

**PARENTHOOD AND HAPPINESS: A REVIEW OF FOLK THEORIES VERSUS
EMPIRICAL EVIDENCE**

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Abstract

This paper reviews and compares folk theories and empirical evidence about the influence of parenthood on happiness and life satisfaction. The review of attitudes toward parenthood and childlessness reveals that people tend to believe that parenthood is central to a meaningful and fulfilling life, and that the lives of childless people are emptier, less rewarding, and lonelier, than the lives of parents. Most cross-sectional and longitudinal evidence suggest, however, that people are better off without having children. It is mainly children living at home that interfere with well-being, particularly among women, singles, lower socioeconomic strata, and people residing in less pronatalist societies—especially when these characteristics are combined. The discrepancy between beliefs and findings is discussed in relation to the various costs of parenting; the advantages of childlessness; adaptation and compensation among involuntarily childless persons; cognitive biases; and the possibility that parenthood confers rewards in terms of meaning rather than happiness.

Keywords: life satisfaction, happiness, children, parenthood, parental status, childlessness, literature review

1 Introduction

This paper reviews and compares folk theories and empirical evidence about the role of children as a source of global or subjective well-being¹. By *folk theory* is meant common lay beliefs about something, based upon known facts, hear-say, or personal experiences. The review focuses on the two most commonly measured aspects or indicators of global well-being in the literature, namely happiness and life satisfaction. The paper thus contrasts lay beliefs about how the presence of offspring affects people's well-being against empirical evidence on the effect of parental status on happiness and life satisfaction.

There is a broad scholarly consensus that *life satisfaction* refers to a cognitive evaluation of well-being that is based upon comparisons of actual achievements to aspired conditions (e.g., Campell et al. 1976; Diener 1984; Michalos 1985). *Happiness* is an elusive concept that can have different meanings. Some argue that it takes the form of an emotional state, more like positive affect than life satisfaction (e.g., Haybron 2007; Michalos 1980; Schnittker 2008). Others assert that happiness and life satisfaction are conceptually similar and can be treated as synonymous (e.g., Blanchflower & Oswald 2004; Easterlin 2005; Veenhoven 1996). For the present purposes, the two constructs will be treated as such, although it is an open question whether they indeed show similar associations to parental status. The fact that happiness and life satisfaction share only 25–50% common variance (Diener & Fujita 1995; Lucas et al. 1996) and can load differently on various independent variables (e.g., age; Haller & Hadler 2006) suggests that the two constructs have unique meanings and can be expected to relate somewhat differentially to parental status. For example, because of the highly cognitive nature of life satisfaction, the mere presence of biological children may foster life satisfaction quite uniformly across the various contexts in which parenthood occurs (e.g., children in the home or not), and life satisfaction effects may be stronger in the categories of people (e.g., by

¹ In people's minds (i.e., folk theory), global well-being is more likely referred to as happiness, hence the title.

gender or culture) who place the highest value on having children. Happiness, however, may be more sensitive than life satisfaction to positive and negative experiences (e.g., Campell et al. 1976) and thus be more negatively affected by the stress and burdens of raising children, especially under difficult social or financial circumstances.

To my knowledge, this is the first extensive review of the literature on parental status and subjective well-being. Although some analytic papers include shorter literature reviews, they tend to have several shortcomings. Typically, these reviews (i) only include negative outcomes (usually depression or loneliness), (ii) cite mostly older, U.S. studies (e.g., McLanahan & Adams 1987), (iii) over-generalize U.S. findings and treat them as global, (iv) ignore diversity among parents and nonparents, and (v) claim the existence of various cultural beliefs without presenting supportive evidence. The current review includes studies from a large number of countries, and address outcome-differential effects and individual- and macro-level moderators of the effects. Unfortunately, this review excludes negative outcomes due to space limitations, and, because of lack of evidence, contains little non-Western evidence.

This paper proceeds as follows. The second section presents folk theories about parenthood and childlessness: What beliefs do people tend to hold, and how common are they? These lay beliefs predict great emotional advantages of having children. The same prediction also follows from the content of the third section, which reviews scholarly theories on the benefits of having children. The fourth section describes research questions and methods. The fifth section reviews cross-sectional and longitudinal evidence, showing that children generally do not make people happier. The sixth section discusses the discrepancy between folk theories and empirical evidence, with a view to explain the unpredictable research findings and to understand where the popular beliefs come from. The paper ends by addressing limitations and suggestions for future research.

2 Folk theories about parenthood and childlessness

Scholars typically claim the existence of two—sometimes three—common beliefs about parental status and happiness: that children make people happier; that childless persons lead empty and lonely lives. However, some scholars note the existence of a third and different stereotype, namely that people tend to view voluntary childless persons as oriented primarily toward freedom and pleasure, which seems to suggest a relatively happy group. Importantly, however, authors tend to simply state that these cultural beliefs exist, without any explanation or proof. What are these notions based upon? How do we know such beliefs exist? How entrenched are they?

2.1 The belief that children make people happier

Several observations support the claim that children are widely considered a vital mode of fulfillment and happiness. For instance, this notion is implicit in people's strong inclination to have children, as nearly everyone (90-95%) of young adults across the world plan to have children (Stanley et al. 2003; Toulemon 1996). In large population-based British data, 85% rate the importance of having children as 5 or higher on a scale from 0 to 10 (42% rate it at 10) (ISER 2010). Although intentional childlessness may be increasing in some Western countries, it is still very rare (2-6%)—most arrive at childlessness through a series of postponements (e.g., of marriage and childbearing) (Basten 2009b; Chancey & Dumais 2010).

Beliefs about parenthood and childlessness have been examined more directly in several large cross-national surveys. Overall, a rather consistent pattern exists whereby pronatalist attitudes are strongest in Eastern Europe, Asia, and Africa, more moderate in South America and South-Central Europe, and weakest in richer OECD countries (e.g., the U.S., Canada, Australia, the Netherlands, and the Nordic countries). For example, agreement with the

statement “you cannot really be happy without having children” has been assessed in 11 countries as part of the Population Policy Acceptance Survey (2000-2003). These data reveal great inter-country variation, with far less agreement in countries like the Netherlands (5%), Belgium (12%), and Finland (22%), than in Cyprus (68%) and Eastern European countries such as Hungary (59%) and Lithuania, Estonia, Czechoslovakia, and (East) Germany (44-48%) (Fokkema & Esveldt 2008). The data shows few gender differences, but distinctly less agreement—across most countries—in younger cohorts and among the highly educated. There is more cross-cultural agreement to a similar statement, included in the National Survey of Families and Households (NSFH) and the International Social Survey Programme (ISSP), that “watching children grow up is life’s greatest joy”. About 80-90%, and slightly more women than men, agree with this statement in virtually all parts of the world and across two decades (Halle 2002; ISSP 2002; Koropeckyj-Cox & Pendell 2007; NSD 2002). This belief may be somewhat less pervasive among people with parenting responsibility, as a British study of 1500 parents aged 20-40 shows this belief to be held by 66% of mothers and 41% of fathers (Stanley et al. 2003).

Another widely used indicator of pronatalist attitudes is whether people think a woman needs to have children in order to feel fulfilled. Recent World Values Survey (WVS) and European Values Survey (EVS) data show that whereas few hold this belief in richer OECD countries like the Netherlands (~5%), the Nordic countries (10-20%), the U.S. and Canada (~15%), and Australia and Great Britain (~20%), more believe this in South-Central Europe (e.g., France, Germany, and Spain), South America (~50-70%), and especially Eastern Europe, Asia, and Africa (~80-100%; except China 35%) (de Vaus 2002; Inglehart et al. 2004; Van de Kaa 2001). In almost all countries, this agreement decreases markedly with higher education, younger age, and in more recent surveys (e.g., from 87% to 44% between 1990 and 2000 in the Czech Republic). No gender differences are found, except there is

somewhat higher agreement among men in richer OECD countries (e.g., Inglehart et al. 2004).

Symptomatic of the traditional view that parenthood is more salient for women, it has been rare until recently to include a question of whether a *man* needs children to feel fulfilled. Responses to this question reveal the same ranking among countries and lack of gender differences, but, in most countries, the agreement is about 5-20 percentage points lower than for the same question posed regarding women (Inglehart et al. 2004).

It seems to be a widely held assumption also that children enhance well-being by fostering greater marital happiness. The belief that children bring couples closer together is held by 70% in older U.S. data (Veroff et al. 1981) and is commonly reported in qualitative interviews (Hoffman & Manis 1979; Stanley et al. 2003). Similarly, recent EVS data shows that about 75-85% think children are very important for a successful marriage in Eastern European countries—somewhat more than in e.g., Sweden and Belgium (55-60%) (Bernhardt & Fratczak 2005; Kerkhofs 1999). Also, about 50% of both men and women in the U.S. (Halle 2002) and Australia (de Vaus 2002) think a marriage without children is not fully complete.

The value-of-children literature reinforces these notions by showing that parents associate having children with great rewards, in terms of companionship and support, meaning, love, excitement and happiness, and that a strong reason for having children is fear of loneliness and depression in old age (e.g., Friedman et al. 1994; Hoffman et al. 1987; Schoen et al. 1997).

2.2 The image of childless persons as “a sad bunch”

There seems to be less support for the cross-cultural existence of an image of childless persons as “a sad bunch”, lacking in meaning and fulfillment. People have gradually become more accepting of childlessness, especially among younger and highly educated people

(Basten 2009b). Data from the General Social Survey (GSS) shows that, over two decades, the percentage of Americans who think childless persons lead empty and unhappy lives, has dropped from 50% to less than 25% (Blake 1979; Halle 2002; Thornton & Young-DeMarco 2001). Recent ISSP data shows great cultural variations in this belief. Whereas only 10-20% believe childless persons lead empty lives in countries like the Netherlands, the Nordic countries, the U.S., Great Britain, and Australia, 55-70% hold this belief in Eastern European and other non-Western countries (ISSP 2002). This belief is generally more common among men than women and more prevalent in older cohorts (Hakim 2003; Halle 2002). In the US, men are more supportive than women of the statement “it is better to have a child than to remain childless; 45% of men compared to 37% of women agreed with the statement (Koropecj-Cox & Pendell 2007).

It has been claimed that a widely held belief is that childlessness leads to loneliness and regrets in old age. Little evidence is available to shed light on this notion, except one older U.S. study showing that 71% think the childless are at greater risk of loneliness in old age (Blake 1979). Interestingly, few childless persons themselves (12%) believe old age may be empty or lonely (Baum & Cope 1980). Similarly, studies on small, nonrepresentative samples show that expressions of regrets about not having had children are either rare or only moderately common among childless persons in midlife and beyond (Alexander et al. 1992; Connidis & McMullin 1999; Jeffries & Konnert 2002; Lewis & Borders 1995; Wenger et al. 2007).

2.3 The childless as selfish hedonists

A different image of childless persons exists that sees them not as unfulfilled and lonely, but rather as pleasure-seeking individualists (e.g., like the characters in the 1990s TV show *Seinfeld*). Qualitative studies show that parents often view the voluntary childless as immature

and self-centered persons, who want to live free of obligations and responsibilities to enjoy life and focus on career, leisure activities and romantic relationships (Callan 1983, 1985; Chancey & Dumais 2010; Somers 1993; Stanley et al. 2003). These stereotypes are more common among men, and have been fairly consistent since the 1970s (Chancey & Dumais 2010). The image of childless persons as self-indulgent individualists seems to translate into a stereotype of a relatively active, joyful, and happy group. This expectation is substantiated by that both parents and childless persons in qualitative interviews cite many advantages to being childless, such as more freedom, less stress, and fewer responsibilities, worries, and financial concerns (Alexander et al. 1992; Connidis 2001; Connidis & McMullin 1999; Stanley et al. 2003), and these are major reasons why some people opt to not have children (Park 2005). Indeed, people are increasingly referring to childless individuals as “childfree,” a term that captures and recognizes the more positive sides of being without children (Connidis 2001). Presumably also, because aversion to lifestyle change is one of the main types of justifications the voluntary childless cite for their remaining childless (Parr 2010), voluntary childless persons do not wish to change their lives because of relatively high existing levels of life satisfaction.

2.4 Summary of folk theories

The belief that parenthood makes people happier seems to be rather pervasive across the world, as indicated by the strong affirmation of statements like “watching children grow up is life’s greatest joy” and “children are important for a successful marriage”. “Stronger” claims, such as that childless persons lead empty, unfulfilling, and lonely lives, still receive relatively strong support among men and women in non-Western societies, but little support in Western countries, particularly among women and in younger generations. In sum, attitudes towards parenthood and childlessness vary considerably between social and cultural groups, with

pronatalist attitudes being more common among the older and less educated, and in non-Western societies.

3 Scholarly perspectives on the emotional effect of parental status

Although the main focus here is on folk theories, it is worth noting that there are several *scholarly* theories that also predict great emotional advantages of having children. First, a needs theory of well-being links children with happiness via the notion that children may gratify basic human needs. Drawing on this theory, the combination of (i) offspring purportedly representing important means to satisfy core psychological needs, such as for companionship, affiliation, respect, security, positive self-image, meaning, and self-realization (e.g., Schoen et al. 1997), and (ii) the gratification of such needs being key to well-being (e.g., Baumeister & Leary 1995; Lyubomirsky & Boehm 2010; Ryan & Deci 2001; Veenhoven 1996), suggests that parenthood confers emotional rewards. Second, goal theories and comparison theories of well-being (e.g., Michalos 1985) link children with happiness via the notion that parenthood, because it is a widely held life goal and may be a strong marker of personal success, may lead to social recognition and feelings of pride, esteem, and satisfaction. Of course, this pathway plays out differently to people that have *childlessness* as part of their life plan. Third, the benefits of having offspring also derive from classical sociological and psychological theories. Durkheimian theory predicts great parenthood advantages based on the notion that parenthood structures people's lives and integrates people into social networks, thereby providing them with meaning and purpose in life. Further, adult development theory stresses the centrality of parenthood for generativity and adult psychosocial development (Erikson 1963). Generativity is a key developmental task of midlife, which involves supporting and guiding the next generation, and is supposedly linked

with mental health. The opposing tendency is obsessive self-indulgence, which is thought to be damaging for healthy development.

4 Methods

The fifth section of this paper addresses two main questions. First, what is the relationship between having offspring and happiness and life satisfaction? Second, how do these relationships vary by demographic factors such as age, gender, marital (or partnership) status, socioeconomic status, and by combinations of these factors? A cross-cutting issue is how the main and moderated (by demographic factors) relationships between having offspring and well-being vary across countries characterized by different welfare systems and gender role orientations.

4.1 The literature reviewed

The relatively sparse literature that focuses primarily or peripherally on links between parental status and well-being is spread across grey literature and peer-reviewed articles published in journals from different disciplines (e.g., family sociology, happiness research, and gerontology). This review identified such literature from PsychLit and Google Scholar searches. Criteria for inclusion were as follows: (i) written in English, (ii) dependent variable is happiness and/or life satisfaction, (iii) at least controlling for (or separating by) partnership status (to tease out the effect of parental status from the impact of partnership status), and (iv) comparing parents and nonparents (i.e., “number of children” effects are excluded). Still, some “number of children” effects and effects on outcomes other than happiness and life satisfaction have been included when they are particularly interesting, relevant, or the only evidence available.

The review focuses on two aspects or indicators of well-being; happiness, which is consistently assessed with single items, and life satisfaction, which is measured with single items or sometimes multi items scales. It is worth noting that differences in measurement and response format may lead to subtle differences in the results. A full list of results on the effect of parental status on happiness and life satisfaction and description of the studies providing these results can be found in the Appendix. Differences in the operationalization of parental status may also affect the comparability of results. Most studies define “parents” as the status of having living biological and/or adopted children and “childless” as the status of never having had such children. Yet, there is some variation and ambiguity as to how studies have categorized step-children, adopted children, and parents who have outlived all of their children. Further, this review defines full-nest parents or resident parents/children as having at least one child at home, whereas empty nest parents refer to parents having none of the children residing at home.

The review gives an overview of effects in different parts of the world, and as far as possible separated by gender, age, and residential status of the children. However, most findings do not distinguish between children living at home or not, due to two different data limitations. First, some datasets (e.g., the WVS) only ask whether the respondent has children (no/yes), and some authors therefore use the respondents’ age as a proxy for whether the children live at home or not (e.g., Margolis & Myrskylä 2010). Second, some datasets (e.g., the European Social Survey; ESS) only record resident children, and authors may therefore use only respondents in the normative childbearing ages to minimize the likelihood of lumping together childless persons and empty nest parents (Aassve et al. 2009).

Cross-sectional “effects” refer to unstandardized coefficients from multivariate OLS or, in rare cases, ordered logit or probit regressions. Papers that use both OLS and ordered logit regressions find substantively identical results (Di Tella et al. 2003; Stanca 2009; Stutzer &

Frey 2006). When results from both methods are available, this review refers to OLS results for reasons of familiarity and ease of interpretation. Most longitudinal analyses are based on multivariate fixed effects regressions, which may eliminate the problem of reversed causality and endogeneity with regard to time invariant characteristics suspected to affect both parental status and well-being. Fixed effects regression does not, however, eliminate the problem of time varying omitted factors. Unless otherwise stated, reported effects and group differences are significant at $p < .01$.

5 Results

Below follows first a review of cross-sectional findings on average differences in well-being between parents and nonparents. Then follows a review of longitudinal evidence on changes in well-being in the years before and after the birth of the first child. These studies usually ignore childless persons, and only include those that become parents. An overview of studies and findings can be found in the Appendix.

5.1 Cross-sectional findings

The following is organized into four parts, mostly for efficiency purposes. The first synthesizes aggregate evidence from large international surveys. The second reviews U.S. and—highly similar—Australian results. The third reviews the diverse European literature. The fourth reviews the few available non-Western studies. The findings are reviewed as far as possible by gender and age. Thereafter follows a synthesis of the sparser literature on variations in findings by marital status, socioeconomic status, and other factors.

Global findings

The WVS is the largest survey available that includes measures of subjective well-being. It contains representative samples from 97 countries, representing almost 90% of the world's population, which implicates that findings can be interpreted as worldwide aggregate effects. Pooled WVS data consistently show that childless persons, contrary to what people tend to expect, generally report *higher* happiness and life satisfaction than parents do (*ceteris paribus*; 1980-2008 data) (Ball & Chernova 2008; Bjørnskov et al. 2008; Haller & Hadler 2006; Margolis & Myrskylä 2010; Stanca 2009). These effects are small, however, as indicated by a net difference in life satisfaction between parents and childless persons of 0.10 on a scale from 1 to 10—which is about a fifth of the difference between employed and unemployed persons or between married and unmarried persons (Stanca 2009).

Gender and age/life stage. Importantly, the psychological implications of parental status can vary considerably by gender and age. Figure 3 shows that the life satisfaction effect of parenthood is more negative for women than for men, and gradually changing from negative to positive with higher age in pooled WVS 1980-2008 data from 94 countries (Stanca 2009). This age pattern suggests that having children can be an investment in future well-being, because as children grow older and move out, the positive aspects of parenthood may dominate and children may become important social assets. Similarly, a WVS study that examines the effect on *happiness* shows that parenthood has a negative impact under age 40 and a near-zero effect in the ages 40-49, patterns that are similar for men and women, whereas the positive effect above age 50 is more pronounced for women (Margolis & Myrskylä 2010). Analyses by welfare regime show that the negative fertility-happiness association at young adult ages is strongest in southern Europe and former socialist countries, and weakest in social democratic states, which may reflect the comparatively generous government support for families (Margolis & Myrskylä 2010).

[FIGURE 1 ABOUT HERE]

Other studies show that parenthood in young age (i.e., raising children) is more detrimental for women's than men's well-being. For example, in a study of 19 countries from different parts of the world, parenthood has no aggregate impact on happiness and life satisfaction for men and women above about age 35, but has, in younger ages, a negative impact on women's happiness and (nonsignificant) life satisfaction, and a positive effect on men's happiness and life satisfaction (Mastekaasa 1994).

North America and Australia

North American and Australian results are rather similar to the international pooled estimates, except for less pronounced parenthood rewards in older ages. In the U.S., parenthood has a negative impact on happiness and life satisfaction (all ages; GSS 1981-1996 and U.S. WVS 1981-2005 data) (Alesina et al. 2004; Di Tella et al. 2003; Margolis & Myrskylä 2010; Peiro 2006; Smith 2003). Parenthood is also linked with lower life satisfaction in the Australian HILDA 2001 data (all ages; nonsignificant for women) (Dockery 2010) and in pooled HILDA 2001-2006 data, where the cross-sectional effect is positive until the first born is two years old, after which the effect is negative (Frijters et al. 2010).

Gender and age/life stage. Consistent with some of the international results, dependent children are more negative for women's than for men's well-being in the U.S. (see McLanahan & Adams 1987, for a review) and Australia (Shields & Wooden 2003). Moreover, the effect of having children on happiness and life satisfaction changes from negative to nonsignificant above about age 55, for men and women (Chang 2008; Connidis & McMullin 1993; Koropeckyj-Cox et al. 2007; McLanahan & Adams 1987; Rempel 1985; Shields & Wooden 2003; Umberson & Gove 1989). These findings are corroborated by up to 17 years of U.S. panel data, showing that emptying the nest improves marital satisfaction, also in the longer term, but either has no impact on life satisfaction (Gorchoff et al. 2008) or a

positive impact among those maintaining frequent contact with their adult children (White & Edwards 1990).

European estimates

Aggregate and country-specific European findings from nationally representative samples (all ages) show mostly negative emotional effects of having children. In older, Euro-Barometer 1975-1992 data, for example, parenthood is negatively related to happiness and life satisfaction in the aggregate (Alesina et al. 2004; Di Tella et al. 2003), and on the country-level the effect on life satisfaction is either significantly negative (UK, France, the Netherlands, Denmark, Ireland, and Portugal) or nonsignificantly negative (Germany, Belgium, Italy, Luxembourg, Spain, and Greece) (Di Tella et al. 2003). A negative effect of parenthood on life satisfaction is also found in pooled British BHPS 1996-2006 data (Angeles 2009; Clark 2007). Because the rest of the European studies are age/life-stage specific, they will be reviewed according to the residential status of the children.

Gender and resident children. There is great diversity in the direction and significance of the emotional impact of having resident children. A negative effect of resident children on life satisfaction and (nonsignificant) happiness is found in recent ESS data (Plagnol & Huppert 2010). Similarly, the presence of resident children is associated negatively with life satisfaction among 1,451 Dutch men aged 40-59 (Keizer et al. 2009) and 1,249 Poles aged 20-36 (significant only for women) (Bernhardt & Fraczak 2005). In other European evidence, however, resident children relates to *higher* well-being. For example, parents report higher life satisfaction than do nonparents among Germans under age 45 in pooled GSOEP 1984-2000 data (Stutzer & Frey 2006). Similarly, recent ESS data shows a positive average effect of resident children in the ages 20-50 on happiness across 26 European countries, an effect

that is stronger for men (0.075, $p < .01$) than for women (0.029, $p < .05$) (Aassve et al. 2009)². This study demonstrates great variability, with a positive effect for both men and women in countries such as Austria and the Nordic countries, and a negative effect in countries such as Bulgaria, Italy, Luxembourg, Poland, and Slovenia. The authors conclude that resident parents are happier in high-fertility, Nordic welfare states than they are in low-fertility, weaker welfare states in other parts of Europe. This conclusion concurs with that of Margolis and Myrskala (2010), who find that resident children have less negative emotional impacts in the Nordic countries than anywhere else in the world.

These conclusions—especially regarding women—are supported by a handful of available nationally representative Nordic studies of young to middle-aged samples. For example, a Danish study of 1,862 twins aged 25-45 finds, after controlling for unobserved endowments, that parental status has no effect on men but that having only one child raises women's life satisfaction (Kohler et al. 2005). Similarly, parenthood is linked with higher happiness and life satisfaction for women but not for men among 2,469 Swedes aged 22-34 (Bernhardt & Fraczak 2005), 318 employed Swedish women aged 43 (Daukantaite & Zukauskiene 2006), 3,421 Danes aged 20-50 (Aassve et al., 2009), and 5,189 Norwegians aged 40-80 (regardless of whether the children live at home or not) (Hansen et al. 2009). The magnitude of these effects seems non-negligible—about 40-70% of that of having a partner. Yet, in two studies that use data from 1998 and 1986, respectively, resident parenthood has no effect on life satisfaction among 369 Swedish women aged 43 (Bergman & Daukantaite 2006) or 7,594 Finnish men and women aged 20-64 (Savolainen et al. 2001).

Gender and empty nest parenthood. The few European studies that focus on middle-aged and older samples are mostly Nordic and find either nonexistent (Kohler et al. 2005) or weak, positive effects (only for women) of having non-resident adult children (Hansen et al. 2009).

² This study only records children in the home, which means that childless persons also include people who are parents but do not live with their children. This group of parents, usually men, may report relatively low well-being (e.g., Shields & Wooden 2003). Hence, the positive effect of parenthood is likely inflated for men.

The very sparse literature available on the very old are all Western European and show that parental status does not make a decisive difference. Among 661 Dutch aged 70-89 and 516 Germans aged 70-100, for example, no parenthood-to-life satisfaction association is evinced, except for a small positive effect among the Dutch men (Dykstra & Wagner 2007). Parental status also has no effect on life satisfaction among 105 Swedes with ages in the 90s (mostly women) (Hilleras et al. 2001).

Non-Western findings

One study uses 1995-1996 WVS data and reports country-specific findings from some African and Asian countries (Peiro 2006). Although it is unclear if the effects are statistically significant, it seems that parenthood has positive effects on life satisfaction and (especially) happiness in a range of non-Western countries, such as Nigeria, China, Taiwan, Japan, and Chile. These effects are negative most notably in Peru and Venezuela, and near-zero in Argentina and the Dominican Republic. In other rare evidence from China, parenthood has a very weak ($p < .10$) positive effect on life satisfaction among 13,447 elderly aged 65 and above (Zhang & Liu 2007). Non-Western findings will not be discussed in the following, however, as these findings are sparse and based mostly on older data.

5.2 Longitudinal results

A range of studies examines changes in well-being in the weeks before and after becoming parents for the first time. However, these findings will only be mentioned briefly, since the immediate effect of becoming a parent is not of main interest here. In the U.S., becoming a parent is reviewed to usually lead to a sudden drop in marital satisfaction and a high degree of stress, anxiety, irritable mood, and depressive symptoms (Hoffenaar et al. 2010; Twenge et al. 2003). Interestingly, several Nordic studies of relatively large samples fail to detect any

change in depressive symptoms (Eberhard-Gran et al. 2004; Josefsson et al. 2001; Salmela-Aro et al. 2006).

The handful of studies that examine the transition over several years tend to show positive anticipation effects but marked drops in marital satisfaction and life satisfaction in the years following the first birth. First, two-wave analyses suggest that those who become parents between waves show greater declines in well-being relative to those who remain childless. For example, recent U.S. data shows that marital satisfaction tends to decline in the first 2 years (Crohan 1996), 5 years (Lawrence et al. 2008), and 8 years (Doss et al. 2009) of marriage for all couples, but more so for parents. Furthermore, in large panel data of Australians mostly in their 20s, becoming a parent during the past year is negatively associated with (especially men's) life satisfaction, controlling for life satisfaction one year prior (Marks & Fleming 1999). In contrast, controlling for life satisfaction in 1988, becoming a father (since 1988) has no effect on life satisfaction in 1995 among 3,088 U.S. men aged 19-65 (Knoester & Eggebeen 2006).

There is corroborating and rather consistent evidence using yearly multivariate fixed effects regressions on life satisfaction in very large German, British, and Australian panel data. For example, as presented in figure 1, twenty waves of the West-German sub-sample of the German Socio-Economic Panel survey (GSOEP, 1984-2003) show a positive anticipation effect one year before birth for men, but not for women (Clark et al. 2008). These data also show a positive effect after birth lasting one year for men and two years for women. However, by the time the first child is 4-5 years old, the estimated coefficients are negative for both men and women. The long-run effect (≥ 5 years) is negative, but significant ($p < .01$) only among women. Similar results are obtained in 11 waves of British Household Panel Survey (BHPS) data (1996-2006), applying the same methodology as Clark et al. (2008). In these data, as figure 2 shows, the first birth has a positive effect on women's but not on men's life

satisfaction (Clark & Georgellis 2010). However, by the time the child is two or more years old, the estimated coefficients turn negative for both genders and remain so thereafter. The long-run effect (≥ 5 years) is negative for both men ($p < .01$) and women ($p < .10$). The study finds a positive anticipation effect for women (up to three years before birth), but none for men. Data from the Household, Income and Labour Dynamics in Australia (HILDA, 2001-2006, both genders) survey shows a positive anticipation effect on life satisfaction in the year leading up to the first birth and a positive effect lasting one year after birth, after which the effect is nonsignificant and near zero (Frijters et al. 2010).

[FIGURE 2 AND 3 ABOUT HERE]

The endogeneity bias

It seems unlikely that reverse causation or unobserved third factors (e.g., personality traits) are accounting for cross-sectional associations between parental status and well-being. First, the effects of parental status on well-being are very similar before and after controlling for prior levels of well-being (Knoester & Eggebeen 2006; Marks & Fleming 1999) or for fixed effects (Frijters et al. 2010). Second, Kohler et al. (2005) use twin data to control for unobserved social and genetic differences and find that the effect of parental status in most cases is the same in standard OLS and in twin-differences models. This suggests that the unobserved heterogeneity bias in analyses is not large. Third, because most associations are negative, it seems unlikely that well-being causally influences parenthood (i.e., that unhappy individuals are more likely to reproduce than happier ones). Indeed, happy couples are more likely to have one or more children than less happy couples (Myers 1997), which suggests that OLS results, if anything, underestimate the causal negative effect of parenthood on well-being.

Cohort effects

There is little evidence of period or cohort differences in the studied effects, globally, as WVS data shows a strong and similar age gradient in the happiness-fertility link in 1981-1996 and in 1997-2007 (Margolis & Myrskylä 2010). There may be some cohort differences in certain regions, however. For example, the emotional effect of parenthood appears to change from positive to negative from older (-1995) to more recent (1995-) data in former socialist states (cf. Margolis & Myrskylä 2010; Peiro 2006; Smith 2003), whereas an opposite pattern is evident in Nordic data (e.g., Hansen et al. 2009; Peiro 2006; Savolainen et al. 2009).

Interestingly, these differences mirror concurrent regional changes in work-family policies over the same period (e.g., Smith 2003). European aggregate effects also seem to have changed from negative to neutral or positive over the same time period (Alesina et al. 2004; Di Tella et al. 2003; Aassve et al. 2009). In the U.S., McLanahan and Adams (1989) have documented gradual negative changes in the effect of parenthood from the 1950s to the 1970s, which they attribute to increasing divorce rates and female employment. From the 1970s, the current review suggests stable negative effects in the U.S.

5.3 Individual-level moderators of the effects**5.3.1 Variations by marital status**

The scant available evidence on interactions between parental status and marital status demonstrates that raising children has different emotional consequences depending on marital status, especially in younger age, for women, and in weaker welfare states. More specifically, most studies show that partnered parents are happier than single parents and that parenthood does not affect well-being among marrieds but adversely affects well-being among single individuals. In other words, low well-being is mostly reported by single parents; to couples, parental status makes little difference.

[FIGURE 4 ABOUT HERE]

As figure 4 shows, and as corroborated by WVS analyses of *happiness* (Margolis & Myrskylä 2010), parenthood adversely affects the well-being of single individuals in global WVS data (Stanca 2009). This pattern is also found for men and women (all ages) in the U.S. (Koropeckyj-Cox et al. 2007; Umberson & Gove 1989), Australia (Shields & Wooden 2003), and in aggregate estimates for happiness across 26 European countries (age 20-50) (Aassve et al. 2009). The studies that differentiate singles by marital history indicate that never-married resident parents report higher well-being than their formerly married counterparts (Koropeckyj-Cox et al. 2007; Shields & Wooden 2003). Well-being can be low for both single mothers and fathers, but for different reasons. Single fathers may suffer due to poor relations to their children, whereas single mothers may experience high financial and social costs associated with parenting (assuming that mothers have custody of the children). The adverse impact of dependent children seems especially large for single mothers, who, in the U.S., report as low happiness as the chronically ill, or the unemployed (cf. Baumeister 1991).

Parenthood usually has a neutral or positive psychological impact among partnered respondents. An exception is a negative effect of parenthood on life satisfaction found among partnered individuals in the WVS (figure 4; Stanca 2009). Yet, in the same dataset, the effect on *happiness* in this group is weakly positive (Margolis & Myrskylä 2010). Small positive effects on happiness and life satisfaction among partnered individuals are also found in pooled European ESS data from up to 30 countries, covering the ages 18-50 (Soons & Kalmijn 2009; Aassve et al. 2009). In a range of countries, however, these associations among partnered individuals (all ages) are nonsignificant, e.g., in the U.S. (Koropeckyj-Cox et al. 2007; Umberson & Gove 1989), Australia (Shields & Wooden 2003), Switzerland (Frey & Stutzer 2000), Croatia (Obradovic & Cudina-Obradovic 2001), and across 22 European countries in the ESS (Pichler 2006).

Interestingly, Nordic findings are conspicuously different, showing—across gender, age, and the children’s residential status—no interaction between parental status and marital status on happiness or life satisfaction (Daukantaite & Zukauskiene 2006; Hansen et al. 2009; Kohler et al. 2005; Savolainen et al. 2001).

There is some support for the notion that married parents fare better than cohabiting parents, at least as measured by life satisfaction in Australian data (Shields & Wooden 2003). However, pooled WVS data suggests similar detrimental life satisfaction effects of parenthood for marrieds and cohabitators (figure 4; Stanca 2009). This similarity may be because in some societies, childrearing in cohabiting unions is widely accepted and legally protected. In the Scandinavian societies, for example, parenthood has similar effects on life satisfaction and marital satisfaction for cohabiting and married men and women (Hansen et al. 2007; Hansen et al. 2009; Wiik et al. 2009).

Because childlessness has been shown to increase the risk of facing support deficits and using formal services when it coincides with widowhood and poor health (e.g., Dykstra & Hagestad 2007a), single elderly persons that are also childless may be at particular risk of low well-being. Indeed, a strong positive effect of adult children on life satisfaction among the widowed has been shown globally (figure 4; Stanca 2009); in the U.S. (Koropecj-Cox et al. 2007; Umberson & Gove 1989), and in Australia (Shields & Wooden 2003), but, as mentioned, not in the Nordic countries (Hansen et al. 2009; Kohler et al. 2005). Also, Western European studies of parental status effects in very old age tend to find nonsignificant results regardless of marital status (Dykstra & Wagner 2007).

5.3.2 Variations by socioeconomic status

Not surprisingly, as raising children can impose substantial financial costs, resident children have more negative effects on well-being in low socioeconomic groups. For example, in

global WVS data, parenthood has a positive effect on life satisfaction in the sub-sample with higher education (\geq some university with or without degree) (figure 4; Stanca 2009) and a strong negative effect on happiness at lower incomes (particularly in the ages 20-39 and if 3 or more children) (Margolis & Myrskylä 2010). U.S. data also shows that parenthood depresses happiness more strongly among the poor than among the rich, especially with increasing number of children (Alesina et al. 2004). Indeed, the presence of resident children has a marked negative impact on financial satisfaction in a range of countries, and especially in the U.S. (Peiro 2006)—also longitudinally after controlling for fixed effects (Angeles 2009). Socioeconomic status seems to matter less in European and generous welfare states, however. Across 12 European countries, no difference in the effect on happiness is found between the poor and the rich (Alesina et al. 2004), and recent Norwegian data (age 40-80) shows no relationship between having children and financial satisfaction (Hansen et al. 2008) and no difference in the effect of parenthood on life satisfaction by education (Hansen et al. 2009).

An opposing and much less documented trend is a more pronounced negative effect of resident children at *high* socio-economic status. According to a review of mostly U.S. findings, parenthood has a more negative effect on marital satisfaction at high socioeconomic status, suggesting that lack of income and resources are not major factors (Twenge et al. 2003). There is some corroborating GSOEP evidence, as resident children in the fixed effect specification are negative ($p < .05$) for life satisfaction among the rich, but positive ($p < .10$) for the poor (only partnered individuals in the West Germany sub-sample) (Becchetti et al. 2010). In summary, whereas most findings suggest that parenthood adversely affects the poor due to overwhelming *financial* costs, some findings indicate that parenthood can have detrimental consequences among the rich and highly educated for reasons of great *opportunity* costs (in terms of career, income, and education).

5.3.3 Variations by other factors

Several other factors can modify the emotional impacts of parenthood and childlessness. First, the findings are mixed regarding whether the *number of resident children* matters, with some national and cross-national data suggesting that happiness and life satisfaction decrease with increasing number of children (see Appendix) (Alesina et al. 2004; Angeles 2009; Ball & Chernova 2008; Di Tella et al. 2003; Margolis & Myrskylä 2010; Shields & Wooden 2003; Stutzer & Frey 2006), and other data showing no effect beyond that of the first child (Alesina et al. 2004; Bergman & Daukantaite 2006; Bjørnskov et al. 2008; Di Tella et al. 2003; Savolainen et al. 2001; Stanca 2009; Aassve et al. 2009). Across 26 European countries, the number of children only makes a difference (negative) to single mothers (Aassve et al. 2009). In global WVS data, the number of children has a particularly negative effect on women (Stanca 2009). Among Germans under age 45 in GSOEP 1984-2000 data, in the fixed effects estimation, one child has a nonsignificant negative effect, whereas two or three children have increasingly significant and negative impacts on life satisfaction (Stutzer & Frey 2006).

Second, the *child's gender* and *age* can also matter. Whereas some studies indicate more pronounced negative impact on life satisfaction of children in the ages 12-15, especially for women (Oswald & Powdthavee 2008a; Savolainen et al. 2001), others find no such effect of the age of the youngest child (Shields & Wooden 2003; Umberson & Gove 1989).

Conversely, U.S. data suggests that the age of the youngest child is positively associated with fathers' life satisfaction (Knoester & Eggebeen 2006). The evidence on the impact of the child's gender on marital satisfaction and life satisfaction is also mixed, with some studies finding no such effects (Bernhardt & Fraczak 2005; Kurdek 1993; Aassve et al. 2009) and others finding positive impacts of having a boy (Cox et al. 1989; Kohler et al. 2005; Raley & Bianchi 2006). The latter authors speculate that boys may lead to more father involvement in

child care. Third and importantly, *quality of relations* matters, as well-being can be very low for mothers and fathers with a distant or conflict-ridden relation to an adult child (Chang 2008; Connidis & McMullin 1993; Koropecj-Cox 2002), or if a child has serious illness or personal problems (Greenfield & Marks 2006; Pillemer & Sutor 1991).

A key distinguishing factor among the childless is whether they are *childless for voluntary or involuntary reasons*. The transition to biological childlessness usually is a major crisis for couples, associated with stress, depression, and low life satisfaction, especially for women (Abbey et al. 1994; Callan 1987). It is unclear whether this vulnerability persists, as one study finds no difference in life satisfaction between voluntary and involuntary women aged 25-50 (McQuillan et al. 2007), whereas a study of older men and women also finds no difference for happiness, but that the involuntary childless (especially women) report lower life satisfaction than the voluntary childless do (Connidis & McMullin 1993).

5.4 Summary of findings

This paper gives an overview over findings from various regions and countries on the effect of having offspring on happiness and life satisfaction. Global aggregate effects and findings from a range of countries show small but significant negative effects, indicating that people generally are happier without having biological children. The cross-sectional findings are corroborated by longitudinal studies, showing that life satisfaction drops markedly after the birth of the first child for both women and men, but recover to almost their pre-parenthood levels after about 4-5 years. These effects are determined by a complex interplay of factors, however. The most important ones include the children's residential status and the parents' gender, age, and marital and socioeconomic status. To complicate matters further, these interactions play out differently in different countries, often in predictable ways according to

levels of state-based supports to young families, gender equality in work and domestic roles, and the extent to which people have to rely on kin for support in old age.

Closer examinations reveal that it is mainly when children live at home that they may interfere with individual and marital well-being. Not surprisingly, the emotional impact of dependent children is more negative for the social categories that generally experience the most burdens and challenges of having children: women, singles, lower socioeconomic strata, and people residing in societies with less pronatalist policies—especially when these characteristics are combined. The effect of having adult, non-resident children on happiness and life satisfaction is in most countries near-zero or—in large international samples—significantly positive. There are exceptions, however, as parenthood is associated with higher well-being in older age in former socialist countries, where old-age support is largely the responsibility of the family. Overall, the age-gradient in the effect of parenthood on well-being (negative effect in younger age, positive in older age) appears strong in weak welfare states and weak or non-existent in strong welfare states. This pattern exists independently of survey period (Margolis & Myrskylä 2010). In very old age, there is no indication of a parenthood-to-happiness relationship emerging—not even among those living alone—which is surprising in light of the documented support deficits associated with childlessness among the widowed elderly.

When comparing the findings across or within studies (e.g., Koropeckyj-Cox et al. 2007; Rempel 1985; Stanca 2009; Umberson & Gove 1989), the general pattern of results is similar for happiness and for life satisfaction. There are some exceptions, as resident children have been shown to more adversely affect happiness than life satisfaction (Haller & Hadler 2006; Umberson & Gove 1989), at least among women (Mastekaasa 1994), which is consistent with theorizing that children put demands on day-to-day positive emotions (happiness), but nonetheless may enhance well-being at a more cognitive level. Yet, parenthood can also relate

somewhat more significantly (negative) to life satisfaction than to happiness (Connidis & McMullin 1993; Peiro 2006; Plagnol & Huppert 2010). One explanation may be that two of these studies use single-item happiness measures that have fewer response categories (only 4) than life satisfaction scales (see Appendix). Few categories may lower the precision and reliability of the instrument and violate the normal distribution assumption, and thus reduce the likelihood of significant results. A puzzling finding that needs further research is that, among married persons in the WVS, parenthood relates positively to happiness (Margolis & Myrskylä 2010), but negatively to life satisfaction (Stanca 2009).

6 Discussion

6.1 Myths and realities

The following focuses on the discrepancy between (i) folk theories predicting great emotional benefits of having children and (ii) empirical evidence typically finding that people are better off without having children. I will put forward five hypotheses to explain this discrepancy. I will first propose that parenthood confers less emotional advantages than people may expect, because: (i) parenting entails substantial psychic and economic costs (the costs of children hypothesis), (ii) childlessness has significant advantages (the pros and cons hypothesis), and (iii) the childless over time adapt to their life situation and find rewarding roles and activities other than parenting (the adaptation and compensation hypothesis). Furthermore, the beliefs may not map onto the findings due to (iv) cognitive biases (the illusion hypothesis) or (v) people mistaking the rewards of parenting for happiness, when they have more to do with meaning (the confounding hypothesis).

The costs of children hypothesis

Although there is little direct (mediation) evidence available, the main explanation for why parenthood has little psychological benefits over childlessness seems to be that dependent children have a number of interrelated costs that interfere with well-being. First, parenting has *psychological costs*, in terms of worries, fatigue, sleep deprivation, and sacrifice and loss of personal freedom (e.g., Twenge et al. 2003). Second, raising children can have “*marital costs*” (i.e., cause marital discord and dissatisfaction), that are either direct (by reducing sex, affection, and time spent together) or indirect (via psychological distress) (Stanca 2009). Third, children can have substantial *financial costs*. Indeed, mediation analysis shows that parenthood has a neutral or positive impact on life satisfaction after controlling for financial satisfaction (Stanca 2009) or income adjusted for household composition (using equivalence scales) (Becchetti et al. 2010; Obradovic & Cudina-Obradovic 2001). Fourth, parenthood can have marked *opportunity costs*, in terms of career, income, and education, especially to women in gender-egalitarian Western societies.

Country differences in the emotional impact of parenthood suggest that culture and policy may shape the balance of rewards and costs associated with parenting. Non-Western countries provide much less public support to young families than OECD countries, of which the Nordic countries (Sweden, Norway, and Finland) have the most extensive and the U.S. and Australia the least extensive supports (such as available and affordable daycare, flexible work schedules, job leave security, cash benefits, and paid parental leave) (Gornick & Meyers 2008; Ray et al. 2009; Save the children 2010; UN 2009). Because family-friendly policies are designed to facilitate dual-earner families and father involvement in child care (Crompton & Lyonette 2006), men assume a larger share of child care and domestic work in the Nordic countries than in other Western countries (Geist 2005; Hook 2006; Smith & Williams 2007).

These contrasts in cultural and institutional frameworks mirror contrasts in findings (most of them reviewed earlier). First, the effect of parenthood on well-being is generally negative

in the U.S. and Australia, but neutral or (among women) positive in the Nordic countries. Second, in contrast to much of the literature, Nordic studies find no vulnerability associated with raising children in unpartnered or low socioeconomic groups³. Third, resident children are, globally, associated with substantial detriments in financial satisfaction and marital satisfaction, also longitudinally (in the U.S.) (Angeles 2009), but not in the Nordic countries (Hansen et al. 2009; Savolainen et al. 2001). Fourth, resident parents report more mental health problems (e.g., depression) than nonparents in U.S. but not in Nordic samples (cf. Hansen et al. 2009). Fifth, the *transition* to parenthood is associated with large increases in psychological distress in U.S. but not in Nordic samples. The latter contrast is unsurprising in light of (U.S.) data showing that this transition has particularly detrimental mental health consequences to those taking relatively short (< 6 weeks) paternity leave (Hyde et al. 1995, 1996), and the fact that the Nordic countries offer about one year of fully paid parental leave, whereas the U.S. (and Australia) offer no such leave at all (Ray et al. 2009). The finding that parents in countries at the forefront of both family-friendly policies and gender-equality derive the greatest emotional benefits from having children, suggests that cultural and policy differences may shape the balance of rewards and costs associated with parenting (e.g., by alleviating work-family conflict). Policy differences may also explain why resident parenthood is more emotionally rewarding to women in the Nordic countries than, seemingly, anywhere else in the world. Because fertility is low in the countries where the costs are high (at least in Europe) (Hilgeman & Butts 2009), the above also suggests ways in which governments may increase fertility by removing some of the disincentives to rearing children.

³ Whereas U.S. reviews conclude that parents are never better off than non-parents on any of the conventional measures of subjective well-being (McLanahan & Adams 1987; Mirowsky & Ross 2003), an opposite conclusion seems apparent in the Nordic literature.

The following will attempt to explain why there is no *systematic* or *substantial* positive emotional impact of parenthood, not even in the conditions when parenthood can have beneficial effects (e.g., to marrieds, elderly, in European welfare states).

The pros and cons hypothesis

This section explores the hypothesis that both parenthood and childlessness have important advantages and that the near-zero emotional impacts of parental status observe the net result of these advantages balancing each other out. Table 1 lists some of the most important advantages of parenthood and childlessness, as invoked by theorists and as listed by parents and childless persons themselves in qualitative interviews (see earlier). The table also indicates whether the literature has confirmed these advantages and their conduciveness to well-being—preconditions for these to be *real* advantages in terms of well-being.

[TABLE 1 ABOUT HERE]

The literature generally supports the purported advantages of parenthood and their conduciveness to well-being (happiness, life satisfaction, or similar outcomes). There is substantial evidence, for example, that people with strong social ties and access to social support tend to report higher well-being than others (see e.g., Baumeister & Leary 1995; Lyubomirsky & Boehm 2010; Powdthavee 2009) and that parents, at least in Western countries, have more contact with relatives and neighbors (Cowan & Cowan 2000; Furstenberg 2005; Gallagher & Gerstel 2001; Ishiikuntz & Seccombe 1989; Nomaguchi & Milkie 2003) and have greater access to companionship and support in older age (Connidis 2001; Dykstra & Hagestad 2007a). Similarly, giving and receiving affection and feeling love and a sense of mattering to others are all known correlates of well-being (e.g., Eysenck 1994; Taylor & Turner 2001), and some research shows that parents more often feel loving, appreciated, and needed compared to nonparents (Callan 1986; Connidis & McMullin 1994).

Furthermore, experiencing informal sanctioning and a failure in living up to normative expectations may reduce well-being (Markowitz 1998), and, although the social stigma of childlessness has softened, it still persists (Connidis 2001; Park 2002). Also, failing to reach salient *personal* life goals can lead to dissatisfaction and a negative life review in old age (e.g., Lecci et al. 1994), and low rates of voluntary childlessness suggest that most childless persons have failed to meet personal expectations of becoming a parent. Generativity also is conducive to well-being (Azarow 2003), and linked to parenthood (especially among men) both cross-sectionally (McAdams & De St. Aubin 1992) and longitudinally (Knoester & Eggebeen 2006).

Finally, parents are the targets of more formal and informal role obligations and social control than are nonparents (Keizer et al. 2009). The emotional implications of such social regulation are less documented, however. Many theorists argue that parents gain psychologically from a clear delineation of rules and a narrowing of behavioral choices. Durkheim, for example, argued that we need norms and regulations to buffer against anomie and excessive individualism, which make us unhappy and depressed. More recently, Schwartz (2000) posits that the “tyranny” of too much choice and freedom only make us frustrated and dissatisfied. Similarly, Friedman et al. (1994) assert that, because children fill people’s presumed needs and desires for predictability, routines, long-term obligations, and order to a life-course, parenting may reduce anxiety and promote feelings of security and well-being.

By contrast, less structure and more freedom are typically viewed by lay persons as positive for well-being and cited as the most important advantages to childlessness. Some of the purported advantages of childlessness are broadly confirmed in the empirical literature, such as that childlessness, in most Western countries—also longitudinally (Angeles 2009)—relates to higher financial and leisure satisfaction. Childless persons also, relative to parents, report fewer worries, less stress, and greater flexibility with time and money (Keizer et al.

2009; McLanahan & Adams 1989; McMullin & Marshall 1996; Nomaguchi & Milkie 2003). Childless persons also do less housework (Nomaguchi & Milkie 2003), exercise more (Nomaguchi & Bianchi 2004), go on outings more (Connidis & McMullin 1992), and spend far more money on restaurants and entertainment (Stanley et al. 2003). Some of these advantages have a straight-forward positive effect on well-being, such as greater financial and leisure satisfaction (Hansen 2010). However, although there is an inverse relationship between stress and happiness (e.g., Schiffrin & Nelson 2010) and a positive correlation of .33 between “the amount of free time you have” and life satisfaction (Dockery 2010), too much freedom from obligations and worries may to some be the very definition of an “empty life”. Some theorists argue that a moderate amount of challenge, struggle, burden, and negative affect can be positive and necessary for human development and to achieve a deeper and more permanent sense of well-being (Karlsen et al. 2006; Vittersø 2004).

In summary, although there arguably are emotional advantages to childlessness, these apply mostly to young adulthood and, relative to the benefits of parenthood, seem less documented and less closely related to psychological needs, e.g., for affiliation, meaning, and security and control in old age. In this sense, the pros and cons hypothesis may not fully explain the mismatch between beliefs and findings.

The adaptation and compensation hypothesis

Although infertile persons tend to go through a phase of finding life empty, meaningless, and unfulfilling (Callan & Hennessey 1988; Callan & Noller 1987; Matthews & Matthews 1986; Nock 1987), these symptoms seem to wane with time as childless persons gradually adapt to their child-free situation. One aspect of adaptation is directing one’s attention elsewhere, and finding satisfying alternative roles and relationships.

It is long established, for example, that childless persons show great creativity in negotiating alternative social ties over the life course. Firstly, the childless report higher marital support and closeness than married parents (Callan & Noller 1987; Ishiikuntz & Seccombe 1989; Somers 1993; Twenge et al. 2003). Furthermore, the childless report more active ties with friends and extended family (e.g., siblings, cousins, nieces, nephews), and these often serve as sources of companionship and support for childless people (Chang 2008; Dykstra 2006; Kendig et al. 2007; Knoester & Eggebeen 2006; Seccombe 1991; Wenger 2001; Wenger et al. 2007). However, because these relationships are not as reliable in providing long-term support, childless elderly more often than parents suffer support deficits in older age (Chang 2008; Dykstra & Hagestad 2007a), even in an advanced welfare state like Sweden (Larsson & Silverstein 2004). Therefore, research shows that childlessness can be detrimental when it coincides with widowhood, and more so for men than for women. Never-married childless adults tend to be quite successful in building alternative networks over the life course, whereas the married, and especially men, more often rely exclusively on their partner for support and companionship. Consequently, the formerly married (men) that cannot turn to their children for help and support are at higher risk of loneliness and depression (Dykstra & Hagestad 2007b; Koropecj-Cox 1998; Wagner et al. 1999; Wu & Pollard 1998; Zhang & Hayward 2001).

There is mostly speculation, however, that childless persons often keep pets or are involved with others' children (Albert & Bulcroft 1988; Basten 2009a; Schvaneveldt et al. 2001), and thus maintain quasiparental roles. Also, there are gendered findings as to whether childless persons are more committed to their careers. There is consistent evidence across many Western countries that men start to work more and women less when they become parents (Bielenksi et al. 2002; Cowan & Cowan 2000; Keizer et al. 2009) and that childless

females are more likely to be employed and more committed to their careers than mothers are (cf. DeOllos & Kapinus 2002).

Apparently, childless adults generally adapt well to their situation and find companionship, support, and a sense of meaning in other ways than through parenting (e.g., via marital, friendship, and work roles). However, because of networks of peers dying out, compensatory actions may be increasingly difficult in older age and the risks associated with childlessness may surface when it coincides with poor health and widowhood.

The origin of myths and the illusion hypothesis

Why do people hold beliefs about parenthood and childlessness that are largely false? Why are people seemingly not aware of the considerable costs of parenting, the advantages of childlessness, and the level of adaptation and compensation among involuntary childless individuals? I will argue that myths about parenthood and childlessness may be (i) innate and caused by evolved preferences, (ii) perpetuated through socialization, and (iii) sustained by cognitive biases.

First, people may be genetically predisposed to think that children bring happiness. This perspective is based upon the notion that people are born with certain needs or drives that, in turn, lead to certain beliefs. On the one hand, we may be genetically wired to want to have biological children. The need for children may, in turn, spill over to a strong motivation for parenthood and beliefs consistent with this drive, such as that we will receive rewards in terms of satisfaction when we have children. However, there may not be an innate need for children per se, but for meaning, commitment, nurturing behaviors, status and esteem, and security and self-realization (e.g., Veenhoven 1975), and people may think of children as powerful means to gratify these needs. In the absence of other equally powerful candidates to satisfy most or all of these needs, parenthood may hold great promise of fulfillment in

people's minds. These views hold that social and cultural pressures may only reinforce or trigger an underlying propensity in people to hold such beliefs.

Second, societies, communities, and families may for long—because of their need for children—have attached value to parenthood and perpetuated the idea that getting married and having children is the morally right and happiest way to live. According to the critical feminist view, it is especially women that have been socialized to value family and children, and this valuation is meant to console women for the lack of genuine power in other areas and to bolster culture's rationalization for the oppression of women (Baumeister 1991). Gilbert (2006) proposes a less intentional transmission of beliefs, offering an “evolutionary” explanation that posits that people's delusions about children persist simply because those who believe children make us happier are more likely to reproduce and pass on this mentality—whether genetically or socially.

Third, misperceptions of parenthood may arise or persist in adults, despite contradictory experiences, due to selective attention and memory. Indeed, even parents themselves seems to exaggerate the joys of parenting, as suggested by the contrast between parents' generally reporting that interactions with one's children is what brings them the most enjoyment (Flood 1997; Juster 1985) and careful studies of how people feel as they go about their daily activities (Kahneman et al. 2004; Schwartz et al. 2006)—showing that taking care of one's children is close to being the least enjoyable activity over the course of a day. Gilbert (2006) calls it the “focusing illusion” that people, despite being aware of the challenges that children impose, mostly focus on the positive experiences when asked about parenting. It is a form of self-delusion in which individuals exaggerate or only recall the good moments and forget the unpleasant aspects that typical everyday parenting entail. This illusion may be supported because people more easily remember aspects that are consistent with general beliefs about a phenomenon (e.g., that children bring happiness) or about one self (“I enjoy my kids”). A

different factor is that people may feel cognitive dissonance if they were to admit that something they invest so much time, effort and money in, is not enjoyable. Parents may thus value the parenting role more highly not despite of, but because of the stress and pain that go with it. Of course, an alternative explanation to why people hold such rosy views of parenting is that they feel it is expected and that they are simply conforming to social norms when thinking about children.

The confounding hypothesis

Baumeister (1991) proposed to explain the paradox that people keep having children even when doing so reduces happiness, by the idea that people tend to confuse *happiness* with meaning. People thus may interpret or mistake the rewards of parenthood—which they know exist—as happiness, when they may have more to do with meaning. Meaning can be defined as having a sense of purpose and direction in life, and that one's activities and efforts make sense and is part of something larger than oneself (e.g., Steger et al. 2008). Longitudinal data shows that the transition to a caregiver role can bolster meaning despite a loss in mental health and happiness (e.g., Marks 2002). It makes intuitive sense that the same mechanism is involved also with parenthood—that meaning may be enhanced in spite of, or perhaps exactly because of, the challenges and sacrifices that parenthood entails. Hence, as Baumeister (1991) notes, parenthood may be a poor strategy for finding happiness, but an excellent one for achieving a meaningful life. Despite the intuitive appeal of these ideas, there have been few attempts at gauging the effect of parenthood on measures of meaning. Some older studies of the effect on meaning either find no effect, using a single item (Veenhoven 1975), or a positive effect on a 7-item scale (Umberson & Gove 1989). In a recent, large Norwegian survey, resident mothers report higher purpose in life, as assessed with Ryff's 3-items purpose

in life scale (Ryff & Keyes 1995), than their childless counterparts (no effect among men or of empty nest parenthood) (Hansen 2010).

There have also been other attempts at defining and measuring the elusive, deep, and profound rewards that parenthood may entail. As Hansen et al. (2009) propose, parenthood, because it involves substantial effort and a concern for others, may have benefits that become apparent in the eudaimonic conception of well-being. Important indicators of eudaimonic well-being are existential dimensions such as growth and development (in addition, of course, to meaning). In a rare attempt to test the effect of parenthood on such eudaimonic outcomes, Plagnol & Hubert (2010) find that the presence of resident children is unrelated to single-items tapping a sense of accomplishment and that what one does is valuable and worthwhile. However, because the authors include measures of positive self-image and feelings of failure in the models, it is unclear whether these items mediate the effect of children on the eudaimonic outcomes. Other rewarding aspects of parenthood that are difficult to quantify, may be deep love or affection (Hansen et al. 2009; Lyubomirsky & Boehm 2010), emotions that are conspicuously absent in available measures of positive affect.

7 Limitations and future research

One potential caveat concerns the stronger selection of socially isolated older childless persons than parents into institutionalized care (e.g., Wagner et al. 1999). The elderly childless respondents living at home (and thus eligible to taking part in the surveys) may constitute the most socially integrated and most happy among childless persons, thus masking the psychological benefits for the oldest cohort of having children. Concomitantly, more research is necessary for investigating the consequences of parental status in the frail and the oldest old, who typically are not represented in large surveys.

A different limitation of this paper is that it only looks at well-being and not ill-being, and the literature would benefit from a similar review of negative aspects of life quality associated with parental status. More research is also needed on effects (i) in non-Western samples, (ii) in subgroups by, e.g., age, socioeconomic status, and marital status, (iii) on love, meaning, or other aspects of eudaimonic well-being, and (iv) of macro-level family policies and commitment to gender equality.

8 Conclusion

Negative attitudes toward childlessness still remain, and most people hold strong beliefs about parenthood as a vital mode of fulfillment. Research findings, however, tend to show that people are better off not having children, particularly women, singles, lower socioeconomic strata, and people residing in less pronatalist societies—especially when these characteristics act in combination. The reasons empirical findings do not map onto beliefs may be because parents are exposed to different stressors that cancel out or exceed the emotional rewards; because childlessness has a number of advantages that promote well-being; and because of effective adaptation and compensation by involuntary childless persons. The reason why the beliefs do not map onto the findings may be attributable to cognitive biases and that people mistake the rewards of parenting for happiness, when they have more to do with meaning. The current review reveals an interesting paradox: It appears that a familistic culture and strong pronatalist values and attitudes go together with low fertility rates and marked negative emotional effects of having children, whereas fertility rates are higher and parents derive greater happiness in more individualistic cultures where people hold less pronatalist beliefs (see also Bernhardt & Fratzak 2005). The rosy views or myths about parenthood thus are the strongest in countries where they are the most likely to be false, and vice versa.

This paper clarifies and debunks some of the myths about parental status and well-being, an illumination is important as commentators and policymakers are trying to curb and understand the consequences of the rapid growth in childlessness across Western nations. Indeed, final childlessness among women born after 1970 is likely to range between 15 and 25% in industrialized countries (Sobotka 2004).

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Appendix. Overview of studies and results (unstandardized regression coefficients)

Author	Data					Results (reference = childless)				
	Country	Survey	N/obs.	Age	Outcome	Parent (1 ≥ child) ^a	1 child	2 (+) children	3 (+) children	4+ children
Aassve et al. (2009)	26 European countries	ESS 2002, 2004, 2006	23,662	20-50	Happiness	0.075** (m) 0.029* (f)				
Alesina et al. (2004)	U.S.	GSS 1981-1996	19,895	All	Happiness		-0.184*	-0.140*	-0.164*	
Alesina et al. (2004)	12 European countries	Euro-Barometer 1975-1992	103,773	All	Happiness		-0.031	-0.059	-0.210*	
Angeles (2009)	UK	BHPS 1996-2005	88,928	All	Life satisfaction		-0.210**	-0.183**	-0.231**	-0.390**
Ball & Chernova (2008)	18 countries	WVS 1995-1998	20,771	15+	Life satisfaction (1-10)		-0.011	-0.064**		
Becchetti et al. (2010)	Germany	GSOEP 1984-2007	214,565	18+	Life satisfaction (0-10)					
Bergman & Daukantaite (2006)	Sweden	IDA 1998	369	43	Life satisfaction (4 items; 2-8)					
Bernhardt & Fratzczak (2005)	Sweden and Poland	Family and Working Life 2003 (S) & Polish Retrospective Study 2001	3,718	20-36	Life satisfaction (1-4)	1.429 (S) 0.955 (P)				
Bjørnskov et al. (2008)	70 countries	WVS 1997-2000	96,092	25+	Life satisfaction		-0.067**	-0.052*	-0.022	
Chang (2008)	U.S.	HRS & AHEAD 2004	1,342	49-64	Happiness (0/1)	0.639 (childless)				
Clark (2007)	Britain	BHPS 1998-2006	82,096	16-64	Life satisfaction (1-7)		-0.051**	-0.043*	-0.049	
Clark et al. (2008)	West Germany	GSOEP 1984-2003	130,000	16-59	Life satisfaction					
Clark & Georgellis (2010)	UK	BHPS 1996-2006	100,000	16-40	Life satisfaction					
Connidis & McMullin (1993)	London, Canada	Own sample 1991	678	55+	Life satisfaction (SWLS)	-0.20**				
Connidis & McMullin (1993)	London, Canada	Own sample 1991	678	55+	Happiness (1-3)	-0.07				
Daukantaite & Zukauskiene (2006)	Sweden	IDA 1998	318 (employed women)	43	Life satisfaction (3 items)	0.47*				
Di Tella et al. (2003)	U.S.	GSS 1972-1994	26,668	All	Happiness		-0.112**	-0.074**	-0.119**	
Di Tella et al. (2003)	12 European countries	Euro-Barometer 1975-1992	271,224	All	Life satisfaction		-0.032**	-0.042**	-0.094**	
Di Tella et al. (2003)	12 European countries	Euro-Barometer 1975-1992	103,990	All	Happiness		-0.033**	-0.041**	-0.111**	
Dockery (2010)	Australia	HILDA 2001	12,192	15+	Life satisfaction (0-10)	-0.09 ** (m) -0.06 (f)				
Dykstra & Wagner (2007)	Amsterdam & Berlin	Nestor-LSN & BASE 1992	1,177	70+	Life satisfaction (1-5)	A: 0.18* (m), -0.04 (f) B: 0.02 (m), 0.29 (f)				
Frey & Stutzer (2000)	Switzerland	Poverty Survey 1992	6,000	18+	Life satisfaction (1-10)					
Frijters et al. (2010)	Australia	HILDA 2001-2006	19,914	15+	Life satisfaction (0-10)					
Frijters et al. (2010)	Australia	HILDA 2001-2006	65,000		Life satisfaction (0-10)					
Haller & Hadler (2006)	34 countries	WVS 1995-1997	~55,000	18+	Happiness (1-4)					

Haller & Hadler (2006)	34 countries	WVS 1995-1997	~55,000	18+	Life satisfaction (1-10)					
Hansen et al. (2009)	Norway	NorLAG 2003	4,169	40-80	Life satisfaction (SWLS, z-score)	0.12 (m)				
Hillerås et al. (2001)	Sweden	Kungsholmen project 1996	105	90-99	Life satisfaction (LSI-Z 0-26, LSI-B 0-23)	0.25** (f)				
Keizer et al. (2009)	The Netherlands	NKPS 2002-2004	1,451	40-59	Life satisfaction (SWLS)	-0.03 (both measures)				
Kohler et al. (2005)	Denmark	Danish twin omnibus study 2002	34,944	25-45, 50-70	Life satisfaction (0-2)	0.17				
Koropecykj-Cox et al. (2007)	U.S.	HRS 1992	4,975	women 51-61	Life satisfaction (0/1)	-0.080 (m, 25-45)				
Koropecykj-Cox et al. (2007)	U.S.	NSFH 1992	719	women 51-61	Happiness (1-7)	0.164† (f, 25-45)				
Margolis & Myrskylä (2010)	87 countries	WVS 1981-2005	201,988	15+	Happiness (1-4)	0.01				
Marks & Fleming (1999)	Australia	Youth in Transition 1980-1995	20,000	16-33	Life satisfaction (9 items)	-0.16	-0.032**	-0.034**	-0.026**	-0.055**
Mastekaasa (1994)	19 countries	International value survey 1983	20,800	18-79	Life satisfaction (1-10, z-score)	0.041 (m)				
Mastekaasa (1994)	19 countries	International value survey 1983	20,800	18-79	Happiness (1-4, z-score)	-0.045 (f)				
Obradovic & Cudina-Obradovic (2001)	Croatia	Own sample	1,010 (marrieds)	18-65	Life satisfaction (SWLS)	At age 40				
Oswald & Powdthavee (2008b)	Britain	BHPS 1992-2005	28,418	all ages	Life satisfaction (1-7)	0.105* (m)				
Peiro (2006)	14 countries	WVS 1995-1996		all ages	Life satisfaction and financial satisfaction (1-10), happiness (1-4)	-0.122* (f)				
Pichler (2006)	22 countries	ESS 2002	28,161	15+	Life satisfaction + happiness (0/1)	At age 40				
Plagnol & Hubbert (2010)	23 countries	ESS 2006	23,784	18+	Happiness (0-10)	-0.055				
Plagnol & Hubbert (2010)	23 countries	ESS 2006	23,784	18+	Life satisfaction (0-10)	-0.110**				
Rempel (1985)	Canada	Social chance in Canada 1979	338	65+	Life satisfaction (1-11)	0.17				
Rempel (1985)	Canada	Social chance in Canada 1979	338	65+	Happiness (1-3)	-0.01				
Savolainen et al. (2001)	Finland	Survey of living conditions 1986	7,594	20-64	Life satisfaction (0/1)	-0.101 (m)				
Shields & Wooden (2003)	Australia	HILDA 2001	13,969	15+	Life satisfaction (0-10)	-0.029 (f)				
Smith (2003)	Soviet Union, U.S., West Germany	WVS 1990-1993	~8,000	all ages	Happiness (1-4)					
Soons & Kalmijn (2009)	30 countries	ESS 2002-2006	31,500 (partnered)	18-44	Life satisfaction + happiness (0-20)	0.08**				
Stack & Eshleman (1998)	17 countries	WVS 1981-1983	18,000	all ages	Happiness (1-4)	0.005				
Stanca (2009)	94 countries	WVS 1980-2008	215,541	15-101	Life satisfaction (1-10)	-0.144**	-0.172**	-0.165**	-0.130**	
Stanca (2009)	94 countries	WVS 1980-2008	215,282	15-101	Happiness (1-4)	-0.04**	-0.04**	-0.04**	-0.05**	

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Stutzer & Frey (2006)	Germany	GSOEP 1984-2000	61,744	<45	Life satisfaction (0-10)	0.062*	0.034	0.0073*	0.0048	-0.105
Stutzer & Frey (2006)	Germany	GSOEP 1984-2000	60,000	<45	Life satisfaction (0-10)	0.062**	-0.030	-0.106	-0.084	-0.375** (5+)
Umberson & Gove (1989)	U.S.	Own sample 1975	2,246	All ages	Life satisfaction (1-3)	0.02				-0.232**
Umberson & Gove (1989)	U.S.	Own sample 1975	2,246	All ages	Happiness (1-4)	0.02				-0.395** (5)
Zhang & Liu (2007)	China	CLHLS 2002	13,447	65-105	Life satisfaction (1-4)	0.118†				-0.712** (6+)

† p< .10, * p< .05, ** p< .01

Notes: All results are unstandardized coefficients from OLS or fixed effect regressions, except some results using logistic regression (Koropeckyj-Cox et al., 2007; Savolainen et al., 2001) or ordered probit (Di Tella et al., 2003; Dockery, 2010) or logit (Bernhardt & Frateczak, 2005; Billari, 2009; Peiro, 2006; Smith, 2003; Zhang & Liu, 2007). Empty “results” cells are due to that results are not reported in the format used here. ^a

m=male, f=female.

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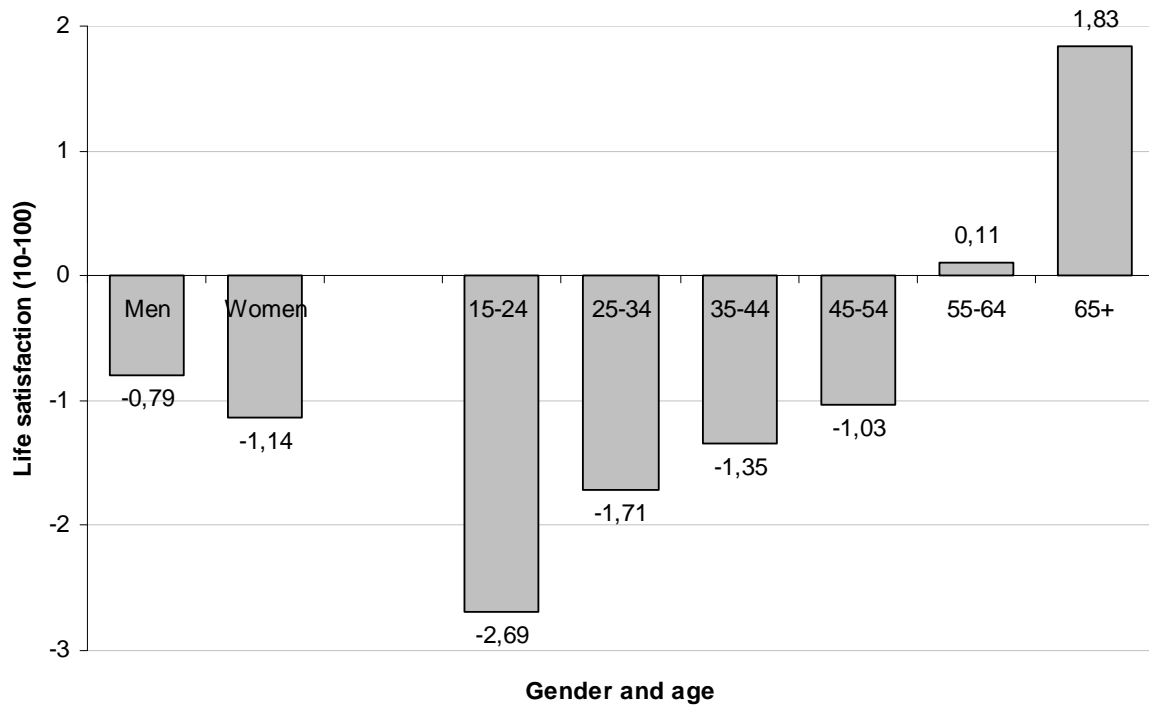
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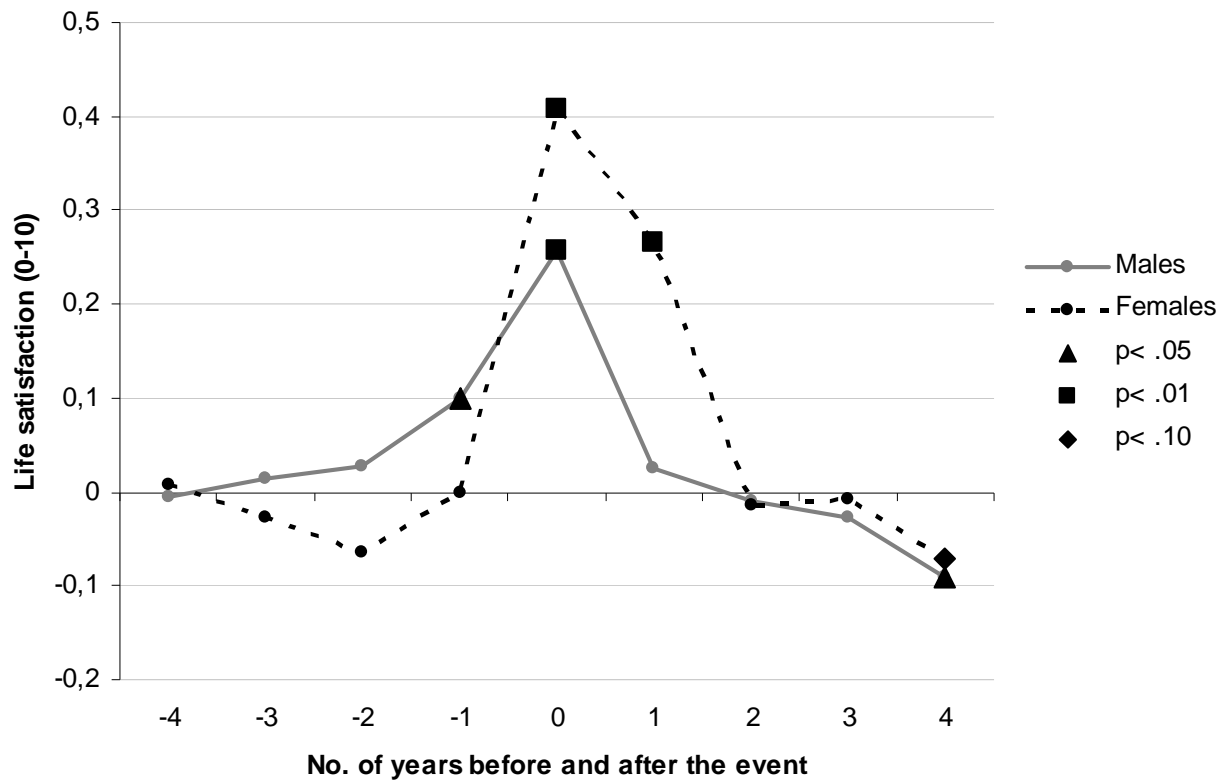
Fig. 1 The effect of parenthood on life satisfaction by gender and age (ceteris paribus) across 94 countries (WVS)



All $p < .01$ except age 45-54 and age 55-65 ($p > .05$)

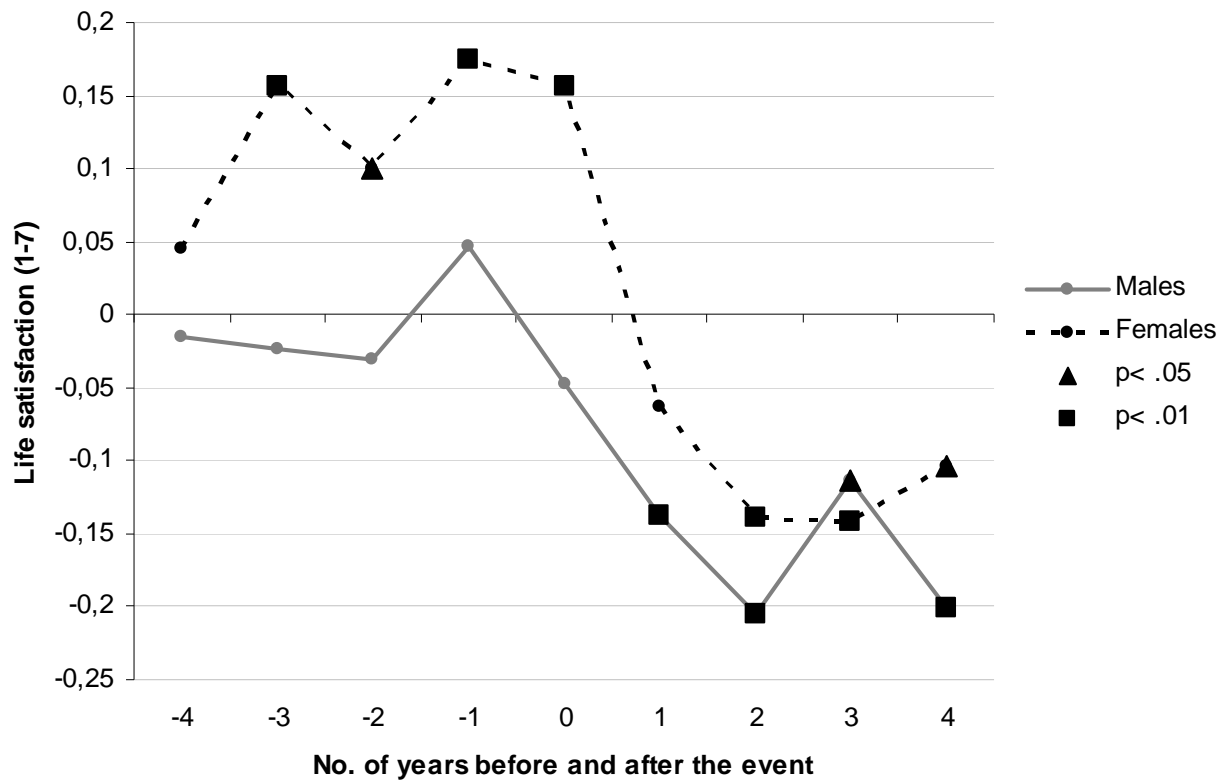
Source: Stanca (2009, some ancillary analyses provided via personal communication)

Fig. 2 Shifts in life satisfaction in the years before and after the first birth (fixed effects regression) in German GSOEP data



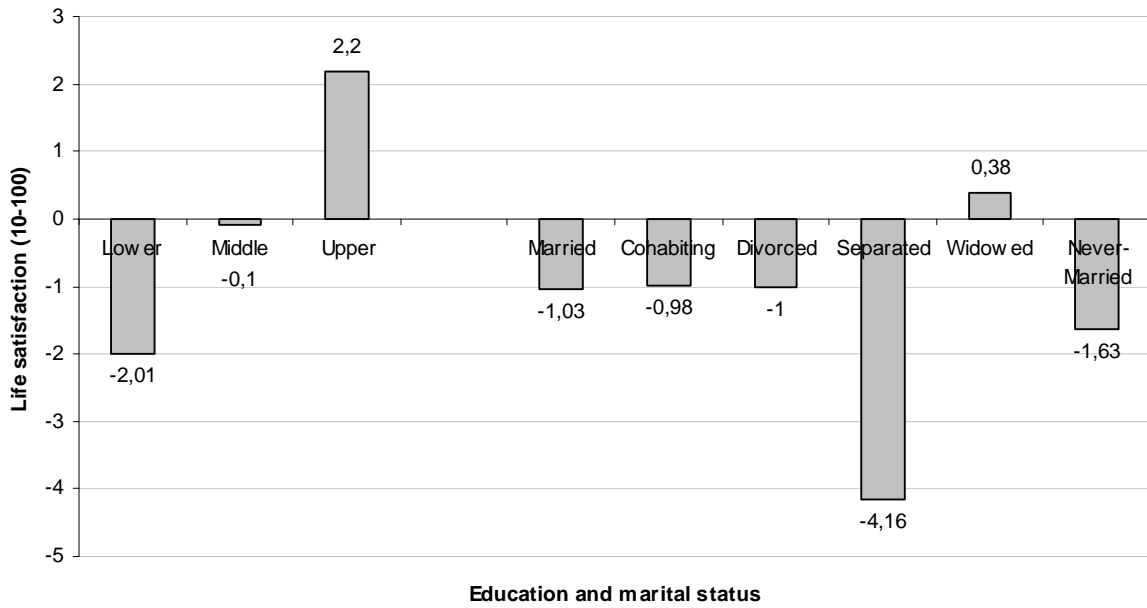
Source: Clark et al. (2008)

Fig. 3 Shifts in life satisfaction in the years before and after the first birth (fixed effects regression) in British BHPS data



Source: Clark & Georgellis (2010)

Fig. 4 The effect of parenthood on life satisfaction by education and marital status (ceteris paribus) across 94 countries (WVS)



The effect of having offspring (marital status) and of “number of children” (education). All $p < .01$ except middle education, cohabiting, and divorced ($p > .05$)

Source: Stanca (2009, some ancillary analyses provided via personal communication)

Table 1 Overview of theoretical and empirical advantages of parenthood and childlessness
for well-being

	Empirical findings	
	Linked with well-being?	Linked with parental status?
Purported advantages of parenthood		
Companionship and support in old age	√	√
Feeling useful and needed	√	√
Feeling loving and loved	√	√
Meeting social expectations	√	√
Meeting personal expectations	√	√
Generativity	√	√
Structure in life	?	√
Purported advantages of childlessness		
Less time and energy demands	?	√
Fewer financial concerns	√	√
Fewer worries	√	√