1.3908 (.3186)	.7568 (2.8842)	-5.3049 (1.9695)	-1.5668 (.1329)
cut2	.9488 (.2735)	1.6169 (.3188)	3.9925 (2.8848)	-1.9302 (1.9674)	1.4829 (.1326)
N	15575	9435	3254	4302	32566
Pseudo R <sup>2</sup>	.0357	.0486	.0646	.0784	.0679
Chi <sup>2</sup>	1004.2	954.2	379.0	614.8	4173.7
Log likelihood	-13563.7	-8497.3	-2744.6	-3611.4	-28643.4

Note: not married includes widowed, separated, divorced and single. Excluded categories -- FT job, white, income average, finances same, no religion. Equations also include 44 state dummies.

Table 10. Life Satisfaction Ordered Logits - Europe aged &lt;30 by Labor Market Status.

	Employed	Housewife/retired	Student/military service	Unemployed
Time trend	.0143 (.0017)	-.0041 (.0035)	.0336 (.0023)	.0142 (.0053)
Male	-.1159 (.0180)	-.2046 (.1118)	-.0264 (.0224)	-.2889 (.0408)
Self-employed 2	.1841 (.0684)			
Self-employed 3	.0766 (.0614)			
Manual	-.2324 (.0523)			
White collar	-.0425 (.0535)			
Executive	.2098 (.0622)			
Retired		-.1107 (.1076)		
Age	-.1494 (.0306)	-.1935 (.0590)	-.1490 (.0395)	-.2963 (.0686)
Age <sup>2</sup>	.0022 (.0007)	.0036 (.0012)	.0018 (.0009)	.0054 (.0015)
ALS 15	-.0542 (.0391)	-.0153 (.0617)	.2802 (.1578)	-.0896 (.0839)
ALS 17	.0645 (.0376)	.2630 (.0642)	.2671 (.1460)	.2215 (.0832)
ALS 18	.0834 (.0365)	.3545 (.0629)	.1686 (.1467)	.2292 (.0782)
ALS 19	.1115 (.0427)	.2294 (.0874)	.2278 (.1616)	.2572 (.0918)
ALS 20	.1750 (.0476)	.4070 (.1164)	.2738 (.1778)	.2203 (.1094)
ALS 21	.1627 (.0503)	.3601 (.1222)	.2725 (.2114)	.3485 (.1245)
ALS >=22	.1719 (.0384)	.1924 (.0824)	.3869 (.1299)	.3128 (.0840)
Studying	.0815 (.0592)	.2368 (.1462)	.3365 (.1195)	.3619 (.1485)
Married	.3442 (.0212)	.5398 (.0619)	.2757 (.0731)	.5213 (.0598)
Live together	.1139 (.0365)	.5011 (.1167)	.0925 (.0695)	.2858 (.0909)
Divorce	-.4847 (.0890)	-.7842 (.1636)	-.6677 (.3239)	-.5107 (.2029)
Separated	-.5926 (.1065)	-.7074 (.1832)	-.9971 (.4284)	-.3729 (.1938)
Widowed	-.7744 (.2009)	-.3661 (.1498)	.1127 (.4705)	.1161 (.4151)
Belgium	1.1825 (.0378)	1.1649 (.0886)	.6692 (.0498)	.7271 (.0875)
Netherlands	1.7903 (.0408)	1.5930 (.0706)	1.1204 (.0500)	1.2451 (.1086)
Germany	.5723 (.0377)	.6568 (.0819)	-.0094 (.0506)	.3874 (.1032)
Italy	.0271 (.0401)	-.1560 (.0802)	-.5382 (.0469)	-.1122 (.0827)
Luxembourg	1.3009 (.0535)	1.6709 (.1223)	.7514 (.0726)	.4048 (.2654)
Denmark	2.3061 (.0395)	1.9800 (.1204)	1.7128 (.0513)	1.7537 (.1011)
Eire	1.2232 (.0384)	1.0056 (.0758)	.6659 (.0503)	.1046 (.0864)
GB	1.1258 (.0383)	.9603 (.0715)	.5136 (.0605)	.3907 (.0956)
NI	1.1391 (.0555)	.8166 (.0993)	.5693 (.0842)	.6890 (.1161)
Greece	-.3696 (.0471)	.0458 (.0809)	-.7097 (.0559)	-.0365 (.1032)
Spain	.5928 (.0531)	.7164 (.1014)	.0936 (.0588)	.4719 (.1019)
Portugal	-.0846 (.0473)	.0147 (.1063)	-.6035 (.0647)	-.1956 (.1202)
cut1	-4.7874 (.3558)	-4.7452 (.6814)	-4.9675 (.4149)	-5.2562 (.7634)
cut2	-3.0522 (.3551)	-3.1162 (.6802)	-3.1564 (.4137)	-3.7098 (.7624)
cut3	-.1027 (.3548)	-.3802 (.6796)	-.1144 (.4132)	-1.3841 (.7615)
N	53961	13110	32474	9029
Pseudo R <sup>2</sup>	.0732	.0559	.0666	.0438
Chi <sup>2</sup>	8319.8	1590.3	4363.4	997.8

Log likelihood	-52708.3	-13422.2	-30588.7	-10883.8
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Notes: 'Not employed' includes unemployed, retired, student/military service and housewife.  
(Standard errors in parentheses).

Table 11. Life Satisfaction Ordered Logits - Europe by Education. Standard errors in parentheses.

	Under age 30		30 years and above	
	low education	high education	low education	high education
Time trend	.0067 (.0017)	.0285 (.0018)	.0063 (.0008)	-.0075 (.0017)
Male	-.1736 (.0193)	-.0577 (.0179)	-.1071 (.0109)	-.2109 (.0195)
Self-employed 2	.1119 (.0913)	.3016 (.1292)	.3052 (.0405)	.5130 (.07423)
Self-employed 3	-.0188 (.0680)	.2414 (.1325)	.1306 (.0272)	.3380 (.07613)
Manual	-.2428 (.0567)	-.1210 (.1196)	-.0422 (.0233)	.0863 (.07259)
White collar	-.0845 (.0587)	.0303 (.1180)	.1828 (.0250)	.2746 (.06986)
Executive	.1695 (.0816)	.2802 (.1230)	.3139 (.0340)	.5418 (.07082)
Retired	-.2637 (.1013)	-.2226 (.2361)	.0588 (.0240)	.4110 (.0735)
Housewife	-.2177 (.0607)	-.0780 (.1253)	.0645 (.0238)	.2330 (.07281)
Student/Military	-.2323 (.0708)	-.0261 (.1203)	.0284 (.1560)	.0116 (.1115)
Unemployed	-1.2377 (.0609)	-.9972 (.1226)	-.9678 (.0320)	-.7954 (.08347)
Age	-.2021 (.0276)	-.1783 (.0242)	-.0341 (.0023)	-.0243 (.0049)
Age <sup>2</sup>	.0036 (.0006)	.0026 (.0005)	.0003 (.00002)	.0003 (.00004)
ALS 15	-.0055 (.0303)		.0532 (.0137)	
ALS 17	.0960 (.0282)		.1429 (.0141)	
ALS 18	.1805 (.0299)		.2282 (.0164)	
ALS 19	.2055 (.0290)		.2893 (.0153)	
ALS 20		.0514 (.0417)		.0611 (.0305)
ALS 21		.0828 (.0444)		.1459 (.0325)
ALS >=22		.0600 (.0337)		-.0012 (.0240)
Studying		.0239 (.0412)		.0111 (.0663)
Married	.3336 (.0225)	.4486 (.0298)	.2850 (.0160)	.3542 (.0256)
Live together	.1265 (.0415)	.1686 (.0412)	-.0354 (.0385)	.0891 (.0507)
Divorce	-.7116 (.0800)	-.2151 (.1481)	-.6194 (.0305)	-.4769 (.0478)
Separated	-.6752 (.0924)	-.5409 (.1697)	-.7313 (.0441)	-.7110 (.0743)
Widowed	-.5861 (.1178)	-.3320 (.2769)	-.3012 (.0205)	-.4027 (.0455)
Belgium	1.1762 (.0399)	.8171 (.0366)	.9570 (.0199)	.7512 (.0348)
Netherlands	1.6899 (.0421)	1.3578 (.0369)	1.5384 (.0208)	1.4230 (.0336)
Germany	.5788 (.0380)	.1848 (.0388)	.7016 (.0191)	.6856 (.0372)
Italy	.0611 (.0402)	-.3510 (.0356)	-.1358 (.0191)	-.2578 (.0370)
Luxembourg	1.3269 (.0584)	.9464 (.0541)	1.3696 (.0287)	1.3024 (.0484)
Denmark	2.1338 (.0421)	1.9580 (.0391)	2.0842 (.0209)	2.0593 (.0346)
Eire	.9969 (.0363)	.8521 (.0404)	1.1338 (.0201)	1.1383 (.0432)
GB	.9988 (.0363)	.7165 (.0460)	1.0399 (.0193)	.9663 (.0408)
NI	.9821 (.0491)	.8055 (.0681)	1.1873 (.0285)	1.0948 (.0720)
Greece	-.1597 (.0455)	-.5306 (.0426)	-.4063 (.0222)	-.3582 (.0419)
Spain	.6637 (.0517)	.2883 (.0458)	.4027 (.0258)	.2746 (.0494)
Portugal	.0450 (.0472)	-.4964 (.0500)	-.3477 (.0244)	-.5512 (.0524)
cut1	-5.1917 (.3179)	-5.4507 (.2909)	-2.7437 (.0689)	-3.0365 (.1412)
cut2	-3.5783 (.3173)	-3.6474 (.2899)	-1.1454 (.0684)	-1.3699 (.1397)
cut3	-.8103 (.3169)	-.6394 (.2893)	1.5643 (.0685)	1.5470 (.1398)

N	55381	53193	205017	57849
Pseudo R <sup>2</sup>	.0683	.0792	.0696	.0831
Chi <sup>2</sup>	8399.4	8727.08	32163.9	10114.2
Log likelihood	-575253.5	-50744.5	-215015.5	-55796.8

Notes: 'Not employed' includes unemployed, retired, student/military service and housewife. 'low education'=age left school age 18 or under. 'high education'=age left school over age 18



Table 12. Life Satisfaction and Happiness Ordered Logits - Europe &lt;age 30.

	(1)		(3)		(4)	
	Life satisfaction		Happiness			
	Married	Not married	Married	Not married	Married	Not married
Time trend	.0044 (.0021)	.0227 (.0015)	.0041 (.0050)	.0250 (.0037)		
Male	-.2689 (.0274)	-.0734 (.0150)	-.3314 (.0457)	-.1675 (.0272)		
Self-employed 2	.3272 (.1139)	.0640 (.0839)	.3444 (.2088)	.0231 (.1585)		
Self-employed 3	.0858 (.1021)	.0635 (.0760)	.0354 (.1734)	.3608 (.1327)		
Manual	-.1350 (.0908)	-.2574 (.0627)	-.0670 (.1559)	-.0880 (.1088)		
White collar	.0207 (.0919)	-.0994 (.0638)	.0773 (.1569)	.0420 (.1106)		
Executive	.3504 (.1043)	.0856 (.0752)	.3798 (.1899)	.3634 (.1583)		
Retired	.0799 (.1448)	-.5126 (.1265)	-.3651 (.4604)	.1862 (.3713)		
Housewife	-.0959 (.0922)	-.4006 (.0761)	-.0362 (.1578)	-.0558 (.1357)		
Student/Military	-.2279 (.1379)	-.2124 (.0669)	-.0918 (.2217)	-.0448 (.1164)		
Unemployed	-.9203 (.1021)	-1.3114 (.0653)	-.5778 (.1743)	-.9848 (.1138)		
Age	-.1126 (.0490)	-.1613 (.0215)	.0146 (.0970)	-.1715 (.0394)		
Age <sup>2</sup>	.0019 (.0010)	.0023 (.0005)	-.0005 (.0020)	.0026 (.0009)		
ALS 15	-.0022 (.0445)	-.0627 (.0409)	.0520 (.0692)	-.0268 (.0682)		
ALS 16	.0798 (.0410)	.0297 (.0366)	.0362 (.0650)	.0024 (.0626)		
ALS 17	.1895 (.0446)	.1078 (.0388)	.0921 (.0697)	.0963 (.0662)		
ALS 18	.2574 (.0431)	.1069 (.0374)	.1745 (.0691)	.0726 (.0649)		
ALS 19	.2094 (.0540)	.1477 (.0438)	.3384 (.0872)	.1494 (.0773)		
ALS 20	.3214 (.0626)	.1734 (.0498)	.2700 (.1059)	.0612 (.0910)		
ALS 21	.3367 (.0654)	.1793 (.0541)	.2491 (.1076)	.0744 (.0968)		
ALS >=22	.2320 (.0473)	.2383 (.0386)	.1534 (.0862)	.0741 (.0793)		
Studying	.3178 (.1028)	.1772 (.0391)	.3642 (.1523)	.0127 (.0673)		
Single		-.1649 (.0298)		-.2896 (.0560)		
Divorced		-.6779 (.0748)		-1.0695 (.1357)		
Separated		-.7278 (.0853)		-1.0841 (.1441)		
Widowed		-.5941 (.1173)		-1.1308 (.2419)		
Belgium	1.2039 (.0449)	.8719 (.0338)	1.1319 (.0702)	1.0977 (.0702)		
Neths	1.7780 (.0457)	1.3592 (.0349)	1.6355 (.0702)	1.3780 (.0702)		
Germany	.6579 (.0488)	.2674 (.0327)	.3738 (.0815)	-.0235 (.0815)		
Italy	-.0423 (.0528)	-.2273 (.0312)	-.4158 (.0849)	-.6137 (.0849)		
Luxembourg	1.5249 (.0753)	.9594 (.0468)	.5230 (.1190)	.3865 (.1190)		
Denmark	2.3610 (.0545)	1.9108 (.0338)	1.3616 (.0813)	.9423 (.0813)		
Eire	1.1260 (.0501)	.8032 (.0321)	.9871 (.0779)	.7725 (.0779)		
GB	1.1083 (.0460)	.7251 (.0352)	.7097 (.0723)	.4287 (.0723)		
N. Ireland	1.0698 (.0641)	.7813 (.0499)	.7911 (.0995)	.5184 (.0995)		
Greece	-.1037 (.0577)	-.4559 (.0369)	-.7783 (.1025)	-1.0457 (.1025)		
Spain	.6432 (.0676)	.3658 (.0398)	.5106 (.1412)	.2604 (.1412)		
Portugal	-.1499 (.0637)	-.2892 (.0404)	-.2281 (.1385)	-.2200 (.1385)		
cut1	-4.3586 (.6016)	-5.2884 (.2429)	-1.5090 (1.1971)-3.9706 (.4428)			
cut2	-2.6920 (.6011)	-3.5955 (.2423)	1.5983 (1.1971)-.8614 (.4418)			
cut3	.2168 (.6009)	-.7270 (.2419)	n/a	n/a		
N	32876	75698	12977	24326		

Pseudo R <sup>2</sup>	.0706	.0757		.0642	.0764
Chi <sup>2</sup>	4872.7	12453.8		1553.7	3547.2
Log likelihood	-32072.46	-82219.0		-11332.3	-
21426.9					

Notes: excluded categories are age left school <15, single, France and self-employed farmers, fishermen (skippers). Self-employed 2=professional self-employed (lawyers, accountants etc), self-employed 3=Business self-employed (owners of shops, craftsmen, proprietors etc.).

Table 13. Satisfaction from financial situation and job.

	Finances <30	Finances >=30	Job <30	Job >=30	Job >=30 (working)
Time trend	-.0034 (.0045)	-.0123 (.0025)	-.0001 (.0047)	-.0158 (.0028)	-.0147 (.0033)
Part-time	.0664 (.0797)	.1240 (.0540)	-.2071 (.0752)	-.0111 (.0537)	-.0173 (.0547)
Job but absent	-.2351 (.1826)	.0748 (.0975)	-.3998 (.1700)	.0736 (.0976)	.0736 (.0982)
Unemployed	-.5385 (.1248)	-.8596 (.1136)	-.2846 (.1243)	-.3762 (.1024)	n/a
Retired	1.2225 (1.715)	.2507 (.0532)	n/a	n/a	n/a
In school	.1197 (.0952)	.2678 (.1657)	n/a	n/a	n/a
Keeping house	.0172 (.0832)	.2638 (.0448)	-.1650 (.0823)	-.4348 (.0474)	n/a
Other	.2032 (.3034)	-.3517 (.1229)	n/a	n/a	n/a
Male	-.1581 (.0555)	-.0380 (.0342)	-.0012 (.0568)	-.1944 (.0380)	-.1780 (.0397)
Black	.2103 (.0776)	-.4026 (.0465)	-.3129 (.0784)	-.2872 (.0498)	-.3572 (.0589)
Other non-white	.3508 (.1543)	.0935 (.1044)	-.1687 (.1625)	-.1960 (.1044)	-.1323 (.1235)
Parents divorced	-.2437 (.0701)	-.1587 (.0544)	.0009 (.0700)	-.1486 (.0563)	-.1226 (.0663)
Unemployment rate	.0022 (.0092)	.0109 (.0101)	.0065 (.0095)	.0238 (.0105)	.0234 (.0125)
Years schooling	.0291 (.0139)	.0116 (.0051)	.0424 (.0139)	.0056 (.0058)	.0104 (.0068)
Age	-.2347 (.1477)	.0655 (.0073)	.2757 (.1531)	.0395 (.0088)	.0280 (.0125)
Age <sup>2</sup>	.0043 (.0029)	-.0002 (.0000)	-.0048 (.0030)	-.0001 (.0001)	.0000 (.0001)
Income below average	.6538 (.1451)	.6390 (.0821)	.1274 (.1278)	.1879 (.0818)	.0393 (.1117)
Income average	- 1.7227 (.1420)	1.7197 (.0809)	.3943 (.1256)	.4638 (.0803)	.3380 (.1086)
Income above average	- 2.6105 (.1556)	2.4232 (.0885)	.5962 (.1416)	.6699 (.0877)	.5788 (.1144)
Income far above average	- 2.4917 (.2710)	2.4387 (.1390)	.3730 (.2756)	.9145 (.1463)	.7133 (.1741)
Married	.7810 (.4627)	-.1969 (.0512)	.2080 (.4822)	-.2222 (.0647)	-.0372 (.0935)
Widowed	-.2354 (.1264)	-.5587 (.0518)	-.2572 (.1213)	-.1227 (.0540)	.0020 (.0609)
Divorce	.0792 (.1561)	-.4089 (.0841)	.0627 (.1523)	-.0203 (.0864)	.3103 (.1031)
Separated	-.0664 (.0651)	-.2256 (.0604)	-.3086 (.0652)	-.2340 (.0647)	-.1943 (.0724)
Finances getting better	.6128 (.0586)	.7275 (.0345)	.3315 (.0603)	.2951 (.0376)	.3507 (.0435)
Finances getting worse	-1.1136 (.0772)	-1.3527 (.0396)	-.3083 (.0760)	-.2996 (.0419)	-.2864 (.0513)
# siblings	.0005 (.0094)	-.0000 (.0046)	-.0135 (.0094)	-.0049 (.0051)	.0090 (.0062)
# children	-.2275 (.0362)	-.0156 (.0092)	.0005 (.0358)	.0147 (.0108)	.0096 (.0140)
Household size	.1203 (.0203)	-.0632 (.0128)	.0199 (.0212)	.0038 (.0137)	.0180 (.0167)
cut1	-2.0066 (1.8517)	2.4410 (.2747)	1.7731 (1.925)	-1.4633 (.3091)	-1.7420 (.3996)
cut2	.5363 (1.8514)	5.0511 (.2766)	3.1868 (1.925)	-.1652 (.3076)	-.4103 (.3976)

cut3	n/a	n/a	5.1753 (1.926)	1.8198 (.3078)	1.6362 (.3978)
N	6343	19980	5496	15653	11292
Pseudo R <sup>2</sup>	.1517	1867	.0306	.0336	.0326
Chi <sup>2</sup>	2038.6	7977.0	397.01	1102.8	750.17
Log likelihood	-5700.7	-17379.9	-6287.2	-15862.1	11122.6

### c) Table 13 Questions

#### 1) Finances

"We are interested in how people get along financially these days. So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied or not satisfied at all?"

2) Job (asked of those currently working, temporarily not at work, or keeping house).  
On the whole how satisfied are you with the work you do - would you say you are very satisfied, moderately satisfied, a little dissatisfied, or very dissatisfied?

Note: all equations also include 8 Census Area dummies.

Table 14. Various types of life satisfaction ordered logits -- USA. Standard errors in parentheses.

	Friends (1)	Family (2)	Hobby/leisure (3)	Health (4)	City (5)
<b>a) Age &lt;30 Full equations</b>					
Time trend	.0056 (.0046)	.0119 (.0047)	.0019 (.0045)	-.0073 (.0046)	.0047 (.0044)
Part-time	.0152 (.0796)	-.0213 (.0809)	.0202 (.0781)	-.0725 (.0788)	-.0566 (.0769)
Job but absent	-.1474 (.1814)	-.1265 (.1900)	-.0478 (.1743)	-.6435 (.1783)	-.2985 (.1792)
Unemployed	-.0133 (.1122)	.0737 (.1135)	-.0639 (.1099)	-.0400 (.1111)	-.1522 (.1087)
Retired	-2.4489 (1.4471)	-.7124 (1.4514)	-1.3048 (1.456)	-2.3411 (1.486)	.1616 (1.485)
In school	-.0178 (.0950)	.1772 (.0962)	.1829 (.0937)	-.1307 (.0938)	-.0171 (.0928)
Keeping house	-.1688 (.0808)	-.0393 (.0842)	-.1983 (.0794)	.0354 (.0810)	.0077 (.0786)
Other	.3176 (.3093)	.1587 (.3030)	.0487 (.2984)	-.0499 (.3267)	.0636 (.3082)
Male	-.3627 (.0552)	-.4407 (.0565)	.2190 (.0542)	.1348 (.0547)	-.1520 (.0535)
Black	-.7279 (.0750)	.0456 (.0764)	-.3495 (.0739)	.3569 (.0748)	-.3023 (.0727)
Other non-white	-.0026 (.1583)	.1735 (.1654)	.0184 (.1568)	.3650 (.1634)	.3154 (.1576)
Parents divorced	-.1304 (.0692)	-.0320 (.0709)	-.1074 (.0681)	-.0922 (.0692)	-.3106 (.0668)
Unemployment rate	-.0036 (.0088)	.0126 (.0090)	-.0007 (.0086)	.0163 (.0088)	.0012 (.0085)
Years schooling	.0909 (.0138)	.0577 (.0143)	.1281 (.0137)	.0449 (.0137)	.0446 (.0134)
Age	-.0944 (.1438)	.2310 (.1472)	-.2941 (.1409)	-.1803 (.1436)	-.0810 (.1397)
Age <sup>2</sup>	.0012 (.0029)	-.0048 (.0029)	.0058 (.0028)	.0036 (.0029)	.0021 (.0028)
Income below average	.1136 (.1218)	-.0274 (.1217)	-.0288 (.1198)	.0794 (.1191)	.0869 (.1184)
Income average	.3914 (.1202)	.1300 (.1197)	.1081 (.1180)	.2916 (.1172)	.3413 (.1167)
Income above average	.5568 (.1345)	.1654 (.1348)	.2196 (.1320)	.3107 (.1312)	.4790 (.1307)
Income far above average	.4966 (.2595)	-.0893 (.2577)	-.2638 (.2468)	.3336 (.2521)	.2088 (.2488)
Married	.9741 (.4425)	-.2566 (.5043)	.8827 (.4637)	.6692 (.4690)	.9535 (.4183)
Widowed	-.1826 (.1206)	-1.0435 (.1231)	-.3062 (.1190)	-.1877 (.1190)	-.3684 (.1162)
Divorce	-.0033 (.1512)	-1.1974 (.1549)	.1403 (.1498)	-.0217 (.1508)	-.2355 (.1468)
Separated	-.0301 (.0643)	-1.3042 (.0676)	-.1328 (.0633)	-.2267 (.0641)	-.1211 (.0620)
Finances getting better	.1076 (.0584)	.2096 (.0601)	.3234 (.0577)	.1727 (.0581)	.1352 (.0567)
Finances getting worse	-.0696 (.0724)	-.1673 (.0732)	-.0354 (.0706)	-.2304 (.0719)	-.2355 (.0703)
# siblings	-.0333 (.0092)	-.0239 (.0094)	-.0324 (.0091)	-.0070 (.0091)	-.0171 (.0091)
# children	-.0588 (.0340)	-.0372 (.0348)	-.0921 (.0341)	-.0735 (.0341)	-.0532 (.0334)

Household size	.0272 (.0196)	.1023 (.0196)	.0048 (.0196)	.0374 (.0196)	.0366 (.0194)
cut1	-5.8933 (1.814)	-1.3712 (1.842)	-6.0587 (1.767)	-6.3573 (1.807)	-3.0911 (1.752)
cut2	-4.0179 (1.805)	-.2760 (1.840)	-4.9277 (1.765)	-4.9398 (1.801)	-1.7842 (1.751)
cut3	-3.2631 (1.804)	.4044 (1.839)	-4.1283 (1.764)	-4.0845 (1.800)	-.9725 (1.751)
cut4	-2.1161 (1.803)	1.3404 (1.839)	-3.2377 (1.764)	-2.8744 (1.799)	.2382 (1.751)
cut5	-1.1487 (1.803)	2.1658 (1.839)	-2.3685 (1.763)	-2.0043 (1.799)	1.1155 (1.751)
cut6	.5224 (1.803)	3.7215 (1.840)	-.8845 (1.763)	-.4614 (1.799)	2.5413 (1.752)
N	5526	5521	5518	5523	5525
Pseudo R <sup>2</sup>	.0273	.0491	.0279	.0115	.0165
Chi <sup>2</sup>	446.6	780.5	517.0	188.3	327.6
Log likelihood	-7942.7	-7563.7	-8995.3	-8086.9	-9747.7

#### b) Age >=30 from separate regressions

Time trend	Friends	Family	Hobby/leisure	Health	City
N	-0.0011(.0044)	.0082 (.0026)	-.0004 (.0025)	-.0078 (.0025)	-.0057 (.0025)
	17066	17021	16994	17063	17071

#### c) Table 14 & 15 Questions

"For each area of life I am going to name, tell me the number that shows how much satisfaction you get from that area (1=a very great deal, 2=a great deal, 3=quite a bit, 4=a fair amount, 5=some, 6=a little, 7=none)".

- The city or place you live in (City)
- your non-working activities -- hobbies and so on (Hobby/leisure)
- your family life (Family)
- your friendships (Friends)
- your health and physical condition (Health).

Note: all equations also include 8 Census Area dummies.

Table 15. Satisfaction with friends and family ordered logits for those under age 30 -- USA. Standard errors in parentheses.

	Friends		Family	
	Married sub-sample	Unmarried subsample	Married sub-sample	Unmarried subsample
Time trend	-.0019 (.0066)	.0186 (.0059)	.0013 (.0071)	.0186 (.0059)
Part-time	-.0046 (.1311)	-.0653 (.0986)	.1622 (.1436)	-.0653 (.0986)
Job but absent	.2786 (.2601)	-.3213 (.2561)	.1926 (.2877)	-.3213 (.2561)
Unemployed	-.0145 (.2034)	.0733 (.1319)	.0269 (.2157)	.0733 (.1319)
In school	-.2794 (.2195)	.1797 (.1076)	-.0439 (.2280)	.1797 (.1076)
Keeping house	.0136 (.1045)	.0223 (.1403)	.0150 (.1126)	.0223 (.1403)
Other	.3394 (.3395)	-.0788 (.3155)	.8461 (.7429)	-.0788 (.3155)
Male	-.2767 (.0894)	-.5546 (.0702)	-.1796 (.0962)	-.5546 (.0702)
Black	-.4928 (.1277)	.2332 (.0909)	-.4894 (.1333)	.2332 (.0910)
Other non-white	.0473 (.2445)	.1157 (.2018)	.4145 (.2833)	.1157 (.2018)
Parents divorced	-.0864 (.1053)	-.0798 (.0886)	.0146 (.1115)	-.0798 (.0886)
Years schooling	.0722 (.0192)	.0371 (.0196)	.0844 (.0208)	.0371 (.0196)
Age	.0994 (.2301)	.3308 (.1738)	.0183 (.2436)	.3307 (.1738)
Age <sup>2</sup>	-.0019 (.0046)	-.0075 (.0036)	-.0004 (.0049)	-.0075 (.0036)
Income far above average	-.4614 (.2068)	-.2127 (.1431)	-.0762 (.2146)	-.2127 (.1431)
Income below average	-.3033 (.0909)	-.1371 (.0847)	-.2377 (.0961)	-.1371 (.0847)
Income above average	.2117 (.1130)	.0586 (.0951)	.0489 (.1231)	.0586 (.0951)
Income far above average	-.3839 (.3994)	-.1284 (.2682)	-.5981 (.4131)	-.1284 (.2682)
Divorced		-.6362 (.5114)		-.6362 (.5114)
Separated		-.9566 (.5193)		-.9566 (.5193)
Single		-.8663 (.5049)		-.8663 (.5049)
Finances getting better	.2114 (.1076)	.2923 (.0964)	.4664 (.1133)	.2923 (.0964)
Finances getting worse	.0728 (.1109)	.1807 (.0932)	.1105 (.1157)	.1807 (.0932)
# siblings	-.0378 (.0132)	-.0116 (.0128)	-.0255 (.0137)	.0144 (.0555)
# children	-.0615 (.0564)	.0144 (.0555)	-.0706 (.0597)	.0896 (.0214)
Household size	-.0129 (.0514)	.0896 (.0214)	.0993 (.0557)	.0371 (.0196)
cut1	-3.9131 (2.8512)	-.3655 (2.0995)	-5.0057 (3.0310)	-.3655 (2.0995)
cut2	-1.8579 (2.8345)	.6831 (2.0973)	-3.3372 (2.9973)	.6831 (2.0973)
cut3	-1.0884 (2.8334)	1.3498 (2.0968)	-2.3564 (2.9923)	1.3498 (2.0968)



cut4	.1352 (2.8326)	2.2667 (2.0967)	-1.2891 (2.9902)	2.2667 (2.0967)
cut5	1.1047 (2.8326)	3.0715 (2.0972)	-.3616 (2.9894)	3.0715 (2.0972)
cut6	2.7177 (2.8330)	4.5296 (2.0981)	1.3975 (2.9894)	4.5296 (2.0981)
N	2582	3051	2582	3051
Pseudo R <sup>2</sup>	.0196	.0159	.0204	.0159
Chi <sup>2</sup>	149.35	156.39	117.54	156.39
Log likelihood	-3727.14	-4847.12	-2824.91	-4847.121

Figure 1a. Year dummies for <30 years of age in the USA, 1972-1993

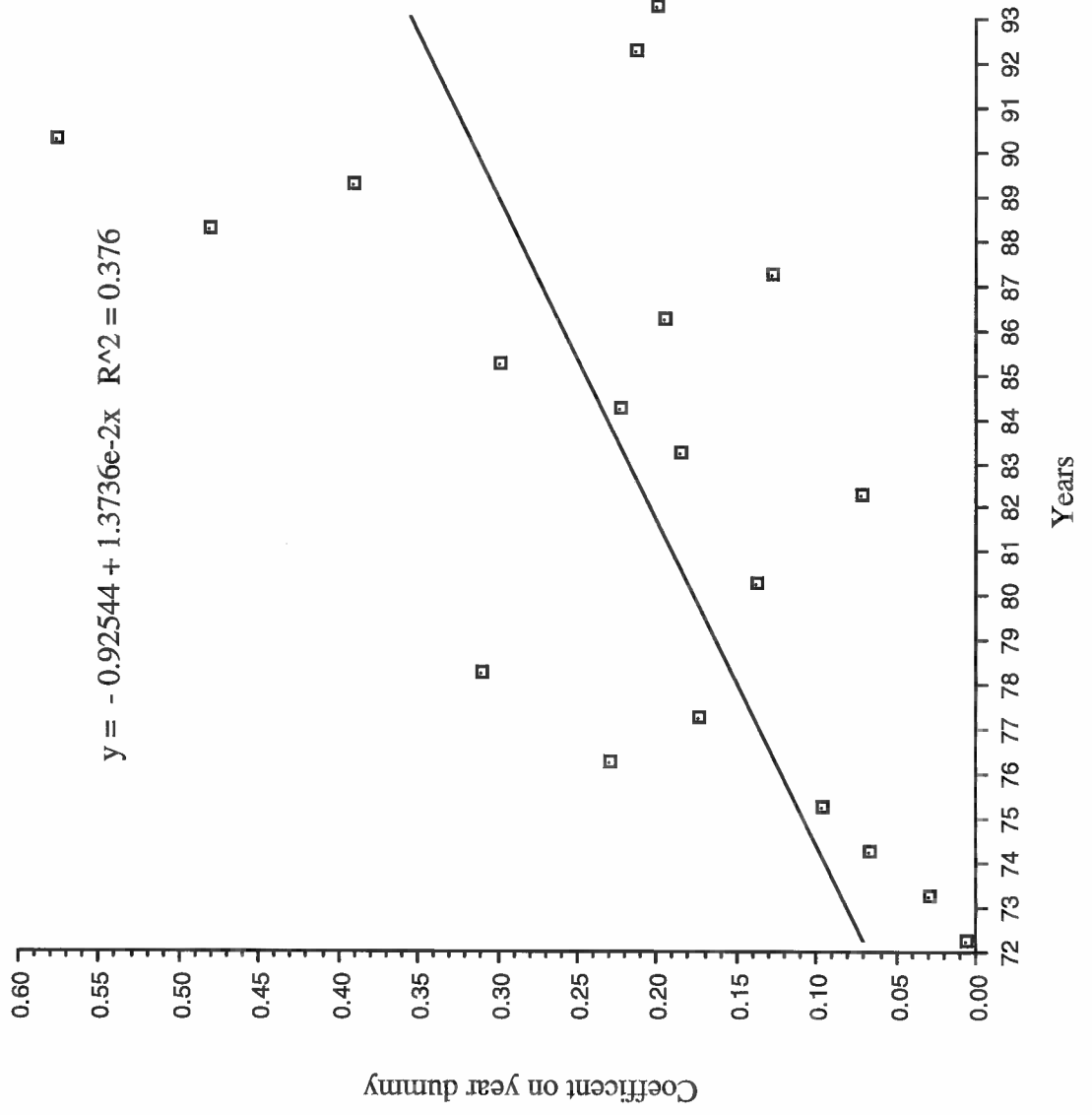


Figure 1b. Year dummies for >=30 years of age in the USA 1972-1993.

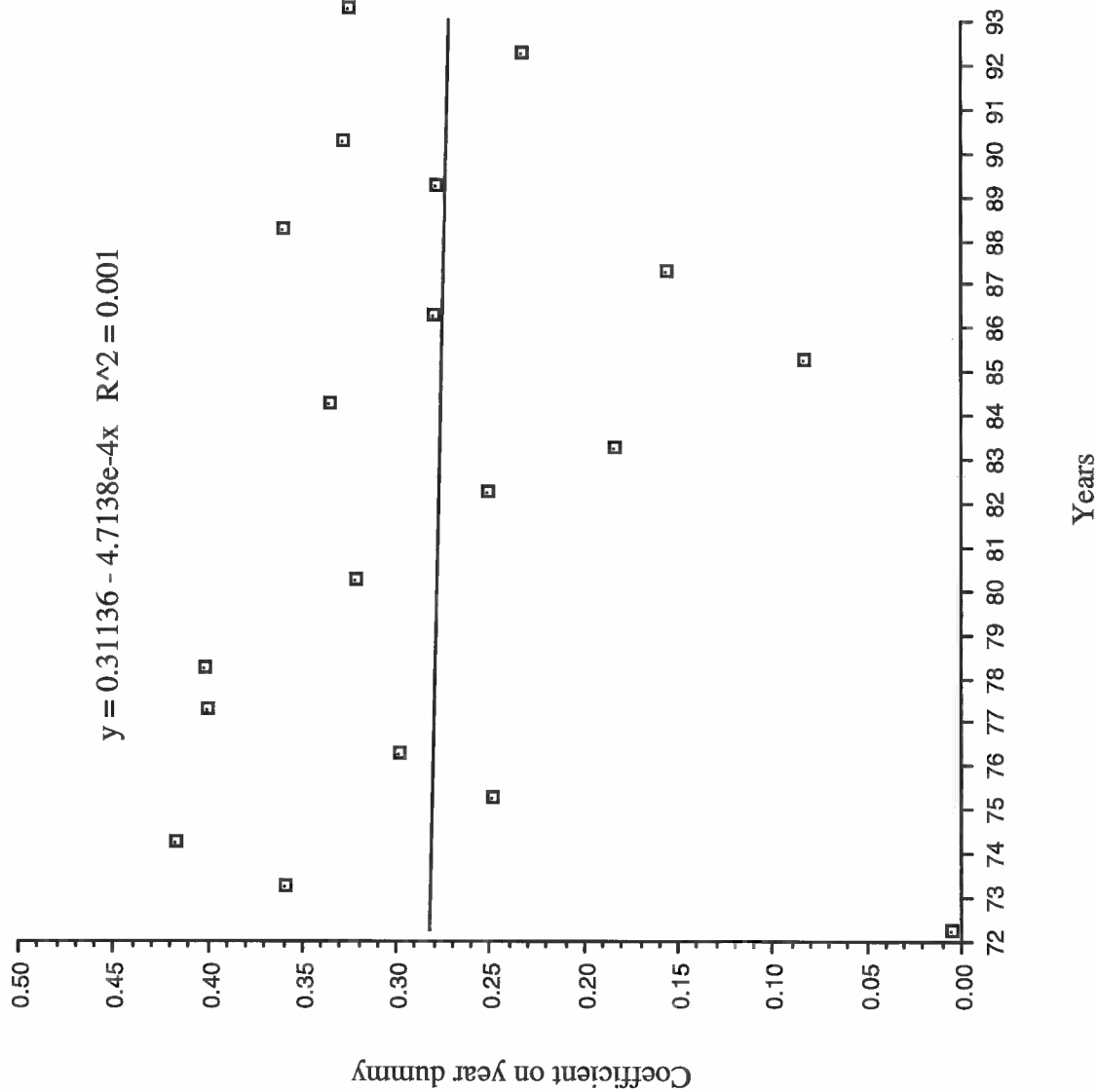


Figure 2. Proportion reporting being very satisfied with their lives - EEC, 1973-1992  
 (Source: Eurobarometer Series)

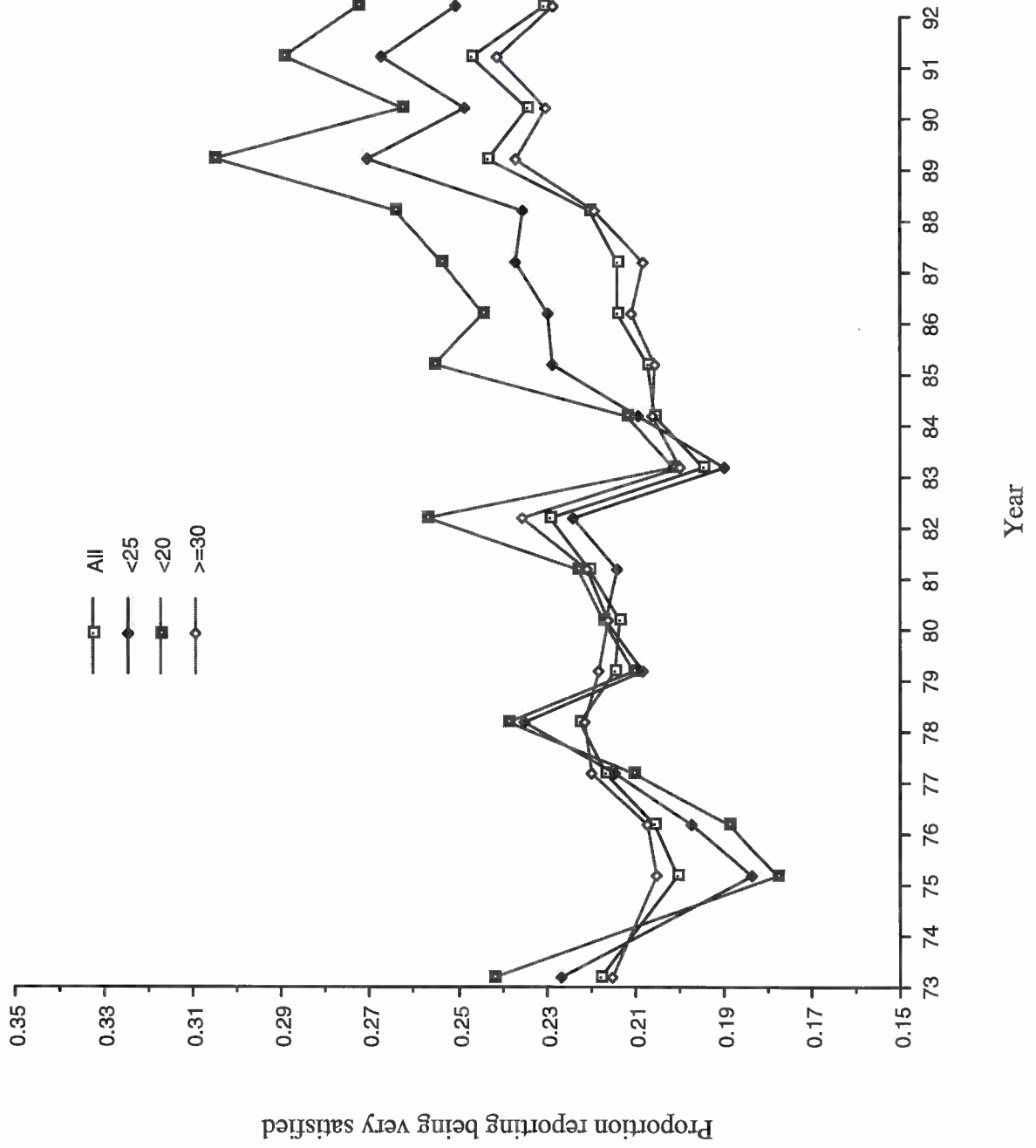


Figure 3. Proportion reporting being 'not at all' satisfied with their lives - Europe, 1973-1992  
 (Source: Eurobarometer Series)

