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Grandpa and the Snapper

The Well-Being of the Elderly Who Live with Children

Angus Deaton and Arthur A. Stone

8.1 Introduction

This chapter lies at the intersection of two literatures, one on whether children bring well-being to those who live with them, and one on the living arrangements of the elderly. Whether or not children make their parents' lives better is an old question that remains unsettled; see Hansen (2012) and Stanca (2012) for recent surveys of the literature, both of these argue that most studies find a negative effect of children on their parents' well-being. Our own work, Deaton and Stone (2014), argues that, in line with what might be expected from rational choice under uncertainty with life evaluation as a target, parents' life evaluation is no different from that of nonparents on average, at least once we allow for differential selection into parenthood. However, we also find that parents of children have different

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Snapper is an Irish term for a child, abbreviated from *whippersnapper*. It is a term that a grandpa would use to indicate his irritation with an unruly child.

emotional lives, with more happiness and more enjoyment, as well as more stress and more worry.

The literature on the living arrangements of the elderly in the United States argues that the elderly value their ability to live independently. In consequence, those who are living with children under age eighteen, who are unlikely to be their own, are likely to be selected on factors such as low income or poor health (see Börsch-Supan, Kotlikoff, and Morris 1988). Low income and poor health have well-attested negative effects on both evaluative and emotional well-being. It is also possible that living with young people brings fewer positive and more negative emotions for the elderly than for the parents themselves; the ability to tolerate the more difficult parts of childhood may diminish with age. Such effects would add to the effects of negative selection, and we might expect especially poor outcomes for the elderly living with children.

Outside of the United States and other rich countries, it is common for the elderly to live in multigenerational families. Where this is the case, there is less reason to believe that there is negative selection into living with children among the elderly. In such places, we should observe something closer to the direct effects of living with children. It has often been argued that, prior to the demographic transition, “the elderly are an integrated, useful, and respected part of their families,” Deaton and Paxson (1992, 165) who are summarizing an earlier extensive literature. If so, living with a younger generation of children may bring positive emotional and evaluative experience in pretransition countries.

We use two large data sets collected by Gallup; one for the United States, the Gallup-Healthways Well-Being Index, and one for 161 countries around the world, the Gallup World Poll, with sample sizes of 1.8 million and 1.1 million individuals, respectively. These data sets are rich in well-being questions, and include measures of life evaluation as well as a range of emotional well-being measures or hedonics. They also have the advantage of using identical questions in all locations. These advantages are offset by incomplete information on living arrangements. In particular, we have information on one respondent from each household, and know only whether or not there is a child at home, not the relationship of the respondent to that child.

Our primary focus is on the well-being of the elderly, though we shall typically compare outcomes for the elderly with those for the younger generation who are actually the parents of the children.

8.2 Well-Being, the Elderly, and Children in the United States

Figure 8.1 is a starting point for our investigation, and uses the Gallup-Healthways Well-Being Index data from the United States, which has collected 1,000 daily observations from adults (age eighteen or older) from the beginning of 2008 through to the end of 2012. The two lines show average

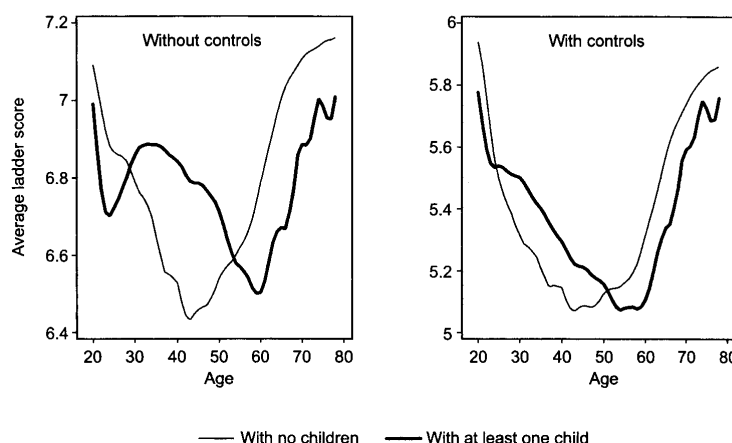


Fig. 8.1 Mean life evaluation by age, with and without children, and with and without covariates

life evaluation by age for those who do and do not report the presence of a child living with them; a child is defined as anyone younger than eighteen, no matter what their relation to the respondent. The life evaluation measure here is the Cantril Ladder, running from 0 (the worst possible life for you) to 10 (the best possible life for you), and these numbers are averaged for all people by single years of age. The left-hand graph has no controls, while the right-hand graph controls for income categories, education categories, and sex; missing values—of which there are a substantial number for income—are handled by treating missing as a category. Both plots show five-year triangularly weighted moving averages of the age coefficients in a regression of the ladder on the presence of at least one child interacted with indicators for single years of age, together with covariates when they are included.

The graphs show that both those with and without children have the familiar U-shaped profile of life evaluation by age (Blanchflower and Oswald 2008; Stone et al. 2010). Interestingly, in the left-hand graph where there are no controls, the onset of the U is postponed for those with children, opening up a gap between those with and without children during ages thirty to fifty; the midlife dip in well-being is two decades later among people with children. We have used the 2008 American Community Survey to investigate how many of the people living with children are the parents of those children. Figure 8.3 plots this fraction by age, and shows that at each age from thirty-four to forty-six, more than 90 percent of adults who have a child at home are the

parents of that child. We can therefore read the left panel of figure 8.1 as showing that, for those age thirty-four to forty-six, *parents* with a child at home have higher life evaluation than adults in the same age range who do not. Among younger respondents, where the child is most likely a sibling, life evaluation is lower in the presence of a child, something that is also true among the elderly. In the right-hand part of the figure, where we have added the controls, the gaps between the two lines are much smaller.

In Deaton and Stone (2014) we show that, for the parental group age thirty-four to forty-six, the higher well-being of those with children can be entirely attributed to a fuller set of covariates than those used in the figure, including race, Hispanic status, marital status, religiosity, smoking, and a range of health conditions. Those with children in the thirty-four to forty-six age range are different from those without children in ways that promote higher life evaluation on their own account. This is consistent with the idea that the positive effect of children on life evaluation comes entirely from the life evaluation-enhancing effects of the circumstances—higher income, education, religiosity, and health—that differentially cause people to select into parenthood. It is also possible that some or all of these conditions may be a result of being a parent, so the ability to explain the evidence by covariates does not conclusively imply that children do not enhance life evaluation. “Good” characteristics cause selection into parenthood, but are in part induced by parenthood—parents giving up smoking, or exercising more frequently—and this part of the increase in well-being should properly be attributed to the presence of the children.

One aim of this chapter is to make a similar accounting for the elderly. We start by examining uncontrolled differences in outcomes by age, and then document the differences in background characteristics between the elderly who do and do not live with children. We then present regressions of outcomes on the presence of a child with a range of controls for background characteristics.

Figure 8.2 shows the (uncontrolled) *difference* in the ladder and in hedonic outcomes between those with and without children; here we use five-year (except for first and last) age groups as an alternative to the smoothing in figure 8.1. The top-left panel for the ladder shows the differences between the two lines in the top panel of figure 8.1. The various hedonic experiences in the other panels come from questions in which respondents are asked whether or not they experienced X “during a lot of the day yesterday.” We average over the dichotomous response to obtain the fractions in each age group who experience X, and then plot the differences in prevalence between those with and without children at home. Figure 8.2 shows the results of this calculation for X equal to happiness, enjoyment, stress, worry, and anger. Note that the scales in figure 8.2 are different for different outcomes.

The panels show that the average hedonic well-being of older Americans living with children is considerably worse than the average hedonic well-

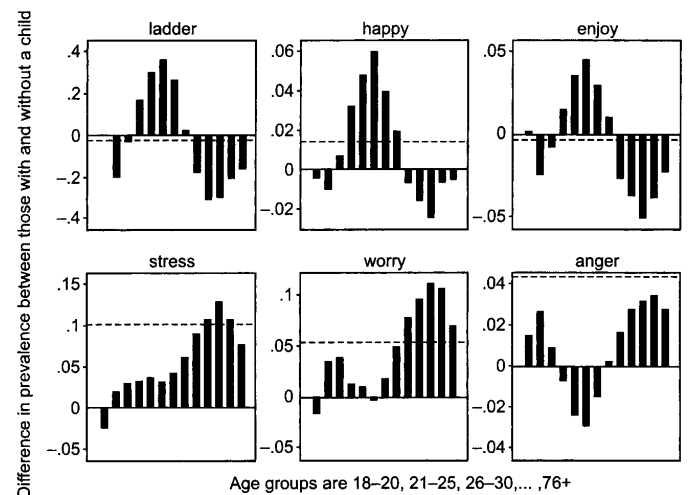


Fig. 8.2 Mean ladder and average prevalence of affect by five-year age groups

being of older Americans who do not. The second panel on top, for example, shows that those age forty-one to forty-six with children were 6 percent *more* likely to experience happiness yesterday, while those age sixty-six to seventy were 2 percent *less* likely to do so. These are large effects, at least in terms of other variables that affect happiness; for example, an increase in log income of 0.3 increases the probability of reporting happiness by 1 percent. The patterns for enjoyment and smiling (not shown) have a similar life cycle shape to that for happiness, as does sadness (with the sign reversed) and this too is not shown. The negative emotions of stress, worry, and anger are shown in the other three panels. Stress is worse among those with children, and especially so among the elderly. Worry is not much worse for adults in their thirties and early forties, and anger is substantially less prevalent for adults in the same age range. But worry and anger are much elevated among the elderly who live with children. Among adults age thirty-four to forty-six who live with children, the presence of children is associated with more positive and more negative affect; emotional life is more extreme with children. But for the elderly, there is no upside: all of the positive emotional experiences are *less* prevalent when they live with children, and negative emotional experiences are *more* prevalent.

The horizontal lines in these figures show the *average* difference between those with and without children irrespective of age. These numbers—particularly for anger, but see also stress—provide spectacular examples of

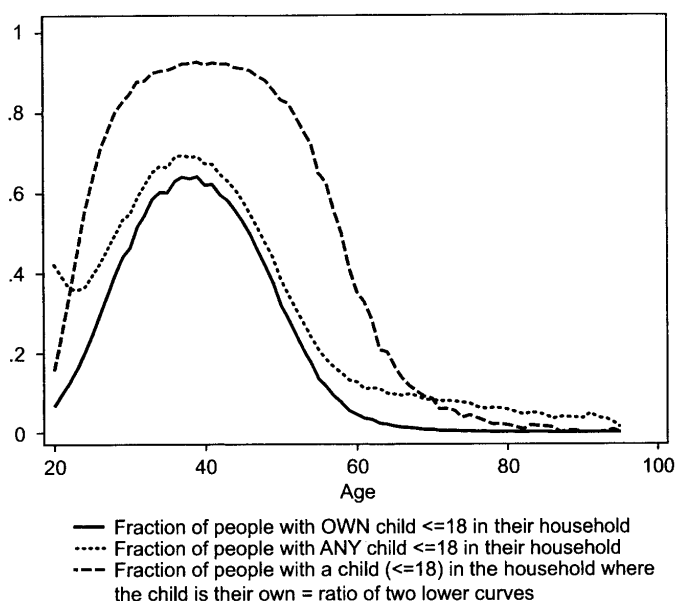


Fig. 8.3 Fractions of people with a child at home and who are child's parents

Source: American Community Survey (2008).

Simpson's paradox, that the average over everyone can lie outside the interval defined by the age-specific averages. Such findings illustrate the importance of appropriate conditioning and undermine the often convenient intuition that omitting a covariate will lead to estimates that are averages of the estimates for each value of the covariate. We suspect that some of the confusion in the literature on the well-being effects of children comes from insufficient attention to controls.

An immediate question is whether the negative outcomes for the elderly can be explained by the circumstances that select the elderly into living with children. We turn first to the question of how the elderly living with children differ from those living without children. Figure 8.3, which is calculated from the 2008 American Community Survey, shows the fractions of people at each age who live with children, and what fraction of those people are the parents (including stepparents and parents through adoption) of the children with whom they live. The graph shows the fractions of people with a child in their household by age, the fraction with their own child in the

Table 8.1 Characteristics of those age 65–94 with and without children living at home

	No children	Children	Difference	t-value
Married	0.55	0.51	–0.04	12.0
Female	0.57	0.58	0.01	2.4
Hispanic	0.04	0.10	0.06	37.4
Black	0.07	0.20	0.13	52.4
White	0.92	0.76	–0.16	59.1
Asian	0.00	0.01	0.01	9.0
Age	74.2	71.4	–2.84	60.8
No high school	0.19	0.27	0.08	27.1
HS diploma	0.41	0.39	–0.02	5.8
College	0.27	0.24	–0.02	7.7
Postgraduate	0.12	0.09	–0.03	14.1
Log income	7.96	7.93	–0.02	3.6
Religious	0.75	0.80	0.04	13.7
Health limitation	0.34	0.39	0.05	14.3
Disabled	0.33	0.38	0.04	51.7
Health status	2.79	2.95	0.16	18.6
Smoker	0.10	0.14	0.04	20.7

Notes: "Religious" is 1 if the respondent said that religion is very important in his or her life, "log income" is the natural log of household monthly income, "disabled" is 1 if the respondent reported that he or she had a health problem that prevented him or her from doing the things that people his or her age can normally do, "health limited" is 1 if the respondent reported that there was at least one day in the last month when poor health prevented him or her from doing his or her usual activities. "Health status" is the mean of self-reported health status scored as 1 for excellent, 2 very good, 3 good, 4 fair, and 5 poor; so higher numbers mean worse health.

household, and the ratio of the two. Note first that the fraction of people living with someone below eighteen years of age is only 12.6 percent at age sixty, and only a third of those are the child of the respondent. By age sixty-five, the numbers are 9.6 percent and 16.5 percent respectively, and they decline with age thereafter. In the Gallup data—unlike the American Community Survey—we do not know the relationship of the respondent to the child, but the most obvious possibility is that the elderly are living with their own adult children, so that the people under eighteen are their grandchildren. The literature on living arrangements in the United States argues that the elderly are reluctant to live with their children, so that the presence of someone under age eighteen may indicate poor health, low income, or an inability to live alone; indeed, low income and functional limitations are predictive of not living independently. Other possibilities include grandparents looking after their grandchildren in the absence of the child's parents—their own children—an outcome that would not suggest poor health.

Table 8.1 looks at the population age sixty-five and older in the GHWI data and shows the characteristics of those with and without children.

There are more than half a million observations in this age group, though some data are missing and some comparisons involve smaller numbers. The elderly who live with children are more likely to be black or Hispanic, and much less likely to be white. They are less well educated, more religious, less likely to be married, a little poorer, and much more likely to report poor health, disability, or health conditions that limit daily activities. Poor health outcomes have strong negative associations with life evaluation and with all hedonics, and are associated with lower happiness, enjoyment, and smiling, and more stress, worry and anger. Income comes with better life evaluation and better hedonics, but is not very different between the two groups. Religiosity comes with higher life evaluation, more of the positive emotions, and with less anger. Education comes with higher life evaluation, but has little effect on hedonics. Women have higher life evaluation, and more of both positive and negative emotions; similar differences characterize blacks and Hispanics relative to whites. Taken together, the poorer health of the elderly who live with someone younger than eighteen can predict some of their poorer outcomes, but their other characteristics have mixed effects on subjective well-being.

If table 8.1 is repeated for those in the parental age group, from thirty-four to forty-six, we find that the circumstances of those who live with children are uniformly well-being enhancing compared with the circumstances of those who do not live with children. They are healthier, better off, better educated, more religious, more likely to be black or Hispanic, and less likely to smoke. This is in contrast to the negative health selection into living with children among the elderly, and the mixed positive and negative selection on other factors. These differences between young and old will go at least some way to explaining what we see in figures 8.1 and 8.2.

Table 8.2 presents regression coefficients on an indicator for the presence of at least one child in regressions for the ladder and for a range of hedonic experiences as well as physical pain; as before, the age group is sixty-five to ninety-five. The first column reports the coefficient when the regression contains, not only the presence of children, but also a range of socioeconomic characteristics (income, education, single years of age, sex, race, marital status, religiosity, state of residence, and smoking status) together with controls for disability, the presence of a health limitation, and the five categories of self-reported health status. The middle column reports the same results, but without the health controls, while the column on the right reports the results for the average difference in outcomes between those who do and do not have a child at home.

All of the estimates in the table show worse outcomes for elderly people who live with children, and all but the coefficient for happiness in the first column are statistically significant. Adding more controls reduces the size of the effects, which grow absolutely smaller as we move along rows from right to left. As might be expected, it is the addition of the health controls

Table 8.2 Coefficients on presence of children with alternative sets of controls

	Full controls		No health controls		No controls	
	β	t	β	t	β	t
Ladder	-0.105	(6.9)	-0.215	(14.5)	-0.278	(18.5)
Happiness	-0.003	(1.4)	-0.011	(5.1)	-0.021	(9.5)
Smiling	-0.010	(3.4)	-0.015	(5.5)	-0.018	(6.8)
Enjoyment	-0.020	(8.3)	-0.028	(12.3)	-0.040	(17.4)
Sadness	0.022	(7.8)	0.033	(12.9)	0.044	(16.9)
Anger	0.037	(18.3)	0.042	(22.7)	0.050	(27.0)
Worry	0.053	(17.3)	0.072	(25.1)	0.090	(31.3)
Stress	0.061	(20.1)	0.078	(27.6)	0.096	(33.7)
Physical pain	0.018	(5.8)	0.043	(13.8)	0.055	(17.6)

Notes: Each β is the coefficient on an indicator for the presence of children in a regression with the outcome as dependent variable. The columns differ in which other covariates are included in the regression. The "full controls" are marital status, household size, single years of age, religiosity, smoking, race, Hispanic status, education, income categories, sex, state of residence, disability, presence of a health limitation, and categories of self-reported health. "No health controls" refers to the full controls except for health, and "No controls" is simply the average difference between those with and without children.

that reduces the size of the negative effects of children on well-being; for life evaluation, the coefficient is reduced from -0.28 without controls to -0.22 with demographic and income controls to only -0.11 with full health controls. People age sixty-five and older who live with children have worse evaluative and emotional outcomes, even when we control for health. Of course, we cannot rule out that there are health conditions beyond those that we can take into account, and it is not the effect of the living arrangements—whether snappers or daughters-in-law. On the other side, we have included self-reported health status in the regression and this arguably overcontrols for health because both it and the outcome variables are self-reported and almost certainly contain common dispositional factors that are spurious in this context.

These results for the elderly are quite different from those for the parents of the children (more precisely, adults age thirty-four to forty-six) in Deaton and Stone (2014). There, life evaluation is higher for those with children, but the difference can be entirely accounted for by their more favorable background characteristics. Adults age thirty-four to forty-six also suffer more worry and stress, but also more happiness and enjoyment, and less anger, and those differences survive the controls. These results are consistent with the fact that the presence of children does indeed produce those emotional outcomes, and the lack of a difference in (conditional) life evaluation is what would be predicted by rational choice if parents aim to maximize life evaluation and anticipate the emotional (and other) effects of having children. Hence, apart from the selection covariates,

there should be no difference *on average* between those with and without children.

For the elderly, by contrast, our evidence suggests that living with children under eighteen is associated with worse outcomes on all measures, in part because of the selection into living with a child—primarily health selection—and in part because living with a child and/or his or her parents is unpleasant in itself. None of this is to argue that some of the elderly do not take pleasure in their grandchildren or in the children of those with whom they live. But, on average, we can find no evidence of it. Controlling for their background characteristics does nothing to contradict the generally bleak picture of evaluative and emotional well-being of the elderly who live with children.

We have replicated table 8.2 for Hispanic and black elderly only, for whom living with children is more common, perhaps because living with their own children is seen as less undesirable. The results (not shown) replicate the generally negative consequences for worry, anger, stress, happiness, and enjoyment, but the negative effect on life evaluation is smaller and statistically insignificant, with or without controls. Note that we still have more than 20,000 observations for elderly blacks and Hispanics, so the insignificance is not simply the effect of having too few observations.

The United States has a relatively high fertility rate compared with other rich countries, although not compared with much of the rest of the world. Within the United States, there are marked differences in fertility rates across states, from 1.63 children per woman in Rhode Island and 1.66 in Massachusetts to 2.35 in Alaska and 2.44 in Utah. While the Mormon presence in Utah makes it exceptional, fertility rates are generally higher in the west and lower in the east. It would not be surprising if these fertility variations were linked to the emotional impacts of living with children. In particular, in high fertility settings, the elderly may find a greater role in childcare, elders may enjoy living with children more, and the selection into living with children may be less averse.

To test this possibility, we have computed, for those age sixty-five to ninety-five, the difference in evaluative and emotional outcomes between those who are or are not living with someone under age eighteen, and correlated those with total fertility rates state by state. In addition to the ladder, we looked at a measure of positive affect, defined as the sum of happiness, smiling, and enjoyment, less sadness, divided by four. A parallel construct of negative affect is defined as the average of stress, worry, and anger. We compute the unconditional differences, because for this comparison we want to include the selection effects as well as the possible direct effects of living with children.

The three cross-state correlations are small and insignificant, 0.05 for the ladder, 0.16 for negative affect, and -0.08 for positive affect. As we shall see, the findings are quite different when we look across countries.

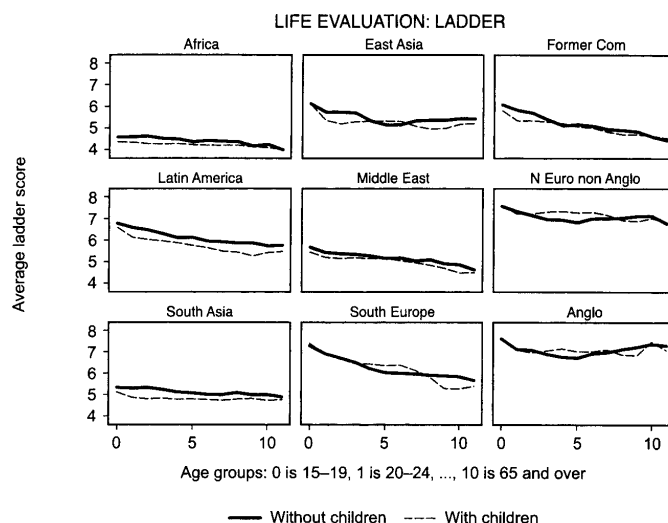


Fig. 8.4 Life evaluation and age for world regions

8.3 Well-Being, the Elderly, and Children around the World

One of the surprising findings from the Gallup World Poll, which has collected data from a total of 161 countries from 2006 to 2012, is that the age pattern of life evaluation does *not* show the standard U-shape in all countries or regions of the world. This is in spite of a literature that claims an almost biological necessity of the shape around the world (Blanchflower and Oswald 2008), holding not only in people, but also in nonhuman primates (Weiss et al. 2012), though see Frijters and Beaton (2012) for a dissenting view, and Ulloa, Möller, and Sousa-Poza (2013) for a review with many contrary findings. Figure 8.4 shows the age patterns of the ladder in the World Poll, split by people who do and do not live with children; it is the counterpart of the left panel of figure 8.1 for the United States, but splits the world into nine geographical regions. In most cases, we have chosen obvious geographical groupings, but we have also distinguished regions where previous work has suggested interesting regional patterns. This accounts for the former communist countries, including the former Soviet Union and its erstwhile satellites in Eastern Europe, for the group of rich English-speaking countries (the United States, Canada, the United Kingdom, Ireland, Australia, and New Zealand) as well as for the division of Europe into North (excluding the Anglo countries) and South. Note also that in the World

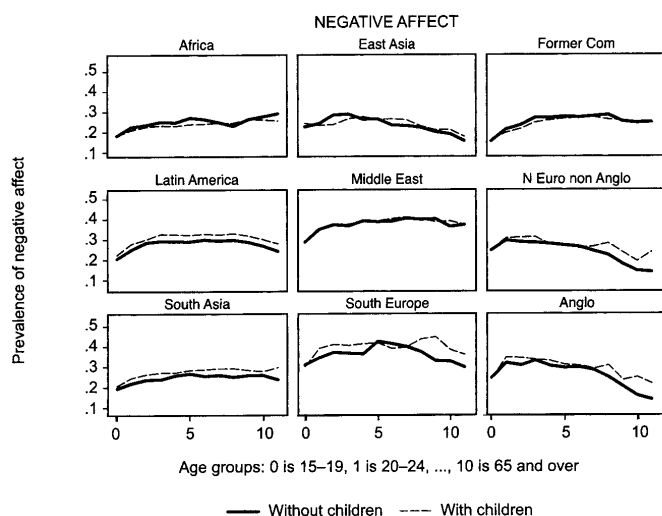


Fig. 8.5 Negative affect and age for world regions

Poll, as opposed to the Gallup-Healthways Well-Being Index poll for the United States, children are defined as those less than fifteen years of age, not eighteen.

The bottom right-hand panel of figure 8.4, for the rich English-speaking countries, looks like figure 8.1 for the United States. The familiar U-shaped pattern is evident here, though it is obscured somewhat by using identical scales for the different regions of the world, most of which have much lower ladder scores than do the rich Anglo countries. The U-shape is also visible in northern Europe and to some extent in East Asia, but it is absent elsewhere. This is particularly obvious in the ex-communist countries, where life evaluation declines steadily with age. This is almost certainly a feature of the transition from communism, where the elderly have lost the world they used to know, and in some cases their pensions and health care, while the young have seen a new world of opportunity open up. But the pattern of life evaluation declining with age is not specific to these countries. It occurs also in Latin America, the Middle East, and southern Europe. In the other two regions—which are also the poorest regions—South Asia and Africa, there is little or no age pattern in the average ladder score.

Looking next at figure 8.5 (we shall come back to the comparison of those with and without children) we see the age patterns of negative affect for the same regions. Negative affect is the same summary measure defined earlier

Table 8.3 Percentages of elderly living with a child by global regions

Region	55–59	60–64	65–69	70 plus
North Europe non-Anglo	6.8	3.1	2.0	1.8
Rich Anglo	9.6	5.2	3.5	2.0
Southern Europe	11.1	6.6	6.2	4.3
Ex-communist	23.8	21.3	17.6	16.3
East Asia	31.2	32.2	26.4	20.1
Latin America and Caribbean	43.2	38.1	34.6	27.6
Middle East	49.0	43.3	40.8	43.2
South Asia	53.4	53.5	54.2	50.9
Africa	75.8	71.9	72.1	69.9

Notes: “Rich Anglo” comprises the English-speaking rich countries: the United States, Canada, Ireland, Britain, Australia, and New Zealand. “North Europe” is the non-Anglo part of northern Europe: France, Germany, Netherlands, Belgium, Sweden, Denmark, Austria, Finland, Iceland, Luxembourg, Norway, and Switzerland. “Southern Europe” is Spain, Italy, Greece, Israel, Malta, Cyprus, Portugal, and Northern Cyprus. “Ex-communist” comprises the formerly communist countries of Eastern Europe, Russia, and Central Asia.

for the United States. The plots show the averages of the fractions of the population who experienced each of the emotions. Stone et al. (2010) show that these negative emotions decline with age in the United States, which is consistent with theories in which people learn to better handle their emotions with age and experience (Carstensen, Fung, and Charles 2003). This pattern is evident in the bottom right panel for the aggregate of the rich Anglo countries. The same pattern is also clear in northern Europe, and to a lesser extent in East Asia (which includes Japan.) But in the rest of the world, there is no evidence that people learn to better handle their negative emotions as they get older. Instead, people just get angrier, more stressed, and more worried as they age. Perhaps anger management, like a well-developed and generous Social Security system, is something that comes only in the richest countries of the world.

We have also drawn a parallel figure for positive affect, the average of happiness, smiling, enjoyment, and negative sadness. The figure is quite similar to that for the ladder in its age patterns, and shows little difference in positive affect between those with and without a child at home so it adds little to the discussion.

Figures 8.4 and 8.5 also show differences between those with and without a child at home. Before looking at these, we look at the prevalence of having a child in the home around the world. It is unusual for an elderly person in the United States to live with a child younger than age eighteen (or fifteen). It is even more unusual in northern Europe, and unusual too in southern Europe, but not at all in the rest of the world. Table 8.3 shows the fractions of the elderly living with children younger than age fifteen. For the rich English-speaking countries (including the United States), for northern Europe and for southern Europe, the fractions of people age seventy and

older who live with someone younger than fifteen is 2 percent, 1.8 percent, and 4.3 percent, respectively. In the Middle East, South Asia, and Africa the corresponding figures are 43.2, 50.9, and 69.9 percent, with intermediate numbers for the Eastern European and other formerly communist countries, for East Asia, and for Latin American and the Caribbean. In the high fertility regions of the world, it is common for the elderly to live with children, and in South Asia and Africa, most of the elderly live with at least one child younger than fifteen. When living with children is normal, it is unlikely to be seen as undesirable, though it is still possible that poor health will make it more likely that the elderly do so.

Returning to figure 8.4, the Anglo panel shows again what we found in section 8.1, that people with children have higher life evaluation than people without when they are in the parenting years, but that the elderly living with children have lower life evaluation. This pattern holds in both northern and southern Europe, and in an attenuated form in East Asia and the Middle East. In Africa, South Asia, and Latin America, people with children have lower life evaluation throughout life. Figure 8.5 shows that negative affect is higher among the elderly with children in Europe and the Anglo countries. In Latin America and South Asia, negative affect is associated with children throughout life. Once again, there is little to see in the corresponding graphs for positive affect. These results, with the sharp differences between the rich and poor regions of the world, which are also the high fertility and low fertility regions of the world, suggest a line of investigation in which the emotional consequences of children depend on how scarce or plentiful they are. We shall return to this later.

Table 8.4 tabulates the differences in outcomes for each region and for the world as a whole. For each outcome, the first pair of columns show the uncontrolled difference (and *t*-value) for people age sixty-five and older between those who do or do not live with a child; these are computed from regressions of each outcome on an indicator for the presence of children and dummy variables for each country, either in the world as a whole, or in a region. The second pair of columns shows the difference when we control for sex, single years of age, education, income, religiosity, and indicators for satisfactory self-reported health status and disability. These estimates should not be treated overly seriously, given the difficulties of measuring income, education, and health status (and even age) in some countries.

The estimates in table 8.4 confirm what we have already seen in figures 8.4 and 8.5, that life evaluation is lower for those with children among the elderly in the richest countries, and that children in the homes of the elderly are associated with more negative affect in most regions, but more so in the richest countries. The controls do little to explain the negative association between the ladder and life evaluation; indeed, for regions other than the Anglo region, the association with children is *smaller* or *more negative* in the

Table 8.4 Children, life evaluation, and emotions around the world

	Ladder				Positive affect				Negative affect			
	No controls		Controls		No controls		Controls		No controls		Controls	
	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>	<i>b</i>	<i>t</i>
World	-0.01	0.5	-0.06	3.5	0.01	4.5	0.01	3.0	0.02	6.3	0.02	7.3
Africa	0.02	0.4	-0.01	0.1	0.01	1.1	0.01	0.1	-0.03	2.7	-0.02	2.6
E. Asia	-0.16	2.7	-0.21	3.8	0.00	0.5	0.00	0.0	0.04	5.3	0.04	5.5
Ex-comm	0.19	5.1	0.02	0.7	0.05	5.8	0.03	3.7	-0.00	0.2	0.01	1.2
LAC	-0.09	1.9	-0.13	2.8	0.01	1.3	0.01	0.8	0.02	4.2	0.02	4.0
M East	-0.09	1.6	-0.14	2.4	-0.01	0.8	-0.01	0.8	0.03	2.9	0.04	3.3
N Europe	-0.02	0.2	-0.05	0.6	0.00	0.0	-0.01	0.5	0.07	5.1	0.07	4.8
S Asia	0.00	0.1	-0.10	2.1	0.02	2.5	0.01	1.3	0.02	2.2	0.03	3.3
S Europe	-0.21	1.8	-0.29	2.5	-0.01	0.6	-0.02	0.9	0.06	3.3	0.06	3.7
Anglo	-0.12	1.0	-0.09	0.8	-0.03	1.6	-0.03	1.8	0.08	4.5	0.08	4.8

Notes: "Positive affect" is the sum of happiness, enjoyment, and smiling less sadness, all divided by 4. "Negative affect" is the average of worry, stress, and anger. The estimates come from regressions that either, in the uncontrolled case, contain country fixed effects, or in the controlled case, country fixed effects plus controls for income, sex, education, single years of age, marital status, religiosity, disability, and self-reported health status.

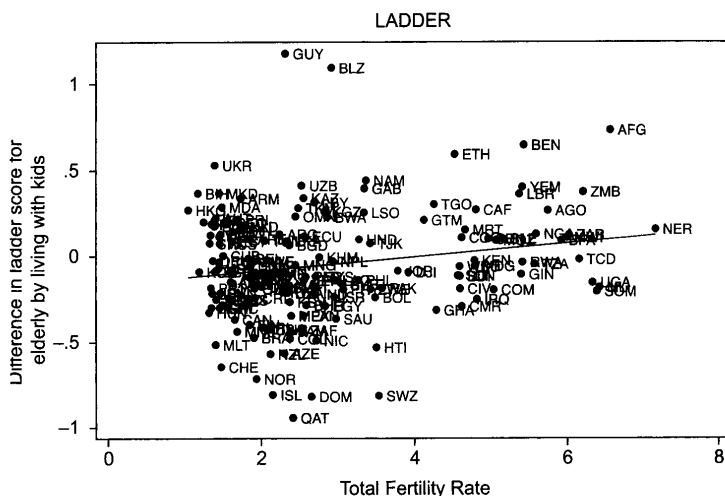


Fig. 8.6 Differences in ladder scores between those who do and do not have a child at home in relation to total fertility rates

presence of the controls. For most of the world, there is thus little evidence of negative selection into living with a child. That there is typically more negative and positive affect among the elderly living with children is essentially unaffected by the presence of the controls. Outside of the English-speaking world, the emotional and evaluative patterns of the elderly living with children look very similar to the patterns among parents living with children.

A final way of looking at these estimates is shown in figures 8.6 and 8.7, which looks at total fertility rates around the world. For each country we have computed the difference in average ladder and negative affect scores for all adults age fifty-five and older (the ten-year extension is to increase the sample sizes for some countries that have only been sampled once). The two figures then plot these differences against the total fertility rate for each country. For figure 8.6, which shows differences in ladder scores between those with and without children, there is a positive correlation with total fertility, whereas in figure 8.7, which shows differences in negative affect between those with and without children, there is a somewhat stronger negative correlation. (There is considerable sampling variability for the outcome measures in several countries, which weakens both scatters, though both are statistically significant.) In places where fertility is high the elderly generally have relatively higher life evaluation when they live in a household contain-

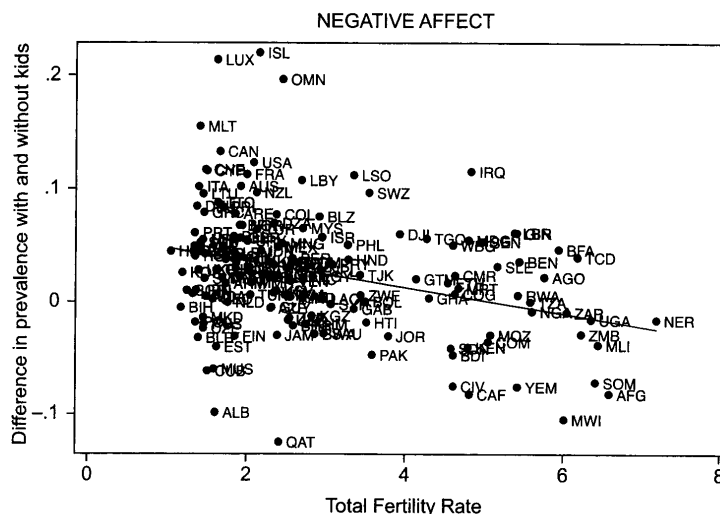


Fig. 8.7 Differences in negative affect between those who do and do not have a child at home in relation to total fertility rates

ing a person under fifteen, and where fertility is low they generally have lower life evaluation. Where high fertility is seen as desirable, older people do not feel that their life is compromised by living in a family with a young child. In such countries they are also less likely to be angered, stressed, or worried by the presence of children. Our results are consistent with the view that the negative evaluative and emotional consequences for the elderly of living with children are most likely a consequence of the fertility transition.

References

- Blanchflower, David G., and Andrew J. Oswald. 2008. "Is Well-Being U-Shaped Over the Life-Cycle?" *Social Science and Medicine* 66:1733–49.
- Börsch-Supan, Axel, Laurence J. Kotlikoff, and John N. Morris. 1988. "The Dynamics of the Living Arrangements of the Elderly." NBER Working Paper no. 2787, Cambridge, MA.
- Carstensen, L. L., H. H. Fung, and S. T. Charles. 2003. "Socioemotional Selectivity Theory and the Regulation of Emotion in the Second Half of Life." *Motivation and Emotion* 27 (2): 103–23.

- Deaton, Angus, and Christina Paxson. 1992. "Patterns of Aging in Thailand and Côte d'Ivoire." In *Topics in the Economics of Aging*, edited by David A. Wise, 163–206. Chicago: University of Chicago Press.
- Deaton, Angus, and Arthur A. Stone. 2014. "Evaluative and Hedonic Wellbeing Among Those with and without Children at Home." *Proceedings of the National Academy of Sciences* 111 (4): 1328–33.
- Frijters, Paul, and Tony Beaton. 2012. "The Mystery of the U-Shaped Relationship between Happiness and Age." *Journal of Economic Behavior and Organization* 82:525–42.
- Hansen, Thomas. 2012. "Parenthood and Happiness: A Review of Folk Theories Versus Empirical Evidence." *Social Indicators Research* 108:29–64.
- Stanca, Luca. 2012. "Suffer the Little Children: Measuring the Effects of Parenthood on Well-Being Worldwide." *Journal of Economic Behavior and Organization* 81:742–50.
- Stone, Arthur A., Joseph E. Schwartz, Joan E. Broderick, and Angus Deaton. 2010. "A Snapshot of the Age Distribution of Psychological Well-Being in the United States." *Proceedings of the National Academy of Sciences* 107 (22): 9985–90.
- Ulloa, Beatrice Fabiola López, Valerie Möller, and Alfonso Sousa-Poza. 2013. "How Does Subjective Well-Being Evolve with Age? A Literature Review." IZA Discussion Paper No. 7328. <http://ssrn.com/abstract=2250327>.
- Weiss, Alexander, James E. King, Miho Inoue-Murayama, Tetsuro Matsuzawa, and Andrew Oswald. 2012. "Evidence for Midlife Crisis in Great Apes Consistent with the U-Shape in Human Well-Being." *Proceedings of the National Academy of Sciences*. www.pnas.org/cgi/doi/10.1073/pnas.1212592109.

Comment David Laibson

This is another chapter in a line of influential and important subjective well-being research by Angus Deaton and Arthur Stone. The current chapter features the following findings. In the United States: (a) older adults living with kids have lower life satisfaction than older adults not living with kids; (b) older adults living with kids have fewer positive emotions and more negative emotions than older adults not living with kids; and (c) these associations are considerably weakened by the addition of controls, but the signs of the associations do not change and the magnitudes remain large. Throughout my discussion, I will reserve the word kids to mean "kids under the age of eighteen." I will refer to "the negative association" as the robust negative association between living with kids and (various measures) of subjective well-being (among older adults). I will also assume that the older adults living with kids are typically living with their middle-aged children and grandchildren. It is the grandchildren that are the "kids" in most of these cases.

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The results are a bit different outside of the United States. The first two results are unchanged and the third result is more paradoxical: the negative associations are unchanged or even *strengthened* by the addition of controls. Finally, the authors show that the results reverse in high fertility countries, where older adults living with kids show *higher* levels of life satisfaction, *higher* frequencies of positive emotion, and *lower* frequencies of negative emotion.

As the authors point out, these relationships need not be causal. Indeed, I believe that selection probably lies behind most of the results in this chapter, a position that is probably aligned with that of the authors. Four kinds of selection—both adverse and advantageous—are present in this setting:

1. Adverse selection on the characteristics of older adults: "Grandpa is disabled so he's going to move in with us so we can take better care of him."
2. Adverse selection on the characteristics of middle-aged adults: "We need to move in with Grandpa, since we can no longer afford to live independently."
3. Advantageous selection on the characteristics of older adults: "Grandpa is rich and has invited us to move in with him."
4. Advantageous selection on the characteristics of middle-aged adults: "We have decided to ask Grandpa to move in with us since we are doing so well."

Adverse selection will induce a negative association between subjective well-being and living with kids. Moreover, the existence of adverse selection would imply that adding the relevant controls weakens the magnitude of this negative effect. On the other hand, advantageous selection will induce a positive association between subjective well-being and living with kids. The existence of advantageous selection would imply that adding the relevant controls weakens the strength of this positive effect. In most societies, both adverse and advantageous will be present, generating scope for a wide range of reduced form associations.

To illustrate the potential richness of these various mechanisms, consider the following hypothetical example. First assume that most selection is adverse (e.g., older adults with low cognitive function are more likely to move in with their kids). However, some selection is advantageous (e.g., older adults with high levels of pension income are more likely to support their middle-aged kids by allowing them to move in). Assume as well that advantageous channels have less measurement error than the adverse channels. Then it follows that there will be a negative association between subjective well-being and living with kids (among older adults), and that adding controls *increases* the magnitude of the negative association (since the advantageous channels are disproportionately partialled out).

On a related point, survey responses from older adults are likely to have higher measurement error than survey responses from middle-aged adults

for two reasons. First, a substantial fraction of older adults have cognitive deficits. For example, about half of people age 80–89 have dementia or CIND (cognitive impairment not dementia). Second, older cohorts have relatively lower levels of literacy than middle-aged adults (particularly in developing countries), reducing their ability to comprehend survey questions (even when they are asked verbally). So it is natural that adding controls absorbs more variance for middle-aged adults than it does for older adults. Consequently, adding controls is more likely to control for selection effects of middle-aged adults than it is to control for selection effects of older adults.

To further explore the selection issues raised in this chapter, consider a simple model of cross-country differences. Assume that countries differ (exogenously) on two dimensions: the “taste” for independence and intergenerational income growth. The taste for independence varies from cultures that value personal space and personal autonomy (like the United States) to cultures that take a more communal view of family duties and intergenerational caregiving (like traditional societies). Note that these communal societies may still value independence/autonomy, just not as much. For example, in the United States, living with your kids/grandkids is a sign of distress—why else would an independence-valuing household give up independence? In communal societies, living with your kids/grandkids is not a sign of distress and might even be a sign of high social capital (e.g., intergenerational ties, filial bonds, etc.).

We formalize these ideas in the following way. For an older adult, living independently yields utility:

$$u(y) + \alpha.$$

For an older adult, living communally yields utility:

$$u\left(\frac{y + y_{+1}}{\sqrt{2}}\right),$$

where y is own income for the older adult and y_{+1} is the income of the middle-aged child of the older adult. The utility function also reflects returns to scale from living together. The strength of the taste for independence is captured by the parameter α . We further assume $\ln$ utility. Let $\theta = y/y_{+1}$, so θ is the inverse of the (gross) rate of intergenerational income growth. Finally, assume that the grandparents make the decision about whether they will or will not move in with their adult children. Then the indifference value of α is

$$\alpha = \ln\left(\frac{\theta + 1}{\theta}\right) - \frac{\ln 2}{2}.$$

This yields the equilibrium diagram in figure 8C.1. Older adults will live independently when the taste for independence, α , is sufficiently high and when the inverse of the rate of intergenerational income growth, θ , is

α = taste for independence

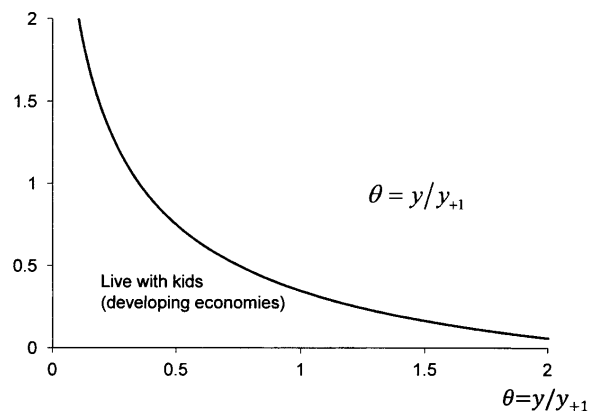


Fig. 8C.1 Selection in choice of household structure

Notes: Older adults above the curve choose to live independently. Older adults below the curve choose to live with their children. In developed countries, living with your children (as an older adult) is atypical, so those households tend to have unobserved adverse characteristics. In developing countries, living with your children (as an older adult) is typical, so those households tend not to have unobserved adverse characteristics.

sufficiently high. These features tend to be associated with developed countries, which also tend to be countries with low rates of fertility.

Finally, there is a natural extension of the model that further links this model to the findings in the chapter. In developed countries, living with your children (as an older adult) is not typical, and older adults with this arrangement tend to have *adverse* characteristics. In developing countries, living with your children is the norm, so those households will not tend to have adverse characteristics and might tend to have advantageous characteristics. Hence, one would expect that in developed countries (low fertility countries) older adults who live with their adult children would tend to have low levels of subjective well-being, whereas in developing countries (high fertility countries), older adults who live with their adult children would tend to have high levels of subjective well-being. This is what Deaton and Stone find in their data, since living with kids (children under eighteen) is a proxy for living with your adult children.