

**Unhappiness and Pain in Modern America: A Review Essay, and Further
Evidence, on Carol Graham's Happiness for All?**

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Abstract

In Happiness for All?, Carol Graham raises disquieting ideas about today's United States. The challenge she puts forward is an important one. Here we review the intellectual case and offer additional evidence. We conclude broadly on the author's side. Strikingly, Americans appear to be in greater pain than citizens of other countries, and most sub-groups of citizens have downwardly trended happiness levels. There is, however, one bright side to an otherwise dark story. The happiness of black Americans has risen strongly since the 1970s. It is now almost equal to that of white Americans.

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The Declaration of Independence promises the opportunity to seek life fulfillment and happiness—in its fullest sense, for all U.S. citizens. Is happiness for all an increasingly elusive dream? Graham (2017)

1. Introduction

The United States is faltering. Many US citizens have lost hope; the lives of disadvantaged citizens are unhappy ones. America's famous dream, of allowing the pursuit of happiness for all, is coming to an end.

That is the broad thesis proposed in a recent book, Happiness for All?, by Carol Graham of the Brookings Institution and the University of Maryland. If you are an American citizen, you will want to know, and to decide for yourself about the persuasiveness of, her argument and the quality of the evidence for and against it. If you are the citizen of another country, you may also be interested in this book's content. Like skinny soy-milk lattes, Macbooks, and opioid consumption, a trend that begins today as an apparently inexplicable one across the sea in America has a good chance, whether you like it or not, or we like it or not, of becoming a ubiquitous part of your country tomorrow.

To make her case, Graham draws on an array of empirical support. Much of the evidence takes the form of survey data on people's feelings. This is what gives the monograph its distinctive character, and also, it might be argued, much of its appeal. The author proposes -- we think convincingly -- that 'well-being metrics' offer a new perspective on the problem and potential ways to get to solutions. Here she has in mind the use of information, for example, on stress, smiling, life satisfaction, happiness, and feelings about the future. In particular, the author says, these metrics give social scientists and policymakers a direct way to evaluate whether interventions have changed experiences and the quality of life.

Carol Graham's ideas are provocative. In more detail, they include the following conclusions:

(i). *Mental well-being has become more unequal in the United States.* This kind of increased psychological inequality, the author argues, should worry both US presidents and the country's citizens.

(ii). *America is suffering from a lack of hope. That is dangerous.* More precisely, those at the bottom of the US economic and social hierarchy have grown less hopeful about their own lives to come. That is risky, the author says, for the United States as a nation. One reason is that beliefs, and particularly feelings of hope, are what shape people's willingness to invest and plan. Unhappy people do not invest for their own long term well-being.

(iii). *White Americans are noticeably less optimistic than black Americans.* This is one of the most interesting, simplest, and potentially most significant, of the various conclusions in the monograph.

(iv). *Compared to the rich, those who are poor in the USA have higher levels of stress, pain, and lower life satisfaction.* Although this is not a conclusion that is likely to surprise commentators, the book offer valuable new forms of evidence.

(v). *Poor Americans score even lower on subjective well-being than their counterparts in Latin America.* Diagrammatic evidence for this strong claim is given in the author's Figure 3.2a on page 62. We are inclined to treat the conclusion cautiously, and future research may wish to inquire into other forms of evidence on it.

(vi). *Life satisfaction is reduced by living in an area with high income inequality.*

(vii). *Americans have lost confidence, and are correct to have done so, in their hopes of upward social mobility.*

(viii). *In social science and public policy, well-being metrics can play an important role in monitoring trends in the quality of life.* An additional advantage, Carol Graham believes, is that

the average person “seems to engage more easily with measures that relate to happiness and emotions.” In the later sections of this paper, we will concentrate on (i)-(v) and on (viii). Numbers (vi) and (vii) are conclusions on which substantial prior literatures exist (such as Alesina, Di Tella, and MacCulloch, 2005, and Corak, 2013).

The author draws principally upon data from the Gallup World Poll and the Gallup Healthways surveys. The key survey, the Gallup World Poll, has been conducted each year since 2005 in approximately 160 countries. It was, and still is, designed to have nationally representative coverage for these nations. Gallup weights the data in each country—and the sample sizes vary from 4000 household interviews in China to 500 households in Puerto Rico. Carol Graham notes the drawback that there are proportionately more responses for small countries than for large ones.

Different individuals are interviewed each year, so analysis can be done on pooled cross-sections of data. Gallup Healthways provides extensive data at the daily household level from January 2008 to 2013 (the last year for which Carol Graham has data). It is a stratified sample of an average of one thousand households across the United States (all localities with landline phones and mobile cell phone connections), surveyed almost every day for the entire period, and thus has a very large number of individual observations. The questions include the usual demographic details of the respondents (age, race, ethnicity, household size, education level), economic conditions (employment status, job security, job mobility), respondents’ perceptions about their standards of living and the state of the economy, access to services (such as health insurance, medical care, telephone and Internet), geographic location (zip code, MSA, and Federal Information Processing Standards [FIPS] code), personal health, emotional experiences, and emotional conditions, among others.

For an ‘evaluative’ measure of mental well-being, Carol Graham uses a standard form of question in the Gallup Poll, known as the Cantril ladder question. This question asks respondents to compare their lives to the best possible life they can imagine on a ladder where 0 represents the worst life and 10 represents the best possible life (BPL). She occasionally refers to this in the text of the book as a measure of life satisfaction (much of the earlier well-being literature has tended to distinguish more firmly between a ‘ladder’ question and a life satisfaction question).

Looking inside the monograph, one diagram stands out as particularly arresting. It is the author’s Figure 4.3a, which is on page 93 of the book. The diagram is a bar chart of what is described in the chart’s title as “How satisfied do you think you will be with your life in 5 years?” (although the wording is the author’s so-called ‘BPLfut’ one, where BPLfut here stands for ‘best possible life in the future’, so that people here estimate where they will be on the best conceivable ladder-of-life, and as a literal matter the word ‘satisfaction’ is not mentioned in the question). The vertical axis in the author’s Figure 4.3a is a measure of how people expect to feel in the future, where expected ‘satisfaction’ is measured on an 11-point scale from zero to 10.

The author’s main finding here is a striking one. Black American citizens -- indeed both rich and poor blacks -- give a mean optimism answer greater than 8. Loosely speaking, therefore, black people in American seem to be rather optimistic about their future, and score it at just over level 8 on a zero to 10 scale. By contrast, white Americans -- whether they are rich or poor -- give average answers close to 7. Hispanics’ answers lie in between those given by the other two groups. These results are not mirages of averaging or composition. They persist, the author shows, after regression-equation corrections for other possible influences. Thus America apparently has a white population that is relatively pessimistic.

More broadly, Carol Graham argues that in the aggregate her empirical findings confirm an increasingly consistent story of “two Americas,” with -- to quote -- the poor much less likely to be optimistic about their futures than the rich. That wording may be putting things rather strongly. According to the author’s calculations, the difference, in Carol Graham’s Figure 4.3a, between the optimism of poor and rich is certainly there but does not appear to be overwhelmingly large: the difference is approximately 0.6 on a 10-point scale. In other words, if the BPL (best possible life) scale is to be taken literally, and we think that is reasonable as a first approximation, we draw the conclusion that:

- (i) *The optimism advantage of blacks over whites in modern America is approximately 1.1 points on a 10-point scale;*
- (ii) *The optimism advantage of rich people over poor people is only 0.6 points on that scale.*

The above comparison appears to be us to be important and it is not one -- to our knowledge -- that is known to many social scientists. It might be interpreted as evidence that it is whites, not the poor, who have the real pessimism problem in modern America. That seems reminiscent of the rather different kinds of evidence, on American morbidity patterns, in Case and Deaton (2015).

At certain points the book makes claims that may sound unduly strong to some kinds of readers. For example, “some new research by psychiatrists Assari and Lankarani (2016) shows that while black Americans have worse health indicators than white Americans on average, they (and minority groups in general) are better off in terms of mental health. Depression, anxiety, and suicide are more common among whites than blacks, for example.”

Suicide is certainly a horrible and sharply defined indicator of unhappiness. Whether one believes that people kill themselves rationally or irrationally (the issue is discussed in Oswald 1997), there seems no arguing with the fact that self-induced death is a marker of mental distress of some deep kind. Here the facts are indeed on Carol Graham's side. It is true in the United States that black people kill themselves less frequently than whites (<https://afsp.org/about-suicide/suicide-statistics/>). Approximately 45,000 Americans take their own lives each year. When age-adjusted, the suicide rate among black males is a remarkable one third of the rate among white males. White males now commit suicide at a greater rate even than the distressingly suicide-prone group of citizens who are born American Indian. Nevertheless, the fact that whites are at higher risk of suicide than blacks has been evident in the United States for many years; it is not a new phenomenon.

At another point the author asks: "Is the ability to pursue happiness as unequally shared as income in the United States?" and at this juncture in the book the reader is, we think, being asked to say yes. Our own view is more cautious, and closer to no.

On the broad conceptual issue, three points might be made. First, as background, there is, as Carol Graham would herself agree, no cardinal measure of human happiness. Hence there is a sense in which the author's question cannot be answered scientifically (until some way is found, and perhaps brain science eventually can, to create a cardinal measure of happiness for human beings). But let us ignore the cardinality issue, forget the scientific caveats that we teach students, and go instead with the underlying spirit of the inquiry, which seems an important and valid spirit. It is known, second, that income is dramatically unequally distributed in nations like the USA. The richest 10% of fulltime working Americans earn at least 6 times the income of the bottom 10% of fulltime workers (source: <https://data.oecd.org/inequality/income->

[inequality.htm](#)). Could such six-fold inequality possibly be true of ‘happiness’? Our view is that it could not. Even intuitively, using common observation, it is hard to believe that the happiest 10% of Americans are 6 times happier than the bottom 10% (though again we would caution that such an assessment cannot truly be made because of lack of cardinality). Third, and more scientifically on the same issue, happiness regression equations reveal that income enters positively in well-being but, in comparison to other influences in the equation, does not have a huge coefficient. For example, marriage has been estimated to be worth 100,000 dollars a year in extra happiness (Blanchflower and Oswald, 2004), which is well above the average earnings of Americans. That suggests that inequality in psychological well-being cannot plausibly be as large as inequality in income. There are just too many other factors -- beyond sheer money -- that go to make up a happy human being; income is not a sufficient statistic for happiness.

2. Aggregate Evidence on Unhappiness and Pain in Modern America

Relatively few scholars have access to Gallup data of the kind employed in Happiness for All?. In the next two sections of this paper, therefore, we explore other data sets in which there is publicly available material that bears on Carol Graham’s arguments. What can be learned from those other data sources? Here we go through some of those implications. Broadly, we find patterns that are supportive of Carol Graham’s concerns about her nation.

It is possible to begin with a simple form of aggregate evidence on the psychological state of modern America. In Figure 1, we plot the mean level of happiness in the USA from the early 1970s until 2016. This chart uses data from the General Social Survey, which is publicly available to researchers, and has for decades been used by investigators from a variety of scholarly disciplines. The relevant question asked in the GSS is: *“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?” Perhaps most famously, this question has been used in the seminal work of Richard Easterlin (for recent examples, see Easterlin 2003, 2006), who has been a major figure in the field. We also have drawn on this question in our previous work – as in Blanchflower and Oswald (2004).

Figure 1 suggests that Americans are gradually becoming less happy. If true, that is a first-order fact for social scientists and citizens. One sensible objection to Figure 1 can be raised. It is that the chart has the unsatisfactory feature that it treats ordinal answers in a cardinal way (by simply assigning the integers 1, 2, 3 to wordings ‘not too happy’, ‘pretty happy’, and ‘very happy’). However, that simplifying step, of enforced cardinalization, is inessential. In the appendix to this paper, it is shown for example that if we examine only the bottom end of the happiness distribution, by measuring the proportion of people giving the lowest feasible answer, there is also evidence of growing discontent in the United States. The secular trend downwards in Appendix Figure A1 is especially severe among those Americans with low levels of education.

At the aggregate US level, another fact that is relevant is that reported levels of pain in the USA are remarkably high. This is probably not known to many economists -- or perhaps scholars generally -- but it has been described in recent work by Krueger (2017) and has received publicity through related research by scholars such as Case and Deaton (2015). There is also new work showing that recessions have historically increased the demand for pain medication (Carpenter et al. 2017).

Here we offer a form of cross-country evidence that seems to be complementary to the US-based data used by Alan Krueger. As far as we know, our analysis is the first to provide

'international' regression equations on pain. Such data are not used by Carol Graham, but they are in the spirit of her monograph.

Table 1 reports three specifications. In each of three columns of Table 1, the estimating form is a probit equation in which a measure of reported pain is the dependent variable. The data set covers approximately 52,000 people's survey answers, from a large number of nations, on how much pain they personally experience. Here the exact question is of the following elementary kind: Question *During the past 4 weeks, how often have you had bodily aches or pains?* Answer. *Never; Seldom; Sometimes; Often; Very often?* For simplicity, we have grouped together the top two answers (very often in pain, often in pain) as an approximate measure of what might be thought of as a high level of pain. The data are thus coded as 1 or zero, where 1 is assigned as high pain. The survey information, which is collected under the auspices of the International Social Survey Program, comes from more than 30 nations -- as are listed in the footnote to Table 1. In the entire sample, just under 20% of citizens report high pain, and are thus assigned to 1 rather than zero in the classification of the dependent variable.

Against our own expectations, we find that in this international data set approximately 34% of Americans give the high-pain answer, namely, saying that they experience bodily aches and pains either very often or often. This is the highest proportion of any country in the ISSP sample. As the US is one of the richest countries in the world, and in principle might be expected to have one of the most comfortable lifestyles in the world, it seems strange -- to put it at its mildest -- that the nation should report such a lot of pain. What Table 1 shows is that even when characteristics are held constant, in the third column of Table 1, the United States continues to be the nation with the largest measured level of pain. In column 3, the coefficient on the USA is 0.1277 with a t-statistic of 2.75. Hence the null of zero is rejected comfortably at

conventional levels of confidence. Every other country, with the exception of Australia, which is the base omitted category in the equation, has a negative country dummy.

Hence Americans are apparently in more pain than anyone else. Is this some kind of recording error? Table 1's accuracy depends in part on the assumption that languages and ideas about pain can be translated, literally and figuratively, in a comparable way across countries (pain in Dutch is *pijn*, in Danish it is *smerte*, and so on). Yet that assumption is open to criticism. It might be suggested by critics that the apparently high level of pain in the United States is illusory; the pattern might be something strange caused by the use of the English language, say. We have considered that and cannot entirely discount it; there must remain a chance that these subjective data on feelings of pain are, in some way, painting a misleading picture. However, a nation like the UK, which also uses English, and has a culture that is somewhat like that of the USA, shows up with similar pain levels -- markedly below the American answers -- to other west European nations. Thus it is not clear to us why the US estimate in Table 1 would be faulty. More evidence on this complicated, and probably controversial, topic will be necessary in the future.

Although Carol Graham's monograph does not focus especially on the troubles of middle-aged Americans, it is of interest to consider those. There is growing published evidence (consistent with Blanchflower and Oswald 2008, Stone et al. 2010, Case and Deaton 2015, and Meara and Skinner 2015) of considerable distress among midlife Americans. Related literature includes Carstensen et al. (2011), Cheng et al. (2017), Frey and Stutzer (2002), Galambos et al. (2015), Gerstorf et al. (2010), Glenn (2009), Graham and Pozuelo (2017), Lachman (2015), Schwandt (2016), Steptoe et al. (2015), Van Landeghem (2012), Weiss et al. (2012), and Wunder et al. (2013). Figure 2 plots life-satisfaction data for approximately 427,000 randomly

sampled citizens of the USA. The data are from the Behavioral Factor Surveillance System, which is a survey run by the US Centres for Disease Control, available through www.cds.gov/brfss. The data are for 2010, which is the most recent year in which the BRFSS asked this question. For scientific clarity, the Figure lays out two kinds of plots. One is for raw averaged life-satisfaction scores at different ages. The other, derived from a regression equation in which other covariates (so-called ‘controls’) are included, is the regression-adjusted level of life-satisfaction. There is apparently some form of midlife low, although the adjusted nadir (that is, with controls) is closer to early-40s rather than approximately 50. However, the pattern across all ages in the no-controls case is more ‘wavy’ with an early dip at the start of people’s 20s. Adjusted well-being in the USA starts high in youth, declines smoothly until the flat part in middle age; it then rises in hill-like way to approximately the age of 70; after that it runs roughly flat, or even fractionally up, until the age of 90.

The controls in this case are gender, race, level of education, marital status, labor market status, a disability dummy variable, number of children, and dummy variables for the state the person lives in within the US. The sample size is approximately 427,000.

This U-shaped pattern in psychological well-being is seen in other modern nations. Appendix Figure A2, for example, plots happiness data for approximately 316,000 randomly sampled Europeans. The data are from the European Social Survey, available from www.europeansocialsurvey.org. One curve is for raw averaged happiness scores at different ages. The other allows for controls in the equation for happiness. It can be seen in the appendix Figure that the two curves have elements in common. However, allowing for controls gives a more pronounced V shape. Nevertheless, in both of the shapes, well-being starts high in youth; it then drops until approximately the early 50; it then goes up quite strongly in the adjusted case

and rather mildly in the raw-data case. The controls in the ESS regression are gender, level of education, marital status, labor market status, country dummy variables, and year dummies. The sample size is 317,000 and covers years 2002 to 2014 inclusive.

3. Happiness and Unhappiness across Different Groups in the USA

A central strand of Happiness for All? is the need to examine cross-group comparisons in people's happiness and mental distress. Hence we now turn to that and consider well-being patterns across sub-sample divisions such as by education, race, and gender.

In Figure 3, we give disaggregated information on recent US history. It depicts the mean levels of happiness, from 1972 to the present day, for three educational groups: those who did not complete high school (labelled in Figure 3 as Dropouts), those who did not go to college but did complete their high school education (labelled in Figure 3 as HS Diploma), and those who completed some or all of a college degree (labelled Some College). It can be seen, first, that happiness is an increasing function of a person's level of education, and that that was also true at the start of the period, in 1972. Second, well-being levels are trended downwards in each of the three educational groups (though more slowly in the College group). Moreover, taking these scores literally, the gap between the groups has grown from approximately 0.1 happiness points to approximately 0.2 happiness points. The educationally disadvantaged have done relatively poorly, according to Figure 3, and that is consistent with the general tenor of the book Happiness for All?

Figure 4 is the equivalent diagram but constructed, in this case, for racial groups in the United States. Here the lines are visually quite different in character. In this case there is evidence of convergence: these two groups are becoming more similar not increasingly further apart. Black Americans began the time period with low recorded feelings of happiness (for

example, at approximately a mean of 1.9 at the start of the 1970s) and ended the period almost as happy as white Americans (above 2.0 in 2016). Evidence of a closing happiness gap between blacks and whites was also reported in Blanchflower and Oswald (2004) and Stevenson and Wolfers (2012).

At this juncture it is useful to compare our patterns with Carol Graham's thesis. "A related trend is new evidence that inequality in life satisfaction in the United States has increased recently....there is some new evidence ... inequality in life satisfaction increasing in the past five or so years (Stevenson and Wolfers, 2008; Clark, Fleche, and Senik, 2016)." While our figures show this is broadly true across educational groups, it is not true across racial groups.

To probe further the nature of dissatisfied feelings in America, we can turn to another form of well-being question that is asked in the General Social Survey. Here we have been influenced by the work of Easterlin (2003) on the idea of domain satisfaction.

Figure 5 is now a different form of plot. It describes data on feelings of financial satisfaction by educational group. Here the question is: "*We are interested in how people are getting 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?*" The graphical outcome is redolent of that seen for overall happiness scores in Figure 3. The most obvious decline is among the high school dropouts. They are notably less content with their financial satisfaction than they were in the early 1970s, and again, as in Figure 3, we see in Figure 4 much evidence of a fanning out – an increase in the inequality of human feelings.

Figure 6 does the same for financial feelings by race. This time, however, there is little or no sign of convergence (or of divergence). When set alongside the trends visible in Figure 4, the

natural conclusion from Figure 6 is, in our judgment, one that we believe has not been suggested before in the research literature. It is that the psychological gains made by black people in the United States have probably not come especially from gains in their feelings about income or expenditure. The black-white gap in satisfaction about finances is no smaller in 2016 than it was in 1972. To explain the greater relative overall happiness of black Americans, therefore, it is necessary to look elsewhere. Perhaps a natural candidate -- to be taken up in future research -- is that societal color discrimination itself has fallen through the decades.

Appendix Figure A3 plots happiness through time by gender. The series for males and females move closely together over time. Of note is that there is little evidence of marked differences in happiness in the US by gender according to the General Social Survey.

Lastly, Figure 7 is designed as a cautionary statistical note. Although it is a reasonable arithmetical procedure to calculate groupings as we have done in the previous charts, dividing citizens into High School Dropouts and other groups, there is one background fact that has to be kept in mind. Those who drop out are now much less numerous in American society. By implication, the individuals in 2016 who are being classified as High School Dropouts in a figure like Figure 3 are not the same sorts of people, in an underlying sense, as those in 1972. In the 1970s, it is likely that large numbers of inherently talented people left schooling at a comparatively early age. That was what happened, after all, to approximately 4 out of 10 of all American citizens. Now, only just over 1 citizen out of 10 drops out. If unobservable characteristics matter in the labor market, it is plausible that the underlying talent of those who drop out of high school is today lower than it once was. If we wish to do a truly even-handed comparison across decades, this analytical difficulty may lead to an over-estimate of the true decline, like for like, in the well-being of the disadvantaged.

We caution readers to bear the underlying compositional changes in mind when looking at diagrams like Figure 3 and Figure 5. Nevertheless, as a literal matter, the figures tell an accurate story.

4. Conclusions

Perhaps the starkest trend is that well-being— as measured by life satisfaction, aspirations for the future, and a range of other markers— has become more unequal in the United States in recent years. Significant sectors of U.S. society are not able to achieve the American Dream of “the pursuit of happiness” in its fullest sense.

Graham (2017)

Is happiness for all Americans an increasingly elusive dream? There is evidence in this stimulating book to suggest that the answer is yes. Here we summarize our general view about Carol Graham’s monograph and the empirical patterns we have sought to describe above. We adopt the same approximate ordering as used in our figures and regression-equation table.

Our main findings in this review article, using different data sets than are employed in the author’s book, include the following.

1. The United States has become less happy since the early 1970s.
2. Although on first hearing it seems hard to believe (and was for us), there is evidence that Americans are in more pain than citizens of other advanced, and even not-so-advanced, countries.
3. Americans in midlife have particular psychological difficulties.
4. The happiness and financial-satisfaction levels of Americans with low amounts of education have fallen behind Americans who have large amounts of education. Well-being gaps of this sort have thus widened over the last five decades. In that sense, consistent with Carol Graham’s thesis, psychological inequality has gone up in the United States of America.
5. The happiness of white Americans has fallen through the decades. Yet black Americans have become happier. Well-being inequality in this dimension has thus declined: the racial happiness

gap is now close to zero (though not quite zero). This result is consistent with, and may help to explain, Carol Graham's finding that black citizens' optimism is currently greater than that of white citizens.

6. The financial satisfaction of white Americans and black Americans has run approximately flat through time. Here the gap between the races is unchanged (with white Americans still markedly higher). Therefore the increased relative happiness of black citizens cannot, it seems, be ascribed to improved happiness about income.

In our judgment, Happiness for All? is a valuable contribution to the modern social-science literature. Dr Graham ends her interesting book with the following sentence: "My personal hope is that the metrics that I have used to assess the state of the American Dream can play a role in restoring the pursuit of happiness for all." We agree with her. If the aim of social science is to understand the lives of human beings, it will be hard to do that without the systematic study of human beings' feelings.

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Table 1. High Levels of Pain in the United States of America: Cross-Country Evidence
 Probit regression of bad pain ('often or very often in pain') for 32 countries, pooled, in 2011.

	(1)	(2)	(3)
USA	.0692 (1.56)	.1596 (3.52)	.1277 (2.75)
UK	-.0627 (1.18)	.0147 (0.27)	-.1229 (2.20)
Denmark	-.2050 (4.33)	-.0429 (0.89)	-.0638 (1.29)
Norway	-.1115 (2.58)	.0092 (0.21)	-.0486 (1.07)
Sweden	-.1477 (2.97)	-.0641 (1.26)	-.1479 (2.86)
29 Other countries*	Yes	Yes	Yes
Personal controls	No	Some	Full
Constant	-.4775	-1.1592	-.7748
Pseudo R ²	.0252	.0727	.1034
N	52,146	51,970	51,965

t-statistics are given in parentheses.

*The other country dummies -- that is, the 29 that are not reported -- enter with coefficients that are significantly negative (at the 0.05 level) in each of the three specifications above.

Column 1 has no other independent variables in the regression equation.

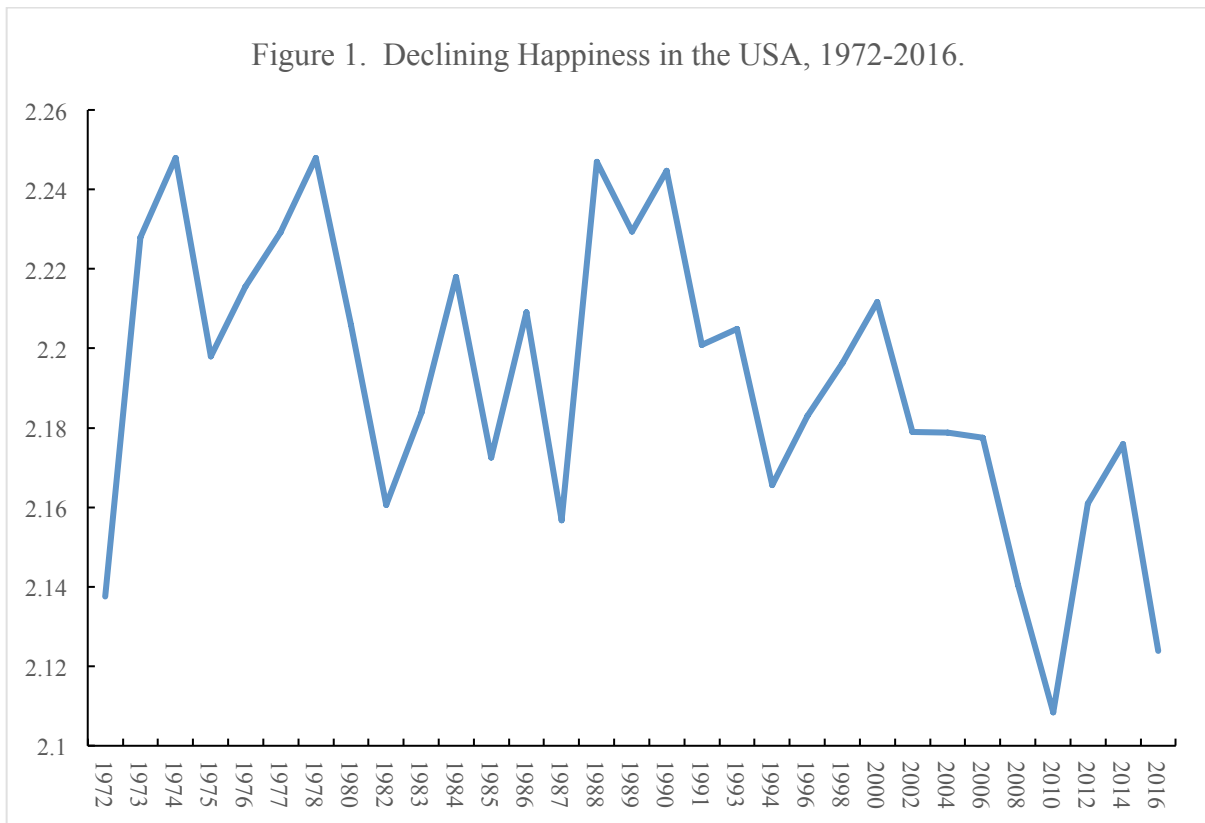
Column 2 includes age, age squared and gender.

Column 3 includes age, age squared and gender, dummies for marital status (8), dummies for labor force status (9) and dummies for education (7).

The data are from the International Social Survey Programme in 2011. The excluded base country is Australia. The countries here are Belgium; Bulgaria; Chile; China; Taiwan; Croatia; Czech Republic; Denmark; Finland; France; Germany; Israel; Italy; Japan; Korea (South); Lithuania; Netherlands; Norway; Philippines; Poland; Portugal; Russia; Slovak Republic; Slovenia; South Africa; Spain; Sweden; Switzerland; Turkey; United Kingdom; United States.

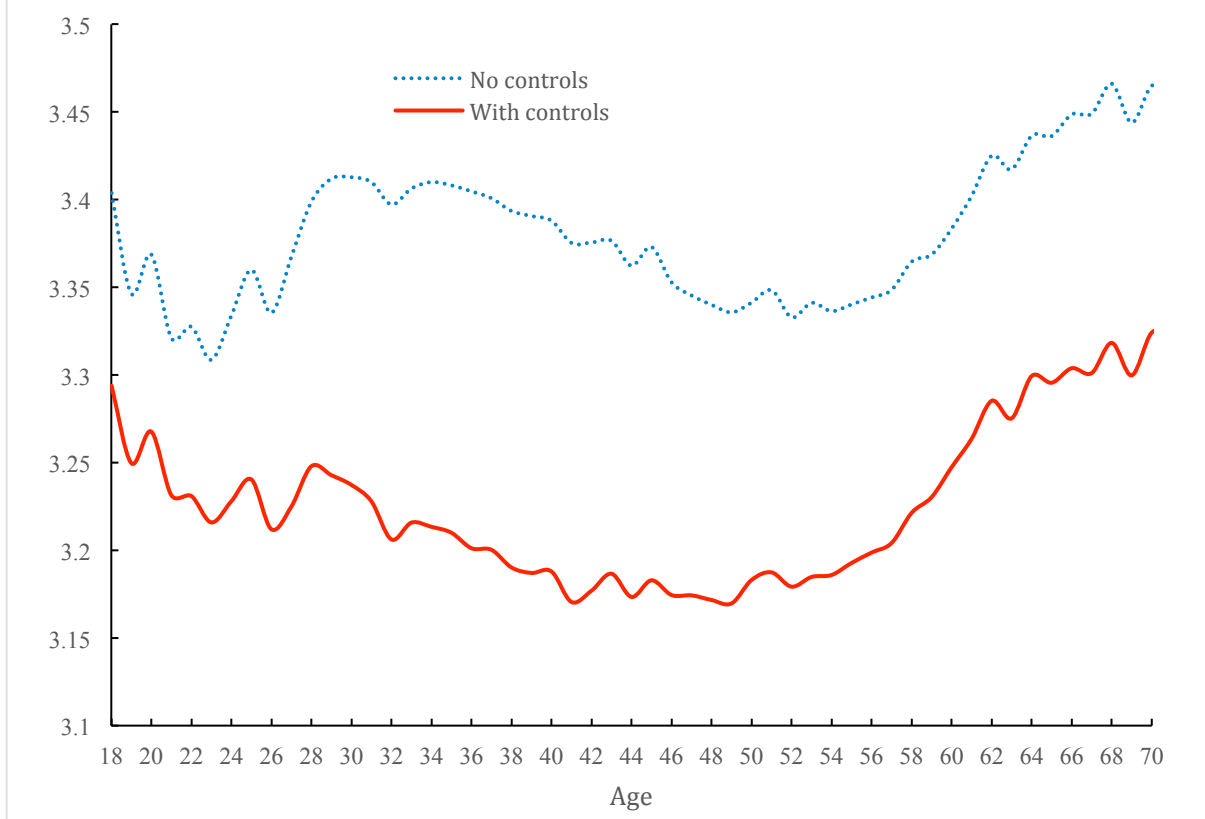
The exact question is: *During the past 4 weeks, how often have you had bodily aches or pains?* Answer. *Never; Seldom; Sometimes; Often; Very often?* The dependent variable is a 1-0 variable in which Very Often and Often are combined and assigned the value 1.

Figure 1. Declining Happiness in the USA, 1972-2016.



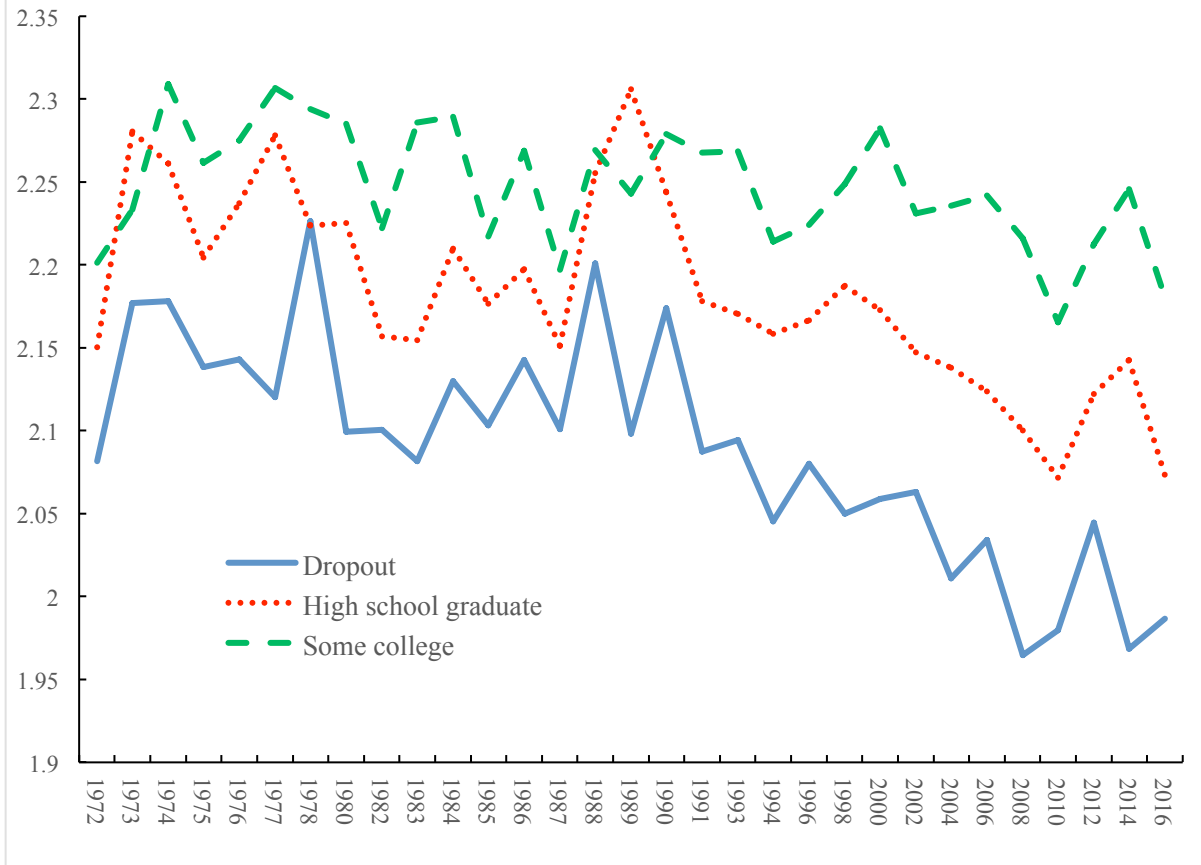
This figure is based on data from the U.S. General Social Survey using the question “*Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?*” scored from 3 to 1. This graph -- and equivalently for later graphs -- reports the mean level.

Figure 2. Low Life-Satisfaction among Middle-Aged Adults in the USA, 2010 - 427,000 observations.

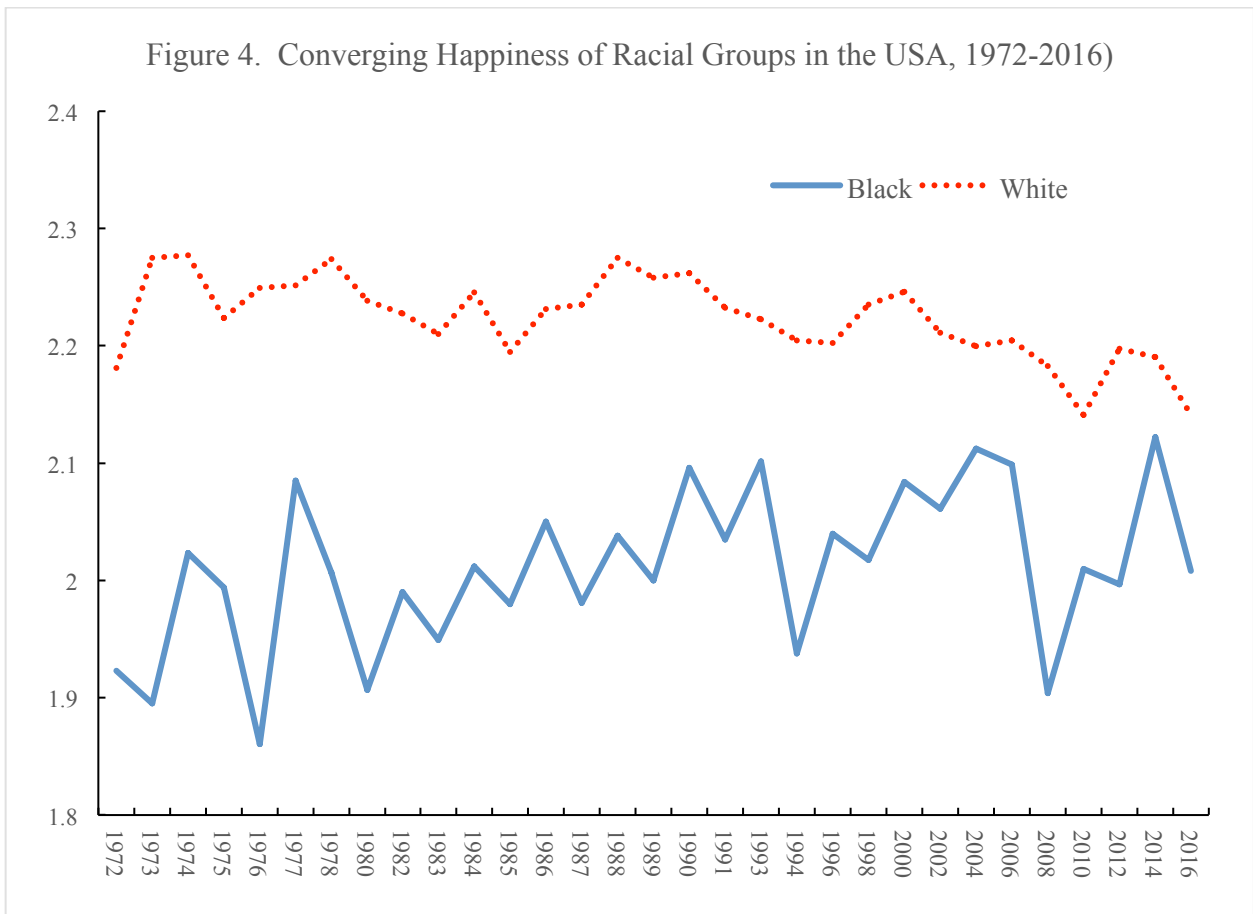


This figure is based on U.S. Behavioral Response Factor Surveillance System data (from the Centres for Disease Control, Atlanta) using the question “*In general, how satisfied are you with your life? Very dissatisfied, ..., very satisfied.*” scored from 1 to 4. To aid in understanding the size of the age effect, the coefficients on marital separation and unemployment in a life-satisfaction equation here are approximately -0.3 and -0.3. The controls in the equation are a full set of age dummies and a standard set of demographic, marital, income dummies, labor force status and education dummies.

Figure 3. Declining Happiness among Different Educational Groups in the USA, 1972-2016.

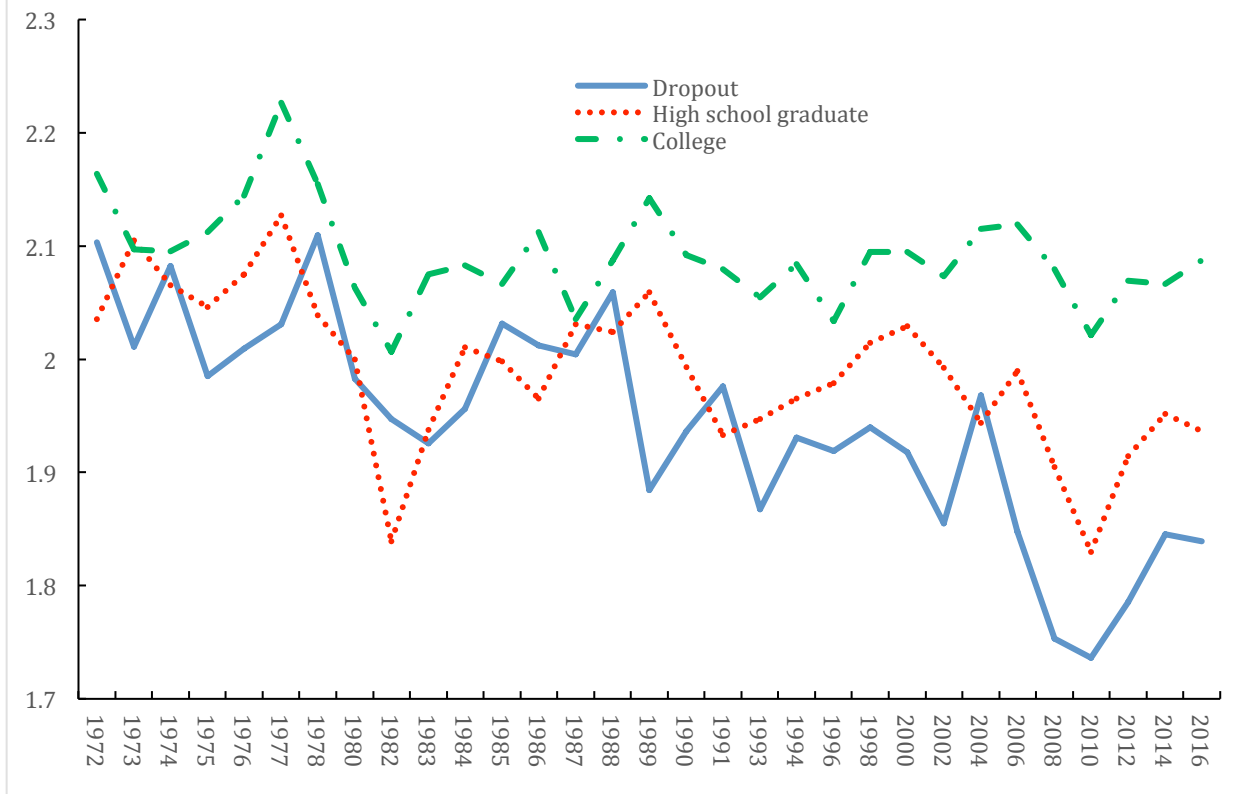


This figure is based on data from the U.S. General Social Survey using the question “Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?” scored from 3 to 1. This graph reports the mean levels for the different groups.

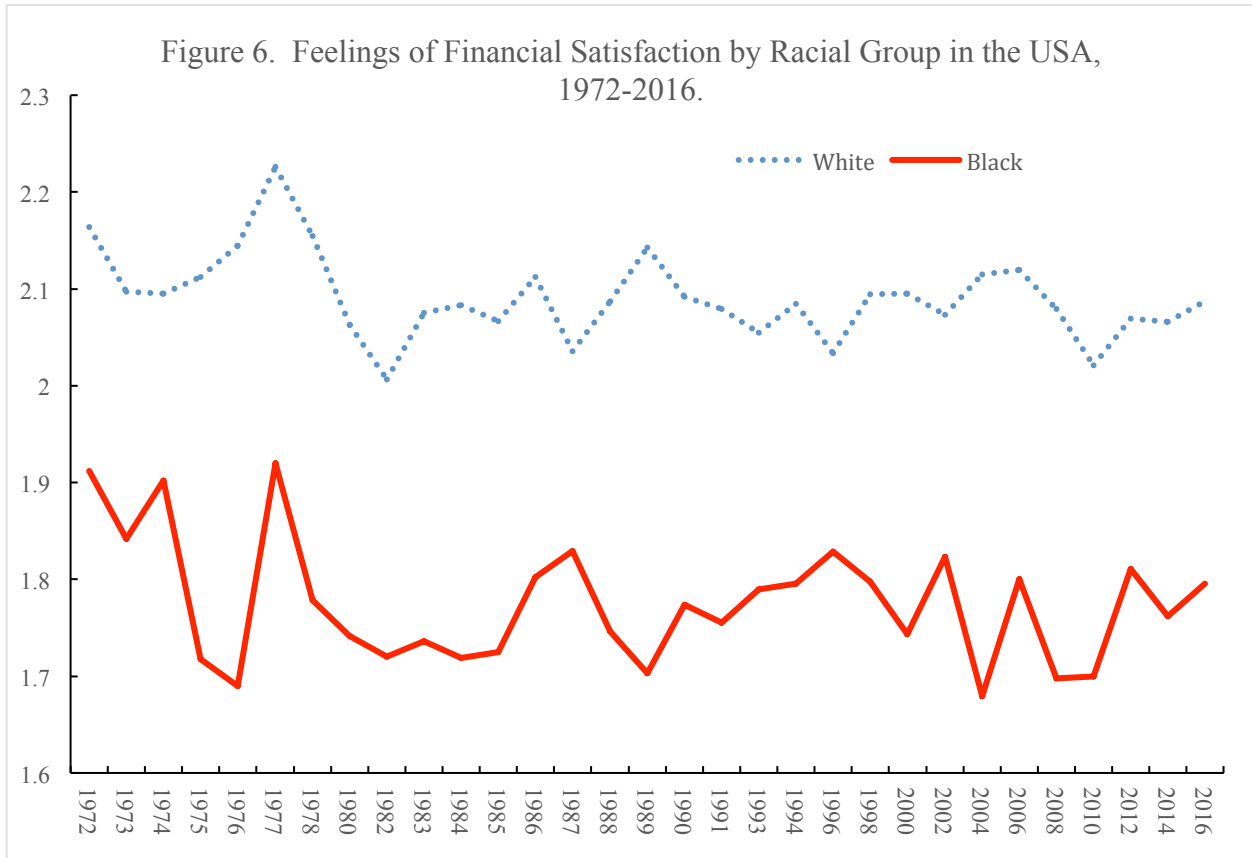


This figure is based on data from the U.S. General Social Survey using the question “Taken all together, how would you say things are these days – would you say that you are very happy, pretty happy, or not too happy?” scored from 3 to 1. This graph reports the mean levels for the different groups.

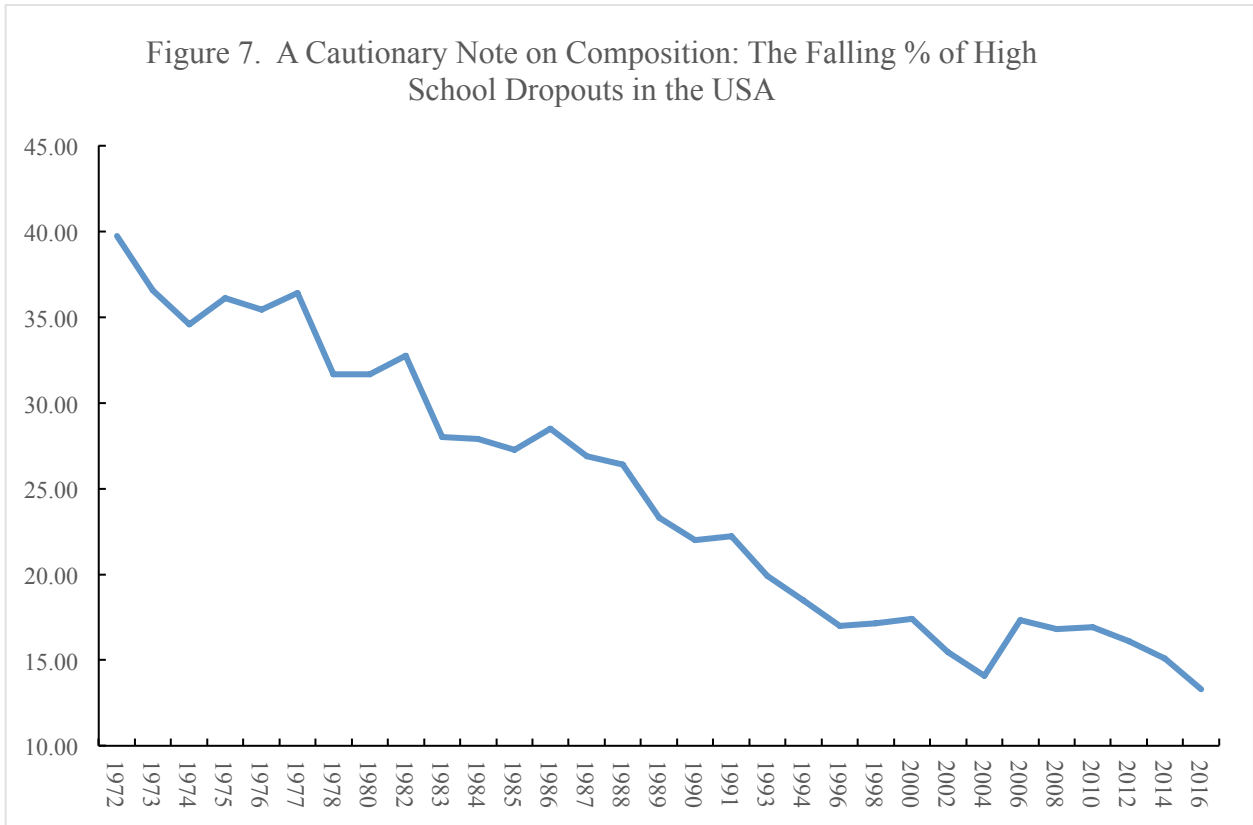
Figure 5. Feelings of Financial Satisfaction by Education Group, USA, 1972-2016



This figure is based on data from the U.S. General Social Survey using the question “*We are interested in how people are getting 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?*” scored from 3 to 1. This graph reports the mean levels for the different groups.

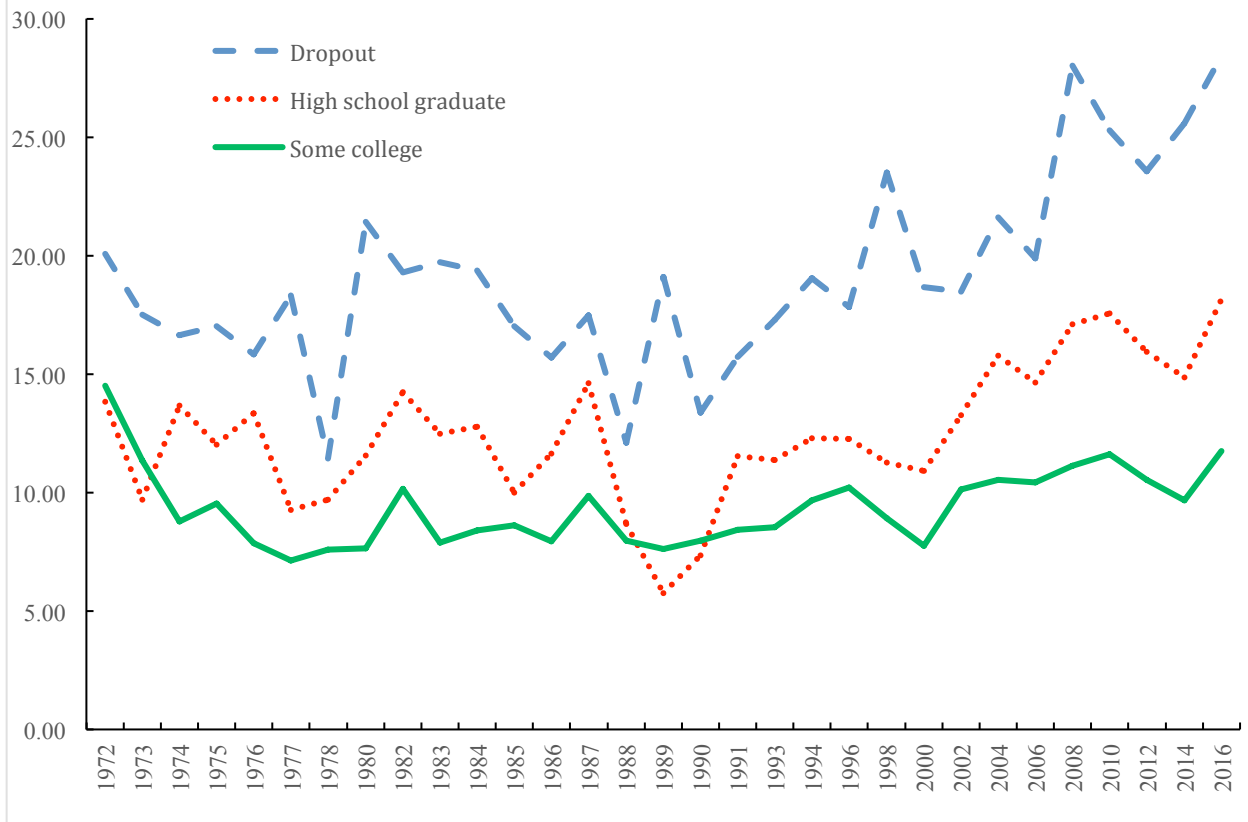


This figure is based on data from the U.S. General Social Survey using the question “*We are interested in how people are getting along financially these days. So far as you and your family are concerned, would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all?*” scored from 3 to 1. This graph reports the mean levels for the different groups.

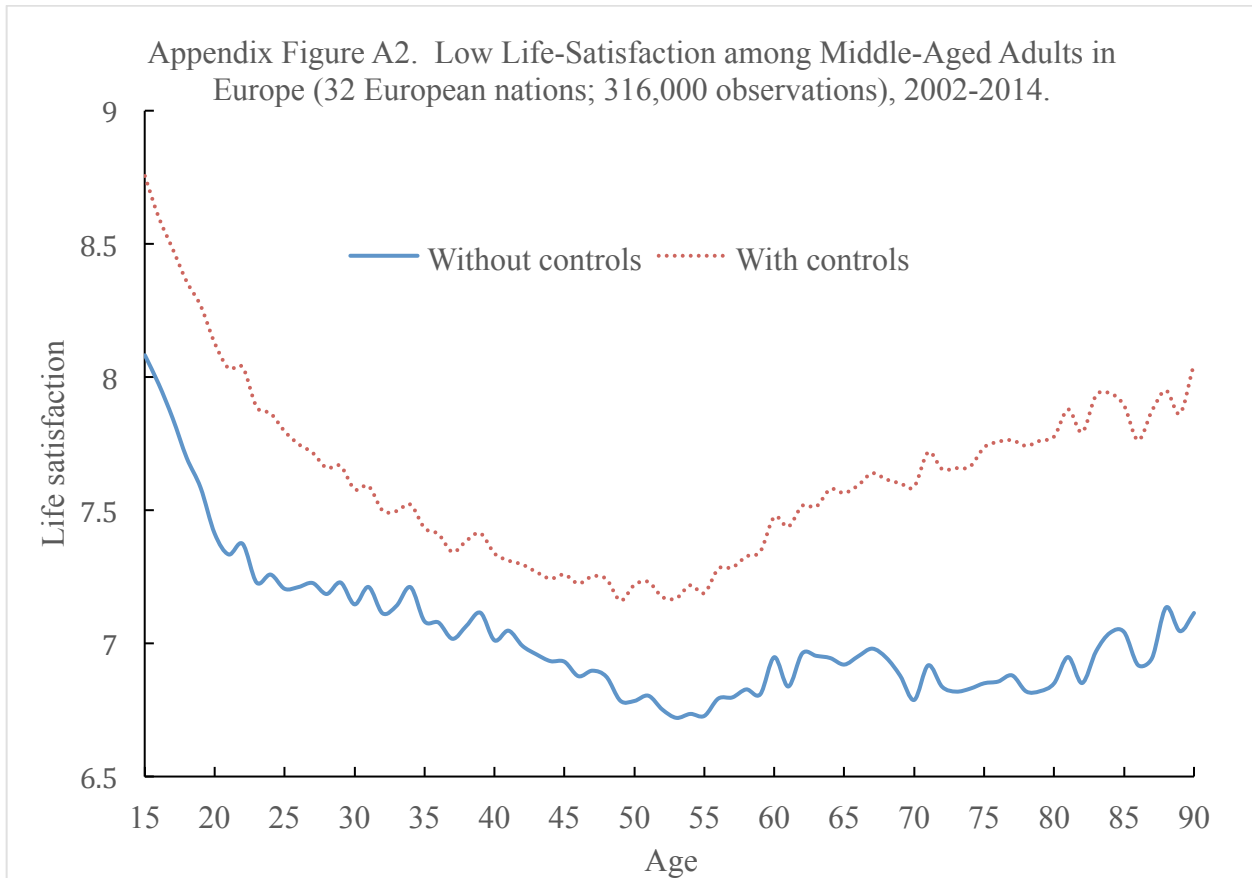


This figure is based on data from the U.S. General Social Survey where a high school dropout is defined as someone with <12 years of schooling.

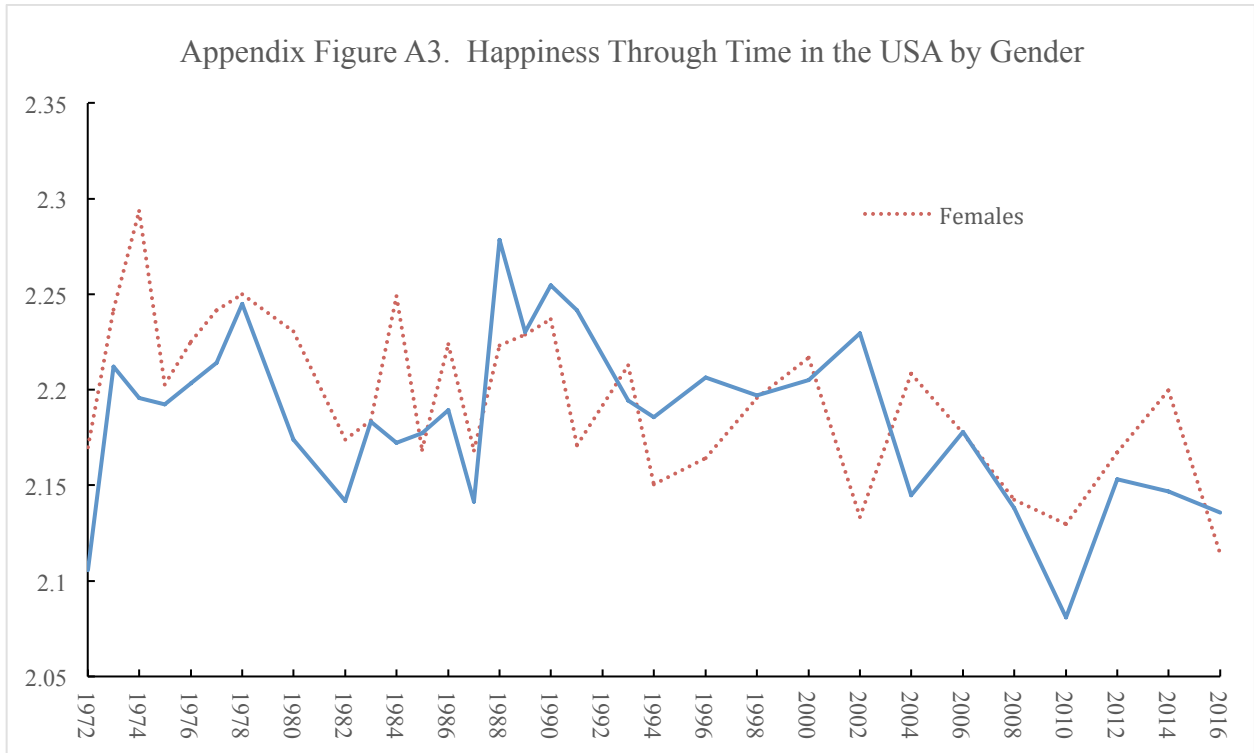
Appendix Figure A1. The Rising Proportion of Americans Giving the Lowest Happiness Answer, 1972-2016. (Percent reporting not very happy)



This figure is based on data from the U.S. General Social Survey using 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?*”. The figure uses only the percentage of people answering in the bottom category (not too happy).



This figure is based on data from the European Social Surveys sweeps 1-7 pooled, using the question “*All things considered, how satisfied are you with your life as a whole nowadays? Extremely dissatisfied, ..., extremely satisfied.*” scored from zero to 10. To aid in understanding the size of the age effect, the coefficients on marital separation and unemployment in a life-satisfaction equation here are approximately -1.0 and -0.6. The controls in the equation are a set of age dummies and a standard set of demographic, marital, and education dummies.



This figure is based on data from the General Social Survey using 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?” scored from 1 to 3. The figure is constructed as in those in the main text.