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The increasing happiness of US parents

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Abstract Previous research suggests that parents may be less happy than non-parents. We critically assess the literature and examine parents' and non-parents' happiness-trends 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 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.

Keywords Parents · Happiness · Life satisfaction · Subjective well-being · General Social Survey (GSS) · DDB Lifestyle Survey (LSS)

JEL Classification D60 · D10

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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 et al. 2004; Clark 2006; Clark et al. 2008a; Di Tella et al. 2003; Evenson and Simon 2005; Glenn and McLanahan 1982; Nomaguchi and Milkie 2003; Stanca 2012; Grossbard and Mukhopadhyay 2013).[1] Such findings are perhaps unsurprising given that parents report enjoying childcare only slightly more than housework and commuting (Kahneman et al. 2004). The existence of a *parental happiness deficit* 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 only one attempt to critically assess the literature. Therefore, our first goal is to undertake such an investigation. We uncover a number of potentially serious problems. First, previous studies that 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 and the parental happiness gap may be mischaracterized. 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 primary goal of this paper is to examine whether the evolution in US parents' happiness differed from that of non-parents over the past few decades. To our knowledge, this is the first paper to explore trends in parental happiness. Further, our paper is focused on a well-defined set of parents, those who are actively parenting. Our analysis uses data from the General Social Survey (GSS) and DDB Worldwide Communications Life Style Survey (LSS), two nationally representative datasets that have tracked self-reported happiness and life satisfaction, respectively, over the last few decades. We find evidence that suggests that parents' happiness increases over time relative to non-parents. This relative improvement appears to be the result of an absolute decline in non-parents' happiness over time. Our findings are consistent across two nationally representative surveys and virtually every demographic sub-group.

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[1] A few studies find inconsistent or neutral effects (e.g., Cleary and Mechanic 1983; Gore and Mangione 1983), and a few others find positive effects (e.g., Ross and Huber 1985; Aassve et al. 2009).

Our results are interesting in light of recent studies documenting widespread declines in happiness over the past few decades in the US For example, Herbst (2011) finds that both men and women's happiness declined between 1985 and 2005; and Stevenson and Wolfers (2009) find that women's happiness declined absolutely, and relative to men's, between 1972 and 2008. In contrast, we find that parents do not experience an absolute drop in happiness and are becoming happier relative to their childless peers. This finding builds on previous research that focused exclusively on low-income single mothers, and found that their absolute and relative happiness (compared to low-income single childless women) increased over the past few decades (Herbst 2012; Ifcher and Zarghamee 2014).

Lastly, we discuss three potential explanations for our findings. First, 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 US (Putnam 2000; Twenge and Campbell 2009)? Second, is the observed relative increase in parental happiness a reflection of a compositional shift in who is a parent? Third, it is possible that perceptions regarding gender roles and the division of labor in the household, as well as the utility of marriage and children, have evolved differently over time for parents and non-parents?

2 Literature review

The earliest studies in the literature focus primarily on outcomes related to parental depression, anxiety, and social relationships. Much of this work is thoroughly reviewed in McLanahan and Adams (1987), Ross et al. (1990), and Umberson and Williams (1999). In recent years, scholars interested in subjective well-being (SWB) have begun to explore the relationship between parental status and *happiness*. The happiness literature is summarized in Blanchflower (2008), Clark et al. (2008a, b), and Dolan et al. (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 early literature provides fairly consistent evidence that parents are worse off than non-parents across a variety of psychological domains (e.g., Barnett and Baruch 1985; Evenson and Simon 2005; Glenn and McLanahan 1981, 1982; Glenn and Weaver 1978, 1979; Nomaguchi and 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 associations 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 and Simon 2005). Furthermore, it appears that parents of young children are unhappier still (Umberson and Williams 1999), and that each successive child in the home is associated with steeper reductions in well-being (Glenn and McLanahan 1982). It must be noted, however, that a few studies find inconsistent or neutral relationships (e.g., Cleary and Mechanic 1983; Gore and Mangione 1983), while others find positive relationships (e.g., Ross and Huber 1985; Aassve et al. 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 and 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 (Koropeckyj-Cox and Call 2007). Finally, single parents are substantially more likely to experience stress and depression than their married counterparts (Aneshensel et al. 1981).

A smaller literature examines the association between parental status and 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 et al. 1996; MacDermid et al. 1990; Menaghan 1982). In contrast, parents report higher levels of self-esteem than non-parents (Hansen et al. 2009). Furthermore, a related set of papers highlights the social benefits of parenthood through increased connectedness to friends, family, and the community (Gallagher and Gerstel 2001; Umberson and 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.

A number of recent papers 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. 2008a, b; Stanca 2012). There is some disagreement in the literature, however, with some studies finding neutral or positive effects (e.g., Frey and Stutzer 2006).[2] Another paper finds that, although children are not directly associated with parental happiness, they do appear to negatively affect the spousal relationship—specifically, by lowering spousal affection—which in turn reduces happiness (Grossbard and Mukhopadhyay 2013). 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 association between parental status and happiness 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

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[2] A recent paper by Hagstrom and Wu (2014 onlinefirst) asks a slightly different question: whether there are happiness differences by pregnancy status. The paper finds that pregnancy results in a happiness increase for white and Hispanic individuals, but not for black individuals (i.e., a neutral association).

1976 using two cross-sections of the Americans View Their Mental Health Survey. Therefore, the current study fills this void by conducting an explicit trends analysis of parents and non-parents' SWB.

Second, there appears to be little consistency in the manner in which the definition of *parent* is handled. For example, studies sometimes do not discuss which groups of parents fall within their definition (e.g., full- vs. empty-nest parents), nor is there much discussion of the advantages and disadvantages of the chosen definition.[3] 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 Myrskyla'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 and Simon 2005).[4] 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 repeated cross-section surveys: the GSS and LSS. The GSS is a standard survey for studying US SWB. The GSS was administered annually to approximately 1500 individuals between 1972 and 1993 (with the exception of 1979, 1981, and 1992) and was administered biennially to approximately 4500 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 (1) dropping the Black oversample in the 1982 and 1987 GSS; (2) dropping surveys that were conducted in Spanish (and could not have been completed in English) in the 2006 GSS; and (3) using the GSS weight WTSSALL to help ensure that the survey includes a nationally representative sample of US adults [see Appendix A of SW (2008) for

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[3] A noteworthy exception is a recent paper by Myrskyla and Margolis (2014), which provides a detailed discussion of the parent definition.

[4] However, it is the case that Margolis and Myrskyla (2011) retain only those parents with children under age 18; thus very few empty-nesters are likely to be included in the sample.

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 et al. (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 3500 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.[5]

3.1 Definition of parent

We define a *parent* as a respondent who reports having children ages 0–17 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.[6] We are not able to determine whether the child is the respondent's 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

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[5] 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.

[6] If women are more likely than men to gain custody of their children after separation or divorce, then our definition of parent will result in a greater percentage of women being classified as parents than men (35 and 41 % of men and women in our sample are coded as parents, respectively). As discussed in the subgroup analysis in Sect. 4, the main results hold for men and women in both datasets [see Column (3) of Table 6].

custody arrangement, it is somewhat reassuring that parents in most arrangements are found to report similar SWB (Evenson and Simon 2005). Further, we recognize that our definition of parent commingles the following as *non-parents*: adults without children, parents with children ages 18 and over, and parents whose children do not live in their household. This is not meant to suggest that the SWB of empty-nest and noncustodial parents is uninteresting. Rather, it is simply not the focus—and beyond the scope—of this paper.[7]

Based on our definition of parent, 38 % of GSS respondents are parents, 16,151 out of 42,298, and 38 % of LSS respondents are parents, 28,706 out of 75,237 (see Table 1).[8] 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.

The GSS also asks: "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)?" The LSS does not ask an analogous question. Of the 16,151 respondents in the GSS who are identified as parents, 1311 report having had zero children. These parents are either step or adoptive parents, or another household member has legal guardianship of the child. While this sub-sample is too small to study separately (approximately 50 observations per year), we can test whether this sub-group is driving the results by re-estimating our models dropping these observations. Our results are robust to doing so.

3.2 Estimating the parental SWB gap

We begin with a brief presentation of a standard SWB equation. Formally, the equation takes the following form:

$$y_{it} = \beta_0 + \beta_1 x_{it} + \varepsilon_{it} \tag{1}$$

for $i = 1,\ldots,I$; and $t = 1,\ldots,T$, where i indexes individuals and t indexes years. The dependent variable, y_{it}, is the self-reported SWB of the ith respondent in year t; X_{it} is a vector of correlates of self-reported SWB of the ith respondent in year t, including demographic and socioeconomic characteristics; and ε_{it} captures unobserved characteristics and measurement error. As self-reported SWB data is ordinal, SWB equations are often estimated using ordered logit or probit.

In the context of this paper, the standard equation can be made more explicit to show how the parental SWB gap is estimated. Specifically, we regress SWB on a parental-status indicator variable and a standard set of correlates. Formally, we estimate an equation of the following form:

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[7] It is worth noting that empty-nest parents are a distinct population from full-nest parents. Compared to full-nest parents, empty-nest parents are generally in a different stage of life and have variant household compositions and economic circumstances. Thus, empty-nest parents are often studied in stand-alone papers.

[8] 265 respondents in the GSS did not report the number of children living in their household, and thus, cannot be categorized as a parent or non-parent; these respondents are dropped from all future analyses.

Table 1 Demographic characteristics

	General Social Survey (GSS)			Life Style Survey (LSS)		
	All (1)	Non-parents (2)	Parents (3)	All (4)	Non-parents (5)	Parents (6)
Average happiness/life satisfaction[+]	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)[++]	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)***

Table 1 continued

	General Social Survey (GSS)			Life Style Survey (LSS)		
	All (1)	Non-parents (2)	Parents (3)	All (4)	Non-parents (5)	Parents (6)
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[+++]	42,298	25,882	16,151	75,237	46,531	28,706

Standard errors (clustered by year) are in parentheses

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

[+] 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"

[++] 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)

[+++] 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'

$$y_{irt} = \beta_0 + \beta_1 parent_{irt} + D_{irt}\gamma + \mu_r + \eta_y + (\mu_r \times \eta_y) + \varepsilon_{irt}, \qquad (2)$$

for $i = 1,\ldots,I$; $r = 1,\ldots,R$; and $t = 1,\ldots,T$, where i indexes individuals, r indexes region of residence, and t indexes years. The dependent variable, y, is the SWB of the ith respondent in region r and year t. The independent variable, *parent*, is a dummy variable that equals one if the ith respondent in region r and year t reports having at least one child ages 0–17 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.[9] The model also includes dummy variables for the nine Census regions (μ_r), a vector of year dummy variables (η_y), and vector of region-by-year interactions ($\mu_r \times \eta_y$). Given the ordered nature of the dependent variable, we use an ordered probit to estimate Eq. (2). Standard errors are adjusted for arbitrary forms of heteroskedasticity as well as the non-random clustering of observations by year.

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[9] All results are robust to dropping observations with missing data.

The β_1 is the coefficient of interest. It captures the parental SWB gap: the average SWB difference between parents and non-parents over the study period. A negative (positive) estimate of β_1 indicates that there is a parental SWB deficit (surplus). Estimates of β_1 are commonly reported in the parental SWB literature; and the finding that there is a parental SWB deficit is based on such estimates. We also estimate Eq. (2) 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

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.

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:

$$y_{irt} = \beta_0 + \beta_1 parent_{irt} + \beta_2(parent_{irt} \times trend_t) + \beta_3(non\text{-}parent_{irt} \times trend_t) \\ + D_{irt}\gamma + \mu_r + \varepsilon_{irt} \quad (3)$$

where y, *parent*, and D are defined as before. A linear time trend, *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). Again, we use an ordered probit to estimate Eq. (3) 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.

The β_2 and β_3 are the coefficients of interest. They capture parents and non-parents' linear SWB time trend, respectively. If the estimate of β_2 or β_3 is positive (negative), then it indicates that the group's SWB is increasing (decreasing) over time. A useful estimate is (β_2–β_3), which captures the difference between parents and non-parents' linear SWB time trend; that is, the change in the parental SWB over time. If the estimate of (β_2–β_3) is positive (negative), then it indicates that parents' SWB increased (decreased) over time relative to non-parents.

4 Results

Estimating Eq. (2), the coefficient on *parent*, β_1, is negative and statistically significant using the GSS and negative and insignificant using the LSS (see Table 2). This is consistent with the literature and suggests that there is a parental SWB deficit. The deficit is 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.

Table 2 Estimates of the parental SWB gap

	All (1)
Panel A: General Social Survey (GSS)	
Parent (happy)[+]	−0.043 (0.013)***
Marginal effect (very happy)	−0.020 (0.006)***
Marginal effect (not too happy)	0.001 (0.003)
Observations[++]	42,033
Panel B: Life Style Survey (LSS)	
Parent (life satisfaction)[+++]	−0.008 (0.014)
Marginal effect (definitely agree)	−0.010 (0.004)**
Marginal effect (definitely disagree)	−0.004 (0.003)
Observations	75,237

Standard errors (clustered by year) are in parentheses

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

[+] 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"

[++] 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'

[+++] 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"

The marginal effects indicate that the predicted probability of parents reporting high-levels of SWB is 0.02 (SE = 0.006) and 0.01 (SE = 0.004) less than non-parents in the GSS and LSS, respectively. Given that 0.34 and 0.16 of respondents reported high-levels of SWB in the GSS and LSS, respectively, these estimates imply that parents are about 6 % less likely to report high-levels of SWB than non-parents.

Estimating Eq. (3), one observes that the difference between parents' and non-parents' linear SWB time trend, β_2–β_3, is positive and statistically significant across both datasets (see Table 3). 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, β_2 is approximately zero across both datasets. In contrast, it appears that non-parents' SWB is decreasing absolutely. The β_3 is negative and highly statistically significant across both datasets. The marginal effects indicate that non-parents are becoming less likely to report high-levels of SWB. Figure 1 presents the parents' and non-parents' SWB time series. Examining the time series, it appears that non-parents' SWB is decreasing absolutely over time in both datasets. In contrast, there is no clear trend for parents. However, the time series for both groups should be interpreted cautiously given that the data tend to be quite noisy, particularly in the GSS. We also estimate Eq. (2) for each year, *t*, separately, to examine the evolution of the parental SWB gap non-parametrically over time. The β_1 becomes more positive over time in both datasets, evolving from being consistently negative to being positive most of the time (see Table 4).

Table 3 Estimates of SWB time trends for parents, non-parents, and the difference

	Parents (1)	Non-parents (2)	Difference (3)
Panel A: General Social Survey (GSS)			
Time trend (happy)[+]	−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[++]	42,033		
Panel B: Life Style Survey (LSS)			
Time trend (life satisfaction)[+++]	−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

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

[+] 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"

[++] 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'

[+++] 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"
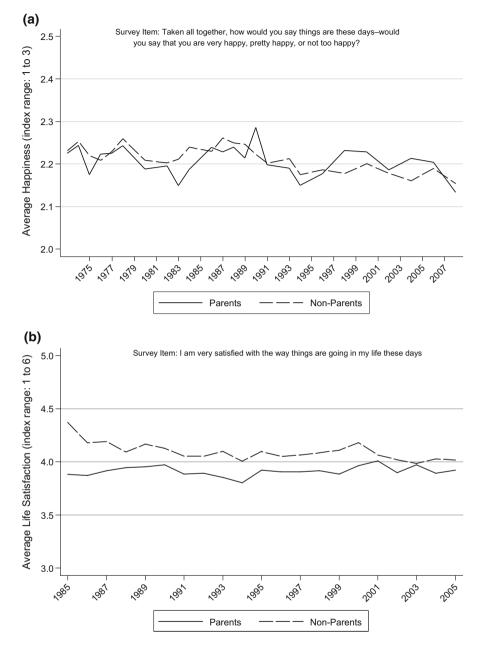
However, one should use caution when interpreting the results in Table 4 as most of the coefficients are insignificant. In addition, it is important to note that the pattern established in the GSS is less clear than the one established in the LSS.[10]

Parental SWB (as discussed in Sect. 2) appears to be negatively related to having young children and more children (e.g., Glenn and McLanahan 1982; Umberson and Williams 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 Eq. (3). 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 Eq. (3) 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.

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[10] This could be the result of the more compressed response-scale in the GSS: there are three possible responses to the GSS happiness question and seven possible responses to the LSS life-satisfaction question.

(a)

(b)

Fig. 1 a Self-reported happiness for parents and non-parents, 1973–2008. *Source*: General Social Survey. b Self-reported life satisfaction for parents and non-parents, 1985–2005. *Source*: DDB Worldwide Communication Life Style Survey

Estimating Eq. (3) 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

Table 4 Estimates of the parental SWB gap by year

General Social Survey (GSS)		Life Style Survey (LSS)	
1973	−0.037 (0.067)	1985	−0.196 (0.035)***
1974	−0.064 (0.068)	1986	−0.099 (0.035)***
1975	−0.116 (0.067)*	1987	−0.060 (0.034)*
1976	−0.001 (0.066)	1988	0.011 (0.034)
1977	−0.073 (0.066)	1989	−0.017 (0.035)
1978	−0.086 (0.062)	1990	−0.003 (0.035)
1980	−0.095 (0.074)	1991	−0.022 (0.035)
1982	−0.041 (0.068)	1992	−0.012 (0.035)
1983	−0.114 (0.063)*	1993	−0.027 (0.036)
1984	−0.127 (0.069)*	1994	−0.007 (0.035)
1986	−0.059 (0.092)	1995	0.024 (0.036)
1987	−0.129 (0.120)	1996	0.023 (0.035)
1988	−0.069 (0.066)	1997	0.008 (0.036)
1989	−0.117 (0.065)*	1998	0.000 (0.038)
1990	0.046 (0.069)	1999	−0.033 (0.038)
1991	−0.032 (0.067)	2000	−0.012 (0.039)
1993	−0.109 (0.062)	2001	0.082 (0.040)**
1994	−0.062 (0.047)	2002	0.050 (0.036)
1996	−0.027 (0.048)	2003	0.133 (0.040)***
1998	0.078 (0.048)	2004	0.034 (0.038)
2000	0.037 (0.048)	2005	0.077 (0.039)*
2002	0.006 (0.077)		
2004	0.079 (0.078)		
2006	−0.006 (0.052)		
2008	−0.089 (0.065)		

Standard errors (clustered by year) are in parentheses

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

[+] 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"

[++] 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)

[+++] 265 observations in the GSS are missing data regarding the number of children living in the household, and thus, cannot be classified as 'non-19ent' or '19ent'

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

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)
Panel A: General Social Survey (GSS)			
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[++]	42,033		
Panel B: Life Style Survey (LSS)			
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

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

[+] 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"

[++] 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'

[+++] 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"

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.

Parental SWB (as discussed in Sect. 2) is not a monolith. For example, female parents worry more and experience lower levels of well-being than male parents (Bird and 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, Eq. (3) 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 β_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 β_3, the non-parents' linear SWB time trend. Most are negative and statistically significant (see Table 6). Thus the subgroup analysis appears to confirm

Table 6 Estimates of SWB time trends by subgroups

	Parents (1)	Non-parents (2)	Difference (3)
Panel A: General Social Survey (GSS)			
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[++]	42,033		
Panel B: Life Style Survey (LSS)			
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

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

[+] 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"

[++] 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'

[+++] 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"

that parents' SWB is increasing relative to non-parents' SWB, and that non-parents' SWB is decreasing absolutely.

Finally, estimating Eqs. (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;

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

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

Standard errors (clustered by year) are in parentheses

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

[+] Questionaire item: "During the last few years, has your financial situation been getting better, getting worse, or has it stayed the same?"

[++] Questionaire 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?"

[+++] Questionaire item: "Would you say your own health, in general, is?" and the response categories are 1 = "excellent," 2 = "good," 3 = "fair," and 4 = "poor?"

[++++] Where response categories are 1 = "definitely disagree," 2 = "generally disagree," 3 = "moderately disagree," 4 = "moderately agree," 5 = "generally agree," and 6 = "definitely agree"

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 less happy than non-parents. In this paper, we critically assess this body of work and careful reexamine the relationship between parental status and SWB, allowing the relationship to vary over time. Using two nationally representative repeated cross-section surveys, we find evidence that parents' relative happiness is increasing over time, a finding that appears to be driven by the absolute decline in non-parents' happiness.

Our findings raise an interesting question: Why have parents experienced a relative increase in happiness over the past few decades? We consider three potential explanations. First, does having children protect parents against social and economic factors that may be reducing 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. Perhaps, parents are not 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 (Gallagher and Gerstel 2001; Nomaguchi and Milkie 2003).

To explore this possibility, we estimate parents and non-parents' time-trends replacing the dependent variables with measures organized around the themes of (1) social and political connectedness, (2) social and political trust, (3) economic well-being, and (4) balancing multiple responsibilities available in the LSS.

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

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

	Parents (1)	Non-parents (2)	Difference (3)
Panel A: social, civic, and political connectedness			
"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)*
Panel B: social and political trust			
"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)
Panel C: economic well-being			
"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)***
Panel D: balancing multiple responsibilities			
"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

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

has exceeded that among 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.

Second, it is possible that there has been a compositional shift in who is a parent, and this has driven the observed relative increase in parental SWB.[11] In other words, it is not the impact of parental status on SWB that has changed over time; rather it is that parents themselves are different. For example, the share of children living with one parent rose from 14 % in 1970 to 25 % in 2008; the share of mothers with children ages 17 and under in the labor force rose from 47 % in 1975 to 71 % in 2008; and the average age of a women at the birth of her first child has risen from 21.4 years old in 1970 to 25 years old in 2006 (Pew 2010; Mathews and Hamilton 2009). Marital status, employment status, and age are each well-known correlates of SWB. Further, more

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[11] One potential explanation for the compositional changes in the population of parents and non-parents is the second demographic transition.

women are choosing not to have children. The share of women ages 40–44 who had never had a child rose from 10 % in 1976 to 20 % in 2006 (Blackstone and Stewart 2012). If adults feel freer, now than before, to choose to not be a parent, then the observed relative increase in parental SWB might be due to better sorting of adults into parents and non-parents. In summary, it is plausible that compositional shifts among parents and non-parents have driven the change in parental SWB.

Third, it is possible that perceptions regarding gender roles and the division of labor in the household, as well as the utility of marriage and children, have evolved differently over time for parents and non-parents. This speaks not only to changes in the selection into parenthood, but also to changes in views and behaviors within marriage and parenthood that may influence SWB. Fortunately, the LSS contains a rich set of questionnaire items that tap into such attitudes. We estimate parents and non-parents' time-trends replacing the dependent variables with various attitudinal measures of gender, children, and marriage. Perhaps not surprisingly, parents became more likely than non-parents to agree with the statement that "consideration of the children should come first" when making family decisions. However, on a number of other dimensions, parents and non-parents' attitudes have evolved in a similar manner. For example, both groups became equally more likely to agree that "couples should live together before getting married," and equally less likely to agree that the "father should be the boss in the house." In addition, parents and non-parents are no different in their evolving views on whether the "women's liberation movement is a good thing," and they became equally disinclined to agree with the view that a "woman's place is in the home." On balance, it appears that although the characteristics of parents and non-parents have changed substantially over time, changing views about women, marriage, and children have evolved similarly in both groups. Thus, a tentative conclusion is that such views likely do not explain the relative rise in parents' SWB over the last few decades.

Although this paper does not answer the question as to the causal effect of parenthood on happiness, one may infer from the results presented here that the happiness "deficit" between US parents and non-parents has narrowed over time. As pointed out by Kravdal (2014), there are significant challenges associated with estimating the causal effect of parenthood. This paper—by showing trends in happiness—focuses instead on presenting a series of stylized facts about the ways in which parents' and non-parents' happiness has evolved over time. The paper also advanced a number of plausible explanations for why parents experienced a relative increase in happiness. Such findings may serve to catalyze future work in this area.

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