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# The increasing happiness of US parents

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**Economics Department**  
LEAVEY SCHOOL OF BUSINESS

# The Increasing Happiness of Parents

Chris M. Herbst and John Ifcher

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## The Increasing Happiness of Parents

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## **Abstract**

Previous research suggests that parents may be less happy than non-parents. We critically assess the extant literature and reexamine the relationship between parental status and happiness using the General Social Survey (N = 42,298) and DDB Lifestyle Survey (N = 75,237). We find that parents are becoming happier over time relative to non-parents, that non-parents' happiness is declining absolutely, and that estimates of the parental happiness gap are sensitive to the time-period and age-group analyzed. These results are consistent across two datasets, most subgroups, and various specifications. Finally, we present evidence that suggests children appear to protect parents against social and economic forces that may be reducing happiness among non-parents.

## 1. Introduction

A large body of research generally finds that parents are less happy, experience more depression and anxiety, and have less fulfilling marriages than their childless counterparts (e.g., Alesina, Di Tella, & McCulloch, 2004; Clark, 2006; Clark, Frijters, & Shields, 2008; Di Tella, MacCulloch, & Oswald, 2003; Evenson & Simon, 2005; Glenn & McLanahan, 1982; ; Nomaguchi & Milkie, 2003; Stanca, 2012). Such findings are perhaps unsurprising given that parents report enjoying childcare only slightly more than housework and commuting (Kahneman, Krueger, Schkade, Schwarz, & Stone, 2004). The existence of a *parental happiness gap* has been adopted by some as conventional wisdom and become the focus of numerous pieces in high-profile media outlets, for example, “Does Having Children Make You Unhappy?” by Lisa Belkin (New York Times, April 1, 2009), “Kid Crazy: Why We Exaggerate the Joys of Parenthood” by John Cloud (Time, March, 2011), and “Having Kids Makes You Unhappy, Right?” by Betsey Stevenson (National Public Radio’s Marketplace, May 6, 2010).

Yet despite—or perhaps because of—the acceptance of this finding, we know of no attempt to critically assess the extant literature. Therefore, our first goal is to undertake such an investigation. We uncover the following: First, previous studies, which use repeated cross-sections of happiness data, specify an empirical model that yields an estimate of the *average* parental happiness gap over several decades. Implicit in this framework is that the happiness gap remains constant over time. If, however, parents’ happiness followed a different trend than non-parents’ happiness, this assumption would be violated. Second, previous studies generally define a *parent* as anyone who reports having a positive number of children in response to a question similar to the following: “How many children have you ever had? Please count all that were born alive at any time (including any you had from a previous marriage)?” This definition commingles noncustodial parents and empty nesters with parents who are actively parenting, and commingles adoptive and step parents with non-parents.

In light of these concerns, the second goal of this paper is to reexamine the relationship between parental status and happiness in the U.S. allowing the relationship to vary over time. Our analysis uses data from the General Social Survey (GSS) and DDB Needham Life Style Survey (LSS), two nationally representative datasets that have tracked self-reported happiness and life satisfaction, respectively. Our results can be summarized as follows. First, we show that while there is evidence of a parental happiness gap in the earlier half of the study period, there is no evidence of a gap in the latter half. Second, we show that parents’ happiness increases over time relative to non-parents. This relative improvement is the result of an absolute decline in non-parents’ happiness over time. These findings are consistent across two nationally representative surveys.

Our results are interesting in light of recent studies documenting widespread declines in happiness over the past few decades in the U.S. (Herbst, 2011; Stevenson & Wolfers, 2009). In contrast, we find that parents do not experience an absolute drop in happiness and are becoming happier relative to their childless peers. In previous research that focused exclusively on single mothers, Herbst (2012) and Ifcher and Zarghamee (forthcoming) find that single mothers’ absolute and relative happiness (compared to single childless women) increased over the past

few decades. Does being a parent protect adults against a growing number of social and economic forces, such as the reduction in social and political trust, the fraying of community ties, and increasing narcissism, that may be reducing well-being in the U.S. (Putnam, 2000; Twenge & Campbell, 2009)? That children and the family environment might offer protection against such forces stands in contrast to the view that being a parent reduces happiness. We examine this possibility in the discussion section using measures of social disconnectedness and economic insecurity from the LSS. We find that parents' social connectedness and economic security is increasing relative to non-parents during the study period.

## 2 Literature Review

The earliest studies come from sociologists, who focus primarily on parental depression, anxiety, and social relationships. Much of this work is thoroughly reviewed in McLanahan and Adams (1987), Ross, Mirowsky, and Goldsteen (1990), and Umberson and Williams (1999). In recent years, economists interested in Subjective Well-Being (SWB) have begun to explore the relationship between parental status and happiness. The happiness economics literature is summarized in Blanchflower (2008), Clark et al. (2008), and Dolan, Peasgood, and White (2008). In addition, Hansen (2011) provides a thorough review of the parental happiness literature across multiple disciplines. Our intent here is to highlight key findings and identify weaknesses in the literature.

The sociological literature provides fairly consistent evidence that parents are worse off than non-parents across a variety of psychological domains (e.g., Barnett & Baruch, 1985; Evenson & Simon, 2005; Glenn & McLanahan, 1981, 1982; Glenn & Weaver, 1978; 1979; Nomaguchi & Milkie, 2003; Pearlin, 1974). Parents report higher levels of stress and anxiety, increased anger and depression, and lower levels of happiness and life satisfaction. Although the negative mental health effects are concentrated among parents with children currently in the home, recent studies find that well-being does not rebound substantially after children leave the home (Evenson & Simon, 2005). Furthermore, it appears that parents of young children are unhappier still (Umberson & Williams, 1999), and that each successive child in the home is associated with steeper reductions in well-being (Glenn & McLanahan, 1982). It must be noted, however, that a few studies find inconsistent or neutral effects (e.g., Cleary & Mechanic, 1983; Gore & Mangione, 1983), while others find positive effects (e.g., Ross & Huber, 1985; Aassve, Goisis, & Sironi, 2009).

Studies also indicate that parents are not a monolith. For example, female parents worry more and experience lower levels of well-being than male parents (Bird & Rogers, 1998), and employed parents—especially working mothers—experience lower mental health than unemployed childless adults (Simon, 1998). The negative relationship between parental status and mental health appears to be concentrated among young parents, as a number of studies find that older parents have similar or even higher levels of well-being than comparable non-parents (Koropecjy-Cox & Call, 2007). Finally, single parents are substantially more likely to experience stress and depression than their married counterparts (Aneshensel, Frerichs, & Clark, 1981).

A smaller sociological literature examines the effect of parental status on marital satisfaction and social connectedness. This research finds that marital satisfaction decreases after the birth of the first child and does not return to pre-child levels after the departure of the last child from the household (Lavee, Sharlin, & Katz, 1996; MacDermid, Huston, & McHale, 1990; Menaghan, 1982). In contrast, parents report higher levels of self-esteem than non-parents (Hansen, Slagsvold, Moun, 2009). Furthermore, a related set of papers highlights the social benefits of parenthood through increased connectedness to friends, family, and the community (Gallagher & Gerstel, 2001; Umberson & Gove, 1989). Finally, a paper by Nomaguchi and Milkie (2003) finds that new parents experience greater social integration (defined as the frequency of contact with friends and relatives) than non-parents.

Economists have largely reached the same conclusion: parents are less happy than non-parents. Most of this research focuses on global measures of SWB and typically find that being a parent is associated with lower SWB (e.g., Alesina et al., 2004; Di Tella et al., 2001; 2003; Clark, 2006; Clark et al., 2008; Clark, Diener, Georgellis, & Lucas, 2008; Stanca, 2012). There is some disagreement in the literature, however, with some studies finding neutral or positive effects (e.g., Frey & Stutzer, 2006). In addition, a paper by Helliwell and Wang (2011) finds elevated levels of SWB during the weekend are more pronounced for those in their prime parenting years presumably because the stress and time constraints associated with being a parent are lessened during the weekend.

Our assessment of the literature uncovers the following: First, the standard empirical specification in studies using repeated cross-sections yields an estimate of the *average* parental happiness gap over time. For example, Di Tella et al. (2001; 2003) estimate the average effect of parental status over approximately 17 years of Eurobarometer data. Implicit in this framework is that the parental happiness gap remains constant over time. If, however, parents and non-parents follow different happiness time trends, then previous research potentially mischaracterizes the parental happiness gap. The only exception is McLanahan and Adams (1989), which compares the parental SWB gap in 1957 and 1976 using two cross-sections of the Americans View Their Mental Health Survey. Therefore, the current study fills this gap by conducting an explicit trends analysis of parents and non-parents' SWB.

Second, previous studies generally do not dedicate sufficient attention to the definition of the *parent* indicator variable. For example, they do not discuss which groups of parents fall within their definition (full- vs. empty-nest parents), nor the advantages and disadvantages of the chosen definition. Alesina et al. (2004) and Di Tella et al. (2001; 2003) do not explicitly define their parent variable. Among papers that explicitly define the parent variable, there is considerable variation in the definition. Margolis and Myrskylä's (2011) definition is based on the survey question "Have you had any children?" This is arguably narrow in scope in that it presumably omits adopted and step children. It also does not allow one to distinguish between full- and empty-nest parents. This distinction is potentially important in light of research that indicates that the presence or absence of a child in the home can lead to different conclusions about parental well-being (e.g., Evenson & Simon, 2005). The survey used in Kohler et al.'s (2005) analysis asks explicitly about respondents' biological children, thereby excluding

adopted, step, and foster children. Lastly, Nomaguchi and Milkie's (2003) definition only includes new parents.

### 3. Data and Methods

We examine parental SWB using two nationally representative surveys: the GSS and LSS. The GSS is a standard survey for studying U.S. SWB. The GSS was administered annually to approximately 1,500 individuals between 1972 and 1993 (with the exception of 1979, 1981, and 1992) and was administered biennially to approximately 4,500 individuals thereafter. For this study we have obtained GSS data through 2008. The GSS includes a standard global happiness question. Specifically, it asks respondents "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?" This question has remained intact since 1972, providing approximately 35 years of data and 42,000 observations.

There have been some changes to the GSS that might impact happiness trends. Stevenson and Wolfers (hereafter SW) (2008, 2009, & 2010) have written a series of papers examining SWB trends using the GSS. We largely follow their methodology for creating a consistent measure of happiness. This includes (i) dropping the Black oversample in the 1982 and 1987 GSS; (ii) dropping surveys that were conducted in Spanish (and could not have been completed in English) in the 2006 GSS; and (iii) using the GSS weight WTSSALL to help ensure that the survey includes a nationally representative sample of U.S. adults [see Appendix A of SW (2008) for additional details]. Our weighting strategy diverges from SW in one way. Specifically, the question that directly preceded the happiness question was different in the 1972 and 1985 GSS (Dillman, Sangster, Tarnai, and Rockwood (1996) and Schuman and Presser (1981) find a question-order effect). We adjust for this by dropping all observations from the 1972 and 1985 GSS as well as all observations from the split-ballot experiments that were conducted in the 1980, 1986, and 1987 GSS to identify the question-order effect. In contrast, SW create a weight to adjust for the question-order effect using the split-ballot experiments. We chose our approach because we believe it is more conservative. Given the large number of waves in the GSS, dropping these observations should not impact the findings. Moreover, the results are similar if we use SW's weights.

Our second data source is the LSS (see Putnam and Yonish (1999) and Groeneman (1994) for an extensive introduction to and evaluation of the LSS). The LSS is a proprietary data archive, although the 1975-1998 surveys are available on Robert Putnam's Bowling Alone website. Each year since 1975, the advertising agency DDB Needham has commissioned Market Facts, a commercial polling firm, to administer the LSS on a sample of approximately 3,500 Americans. The questionnaire covers a diverse set of topics, ranging from consumer behavior and product preferences to recreational activities and political attitudes. Importantly for the current study, the LSS contains a standard item that inquires about respondents' life satisfaction: "I am very satisfied with the way things are going in my life these days" (response categories include 6=*definitely agree*, 5=*generally agree*, 4=*moderately agree*, 3=*moderately disagree*, 2=*generally disagree*, and 1=*definitely disagree*). This question has remained intact since 1983. In auxiliary analyses, we examine other SWB measures, for example, regrets about the past, self-



reported physical condition, and a variety of stress-related health issues. Finally, between 1975 and 1984, the LSS was administered exclusively to married individuals. Thus, we are only able to use the LSS data between 1985 and 2005, providing approximately 20 years of data and 75,000 observations.<sup>1</sup>

### 3.1 Definition of parent

We define a *parent* as a respondent who reports having children ages 0 to 17 residing in the household. This definition enables us to focus on the subset of parents who are of primary interest—those who are actively parenting. We recognize that this definition commingles the following as *non-parents*: adults without children, parents with children ages 18 and over, and parents whose children do not live in the household. To investigate the sensitivity of the results to our definition of parents, we re-estimate the GSS models using an alternative definition of parents: respondents who report *having children* and *having children residing in the household*. Our main results are consistent using this alternative definition. We are not able to determine whether a child is the respondent’s own biological, adoptive, or step child, or whether another household member claims legal guardianship over the child. Although it would be ideal to examine parental well-being across each parent-child custody arrangement, it is somewhat reassuring that parents in most arrangements are found to report similar SWB (Evenson & Simon, 2005).

Based on this definition of parent, 39 percent of GSS respondents are parents, 16,416 out of 42,298, and 38 percent of LSS respondents are parents, 28,706 out of 75,237 (see Table 1). Parents and non-parents’ demographic characteristics are materially different across both datasets. Parents are significantly more likely to be female, non-White, employed, and married than non-parents. Parents are also significantly younger, less educated and poorer than non-parents, on average.

### 3.2 Estimating the parental SWB gap

We estimate a standard SWB equation, regressing SWB on a parental status indicator variable and a standard set of covariates. Formally, we estimate an equation of the following form:

$$(1) \quad y_{irt} = \beta_0 + \beta_1 \text{parent}_{irt} + D_{irt}\gamma + \mu_r + \eta_y + (\mu_r \times \eta_y) + \varepsilon_{irt},$$

for  $i = 1, \dots, I$ ;  $r = 1, \dots, R$ ; and  $t = 1, \dots, T$ , where  $i$  indexes individuals,  $r$  indexes region of residence, and  $t$  indexes years. The dependent variable,  $y$ , is the SWB of the  $i^{\text{th}}$  respondent in region  $r$  and year  $t$ . The independent variable, *parent*, is a dummy variable that equals one if the

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<sup>1</sup> The LSS includes a weight, but there is insufficient documentation on how the weight is constructed. Therefore, we conduct the LSS analyses without the weight. Nevertheless, applying the weight does not change the results.

$i^{\text{th}}$  respondent in region  $r$  and year  $t$  reports having at least one child ages 0 to 17 residing in the household. The vector  $D$  is a standard set of exogenous and endogenous demographic variables that may be correlated with SWB: gender, age, education, employment, income, and marital status. Throughout the paper we use equivalency-scaled real income in 2008 dollars. For the GSS the OECD equivalency scale is used: the first adult is equal to 1, additional adults are 0.5, and each child is 0.3. For the LSS: the first adult is 1, and additional household members are 0.4 (as the LSS does indicate the age of household members, we are unable to use the OECD equivalency scale). For each covariate, we set missing observations to zero and add a dummy variable that equals one if the observation is missing and zero otherwise. The model also includes dummy variables for the nine Census regions ( $\mu_r$ ), a vector of year dummy variables ( $\eta_y$ ), and vector of region-by-year interactions ( $\mu_r \times \eta_y$ ).

The  $\beta_1$  is the coefficient of interest. It captures the average SWB difference between parents and non-parents over the study period. A negative (positive) estimate of  $\beta_1$  indicates that there is a parental SWB gap (surplus). Estimates of  $\beta_1$  are commonly reported in the parental SWB literature; and the finding that there is a parental SWB gap is based on such estimates. Given the ordered nature of the dependent variable, we use an ordered probit to estimate equation (1). Standard errors are adjusted for arbitrary forms of heteroskedasticity as well as the non-random clustering of observations by year. We also estimate equation (1) using binary indicators of high- and low-levels of SWB using a probit regression. In the GSS, the top happiness category is *very happy* and the bottom category is *not too happy*. In the LSS, the top life satisfaction category is *definitely agree* and the bottom category is *definitely disagree*.

### 3.3 Estimating trends in parental SWB

To examine trends in parents and non-parents' SWB, we utilize the empirical framework outlined in Blanchflower and Oswald (2004). In particular, we estimate an equation of the following form:

$$(2) \quad y_{irt} = \beta_0 + \beta_1 \text{parent}_{irt} + \beta_2 (\text{parent}_{irt} \times \text{trend}_t) + \beta_3 (\text{non-parent}_{irt} \times \text{trend}_t) + D_{irt} \gamma + \mu_r + \varepsilon_{irt}$$

where  $y$ ,  $\text{parent}$ , and  $D$  are defined as before. A linear time trend,  $\text{trend}$ , equals the year the survey was administered,  $t$ , minus the first year the survey was administered divided by 100. Dividing by 100 "scales-up" the coefficient so that it represents the net change in SWB one would expect to observe over a century (this follows SW 2009; 2010).

The  $\beta_2$  and  $\beta_3$  are the coefficients of interest. They capture parents and non-parents' linear SWB time trend, respectively. If the estimate of  $\beta_2$  or  $\beta_3$  is positive (negative), then it indicates that the group's SWB is increasing (decreasing) over time. A useful estimate is  $(\beta_2 - \beta_3)$ , which captures the difference between parents and non-parents' linear SWB time trend; that is, the change in the parental SWB gap over time. If the estimate of  $(\beta_2 - \beta_3)$  is positive (negative), then it indicates that parents' SWB increased (decreased) over time relative to non-parents. Again, we use an ordered probit to estimate equation (2) and calculate robust standard errors by clustering observations by year. Finally, year fixed effects are not included as we are estimating time trends in this analysis.

## 4. Results

Estimating equation (1), the coefficient on *parent*,  $\beta_1$ , is negative and statistically significant using the GSS and negative and insignificant using the LSS (see Table 2). This is consistent with the extant literature and suggests that there is a parental SWB gap. The observed parental SWB gap appears to be the result of parents being less likely to report high-levels of SWB than non-parents; parents are not more likely to report low-levels of SWB than non-parents. The estimated marginal effects indicate that parents are 2.0 (s.e. = 0.6) and 1.0 (s.e. = 0.4) percentage points less likely to report high-levels of SWB than non-parents in the GSS and LSS, respectively. Given that 34 and 16 percent of respondents reported high-levels of SWB in the GSS and LSS, respectively, these estimates imply that parents are about 6 percent less likely to report high-levels of SWB than non-parents.

### *4.1 There is no evidence of a parental SWB gap in the latter half of the study period*

To examine whether the parental SWB gap is the same in the first and second half of the study period, a *pre1995* dummy is interacted with the *parent* dummy in equation (1); 1995 is the midpoint of the LSS (the GSS results are robust to using a *pre1990* dummy, the midpoint of the GSS). The *pre1995* dummy equals one if the survey was administered before 1995, and zero otherwise; the *pre1995* dummy is also used as a covariate to allow for a pre-1995 period effect.

The  $\beta_1$  is positive and insignificant using the GSS and positive and statistically significant using the LSS in the post-1995 period (see Column (3) of Table 2). Thus, there is no evidence of a parental SWB gap in the post-1995 period. In contrast,  $\beta_1$  is negative and statistically significant across both datasets in the pre-1995 period. Moreover, the post-1995  $\beta_1$  is significantly greater than the pre-1995  $\beta_1$  across both datasets. This indicates that the parental SWB gap is significantly smaller in the post-1995 period than in the pre-1995 period; and is consistent with there being a parental SWB gap in the pre-1995 period and a parental SWB surplus in the post-1995 period.

### *4.2 There is no evidence of a parental SWB gap for respondents ages 45 and under*

The parents in our sample are younger, on average, than the non-parents. Further, the likelihood of being a parent is greater for those ages 45 and under than for those over 45 (GSS: 56 vs. 16 percent; LSS: 62 vs. 12 percent). These differences are important given that there appears to be a U-shaped relationship between age and SWB, with the trough estimated to be between 40 and 50 years old (e.g., Frey & Stutzer, 2002; Stone, Schwartz, Broderick, & Deaton, 2010). To focus the analysis on respondents who are most likely to be parents, or comparable to parents, the sample is restricted to respondents ages 45 and under (the results are robust to restricting the sample to those ages 40 and under, and 50 and under). Similar age restrictions are often used for analogous reasons when studying the impact of social welfare programs (e.g., Grogger, 2004; Meyer & Rosenbaum, 2001).

The  $\beta_1$  is positive and insignificant using the GSS and positive and statistically significant using the LSS for respondents ages 45 and under (see Table 3). Thus, there is no evidence of a

parental SWB gap. Further, if we estimate equation (1) using the *pre1995* dummy and the age restriction, we find that the post-1995  $\beta_1$  is positive and statistically significant across both datasets (see Column (3) of Table 3). Thus, there is evidence of a parental SWB surplus in the post-1995 period for respondents ages 45 and under. The observed parental SWB surplus appears to be the result of parents being less likely to report low-levels of SWB than non-parents; parents are not more likely to report high-levels of SWB than non-parents. The estimated marginal effects indicate that parents are 2.1 (s.e. = 0.6) and 1.6 (s.e. = 0.4) percentage points less likely to report low-levels of SWB than non-parents in the GSS and LSS, respectively. Given that 11 and 8 percent of respondents reported low-levels of SWB in the GSS and LSS, respectively, these estimates imply that parents (ages 45 and under) are about 20 percent less likely to report low-levels of SWB than non-parents in the post-1995 period.

In summary, we find no evidence that there is a parental SWB gap in the post-1995 period. The  $\beta_1$  is positive in all specifications. Moreover, when the sample is restricted to respondents ages 45 and under, the post-1995  $\beta_1$  is positive and statistically significant across both datasets. In contrast, in the pre-1995 period, we find consistent evidence of a parental SWB gap.

#### **4.3 Trends in parents' SWB**

If the parental SWB gap has diminished, or become a parental SWB surplus recently, then it suggests that there might a trend of increasing parental SWB (relative to non-parents) over time. In recent years researchers have become increasingly interested in SWB trends. For example, Sousa-Poza and Sousa-Poza (2003) study gender-specific trends in job satisfaction, and Blanchflower and Oswald (2004), SW (2009), and Herbst (2011) examine gender-specific trends in SWB. To date, we know of no attempt to examine trends in parental SWB.

Estimating equation (2), one observes that the difference between parents and non-parents' linear SWB time trend,  $\beta_2 - \beta_3$ , is positive and statistically significant across both datasets (see Table 4). This indicates that parents' SWB is increasing relative to the non-parents' SWB over the study period. Interestingly, parents' SWB does not appear to be increasing absolutely, that is,  $\beta_2$  is approximately zero across both datasets. In contrast, it appears that non-parents' SWB is decreasing absolutely. The  $\beta_3$  is negative and highly statistically significant across both datasets. The estimated marginal effects indicate that non-parents are becoming less likely to report high-levels of SWB. The estimates imply that the likelihood of reporting high-levels of SWB is decreasing by 0.4 (s.e. = 0.07) and 0.3 (s.e. = 0.05) percentage points per year in the GSS and LSS, respectively.

Parental SWB (as was discussed in the literature review) appears to be negatively related to having young children and more children (e.g., Glenn & McLanahan, 1982; Umberson & William, 1999). Thus, it is interesting to explore whether parental SWB trends vary with the age of the youngest child—and number of children—in the household. Specifically, a set of *youngest-child-age-group* (*number-of-children*) dummies are interacted with the *parent* dummy when estimating equation (2). The *youngest-child-age-groups* are: ages 0-6, 7-12, and 13-17 in the GSS and ages 0-5, 6-11, and 12-17 in the LSS. The *youngest-child-age-group* dummies equal

one if the youngest child in the household is in a given age group and zero otherwise. The number-of-children categories are: one child and two or more children. The *number-of-children* dummies equal one if the household size is in the number-of-children range, and zero otherwise. When estimating equation (2) the *youngest-child-age-group (number-of-children)* dummies are included as covariates to allow for youngest-child-age-group (number-of-children) level effects in the time-trends analysis.

Estimating equation (2) using the GSS, we find that the relative improvement in parental SWB is most pronounced for parents with young children and more children. That is,  $(\beta_2 - \beta_3)$  monotonically increases as the age-group it is interacted with decreases, and it is larger when interacted with the two-or-more children dummy than with the one-child dummy (see Table 5). Using the LSS, we find that  $(\beta_2 - \beta_3)$  is positive and statistically significant regardless of which age-group and number-of-children dummy it is interacted with. That is, there is consistent evidence that parents' SWB is increasing relative to non-parents regardless of household structure. In summary, there is no evidence that having younger children or more children is associated with less relative improvement in parental SWB.

Finally, parental SWB (as was discussed in the literature review) is not a monolith. For example, female parents worry more and experience lower levels of well-being than male parents (Bird & Rogers, 1998), and employed parents—especially working mothers—experience lower mental health than unemployed childless adults (Simon, 1998). To investigate whether the trend of increasing relative parental SWB is widespread, equation (2) is estimated for a series of relevant subgroups: men and women, employed and unemployed adults, employed men and employed women, non-White and White adults, and more and less educated adults. Results from the subgroup analyses are consistent with the main results. The  $(\beta_2 - \beta_3)$  is always positive and often statistically significant across both datasets; the lack of statistical significance for some subgroups may be due to a loss of statistical power. Again, there is no clear pattern in the estimates of  $\beta_2$ , parents' linear SWB time trend. That is, parents' absolute SWB is not trending up or down. In contrast, there is a clear pattern in estimates of  $\beta_3$ , the non-parents' linear SWB time trend. Most are negative and statistically significant (see Table 6). Thus the subgroup analysis appears to confirm that parents' SWB is increasing relative to non-parents' SWB, and that non-parents' SWB is decreasing absolutely.

#### ***4.4 Alternate measures of self-reported well-being***

Estimating equations (1) and (2) with additional subjective measures of well-being, one finds that the results generally corroborate our findings (see Table 7). For example, parents' perceive their financial situation as improving relative to non-parents during the study period. Parents report (relative to non-parents): being in better health, being less likely to want to alter their lives, and being more confident and physically fit. Using these measures, it again appears that parents' well-being is improving over time relative to non-parents'. Parents, however, may experience more stress than non-parents, and their general health appears to be deteriorating; they report (relative to non-parents) more headaches, difficulty relaxing, and trouble falling asleep.

## 5 Discussion

The past few decades have witnessed a flurry of parental happiness research. Much of this research finds that parents are worse off than non-parents. In this paper, we critically assess this body of work and carefully reexamine the relationship between parental status and SWB allowing the relationship to vary over time. We find that parents' relative happiness is increasing over time, a finding that is driven by the absolute decline in non-parents' happiness. We also find that the parental happiness gap is sensitive to the time-period and age-group analyzed.

Our findings raise an interesting question: Why have parents experienced a relative increase in happiness over the past few decades? One potential explanation is that having children may protect parents against social and economic factors that increasingly reduce well-being. Examples of such factors include the decline in community and political involvement, growing disconnectedness from family and friends, and the growth in economic insecurity. Indeed, many of these themes are studied in Robert Putnam's book *Bowling Alone* (2000). In Putnam's view, these changes are important because they have profound effects on outcomes ranging from national economic prosperity and community health to individual happiness. Added to these societal changes is the reported rise in narcissism. In *The Narcissism Epidemic* (2009), Twenge and Campbell document Americans' increasing narcissism and its destructive effect on individuals and society.

Our conjecture is that parents may not have been as vulnerable to these changes, and as a result, have been buffered against a decline in SWB. Indeed, previous research finds that one of the benefits associated with parenthood is increased social connectedness (e.g., Gallagher & Gerstel, 2001; Nomaguchi & Milkie, 2003). To explore this possibility, we estimate equation (2), replacing the dependent variables with measures organized around the themes of (i) social and political connectedness, (ii) social and political trust, (iii) economic well-being, and (iv) balancing multiple responsibilities.

Consistent with Putnam's (2000) work, Table 8 provides evidence in favor of the steady erosion in Americans' social and civic connectedness, interpersonal trust, and economic security. Across virtually every measure, however, the reduction has been substantially less dramatic among parents. Indeed, parents over time have become relatively more likely to visit friends, to get the news every day, and to remain engaged in politics. Interestingly, these relative improvements apply to the economic realm as well: Parents are increasingly likely relative to non-parents to agree that "family income is high enough to satisfy nearly all important desires," and perhaps because of this, have become less likely to confide that "our family is too heavily in debt." Finally, even the indicator of balancing multiple responsibilities favors parents. Parents and non-parents alike are increasingly likely to agree with the statement "I feel like I am so busy trying to make everybody else happy that I don't have control of my own life," but the upward trend among non-parents has exceeded that of parents. Together, this evidence suggests that parents have not experienced the growing social disconnectedness and economic insecurity to the same extent as non-parents. Insofar as these social and economic factors are related to SWB, such differential changes over time provide a plausible explanation for why parents' absolute SWB has not deteriorated, and has improved relative to non-parents.

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Table 1: Demographic characteristics

	General Social Survey (GSS)						LifeStyle Survey (LSS)							
	All (1)		Non-parents (2)		Parents (3)		All (4)		Non-parents (5)		Parents (6)			
Average happiness / life satisfaction <sup>+</sup>	2.23	(0.00)	2.24	(0.00)	2.22	(0.01)	***	4.03	(0.01)	4.10	(0.01)	3.91	(0.01)	***
Very happy / definitely agree	0.34	(0.00)	0.35	(0.00)	0.33	(0.00)	***	0.16	(0.00)	0.18	(0.00)	0.13	(0.00)	***
Pretty happy	0.55	(0.00)	0.54	(0.00)	0.56	(0.00)	***							
Not too happy / definitely disagree	0.11	(0.00)	0.11	(0.00)	0.11	(0.00)		0.08	(0.00)	0.08	(0.00)	0.09	(0.00)	***
Age	44.2	(0.09)	49.3	(0.13)	36.9	(0.10)	***	47.1	(0.06)	53.5	(0.07)	36.8	(0.05)	***
Female	0.54	(0.00)	0.52	(0.00)	0.57	(0.00)	***	0.55	(0.00)	0.54	(0.00)	0.56	(0.00)	***
Black	0.12	(0.00)	0.10	(0.00)	0.14	(0.00)	***	0.08	(0.00)	0.07	(0.00)	0.09	(0.00)	***
White	0.83	(0.00)	0.86	(0.00)	0.80	(0.00)	***	0.86	(0.00)	0.88	(0.00)	0.83	(0.00)	***
Other race	0.05	(0.00)	0.04	(0.00)	0.06	(0.00)	***	0.06	(0.00)	0.05	(0.00)	0.08	(0.00)	***
Parent (children ages 0-17 in HH)	0.41	(0.00)	0.00	(1.00)	1.00	(0.00)	***	0.38	(0.00)	0.00	(0.00)	1.00	(0.00)	***
Number of children ages 0-17 in HH	0.82	(0.01)	0.00	(0.00)	1.97	(0.01)	***	0.64	(0.00)	0.00	(0.00)	1.68	(0.00)	***
Completed high school or less	0.55	(0.00)	0.54	(0.00)	0.56	(0.00)	***	0.42	(0.00)	0.43	(0.00)	0.42	(0.00)	***
Completed some college (no degree)	0.24	(0.00)	0.24	(0.00)	0.24	(0.00)		0.30	(0.00)	0.29	(0.00)	0.32	(0.00)	***
Completed college or more	0.22	(0.00)	0.23	(0.00)	0.20	(0.00)	***	0.27	(0.00)	0.28	(0.00)	0.26	(0.00)	***
Employed	0.61	(0.00)	0.57	(0.00)	0.68	(0.00)	***	0.66	(0.00)	0.60	(0.00)	0.76	(0.00)	***
Family income (equivalency scaled) <sup>++</sup>	35,518	(167.9)	38,959	(244.1)	30,767	(211.2)	***	34,985	(100.7)	39,445	(142.6)	27,973	(118.0)	***
Married	0.62	(0.00)	0.54	(0.00)	0.73	(0.00)	***	0.71	(0.00)	0.61	(0.00)	0.86	(0.00)	***
Divorced	0.09	(0.00)	0.10	(0.00)	0.07	(0.00)	***	0.09	(0.00)	0.10	(0.00)	0.06	(0.00)	***
Never married	0.20	(0.00)	0.24	(0.00)	0.15	(0.00)	***	0.11	(0.00)	0.16	(0.00)	0.04	(0.00)	***
Separated	0.03	(0.00)	0.02	(0.00)	0.03	(0.00)	***	0.02	(0.00)	0.02	(0.00)	0.02	(0.00)	***
Widowed	0.07	(0.00)	0.10	(0.00)	0.02	(0.00)	***	0.08	(0.00)	0.11	(0.00)	0.01	(0.00)	***
Observations <sup>+++</sup>	42,298		25,882		16,416			75,237		46,531		28,706		

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> GSS questionnaire item: "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?" where 1 = "not too happy," 2 = "pretty happy," and 3 = "very happy." LSS questionnaire item: "I am very satisfied with the way things are going in my life these days" and the response categories are 1 = "definitely disagree," 2 = "generally disagree," 3 = "moderately disagree," 4 = "moderately agree," 5 = "generally agree," and 6 = "definitely agree."

<sup>++</sup> for GSS the OECD equivalency scale was used where the first adult is equal to 1, additional adults are equal to 0.5, and each child (under the age of 18) is equivalent to 0.3. For LSS first adult is equal to 1, and additional household members are equal to 0.4 (LSS household size data does indicate the age of the household members).

<sup>+++</sup> 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-parent' or 'parent.'

\*, \*\*, and \*\*\* signify that the non-parents' and parents' means are significantly different with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 2: Estimates of the parental SWB gap

	All (1)			Before 1995 (2)			1995 and after (3)		
<b><u>Panel A: General Social Survey (GSS)</u></b>									
Parent (happy) <sup>+</sup>	-0.043	(0.013)	***	-0.072	(0.014)	***	0.008	(0.024)	^^^
Marginal effect (very happy)	-0.020	(0.006)	***	-0.031	(0.007)	***	-0.002	(0.011)	^^
Marginal effect (not too happy)	0.001	(0.003)		0.006	(0.004)	*	-0.007	(0.005)	^^
Observations <sup>++</sup>	42,033						42,033		
<b><u>Panel B: Life Style Survey (LSS)</u></b>									
Parent (life satisfaction) <sup>+++</sup>	-0.008	(0.014)		-0.043	(0.018)	**	0.033	(0.013)	** ^^
Marginal effect (definitely agree)	-0.010	(0.004)	**	-0.023	(0.006)	***	0.006	(0.005)	^^
Marginal effect (definitely disagree)	-0.004	(0.003)		-0.004	(0.003)		-0.005	(0.004)	
Observations	75,237						75,237		

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> GSS questionnaire item: "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?" where 1 = "not too happy," 2 = "pretty happy," and 3 = "very happy."

<sup>++</sup> 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-parent' or 'parent.'

<sup>+++</sup> LSS questionnaire item: "I am very satisfied with the way things are going in my life these days" and the response categories are 1="definitely disagree," 2="generally disagree," 3="moderately disagree," 4="moderately agree," 5="generally agree," and 6="definitely agree."

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

^, ^^, ^^ signify that the coefficients for the earlier later periods are significantly different with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 3: Estimates of the parental SWB gap for respondents ages 45 and under

	$\leq 45$ years old (2)		Before 1995 & $\leq 45$ years old (3)		1995 and after & $\leq 45$ years old (4)			
<b>Panel A: General Social Survey (GSS)</b>								
Parent (happy) <sup>+</sup>	0.007	(0.016)	-0.023	(0.023)	0.056	(0.021)	***	^^
Marginal effect (very happy)	-0.004	(0.007)	-0.010	(0.010)	0.006	(0.011)		
Marginal effect (not too happy)	-0.008	(0.005)	0.002	(0.006)	-0.021	(0.006)	***	^^^
Observations <sup>++</sup>	23,169				23,169			
<b>Panel B: Life Style Survey (LSS)</b>								
Parent (life satisfaction) <sup>+++</sup>	0.060	(0.014)	***	0.046	(0.019)	**	0.075	(0.015) ***
Marginal effect (definitely agree)	0.002	(0.005)		-0.001	(0.007)		0.006	(0.006)
Marginal effect (definitely disagree)	-0.019	(0.003)	***	-0.020	(0.004)	***	-0.016	(0.004) ***
Observations	38,712				38,712			

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> GSS questionnaire item: "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?" where 1 = "not too happy," 2 = "pretty happy," and 3 = "very happy."

<sup>++</sup> 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-parent' or 'parent.'

<sup>+++</sup> LSS questionnaire item: "I am very satisfied with the way things are going in my life these days" and the response categories are 1="definitely disagree," 2="generally disagree," 3="moderately disagree," 4="moderately agree," 5="generally agree," and 6="definitely agree."

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

^, ^^, ^^^ signify that the coefficients for the earlier later periods are significantly different with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 4: Estimates of SWB time trends for parents, non-parents, and the difference

	Parents (1)		Non-parents (2)		Difference (3)		
<b><u>Panel A: General Social Survey (GSS)</u></b>							
Time trend (happy) <sup>+</sup>	-0.033	(0.133)	-0.341	(0.080)	***	0.308	(0.115) ***
Marginal effect (very happy)	-0.176	(0.138)	-0.428	(0.070)	***	0.253	(0.156)
Marginal effect (not too happy)	-0.245	(0.209)	0.144	(0.184)		-0.390	(0.143) ***
Observations <sup>++</sup>			42,033				
<b><u>Panel B: Life Style Survey (LSS)</u></b>							
Time trend (life satisfaction) <sup>+++</sup>	-0.038	(0.085)	-0.819	(0.172)	***	0.781	(0.197) ***
Marginal effect (definitely agree)	-0.019	(0.027)	-0.317	(0.054)	***	0.298	(0.059) ***
Marginal effect (definitely disagree)	-0.036	(0.029)	-0.014	(0.037)		-0.022	(0.045)
Observations			75,237				

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> GSS questionnaire item: "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?" where 1 = "not too happy," 2 = "pretty happy," and 3 = "very happy."

<sup>++</sup> 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-parent' or 'parent.'

<sup>+++</sup> LSS questionnaire item: "I am very satisfied with the way things are going in my life these days" and the response categories are 1="definitely disagree," 2="generally disagree," 3="moderately disagree," 4="moderately agree," 5="generally agree," and 6="definitely agree."

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.



Table 5: Estimates of SWB time trends by age of youngest child and number of children in the household

	Parents (1)		Non-parents (2)			Difference (3)		
<b>Panel A: General Social Survey (GSS)</b>								
Age of youngest child in HH								
0-6	0.240	(0.179)	-0.339	(0.080)	***	0.579	(0.147)	***
7-12	-0.115	(0.096)				0.224	(0.124)	*
13-17	-0.392	(0.252)				-0.053	(8.000)	
Number of children in HH								
One	-0.090	(0.171)	-0.344	(0.079)	***	0.254	(0.161)	
Two or more	0.024	(0.134)				0.368	(0.115)	***
Observations <sup>++</sup>				42,033				
<b>Panel B: Life Style Survey (LSS)</b>								
Age of youngest child in HH								
0-5	-0.036	(0.092)	-0.831	(0.172)	***	0.795	(0.211)	***
6-11	-0.234	(0.156)				0.597	(0.245)	**
12-17	-0.080	(0.132)				0.750	(0.180)	***
Number of children in HH								
One	-0.182	(0.144)	-0.826	(0.172)	***	0.645	(0.197)	***
Two or more	0.082	(0.116)				0.908	(0.239)	***
Observations				75,237				

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> GSS questionnaire item: "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?" where 1 = "not too happy," 2 = "pretty happy," and 3 = "very happy."

<sup>++</sup> 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-parent' or 'parent.'

<sup>+++</sup> LSS questionnaire item: "I am very satisfied with the way things are going in my life these days" and the response categories are 1="definitely disagree," 2="generally disagree," 3="moderately disagree," 4="moderately agree," 5="generally agree," and 6="definitely agree."

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 6: Estimates of SWB time trends by subgroups

	Parents (1)		Non-parents (2)		Difference (3)		
<b>Panel A: General Social Survey (GSS)</b>							
Men	0.177	(0.200)	-0.136	(0.116)		0.313	(0.187) *
Women	-0.177	(0.148)	-0.527	(0.117)	***	0.350	(0.178) **
Employed	0.062	(0.164)	-0.243	(0.117)	**	0.305	(0.125) **
Employed men	0.255	(0.200)	-0.010	(0.158)		0.264	(0.236)
Employed women	-0.172	(0.233)	-0.528	(0.196)	***	0.356	(0.234)
Not employed	-0.186	(0.156)	-0.455	(0.112)	***	0.269	(0.177)
Nonwhite	0.359	(0.282)	0.178	(0.297)		0.182	(0.271)
White	-0.117	(0.138)	-0.427	(0.070)	***	0.310	(0.129) **
High school or less	-0.225	(0.158)	-0.460	(0.108)	***	0.235	(0.143)
College or more	0.282	(0.226)	0.046	(0.164)		0.236	(0.219)
Observations <sup>++</sup>				42,033			
<b>Panel B: Life Style Survey (LSS)</b>							
Men	0.069	(0.153)	-0.878	(0.112)	***	0.947	(0.181) ***
Women	-0.130	(0.112)	-0.781	(0.231)	***	0.651	(0.251) ***
Employed	-0.087	(0.096)	-0.515	(0.193)	***	0.428	(0.195) **
Employed men	-0.013	(0.162)	-0.475	(0.139)	***	0.463	(0.189) **
Employed women	-0.181	(0.158)	-0.594	(0.272)	**	0.413	(0.245) *
Not employed	0.130	(0.185)	-1.119	(0.182)	***	1.249	(0.281) ***
Nonwhite	0.677	(0.264)	** -0.057	(0.289)		0.734	(0.375) *
White	-0.058	(0.091)	-0.923	(0.181)	***	0.865	(0.210) ***
High school or less	-0.135	(0.154)	-1.011	(0.205)	***	0.876	(0.268) ***
College or more	-0.163	(0.178)	-0.365	(0.209)	*	0.202	(0.261)
Observations				75,237			

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> GSS questionnaire item: "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?" where 1 = "not too happy," 2 = "pretty happy," and 3 = "very happy."

<sup>++</sup> 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-parent' or 'parent.'

<sup>+++</sup> LSS questionnaire item: "I am very satisfied with the way things are going in my life these days" and the response categories are 1="definitely disagree," 2="generally disagree," 3="moderately disagree," 4="moderately agree," 5="generally agree," and 6="definitely agree."

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 7: Estimates of the parental SWB gap and the difference in SWB time trends for alternative measures of well-being

	Parental SWB gap (-) or surplus (+) (1)		Difference in time trend (2)		
<b>Panel A: General Social Survey (GSS)</b>					
	Probit				
Q1: "During the last few years, has your financial situation been getting better?" <sup>+</sup>	0.019	(0.020)		0.381 (0.171)	**
Q2: "Would you say that you are pretty well satisfied with your financial situation?" <sup>++</sup>	-0.001	(0.019)		0.346 (0.149)	**
	Ordered probit				
Q3: "Would you say your own health, in general, is excellent, good, fair, or poor?" <sup>+++</sup>	0.049	(0.017)	***	-0.309 (0.097)	***
<b>Panel B: Life Style Survey (LSS)</b>					
	Ordered probit				
Q4: "If I had my life to live over, I would sure do things differently" <sup>++++</sup>	-0.038	(0.011)	***	-0.315 (0.119)	***
Q5: "I wish I could leave my present life and do something entirely different" <sup>++++</sup>	-0.086	(0.017)	***	-1.008 (0.117)	***
Q6: "I have more self-confidence than most people" <sup>++++</sup>	0.037	(0.012)	***	0.284 (0.098)	***
Q7: "I wish I knew how to relax" <sup>++++</sup>	0.045	(0.010)	***	0.720 (0.180)	***
Q8: "I have trouble getting to sleep" <sup>++++</sup>	-0.092	(0.011)	***	0.500 (0.140)	***
Q9: "I get more headaches than most people" <sup>++++</sup>	0.010	(0.010)		0.160 (0.122)	
Q10: "I am in very good physical condition" <sup>++++</sup>	0.002	(0.013)		0.293 (0.109)	***

Standard errors (clustered by year) are in parentheses.

<sup>+</sup> questionnaire item: "During the last few years, has your financial situation been getting better, getting worse, or has it stayed the same?"

<sup>++</sup> questionnaire item: "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?"

<sup>+++</sup> questionnaire item: "Would you say your own health, in general, is?" and the response categories are 1 = "excellent," 2 = "good," 3 = "fair," and 4 = "poor?"

<sup>++++</sup> where response categories are 1 = "definitely disagree," 2 = "generally disagree," 3 = "moderately disagree," 4 = "moderately agree," 5 = "generally agree," and 6 = "definitely agree."

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.

Table 8: Estimates of SWB time trends for measures of social disconnectedness and economic insecurity

	Parents (1)			Non-parents (2)			Difference (3)		
<b><u>Panel A: social, civic, and political connectedness</u></b>									
"I like to be considered a leader"	-0.611	(0.128)	***	-0.833	(0.118)	***	0.222	(0.094)	**
"I spend a lot of time visiting friends"	0.067	(0.088)		-0.182	(0.096)	*	0.249	(0.088)	***
"I need to get the news everyday"	-1.733	(0.331)	***	-2.468	(0.292)	***	0.735	(0.121)	***
"I am interested in politics"	-1.139	(0.201)	***	-1.329	(0.164)	***	0.190	(0.112)	*
<b><u>Panel B: social and political trust</u></b>									
"Most people are honest"	-1.622	(0.188)	***	-1.638	(0.119)	***	0.016	(0.139)	
"An honest man cannot get elected to high office"	0.078	(0.134)		0.041	(0.103)		0.037	(0.061)	
<b><u>Panel C: economic well-being</u></b>									
"It is hard to get a good job these days"	-0.800	(0.417)	*	-0.727	(0.550)		-0.073	(0.179)	
"Our family income is high enough to satisfy nearly all our important desires"	-0.544	(0.154)	***	-1.207	(0.209)	***	0.663	(0.151)	***
"No matter how fast our income goes up we never seem to get ahead"	-0.514	(0.234)	**	0.181	(0.261)		-0.695	(0.304)	**
"Our family is too heavily in debt"	1.057	(0.217)	***	2.052	(0.165)	***	-0.996	(0.142)	***
<b><u>Panel D: balancing multiple responsibilities</u></b>									
"I feel like I am so busy trying to make everybody else happy that I don't have control of my own life"	0.626	(0.162)	***	1.079	(0.160)	***	-0.453	(0.109)	***

Standard errors (clustered by year) are in parentheses.

\*, \*\*, and \*\*\* signify that the coefficient is significantly different than zero with a p-value < 0.10, 0.05, and 0.01, respectively.



# Economics Department

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## LEAVEY SCHOOL OF BUSINESS

2013

1. Popper, H. Mandilaras, A., Bird, G. 2013. Trilemma stability and international macro economic archetypes. Economics Working Paper 2013-01, Santa Clara University.
2. Field, A., 2013. Schelling, von Neumann, and the Event that didn't occur. Working Paper 2013-02, Santa Clara University.
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2014

1. Shin, D., Strausz, R. 2014. Delegation and Dynamic Incentives. Working Paper 2014-01, Santa Clara University.
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