

# Intergenerational Mobility and Subjective Well-being – Evidence from the General Social Survey

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## Abstract

We investigate the relationship between intergenerational socio-economic mobility and subjective well-being (SWB) using data from the General Social Survey (GSS). We look at three different measures of intergenerational mobility—social, educational, and income mobility. We find that downward mobility with respect to all three measures has a negative effect on the self-reported level of happiness and subjective health while upward mobility is associated with positive outcomes in subjective well-being. The positive and negative effect of social and educational mobility, however, is entirely through the income and health channels while income mobility has an impact on subjective well-being even after controlling for the current level of income and health. We further find that the effect of income mobility on subjective well-being peaks between the ages of 35-45 years and then slowly dissipates. Finally, the negative effect of downward mobility on subjective well-being is much stronger than the positive effect of upward mobility. This is consistent with the decision theory of loss aversion according to which the experienced disutility from losses outweighs the utility from acquiring proportionate gains. We do not find evidence for loss aversion when it comes to social and educational mobility.

**Keywords:** Income Mobility, Subjective Well-being, Happiness

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## 1. Introduction

Income inequality in the United States has rapidly increased since the 1970's reaching historically high levels in recent years (Piketty and Saez, 2003). An emerging body of evidence<sup>2</sup> suggests that higher level of income inequality naturally leads to decline in socio-economic mobility, a relationship that is now commonly referred to as "The Great Gatsby Curve." According to a report by the OECD (2011, p.40), for example, rising income inequality "can stifle upward mobility, making it harder for talented and hard-working people to get the rewards they deserve." In the United States, income mobility is already detrimentally low and will continue to decline in the future (Krueger, 2012). This view has been challenged by Chetty *et al.*,( 2014) who find that rank-based measures of income mobility in the United States have stayed relatively constant since the 1970's. A recent study by Bjornskov et al. (2013) also finds that in countries with low upward-mobility the negative effect of income inequality on SWB is much higher than in countries with plenty of economic opportunities that allow people to move quickly up the social ladder. This raises serious concerns about the "American Dream," which remains the core of the United States identity and promises equal socio-economic opportunities regardless of a person's economic background.

In this paper, we examine the effect of intergenerational socio-economic mobility<sup>3</sup> on SWB. Although there is by now a large literature on variety of topics related to intergenerational mobility, only a handful of papers explore the topic with respect to subjective measures of well-being. Theoretical evidence suggests that socio-economic mobility can increase the level of SWB through variety of channels. For example, in addition to higher consumption and better access to services such as health care and education, individuals who do better than their parents feel pride and a sense of accomplishment. Higher social status may also make people feel more powerful and socially accepted. On the other hand, individuals may find themselves in a new socio-economic class where expectations for success and consumption are much higher which may lower their life satisfaction. Do people who climb the socio-economic ladder, then, get stuck on a hedonic treadmill or is there a permanent happiness residual in addition to the positive impact of higher income on consumption? Does social status, income, or educational mobility matter more when it comes to subjective well-being and does this effect differ among the different groups of the population?

We answer these questions using a pooled cross sectional data from the GSS from 1972 to 2012. We look at three separate measures of intergenerational mobility—social, income, and educational

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<sup>2</sup> For example, see Miles (2013) or Krueger (2012) for a summary of this literature.

<sup>3</sup> We use the term intergenerational social mobility as the change in status (social, economic, or educational) between particular individual and their parents. Thus, the concept applied in this paper can signal upward mobility for everyone (although not necessarily), while the ranks within society stay fixed. This is consistent with the use of the term with previous studies in the literature.

mobility. We find that downward intergenerational mobility with respect to each one of these measures has a negative effect on happiness and subjective health. Similarly, climbing the socio-economic ladder is associated with higher levels of happiness and subjective health. The impact of social and educational mobility, however, is entirely through the income and health channels. These results are robust with respect to several specifications used. Following Gehring (2013), we also examine how the effect of income mobility differs among the different subgroups of the population. Upward income mobility, for example, tends to benefit females, blacks, and people with higher education more than it benefits males, whites, and people with lower education. Downward income mobility, on the other hand, tends to influence more negatively males, whites, and people with lower education. We do not find any significant differences when it comes to social and education mobility. The effect of income mobility on subjective well-being peaks between the ages of 35-45 and then slowly dissipates. Finally, the negative effect of downward income mobility on SWB is much stronger than the positive effect of upward mobility, which is consistent with the decision theory of loss aversion according to which the experienced disutility from losses outweighs the utility from acquiring proportionate gains. We do not find support of the loss aversion theory when it comes to social and educational mobility where relative gains seem to be valued more than losses.

Our study advances the literature in several ways. First, to the best of our knowledge, this is the first paper that looks at three different measures of intergenerational mobility, and the only one that considers the relationship between educational mobility and SWB. Second, we apply the analysis to the United States using data from the GSS which replicates some of the previous evidence which is based on data from Europe. Third, we investigate the effect of intergenerational mobility beyond the income and health channels, i.e., once we account for the positive effect of higher income, and better health and education, we answer if climbing the socio-economic ladder matters. Fourth, we examine how socio-economic mobility differs by sub-groups of the population. For example, given the traditional gender roles in society, do females and males see social mobility similarly? Finally, we examine how the effect of upward or downward intergenerational mobility changes with age.

## **2. Theory and Literature Review**

Most people want more income and strive for it. Yet as standards of living have substantially improved in Western societies over the last fifty years, happiness levels have not changed (Easterlin, 1974, 1995, 2010; Diener and Oishi, 2000, and Inglehart and Klingemann, 2000). Within a country, richer people may as a rule be happier than poorer people (see Inglehart and Klingemann, 2000; Blanchflower and Oswald; 2004; Frey and Stutzer, 2002; Headey and Wooden, 2004; Gilbert and Paul, 2009), but ultimately nations and individuals are trapped on a hedonic treadmill as they grow richer over time.

This observation, known as the Easterlin Paradox,<sup>4</sup> has become the cornerstone of happiness research and a large literature has emerged since the 1970's that tries to explain it. What role does intergenerational mobility play in the income-happiness puzzle? Do people who manage to climb the socio-economic ladder over time report lasting increase in their happiness beyond the effect of higher consumption, or do they adapt to their new socio-economic status which after a short period of time stops delivering on its promise for higher life satisfaction?

Several psychological theories explain the Easterlin paradox. First, the theory of hedonic adaptation suggests that as individuals move up the socio-economic ladder they quickly adjust to their new level of wealth and status. People get a thrill from buying a new car or the latest tech gadget, but they soon get used to their new shiny toys and return to the mall. This leaves individuals on a "hedonic treadmill" (Brickman and Campbell, 1981; Stutzer, 2004, and Di Tella et al., 2006) so that the only way they can experience the same level of happiness is if their income growth matches the income growth from previous years. Different models of hedonic adaptation have been proposed. Kimball and Willis (2005), for example, distinguish between hedonic adaptation and internal habits. The former is related to the idea that after initial period of elation, individuals rapidly return to their baseline (mean) happiness. The latter is the idea that if individuals get less than what they are accustomed to, they experience disutility. If adaptation is complete, then movements up and down the socioeconomic ladder can only cause a temporary change in SWB, but not a permanent one.

A number of studies, however, have challenged the theory of hedonic adaptation (for a summary of the literature, see Headey, 2007). Guilbert and Paul (2009), for example, do not find evidence for adaptation to income using five waves (2001-2005) of HILDA surveys. Furthermore, Lucas et al. (2004) find that people do not fully recover from repeated spells of unemployment. In addition, Lucas et al. (2003) show that some people, although not all, experience permanent gains in happiness as a result of marriage. Finally, Frederick and Loewenstein (1999) show that cosmetic surgery can be another positive life event which can raise SWB in the long-run. If anything, most scientists today believe that if adaptation exists, it is partial.

A second explanation of the Easterlin Paradox is the theory of social comparisons—people do not evaluate their life in isolation. What matters to people, for example, is not the absolute level of their income, but how their income compares to the income of the family next door, or the so called "similar others." The similar others can include people of similar age, income, education, gender, race, etc. An increase in the income or status of the reference group is associated with decline in SWB. This comparison is sociological and external (McBride, 2001) and is deeply rooted in human nature (Frank,

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<sup>4</sup> For a more recent discussion of the income-happiness paradox see Deaton & Stone (2013).

1999, p.45). Thus, even though individuals may have higher socio-economic status than their parents, their subjective well-being may not improve as they constantly compare themselves to people who have similar or higher status.<sup>5</sup> This social comparison can also be internal as people often compare their income and achievements today with their own income and successes in the past. An individual who grows in a higher income household, for example, may have a higher consumption standard than an individual who grows in poverty. A number of empirical studies find support for the social comparison hypothesis (Clark and Oswald, 1996; McBride 2001, Stutzer, 2004, Ferrer-i-Carbonell, 2005).

A third explanation of the Easterlin Paradox is the law of diminishing marginal utility of income. Beyond some level of income, money does not buy happiness. Kahneman and Deaton (2010), for example, find that beyond \$75,000, “higher income is neither the road to experienced happiness nor the road to the relief of unhappiness or stress, although higher income continues to improve individual’s life evaluations.” This suggests that moving up the income ladder will have a much stronger positive effect for people who start in a lower income quintile than those who start in a higher one.

Although the adaptation and social comparison effects have been studied extensively in the context of income, there is empirical evidence that social status is also an important determinant of subjective well-being and health. Anderson et al. (2012), for example, find that sociometric status—the respect and admiration one has in face to face groups (such as the workplace)—has a strong effect on SWB. The so called “local ladder effect” suggests that as sociometric status rises or falls, SWB rises or falls accordingly. These effects are driven by feelings of power and social acceptance, which are both critical determinants of SWB (Keltner et al., 2003). In addition, Wilkinson and Pickett (2009) suggest a psychological mechanism how individuals’ relative income, social status, and class position may affect their well-being. Social status carries the strongest message of superiority or inferiority. It is also one of the most powerful sources of stress together with lack of friends and stress in early life that is seriously detrimental to health and longevity. Lower social status, for example, is correlated with higher levels of the stress hormone cortisol. The rise of income inequality in the Western World, for example, has been accompanied by increases in the frequency of behavioral problems including crime, alcohol, and drug abuse. Support for these observations comes from the happiness literature too—people who live in less equal societies tend to report lower levels of life satisfaction. This is true for developed nations (Alesina et al., 2004; and Oishi, Kesebir, and Diener, 2011 for the US and Europe), but also for developing ones (see Smyth and Qian, 2008 for China; Graham and Felton, 2006 for Latin America).

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<sup>5</sup> The relative income effect has been extensively studied by sociologists, psychologists, and economists. See Clark *et al.* (2008) for a summary of the literature.

Thus, we hypothesize that in addition to income, social and education mobility will also play an important role in determining one's SWB and subjective health.<sup>6</sup> People who have less respectful jobs or lower education are more likely to feel isolated and lonely, which can also be detrimental to their health. In addition, people with lower social status may feel lack of control over their life, which has one of strongest negative effects on SWB (Verme, 2008). However, it is not clear *a priori* how any of the three measures of intergenerational mobility that we use in this study will affect the SWB of individuals. On the one hand, individuals who manage to climb the income ladder may find themselves in a new socio-economic class where higher expectations for consumption, and educational and job status may lower their SWB. They may also partially adapt to their new socio-economic status or get to the point where additional gains in income, education, or social status play trivial role in determining their happiness. On the other hand, if individuals use their parents as a reference for comparison, they may experience higher level of SWB. Their higher social status may also lead to feelings of superiority, power, and greater social acceptance, which can translate in higher SWB. Similarly, people may also adjust their expectations to a lower standard of living while a comparison with their more successful parents may have a negative impact on their SWB.

Based on the concavity of the utility function, we hypothesize that incremental gains in moving up the socio-economic ladder (in any of these three measures) should bring progressively smaller gains in SWB. In addition, since people tend to be more risk averse when it comes to gains (Kahneman & Tversky, 1979), we would expect to see that downward mobility will have a much stronger relative effect on SWB than upward mobility. This could also be attributed to the status quo bias since some individuals may also have the tendency to stay in their current position because their prospect value function is much steeper when it comes to losses. This, however, is a manifestation of the loss aversion bias. For a summary of these cognitive biases see Kahneman *et al.* (1991).

Several studies investigate directly the empirical relationship between intergenerational mobility and SWB. Using data from the GSS, McBride (2001), for example, shows that individuals who surpass their parents in terms of standard of living are much happier than those who fall short. His analysis is based on the question: "*Compared to your parents when they were the age you are now, do you think your own standard of living is: much better, somewhat better, about the same, somewhat worse, or much worse.*" We add to McBride's paper by extending his dataset for a number of years and constructing an alternative measure of income mobility. In addition, we evaluate his hypothesis in regard to other measures of intergenerational mobility.

In another paper, Clark and D'Angelo (2009) use BHPS data to investigate the relationship

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<sup>6</sup> There is ample evidence that the comparison effects are true in the context of social class. See Walker & Smith (2001) for the theory of relative deprivation.

between upward social mobility in relation to parental status, political ideology, and job and life satisfaction. Their findings indicate that relative income has a significant impact on happiness. Individuals who end up with more socially desirable and respectful jobs relative to their parents' jobs have greater levels of job and life satisfaction. Our research builds on their study by providing additional evidence from the GSS and again by looking at additional measures of intergenerational mobility.

Finally, using data from the British Cohort Study, Dolan and Lordan (2013) find that relative income mobility is a substantial predictor of mental health and life satisfaction. Their results indicate that upward mobility does not impact life satisfaction in a statistically significant manner. Downward mobility, however, is extremely detrimental to both mental health and life satisfaction. This finding is consistent with the theory of loss aversion. In their study, absolute income mobility is only a significant predictor of change in subjective well-being when an individual experiences downward mobility. Our paper provides additional evidence from the United States and builds on their study by examining two separate measures of mobility—educational and social—that are not considered in their paper. Further, we test for interactive effects with gender, race, age, and educational attainment.

### **3. Data and Empirical Model**

Data was collected from the nationally representative General Social Survey (GSS) conducted by the National Opinion Research Center at the University of Chicago. The GSS is a cross-national survey that covers the period from 1972-2012 and with more than 5,000 variables it is often regarded as the single best source of data on societal trends. Table 1 in the Appendix provides description and sources for the main variables in this study, and Table 2 shows summary statistics.

#### **3.1 Subjective Well-being**

Traditionally, economists have assumed that utility (or subjective well-being) cannot be measured. What is more important, neoclassical economists believe that utility need not be measured directly because it can be inferred from the choices that people make which reveal their preferences. Within this tradition, subjective well-being data is seen as highly suspicious and often regarded as unscientific. This objectivist approach to well-being, however, has been challenged in recent years as research in psychology and economics has pointed out that there are large discrepancies between how people feel and how they actually behave in life (Kahneman and Thaler, 2006).

Although measuring feelings can be very subjective, there is by now ample evidence that subjective well-being data, although imperfect, provides valid, reliable, and meaningful information. First, self-reported happiness tends to correlated strongly with other meaningful measures of well-

being. For example, people that report themselves happier tend to smile more often (Fernandez-Dols and Ruiz-Belda, 1995). Happy people are also more likely to be rated happy by friends and family (Sandvik et al., 1993) and by their spouses (Costa and McCrae, 1988). Second, happiness data tends to move in an expected manner with many external factors such as unemployment and marriage known to affect well-being. For example, unemployed people report lower levels of happiness and so do those who are recently divorced. Similarly, happiness data tends to move in a predictable way with many macroeconomic variables such as GDP per capita, the general level of unemployment, and income inequality (e.g., see Di Tella et al., 2003; Alesina et al., 2004). A third important validation comes from neuropsychological studies that measure electrical changes in brain activity and heart rate. These changes tend to be significantly correlated with a variety of hedonic experiences and the subject's self-report

(Davidson 1992, 2000; Davidson et al., 2000).

Thus, despite its many shortcomings, a growing body of evidence suggests that it is possible to collect subjective well-being data in a reliable, consistent, valid, and meaningful way. Although such data has many limitations, it nevertheless reveals important information about quality of life that is often not found in traditional indicators such as income.

We use four measures of subjective well-being from the GSS—happiness, job satisfaction, subjective health, and financial satisfaction. Data on happiness (GSS variable: *happy*) was collected using the following question: "*Taken all together, how would you say things are these days -- would you say that you are very happy, pretty happy, or not too happy?*" The data was then recoded so that the answers correspond to the following numerical values: (1) 'not too happy', (2) 'pretty happy', and (3) 'very happy'.<sup>7</sup> The measure of job satisfaction (GSS variable: *satjob*) was collected with the question: "*On the whole, how satisfied are you with the work you do?*" Responses were evaluated on a scale from 0 'very dissatisfied' to 10 'very satisfied'. Data on self-reported health (GSS variable: *health*) was collected with the question: "*Would you say your own health, in general, is excellent, good, fair, or poor?*" And data on financial satisfaction (GSS variable: *satfin*) came from the question: "*would you say that you are pretty well satisfied with your present financial situation, more or less satisfied, or not satisfied at all.*"

### **3.2 Intergeneration Mobility**

We use several measures of intergenerational mobility in this study. Below we describe each one of them. For a summary and description of the mobility variables, please refer to Table 1b.

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<sup>7</sup> A small fraction of responses "Don't know" and "No answer" are ignored by the analysis.



### 3.2.1 Social Mobility

Our first measure of intergenerational mobility is calculated using the respondent's socioeconomic index (SEI) from the GSS. The SEI is an occupational index that reflects the job's prestige and desirability. It is based the 1989 GSS study that ranks jobs according to their reputation.<sup>8</sup> One can think of the SEI score as a proxy for employment status and job desirability. The SEI scores range from 17.1 (lowest status job) to 97.2 (highest status job). In this study, we use the SEI as a proxy for individual social status because it is based on several different factors—e.g. average job earnings and education required for the job. More importantly, equivalent SEI scores are available for both parents and are measured on the same scale at the time the respondent was 16 years of age. Thus, to create a measure of intergenerational social mobility, we compare the respondent's SEI score to the SEI score of his/her parents. We categorize the sei scores of the respondent and his parents into quintiles. We define upward social mobility as a situation in which the respondent SEI score is in a higher quintile than both of his parent's SEI scores, and downward social mobility if his score is in a lower quintile than at least one of his parents' SEI scores. In addition, we utilize answers to the following question which attempts to measure occupational intergenerational mobility: *"If you compare [your] job with the job your father had when you were 16, would you say that the level or status of our job is: (1) much higher than dad, (2) higher, (3) about equal, (4) lower, (5) much lower than dad."* (GSS variable: *occmobil*)

### 3.2.2 Educational Mobility

The GSS reports the educational attainment of the respondent (GSS variable: *degree*) in four separate categories which were recoded to take the following numerical values: (0) 'less than high school', (1) 'high school', (2) 'college degree' and (3) 'graduate degree.'<sup>9</sup> The same information is provided for the respondent's parents. We create a dummy variable for upward educational mobility if the respondent's educational attainment is higher than the highest degree of his parents. On the other hand, downward education mobility is experienced if the respondent has a lower degree than the highest degree attained by his parents. For example, if the respondent's highest degree was college or graduate school and neither one of his parents attained a higher degree than high school, then the respondent experienced upward educational mobility. On the other hand, if one of the respondent's parents had a graduate degree, but the respondent did not earn a higher degree than college, then the respondent experienced a downward educational mobility.

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<sup>8</sup> See Nakao, Keiko and Treas, Judith, "The 1989 Socioeconomic Index of Occupations: Construction from the 1989 Occupational Prestige Scores," GSS Methodological Report No. 74. Chicago: NORC, 1992.

<sup>9</sup> A small number of observations 'some college' are dropped from the analysis.

### 3.2.3 Income Mobility

We use two separate measures of income mobility. First, we use answers to the following question as a measure of intergenerational income mobility: “*compared to your parents when they were the age you are now, do you think your own standard of living now is: much better, somewhat better, about the same, somewhat worse, or much worse.*” Second, we utilize the GSS income variable *coninc*, which is constructed from categorical data and represents inflation adjusted annual personal income before taxes (in constant 2005 dollars). To calculate an income mobility variable we take advantage of another variable that approximates the income of the respondent’s parents when he/she was 16 years old (GSS variable: *incom16*). This variable was collected with the following question: “*Thinking about the time when you were 16 years old, compared with American families in general then, would you say your family income was—(1) far below average, (2) below average, (3) average, (4) above average, (5) way above average?*” We then transform the *coninc* variable into quintiles using the middle quintile as our average income category. We define upward social mobility as a situation in which the respondent’s income is in a higher quintile (e.g., average) than the income of his/her parents (e.g., below average), and downward social mobility if his/her score is in a lower category than his/her parents. Although not perfect, this strategy allows us to use an additional measure of income mobility and compare it to the results obtained from our previous measures.

### 3.4 Other Background Controls

The GSS dataset also provides a number of background variables on the individual level. The ones that are used as controls in this study are well known to affect the individual level of happiness and include: age, gender, race, marital status, number of children, and personal unemployment. In addition, we include a number of controls for family background such number of siblings, family income at the age of 16, and father and mother’s educational attainment. We provide the original GSS names of these variables in parenthesis (and in the Appendix), so that someone interested in duplicating this study can easily find them in the GSS dataset which can be downloaded from: <http://www3.norc.org/gss+website/>.

### 3.5 Empirical Model

To examine the relationship between intergenerational mobility and subjective well-being, we use a reduced form model which is common in the happiness literature (e.g., see Di Tella et al., 2003).

$$SWB_i = \alpha Mobility_i + \beta \log y_i + \gamma' X + \phi' Z + v_i$$

where  $SWB_i$  is our measure of subjective well-being (self-reported happiness or subjective health),  $Mobility$  is one of our three measures of intergeneration mobility (socio-economic, education or income mobility),  $y_i$  is the log of individual income (before taxes and measured in 2005 constant dollars)<sup>10</sup>,  $\mathbf{X}$  is a vector of personal characteristics that includes age, quadratic of age, sex, race, employment status, educational attainment and condition of health<sup>11</sup>,  $\mathbf{Z}$  is a vector of family characteristics including number of siblings, family income at 16, and mother and father's education . Finally,  $v_i$  is the i.i.d. error.

Since the dependent variable in this study, SWB, is a categorical variable, it requires an ordered logit estimation. We provide estimates from both an ordered logit estimation but also report the coefficients from OLS regression in most of the models. Both estimates tend to tell the same story. This is consistent with Ferrer-i-Carbonell (2004) who provide extensive evidence that the results from OLS and ordered logit regressions hardly differ in the context of happiness research. While the ordered logit models are theoretically appealing, the OLS estimates have the practical advantage of providing easy-to-interpret marginal effects. This is important since Ai and Norton (2003), for example, show that coefficients in ordered probit regressions are more difficult to interpret than commonly assumed.

### 3.6. Omitted Variables & Serial Correlation

No matter how comprehensive our model is, there is always possibility for omitted variables which may bias the mobility coefficients. Many of the control variables included in the regression, however, such as the log of personal income, health and educational attainment are positively correlated with SWB. Including these variables closes the channels through which the mobility coefficients may affect SWB and would bias the coefficients downward. In the regressions that follow, we provide estimates for the overall effect of intergenerational mobility through the income, health, and education channels (i.e., we do not include these controls in the regressions) and the direct effect once we account for the positive effect of income, health, and education. Overall, the second set of regressions allows us to provide a lower bound for the true causal effect.

Nevertheless, the set of control variables included in the regressions may still not be complete. For example, aggregated variables such as regional unemployment, urbanization, and income inequality can affect SWB. Unfortunately, due to data limitation, such controls are not included in the regressions. In addition, unobserved regional characteristics may also cause serial correlation which can bias the estimates of the standard error and significance tests. By including regional and year dummies, or

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<sup>10</sup> For details on how the income variable was calculated refer to GSS Methodological Report No. 101 (Holt, 2004).

<sup>11</sup> Subjective health is omitted from the regressions in which it is used as a dependent variable.

aggregating the error term around year, we can partly alleviate this problem. Serial correlation and omitted variable bias remains a problem that future studies will need to address as data becomes available. However, the regressions in this study are more complete than previous studies using the same dataset, which helps build on the evidence.

### **3.7. Causality**

It is possible that happier people are more likely to experience upward socio-economic mobility. On the one hand, happier people may be more content with their lives and less ambitious. Data from the GSS, for example, shows that people who report that ‘ambition is not very essential to success’ also report more than one standard deviation higher happiness than those who believe that it is ‘very important’. However, numerous studies also show that happier individuals are more successful across multiple life domains, including marriage, friendship, income, work performance, and health (for a comprehensive review of this literature see Lyubomirsky, 2005). The problem of reverse causality remains one of the major issues with happiness studies which often assume that the relationship is only in one direction.

In the next section, we estimate the relationship between intergenerational mobility and happiness.

## **4. Empirical Tests**

We start the analysis in Table 3, which presents the basic results for income mobility. As expected, models (1) and (3) suggest that downward income mobility (INC\_DOWN) has a negative and statistically significant effect on the self-reported level of happiness and health while upward income (INC\_UP) mobility has a positive effect. Once we control for the current level of income, health, and educational attainment in models (2) and (4), the mobility coefficients lose much of their magnitude, but are still statistically significant and reveal similar patterns. This suggests that about one half of the effect of income mobility is through the income, education, and health channels. Thus, even after controlling for the current level of income, health, and educational attainment, people who climb (slide) the income ladder tend to report significantly higher (lower) level of happiness.

How large is the effect of income mobility? The coefficients from the OLS regression from column (1) in Table 3, for example, suggest that downward income mobility will decrease self-reported happiness with 0.1 points (on a scale from 1-3). This effect is about half as strong as the negative effect of personal unemployment, about one fifth of the negative effect associated with “poor health (compared to ‘excellent health.’), but twice as large as the happiness premium that people with college degree enjoy compared to people with less than high school education. Once we add additional controls

such as health, income, and education, and close these channels through which income mobility can affect happiness, the magnitude of the coefficients on both upward and downward mobility decreases by half.

In addition, in all four models, the effect of downward income mobility has a stronger impact on one's happiness than the effect of upward income mobility. One explanation for this phenomenon could be the concavity of the utility function since additional gains in income are valued incrementally less the higher one is in the income distribution. Another explanation is the theory of loss aversion (Kahneman and Thaler, 1991)—people have stronger preference avoiding losses to acquiring proportional gains. The results in Table 3 suggest that when it comes to income mobility, proportional losses tend to be twice as powerful as equivalent gains with respect to both subjective happiness and health. A third explanation could be the survey scales that people use to report subjective well-being. Since majority of people report themselves happy, it may be easier to adjust one's well-being report down than it is to adjust it up. The results in the table are consistent with previous findings in the happiness literature (see Aleisna *et al.*, 2004). For example, people who are unemployed, have worse health, and lower educational attainment tend to report lower levels of happiness and subjective health.

Table 4 provides several alternative tests of the main model in Table 3. First, model (1) presents the empirical results from an ordered logit model and finds results that do not deviate significantly from the results in Table 3. In model (2) we cluster the observations around individuals and in model (3) we cluster them around years using a pooled OLS model. This allows us to relax the assumption that individual observations across years and individuals are independent from each other. The results from both models are consistent with the main findings so far.

As an additional robustness test, we use the self-reported level of standard of living of the respondent compared to the standard of living of their parents. Figure 1 shows that individuals who report higher standard of living than their parents also report higher happiness levels. The difference between those who report 'much worse' living standards than their parents and 'much better' is close to .5, which is almost one standard deviation of self-reported level of happiness. Table 5 presents the results from an OLS model with robust standard errors. The findings are consistent with the main model from Table 3. People who report 'much worse' standards of living than their parents tend to experience lower level of happiness compared to individuals who report that their standard of living is 'about the same' to their parents. On the other hand, people who report 'much better' standard of living than their parents also have higher levels of happiness than the base group 'about the same'. Again, the results are consistent with the theory of loss aversion. Models (2), (3), and (4) in the table reveal similar patterns with respect to health, financial satisfaction, and socio-economic status.

So far we have established that there is a strong positive effect of income mobility on SWB. Next, we divide respondents into several sub-groups based on their gender, race, and educational level in order to determine what factors may contribute indirectly to the relationship between income mobility and happiness. This is justified because appreciation of income mobility may depend on individual preferences that could be socially determined. Bjornskov *et al.* (2013), for example, show that individuals who have greater appreciation of income mobility (or higher perception of fairness) are more likely to be less affected by income inequality. In addition, given the traditional gender roles in the US, we may expect to see differences in attitudes toward income mobility among males and females. Finally, people with higher education may have higher aspirations for material success which may also change how they perceive socio-economic mobility.

The results in Table 6 indicate that upward income mobility tends to benefit females, blacks, and people with higher education more than it benefits males, whites, and people with lower education. Downward income mobility, on the other hand, tends to negatively affect males, whites, and people with lower education more than it does females, blacks, and people with higher education. Furthermore, Table 7 splits the sample by age and reveals that the effect of income mobility on subjective well-being peaks between the ages of 35-45 and then slowly dissipates. To some extent this result is intuitive as income mobility should matter more later in life when people have already had a chance to establish themselves. On the other hand, it is puzzling why income mobility does not seem to matter to older people. One possible explanation could be that some of the older people in the sample are on social security and perhaps earned income matters more to happiness than income that is transferred via government. It is also possible that the income comparison with deceased parents, which may be the case for some of the older respondents in the sample, is less salient.

Next, in Table 8 we repeat the analysis from Table 3 with respect to the social mobility variables SOC\_UP and SOC\_DOWN. Figure 2 shows some preliminary evidence that upward social mobility is associated with higher levels of happiness and subjective health. In Table 8 we report the results from an OLS with robust standard errors. We find that upward social mobility tends to affect subjective well-being and health positively while downward social mobility is associated with lower levels of happiness and subjective health. This effect is about half as strong as the effect of income mobility. Once we control for the current level of income, health, and education, however, we find no significant relationship between social mobility and health and happiness. This suggests that all of the positive (negative) benefits of upward (downward) social mobility are through the income, health, and educational channels. When it comes to social mobility, we do not find evidence for loss aversion. Table 9 further decomposes the effect by several sub-groups of the population. In almost all of the regressions, the mobility variable is insignificant, which is consistent with the results obtained in the more complete

models of Table 8 and suggests that much of the effect of social mobility is through the income, health, and educational channels.

Finally, we explore the effect of educational mobility on subjective well-being. Figure 3 suggests that people who experience upward educational mobility report higher levels of happiness. The relationship between educational mobility and health, however, does not appear as straightforward. Table 10 reports the main results from the OLS analysis. The results in the table reveal that upward educational mobility (EDU\_UP) positively affects health and happiness. No evidence of loss aversion is found. In fact, the positive effect of upward educational mobility is disproportionately stronger than the negative effect of downward educational mobility (EDU\_DOWN). Overall, the effect of educational mobility is about one third the effect of income mobility. Once additional controls are included in models (3) and (4), however, the mobility variables also lose their significance. The only exception is the coefficient on upward educational mobility, which shows a negative significant sign (e.g., see Clark and Oswald, 1996). To some extent this result is puzzling. However, several studies find that higher education may lead to lower happiness. One possible explanation is that education makes people more ambitious, which might reduce life satisfaction since higher aspirations are more difficult to fulfill. College graduates, for instance, experience higher levels of stress related to unemployment than their less educated counterparts. Similar to the results found in Table 8, much of the effect of educational mobility tends to be through the income, health, and educational channels. In addition, compared to income and social mobility, educational mobility tends to have the least impact on one's happiness and health. This could be due to the fact that educational attainment is often less visible than positional goods such as a bigger house or more prestigious job that allow individuals to feel a sense of superiority.

Finally, Table 9 decomposes the effect of educational mobility by several sub-groups of the population. Again, in almost all of the regressions, the education mobility variables are insignificant, which is consistent with the results obtained in the more complete models of Table 10. The only exception is the coefficient on upward educational mobility in the female subsample, which is positive and statistically significant. To some extent this result can be explained by the closing higher education gender gap. In the 1970s, for example, 75 percent more men finished college than women while the gender gap has stabilized over the past decade with women representing the same percent of college enrollment today as men (American Council of Education, 2010). Thus, many women may feel a greater sense of accomplishment and pride for finishing their degree given this historical gender difference.

## **5. Conclusions**

Using data from the GSS from 1972 to 2012, we estimate the effect of three separate measures of intergenerational mobility—social, income, and educational mobility—on two measures of subjective well-being—self-reported level of happiness and health. We find that downward social, income, and educational mobility have negative effect on both of these measures. Similarly, climbing the income ladder is associated with higher levels of happiness and subjective health. The effect of social and educational mobility, however, is entirely through the income and health channels. The effect of income mobility differs among the different subgroups of the population. Upward income mobility benefits females, blacks, and people with higher educational attainment more than it benefits males, whites, and people with lower education. Downward income mobility, on the other hand, tends to affect more negatively males, whites, and people with lower education. We find that the effect of income mobility on subjective well-being peaks between the ages of 35-45 and then slowly dissipates. Finally, the negative effect of downward income mobility on SWB is much stronger than the positive effect of upward mobility, which is consistent with the decision theory of loss aversion according to which the experienced disutility from losses outweighs the utility from acquiring proportionate gains. We do not find support for the loss aversion theory when it comes to social and educational mobility where relative gains seem to be valued more than losses.

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## Appendix

Table 1a: Description and Sources of Main Variables

Micro Variables		
<b>Happy</b>	Data was collected with the question: “ <i>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?</i> ” (1 ‘not too happy’, 2 ‘pretty happy’, 3 ‘very happy’)	General Social Survey (GSS variable: <i>happy</i> ) <a href="http://www3.norc.org/gss+website/">http://www3.norc.org/gss+website/</a>
<b>INC_DOWN</b>	Downward income mobility (see text for description)	Own calculations
<b>INC_UP</b>	Upward income mobility (see text for description)	Own calculations
<b>Standard of Living</b>	Respondents standard of living compared to parents: ‘much better’, ‘somewhat better’, ‘about the same’, ‘somewhat worse’, ‘much worse’	GSS variable: <i>parsol</i>
<b>SOC_DOWN</b>	Dummy = 1 if respondent has lower sei score than his parent’s sei score.	Own calculations
<b>SOC_UP</b>	Dummy =1 if respondent has a higher sei score than his parent’s sei score.	Own calculations
<b>Occupational Mobility</b>	Status of job higher than father? “”	GSS variable: <i>occmobil</i>
<b>EDU_DOWN</b>	Dummy = 1 if respondent has lower educational attainment than both of his parents.	Own calculations
<b>EDU_UP</b>	Dummy = 1 if respondent has higher educational attainment than both of his parents.	Own calculations
<b>Income</b>	Respondent’s income (in 2005 constant dollars)	GSS variable: <i>conrinc</i>
<b>SEI</b>	Prestige and socio-economic index	GSS variable: <i>sei</i>
<b>Job Satisfaction</b>	Answers to the question: “On the whole, how satisfied are you with the work you do?” (0 ‘very dissatisfied’ to 10 ‘very satisfied’)	GSS variable: <i>satjob</i>
<b>Age</b>	Age in years	GSS variable: <i>age</i>
<b>Sex</b>	Gender dummy (0 ‘male’, 1 ‘female’)	GSS variable: <i>sex</i>
<b>Race</b>	Race dummy (0: White, 1: Black)	GSS variable: <i>race</i>
<b>Marital Status</b>	Dummies for ‘divorced’, ‘separated’, and ‘widowed’ (‘married’ is the base category)	GSS variable: <i>marital</i>
<b>Education</b>	Dummies for ‘high school’, ‘college’, ‘graduate school’ (‘less than high school’ is the base category)	GSS variable: <i>degree</i>
<b>Health</b>	Dummies for ‘poor’, ‘fair’, ‘good’, and ‘excellent’ health (‘poor’ is used as a base)	GSS variable: <i>health</i>
<b>Children</b>	Number of children	GSS variable: <i>childs</i>
<b>Employment Status</b>	Dummy for unemployed	GSS variable: <i>wrkstat</i>
<b>Number of Siblings</b>	Number of brothers and sisters	GSS variable: <i>sibs</i>
<b>Family Income at 16</b>	Number of hours worked last week	GSS variable: <i>incom16</i>
<b>Mother’s Education</b>	Mother’s highest degree	GSS variable: <i>madeg</i>
<b>Father’s Education</b>	Father’s highest degree	GSS variable: <i>padeg</i>

Note: All variables were obtained from the General Social Survey. <http://www3.norc.org/gss+website/>

Table 1b: Description of Mobility Variables

INCOME MOBILITY	
INC_DOWN INC_UP	We utilize the GSS income variable <i>coninc</i> , which is constructed from categorical data and represents inflation adjusted annual personal income before taxes (in constant 2005 dollars). To calculate an income mobility variable we take advantage of another variable that approximates the income of the respondent's parents when he/she was 16 years old (GSS variable: <i>incom16</i> ). This variable was collected with the following question: "Thinking about the time when you were 16 years old, compared with American families in general then, would you say your family income was—(1) far below average, (2) below average, (3) average, (4) above average, (5) way above average?" We then transform the <i>coninc</i> variable into quintiles using the middle quintile as our average income category. We define upward social mobility as a situation in which the respondent's income is in a higher quintile (e.g., average) than the income of his/her parents (e.g., below average), and downward social mobility if his/her score is in a lower category than his/her parents.
Standard of Living	We use answers to the following question as a measure of intergenerational income mobility: "compared to your parents when they were the age you are now, do you think your own standard of living now is: much better, somewhat better, about the same, somewhat worse, or much worse."
SOCIAL MOBILITY	
SOC_DOWN SOC_UP	We use the respondent's socioeconomic index (GSS variable: <i>SEI</i> ) from the GSS. The SEI is an occupational index that reflects the job's prestige and desirability. It is based the 1989 GSS study that ranks jobs according to their reputation. The SEI scores range from 17.1 (lowest status job) to 97.2 (highest status job). Equivalent SEI scores are available for both parents and are measured on the same scale at the time the respondent was 16 years of age. To create a measure of intergenerational social mobility, we compare the respondent's SEI score to the SEI score of his/her parents. We categorize the sei scores of the respondent and his parents into quintiles. We define upward social mobility as a situation in which the respondent SEI score is in a higher quintile than both of his parent's SEI scores, and downward social mobility if his score is in a lower quintile than at least one of his parents' SEI scores.
Occupational Mobility	We utilize answers to the following question which attempts to measure occupational intergenerational mobility: "If you compare [your] job with the job your father had when you were 16, would you say that the level or status of our job is: (1) much higher than dad, (2) higher, (3) about equal, (4) lower, (5) much lower than dad." (GSS variable: <i>occmobil</i> )
EDUCATION MOBILITY	
EDU_DOWN EDU_UP	The GSS reports the educational attainment of the respondent (GSS variable: <i>degree</i> ) in four separate categories which were recoded to take the following numerical values: (0) 'less than high school', (1) 'high school', (2) 'college degree' and (3) 'graduate degree.' The same information is provided for the respondent's parents. We create a dummy variable for upward educational mobility ( <b>EDU_UP</b> ) if the respondent's educational attainment is higher than the highest degree of his parents. On the other hand, downward education mobility ( <b>EDU_DOWN</b> ) is experienced if the respondent has a lower degree than the highest degree attained by his parents.

Table 2: Summary Statistics for Microeconomic Variables

<b>Variables</b>	<b>Observations</b>	<b>Mean</b>	<b>St. Dev.</b>	<b>Min</b>	<b>Max</b>
Happy	52321	2.19	0.64	1	3
<b>Income Mobility</b>					
INC_DOWN	39746	0.31	0.46	0	1
INC_UP	39746	0.31	0.46	0	1
Standard of Living (relative)					
Much Worse	14827	0.33	0.47	0	1
Somewhat Worse	14827	0.31	0.46	0	1
About the Same	14827	0.22	0.41	0	1
Somewhat Better	14827	0.11	0.31	0	1
Much Better	14827	0.04	0.19	0	1
<b>Social Mobility</b>					
SOC_UP	27055	0.36	0.48	0	1
SOC_DOWN	27055	0.36	0.48	0	1
Occupational Mobility	2636	2.90	1.58	0	7
<b>Education Mobility</b>					
EDU_UP	40214	0.32	0.46	0	1
EDU_DOWN	40214	0.20	0.40	0	1
<b>Personal Characteristics</b>					
Log Income	33365	9.92	1.09	5.95	12.98
SEI	31277	48.42	19.18	17.1	97.2
Age	56859	45.70	17.47	18	89
Female	57061	0.56	0.50	0	1
Black	57061	0.14	0.35	0	1
Unemployed	57047	0.03	0.18	0	1
Number of Children	56880	1.95	1.79	0	8
High School	56896	0.57	0.50	0	1
College	56896	0.14	0.35	0	1
Graduate School	56896	0.07	0.25	0	1
Poor Health	42426	0.06	0.23	0	1
Fair Health	42426	0.19	0.39	0	1
Good Health	42426	0.45	0.50	0	1
Excellent Health	42426	0.31	0.46	0	1
<b>Family Characteristics</b>					
Siblings	55382	3.94	3.19	0	68
Family Income (age 16)	55517	1.93	1.82	0	8
Father's Education	42870	0.86	1.16	0	4
Mother's Education	49428	0.81	0.97	0	4

Table 3: Basic Results

	Happy			Happy			Health			Health		
INC_DOWN	-0.102	(.0108)	***	-0.065	(.0164)	***	-0.145	(.0166)	***	-0.025	(.0199)	
INC_UP	0.056	(.0101)	***	0.042	(.0141)	***	0.082	(.0146)	***	0.017	(.0167)	
log Income				0.032	(.0072)	***				0.083	(.0088)	***
<b>Personal Characteristics</b>												
Age	-0.005	(.0022)	**	-0.019	(.0042)	***	-0.014	(.0034)	***	-0.029	(.0054)	***
Age squared	6.76E-05	(.0000)	***	2.26E-04	(.0000)	***	3.00E-05	(.0000)	***	2.41E-04	(.0001)	***
Female	0.020	(.0086)	**	0.025	(.0133)	**	-0.021	(.0128)	**	0.062	(.0157)	***
Black	-0.189	(.0157)	***	-0.163	(.0223)	***	-0.136	(.0224)	***	-0.117	(.0257)	***
Unemployed	-0.279	(.0294)	***	-0.236	(.0422)	***	-0.166	(.0428)	***	-0.152	(.0469)	***
Number of Children	0.006	(.0026)	**	0.012	(.0041)	***	-0.012	(.0040)	*	0.009	(.0049)	*
High School				0.056	(.0209)	***				0.273	(.0257)	***
College				0.065	(.0258)	**				0.390	(.0309)	***
Grad School				0.054	(.0285)	*				0.431	(.0339)	***
Fair Health				0.178	(.0488)	***						
Good Health				0.361	(.0471)	***						
Excellent Health				0.554	(.0476)	***						
<b>Family Characteristics</b>												
Number of Siblings	-0.003	(.0015)	*	0.003	(.0022)		-0.012	(.0059)	**	-0.006	(.0026)	**
Family Income at 16	-0.006	(.0039)		0.001	(.0059)		0.053	(.0070)	**	-0.004	(.0068)	
Mother's Education	0.024	(.0049)	***	-0.003	(.0067)		0.063	(.0086)	**	0.020	(.0078)	**
Father's Education	0.026	(.0059)	***	0.022	(.0080)	***	0.054	(.0291)	**	0.018	(.0093)	**
R-Squared	0.0350			0.1065			0.1190			0.1357		
Observations	21466			5077			16267			9562		
Region Dummies	YES			YES			YES			YES		
Year Dummies	YES			YES			YES			YES		

Note: \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS. The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.

Table 4: Basic Results, Alternative Specifications

	Ordered Probit	Marginal Effects dy/dx	OLS: Clustered Robust (id)	OLS: Clustered Robust (year)
INC_DOWN	-0.125 (.0319) ***	-0.020	-0.065 (.0162) ***	-0.064 (.0166) ***
INC_UP	0.082 (.0278) ***	0.013	0.042 (.0141) ***	0.041 (.0140) ***
log Income	0.064 (.0141) ***	0.010	0.032 (.0071) ***	0.033 (.0072) ***
<b>Personal Characteristics</b>				
Age	-0.038 (.0086) ***	-0.006	-0.019 (.0043) ***	-0.020 (.0042) ***
Age squared	4.53E-04 (.0001) ***	0.76E-04	2.26E-04 (.0000) ***	2.30E-04 (.0000) ***
Female	0.047 (.0260) **	0.008	0.025 (.0130) *	0.023 (.0132) *
Black	-0.316 (.0430) ***	-0.050	-0.163 (.0220) ***	-0.169 (.0211) ***
Unemployed	-0.451 (.0809) ***	-0.071	-0.236 (.0437) ***	-0.240 (.0364) ***
Number of Children	0.023 (.0079) ***	0.004	0.012 (.0040) ***	0.013 (.0039) ***
High School	0.109 (.0405) ***	0.018	0.056 (.0215) **	0.046 (.0196) **
College	0.128 (.0504) **	0.019	0.065 (.0261) **	0.054 (.0251) **
Grad School	0.105 (.0558) *	0.016	0.054 (.0291)	0.045 (.0279)
Poor Health	0.339 (.0937) ***	0.111	0.178 (.0496) ***	0.179 (.0425) ***
Good Health	0.687 (.0909) ***	0.184	0.361 (.0479) ***	0.361 (.0409) ***
Excellent Health	1.069 (.0926) ***	0.232	0.554 (.0479) ***	0.557 (.0415) ***
<b>Family Characteristics</b>				
Number of Siblings	0.007 (.0043)	0.0012	0.003 (.0022)	0.003 (.0022)
Family Income at 16	0.002 (.0114)	0.0002	0.001 (.0058)	0.000 (.0057)
Mother's Education	-0.005 (.0133)	-0.0007	-0.003 (.0067)	-0.005 (.0069)
Father's Education	0.044 (.0157) ***	0.0066	0.022 (.0080) **	0.018 (.0081) **
R-Squared	0.0529		0.0939	0.0884
Observations	9556		9556	9556
/cut1	-0.461 (.2590) ***			
/cut2	1.351 (.2594) ***			
Region Dummies	YES		YES	YES
Year Dummies	YES		YES	NO

Note: Dependent variable: *Happy*. \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are ordered probit. The categories 'male', 'white', 'married', and 'poor health' were omitted.

Fig 1: Standard of Living Compared to Parents and Average Happiness

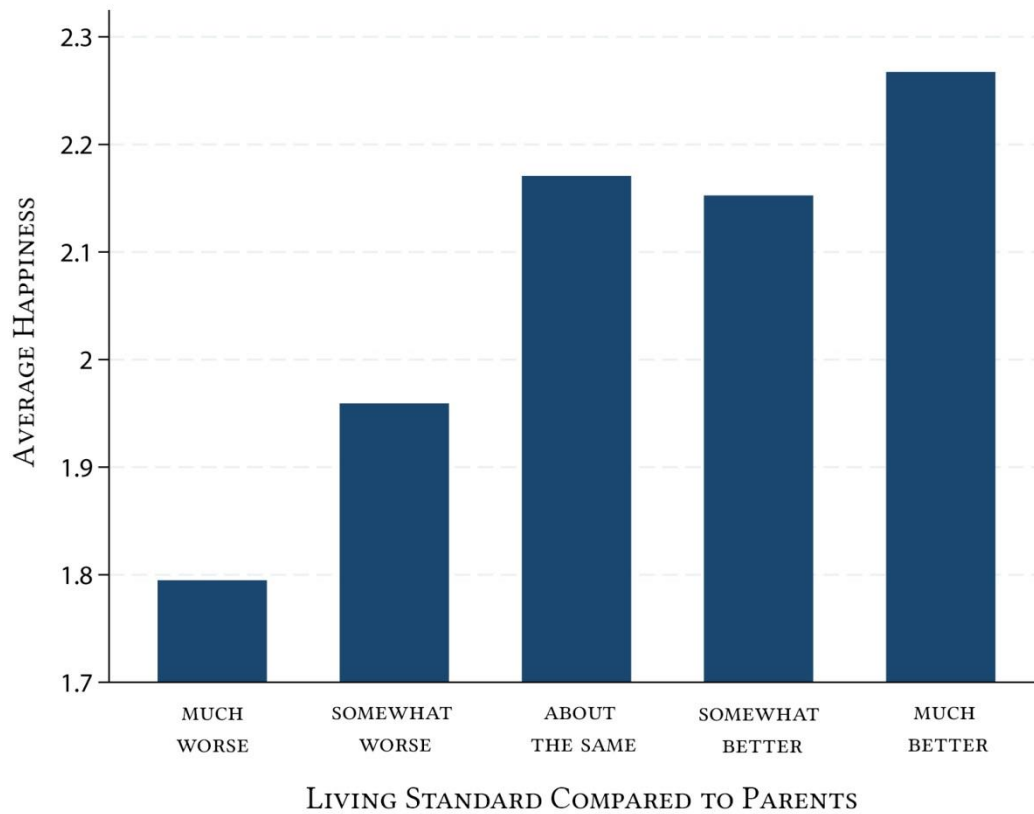


Table 5: Standard of Living Compared to Parents

	Happy			SEI			Health			Fin Sat		
Much Better	0.110	(.0287)	***	1.186	(.7505)	*	0.074	(.0322)	***	0.224	(.0317)	***
Somewhat Better	-0.008	(.0279)		0.965	(.7370)		0.011	(.0316)		0.056	(.0306)	*
Somewhat Worse	-0.183	(.0353)	***	-1.075	(.9227)		-0.112	(.0391)	***	-0.382	(.0372)	***
Much Worse	-0.293	(.0660)	***	-2.765	(1.7029)	*	-0.252	(.0855)	***	-0.504	(.0649)	***
R-Squared	0.1129			0.3872			0.0959			0.1903		
Observations	3560			3319			3579			3576		

Note: \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS, and include all controls in the benchmark model from Table 3 (including both regional and year dummies). The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.



Table 6: Income Mobility and Happiness by Sub-groups

	Sex				Race			
	Male		Female		White		Black	
INC_DOWN	-0.061	**	-0.058	**	-0.075	***	-0.013	
	(.0248)		(.0234)		(.0180)		(.0576)	
INC_UP	0.016		0.066	***	0.037	**	0.119	**
	(.0193)		(.0217)		(.0154)		(.0509)	
Observations	4912		4283		7887		928	
R-Squared	0.1121		0.0940		0.0939		0.0893	
	Marital Status				Education			
	Married		Never Married		< HS		College >	
INC_DOWN	-0.016		0.020		-0.081	***	0.053	
	(.0242)		(.0447)		(.0177)		(.0567)	
INC_UP	0.019		-0.019		0.036	**	0.095	**
	(.0167)		(.0486)		(.0154)		(.0393)	
Observations	5960		988		7887		1092	
R-Squared	0.0819		0.1498		0.0939		0.1107	

Note: Dependent variable: *Happy*. \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS, and include all controls in the benchmark model from Table 3 (including both regional and year dummies). The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.

Table 7: Income Mobility and Happiness by Age

	Age < 25		Age 25-35		Age 35-45		Age > 45	
INC_DOWN	-0.030	(.0353)	-0.048	(.0238)	**	-0.069	(.0282)	**
INC_UP	0.004	(.0442)	0.021	(.0252)		0.062	(.0238)	***
Controls	YES		YES		YES		YES	
Year Dummies	YES		YES		YES		YES	
Region Dummies	YES		YES		YES		YES	
R-Squared	0.1338		0.1014		0.1084		0.0986	
Observations	1436		3430		3197		4660	

Note: Dependent variable: *Happy*. \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS, and include all controls in the benchmark model from Table 3 (including both regional and year dummies). The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.

Fig 2: Social Mobility and Average Happiness

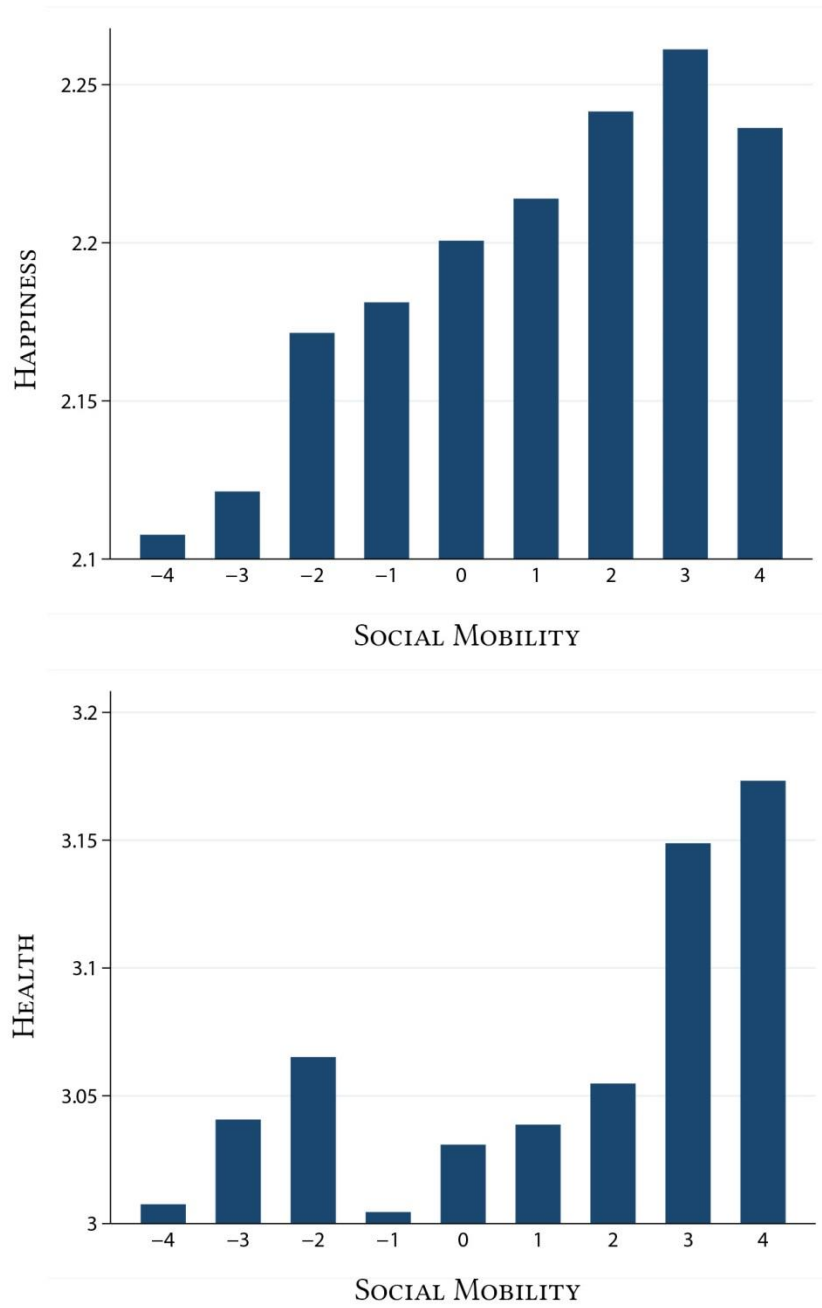


Table 8: Social Mobility & Subjective Well-being

	Happy			Health			Happy			Health		
SOC_DOWN	-0.041	(.0125)	***	-0.066	(.0176)	***	-0.018	(.0176)		0.015	(.0199)	
SOC_UP	0.047	(.0124)	***	0.091	(.0177)	***	0.028	(.0173)		0.018	(.0198)	
log Income							0.077	(.0209)	***	0.090	(.0093)	***
<b>Personal Characteristics</b>												
Age	-0.003	(.0025)		-0.002	(.0036)		0.031	(.0082)	**	0.090	(.0093)	***
Age squared	0.000	(.0000)		0.000	(.0000)	**	-0.023	(.0048)	***	-0.029	(.0058)	***
Female	-0.017	(.0099)	**	-0.004	(.0140)		0.000	(.0000)		0.000	(.0001)	***
Black	-0.170	(.0188)	***	-0.137	(.0255)	***	-0.010	(.0145)	***	0.045	(.0163)	***
Unemployed	-0.254	(.0341)	***	-0.202	(.0475)	***	-0.148	(.0264)	***	-0.088	(.0281)	***
Number of Children	0.017	(.0032)	***	-0.010	(.0048)	*	-0.226	(.0459)	***	-0.152	(.0517)	
High School							0.025	(.0298)		0.289	(.0323)	***
College							0.043	(.0341)		0.414	(.0368)	***
Grad School							0.056	(.0376)		0.451	(.0408)	***
Poor Health							0.110	(.0610)	***			
Good Health							0.269	(.0589)	***			
Excellent Health							0.490	(.0596)	***			
<b>Family Characteristics</b>												
Number of Siblings	-0.003	(.0017)	**	-0.015	(.0025)	***	0.000	(.0026)		-0.003	(.0028)	
Family Income at 16	-0.007	(.0049)		-0.009	(.0068)		-0.003	(.0069)		0.003	(.0074)	
Mother's Education	0.018	(.0051)	***	0.062	(.0071)	***	-0.007	(.0070)		0.019	(.0080)	**
Father's Education	0.028	(.0063)	***	0.061	(.0087)	***	0.022	(.0085)	***	0.022	(.0096)	**
R-Squared	0.0244			0.1013			0.0837			0.0869		
Observations	15879			12438			7663			8189		
Region Dummies	YES			YES			YES			YES		
Year Dummies	YES			YES			YES			YES		

Note: \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS. The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.

Table 9: Social Mobility & Subjective Well-being by Sub-groups

	Sex		Race	
	Male	Female	White	Black
SOC_DOWN	-0.034	0.032	-0.014	0.006
	(.0396)	(.0572)	(.0336)	(.1346)
SOC_UP	-0.019	0.057	0.005	0.074
	(.0394)	(.0573)	(.0335)	(.1368)
Observations	3905	3758	6515	735
R-Squared	0.0977	0.0846	0.0783	0.1041
	Marital Status		Education	
	Married	Never Married	< HS	College >
SOC_DOWN	-0.037	-0.022	0.004	-0.049
	(.0406)	(.0665)	(.0402)	(.0538)
SOC_UP	-0.014	0.008	0.035	-0.053
	(.0402)	(.0684)	(.0405)	(.0527)
Observations	4540	1081	5054	2609
R-Squared	0.0756	0.1275	0.0878	0.0752

Note: Dependent variable: *Happy*. \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS, and include all controls in the benchmark model from Table 3 (including both regional and year dummies). The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.

Fig 3: Education Mobility and Average Happiness

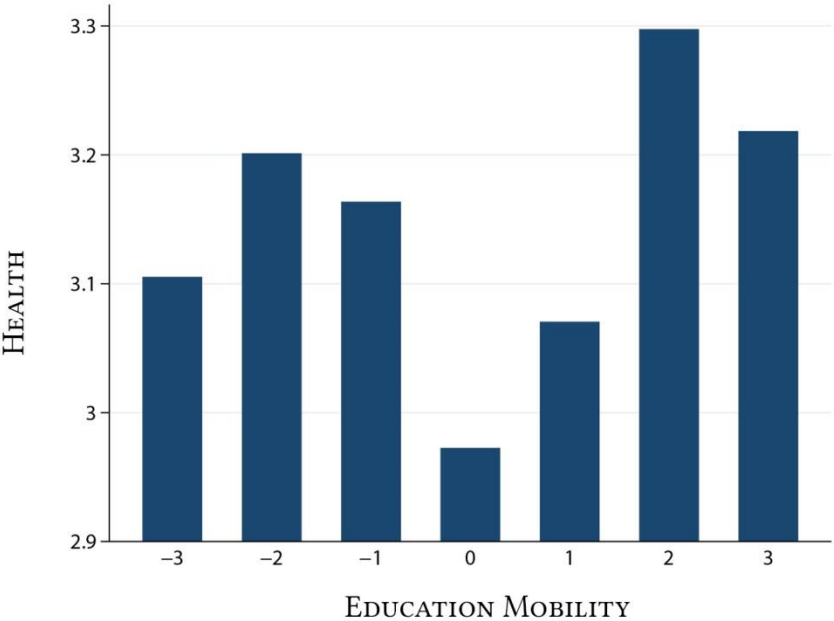
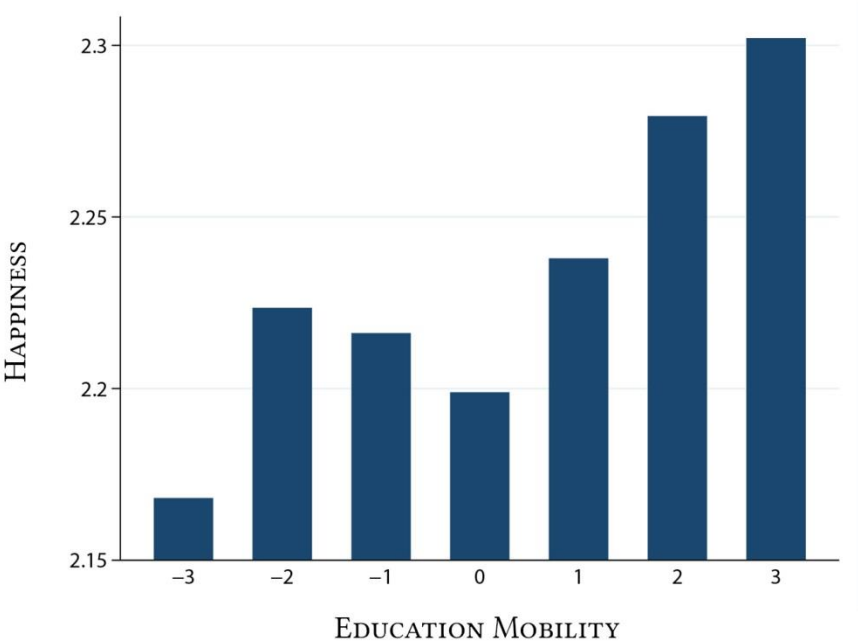


Table 10: Educational Mobility & Subjective Well-being

	Happy			Health			Happy			Health		
EDU_DOWN	-0.031	(.0126)	**	-0.075	(.0179)	***	0.011	(.0183)		0.004	(.0209)	
EDU_UP	0.056	(.0080)	***	0.213	(.0117)	***	-0.028	(.0152)	**	-0.017	(.0180)	
log Income							0.035	(.0061)	***	0.088	(.0074)	***
<b>Personal Characteristics</b>												
Age	-0.001	(.0018)		-0.011	(.0027)	***	-0.020	(.0037)	***	-0.029	(.0047)	***
Age squared	0.000	(.0000)		0.000	(.0000)		0.000	(.0000)	***	0.000	(.0000)	***
Female	0.000	(.0073)		-0.032	(.0107)	***	0.016	(.0113)		0.063	(.0133)	***
Black	-0.184	(.0134)	***	-0.143	(.0187)	***	-0.159	(.0194)	***	-0.109	(.0221)	***
Unemployed	-0.306	(.0258)	***	-0.188	(.0366)	***	-0.261	(.0368)	***	-0.153	(.0414)	***
Number of Children	0.010	(.0023)	***	-0.005	(.0034)		0.016	(.0035)	***	0.010	(.0043)	**
High School							0.057	(.0208)	***	0.284	(.0251)	***
College							0.093	(.0282)	***	0.420	(.0335)	***
Grad School							0.109	(.0319)	***	0.461	(.0378)	***
Poor Health							0.154	(.0431)	***			
Good Health							0.335	(.0415)	***			
Excellent Health							0.542	(.0420)	***			
<b>Family Characteristics</b>												
Number of Siblings	-0.002	(.0013)	**	-0.015	(.0019)	***	0.003	(.0019)		-0.004	(.0022)	**
Family Income at 16	-0.008	(.0034)	**	-0.011	(.0049)	**	0.000	(.0052)		-0.003	(.0059)	
Mother's Education	0.019	(.0042)	***	0.064	(.0059)	***	-0.014	(.0060)	*	0.013	(.0072)	**
Father's Education	0.036	(.0052)	***	0.096	(.0074)	***	0.013	(.0075)	*	0.017	(.0088)	**
R-Squared	0.0259			0.1247			0.0900			0.0922		
Observations	29501			22981			12884			13433		
Region Dummies	YES			YES			YES			YES		
Year Dummies	YES			YES			YES			YES		

Note: \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS. The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.

Table 11: Educational Mobility & Subjective Well-being by Sub-groups

	Sex			Race	
	Male	Female		White	Black
EDU_DOWN	0.007	-0.008		-0.001	-0.026
	(.0298)	(.0317)		(.0232)	(.0800)
EDU_UP	-0.005	0.046	*	-0.015	-0.087
	(.0242)	(.0245)		(.0185)	(.0631)
Observations	6739	6145		11018	1311
R-Squared	0.1053	0.0901		0.0846	0.0937
	Marital Status			Education	
	Married	Never Married		< HS	College >
EDU_DOWN	0.024	0.041		0.029	-0.051
	(.0270)	(.0554)		(.0313)	(.0367)
EDU_UP	-0.036	0.000		-0.034	-0.077
	(.0215)	(.0485)		(.0225)	(.0383)
Observations	8102	1567		8936	3948
R-Squared	0.0807	0.1531		0.0917	0.0841

Note: Dependent variable: *Happy*. \*\*\*(\*\*)[\*] indicate significance at  $p < .01$  ( $p < .05$ ) [ $p < .1$ ]. Robust standard errors are reported in parenthesis. All estimates are pooled OLS, and include all controls in the benchmark model from Table 3 (including both regional and year dummies). The categories 'male', 'white', 'less than high school', and 'poor health' were omitted because they are used as a base category.