

The social context of well-being

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Large samples of data from the World Values Survey, the US Benchmark Survey and a comparable Canadian survey are used to estimate equations designed to explore the social context of subjective evaluations of well-being, of happiness, and of health. Social capital, as measured by the strength of family, neighbourhood, religious and community ties, is found to support both physical health and subjective well-being.

Our new evidence confirms that social capital is strongly linked to subjective well-being through many independent channels and in several different forms. Marriage and family, ties to friends and neighbours, workplace ties, civic engagement (both individually and collectively), trustworthiness and trust: all appear independently and robustly related to happiness and life satisfaction, both directly and through their impact on health.

Keywords: subjective well-being; social capital; life satisfaction; happiness; trust; suicide

1. INTRODUCTION

The purpose of this paper is to survey the influence of social context on subjective well-being. We begin by defining key concepts, reviewing (briefly) the burgeoning literature on this topic, and indicating some of the most difficult methodological challenges in this field. We conclude by presenting original evidence from several countries, highlighting the close connection between well-being and social capital.

A *prima facie* case can be made that the ultimate ‘dependent variable’ in social science should be human well-being, and in particular, well-being as defined by the individual herself, or ‘subjective well-being’. Whereas philosophers from Aristotle to John Stuart Mill have articulated this view, only in recent years have psychologists, economists and others begun to demonstrate that subjective well-being can be measured with reliability and validity, using relatively simple self-rating questions about ‘happiness’ and ‘life satisfaction’. Generally speaking, self-ratings of ‘happiness’ turn out to reflect relatively short-term, situation-dependent expressions of mood, whereas self-ratings of ‘life satisfaction’ appear to measure longer-term, more stable evaluations, but both produce broadly consistent findings (as indeed we confirm in our own research). This is not the place for a detailed review of the methodological issues involved in the measurement of subjective well-being, except to say that for present purposes, a large body of literature has shown that responses to both sorts of question appear to reflect real differences across individuals that correspond with external reports on respondents (by friends, partners, and so on) and with observed behaviour (Wilson 1967; Diener *et al.* 1999; Diener 2000; Helliwell

2001; Donovan *et al.* 2003). Current research, though still preliminary, is beginning to establish biochemical correlations that reinforce this impression that measurements of subjective well-being are reasonably reliable and valid.

Among the most powerful predictors of subjective well-being, as reported in the literature, are genetic make-up and personality factors, such as optimism and self-esteem. Although not discounting such factors, we focus here instead on the social correlates of well-being. Another strong (and unsurprising) correlate of subjective well-being is physical health. Although the direction of causation underlying this correlation remains somewhat controversial, it seems quite likely that health is an important determinant of subjective well-being. In turn, a large and growing literature suggests that physical health itself is strongly conditioned by social factors, so it is plausible to conjecture that health constitutes one pathway through which social factors influence subjective well-being (Berkman & Glass 2000; House *et al.* 1982; Reed *et al.* 1983; Schoenbach *et al.* 1986; Seeman *et al.* 1993; Sugisawa *et al.* 1994; Farmer & Stucky-Ropp 1996; Kessler & Essex 1997; Roberts *et al.* 1997; Krumholz *et al.* 1998; Kawachi & Berkman 2000; Kawachi & Kennedy 1997; Ryff & Singer 2003). Although not exploring directly the putative impact of health on subjective well-being, our analysis here does include self-reports on physical health, as a way of estimating the possible *indirect* effects of social factors on subjective well-being. Our primary focus, however, is on the *direct* effects, holding physical health constant.

Which features of a person’s social circumstances might be expected to affect her subjective well-being? One obvious answer is economic position or material well-being, as measured by wealth, income or material possessions. Indeed, this factor seems so obviously important that at least until recently, most economists have simply assumed that utility is, by definition, a product of material well-being. Much recent work, however, has questioned that

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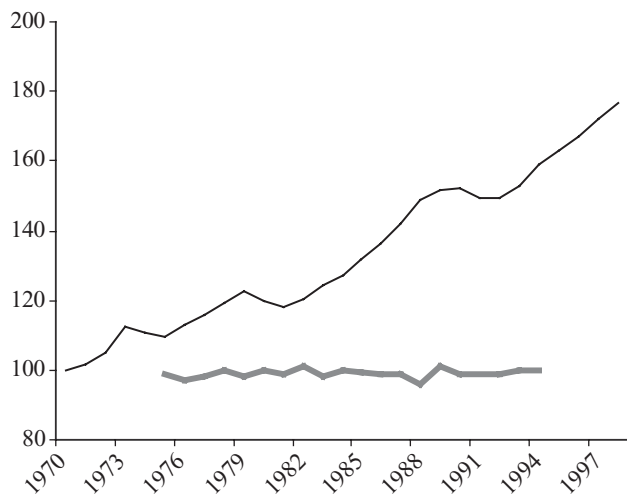


Figure 1. Material and subjective well-being in Britain, 1973–1997. Black line, gross domestic product *per capita* (1970, 100); grey line, life satisfaction (1973, 100). From Donovan *et al.* (2003), p. 17, with permission.

assumption, for although at low levels of economic development, income does indeed predict subjective well-being, at somewhat higher levels (say, above the median for OECD countries) material well-being appears to have a quite modest effect (Diener & Oishi 2000; Diener & Biswas-Diener 2002; Frey & Stutzer 2002; Easterlin 2003). Money can buy you happiness, but not much, and above a modest threshold, more money does not mean more happiness. Moreover, some evidence strongly suggests that, in fact, it is relative income, not absolute income, that matters most (Easterlin 1974, 1995, 2003; Kasser & Ryan 1993; Blanchflower & Oswald 2000). It is not my income itself that makes me happy, but rather a favourable comparison between my income and yours. This is one parsimonious explanation for the otherwise quite striking and startling fact that although real *per capita* incomes have quadrupled in the past 50 years in most advanced economies, aggregate levels of subjective well-being have remained essentially unchanged (see figure 1 for the relevant evidence from Britain, a typical case).

Among other features of an individual's social location that have been shown in many studies to be predictive of subjective well-being are marital status, race, education, employment and age (Glenn & Weaver 1985; Gove & Shin 1985; Gove *et al.* 1985; Coombs 1991; Clark & Oswald 1994; Clark *et al.* 2003). An early review of the literature nearly four decades ago profiled the happy person as 'young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious, married person with high self-esteem, job morale and modest aspirations, of either sex and of a wide range of intelligence' (Wilson 1967, p. 294, quoted by Diener *et al.* 1999). A more recent review of many subsequent studies in the US and Europe concluded that people who are married, white, better educated, employed, but not middle-aged and have higher incomes are happier (Oswald 1997). This summary, although not identical with Wilson's initial findings 35 years earlier, is sufficiently similar to suggest that most of the key patterns seem to be relatively robust.

Marriage has universally been found to be a strong correlate of happiness, subject (like all these correlations) to some methodological cautions discussed below. Education has also been found to be a virtually universal correlate, although often its effects are substantially reduced or even absent, when other variables are included. This suggests that education may be largely instrumental, acting mainly through its effects on human and social capital. Unemployment seems to be a strong negative predictor of happiness, substantially stronger than can be accounted for by the implied loss of income. Oswald's summary comment about age reflects the by-now common finding that, controlling for marital status, the correlation between age and happiness is curvilinear; higher among the young and the elderly, lower among the middle-aged. Religiosity is often found to be associated with subjective well-being, although there is considerable debate about whether *believing* or *belonging* is more important; that is, whether what matters for subjective well-being is religious faith or rather participation in a religious community (Pollner 1989; Moberg & Taves 2000).

Our results will speak to all these social factors, but our distinctive focus here is on the contribution played by 'social capital'. It will thus be helpful to introduce this concept briefly.

2. SOCIAL CAPITAL

Physical capital generally refers to building and equipment (anything from a screwdriver to a power plant) used for production of goods and services. Several decades ago, economists started to think more explicitly of skills and education as another form of capital: *human capital*. More recently, social scientists in many countries have observed that social networks (and the associated norms of reciprocity and trust) can also have powerful effects on the level and efficiency of production and well-being, broadly defined, and they have used the term *social capital* to refer to these effects (Coleman 1993; Putnam 2000; OECD 2001; Woolcock 2001).

The core idea here is very simple: social networks have value. They have value to the people in the networks: 'networking' is demonstrably a good career strategy, for example. But they also have 'externalities', that is, effects on bystanders. Dense social networks in a neighbourhood—barbecues or neighbourhood associations, etc.—can deter crime, for example, even benefiting neighbours who do not go to the barbecues or belong to the associations. Social capital can be embodied in bonds among family, friends and neighbours, in the workplace, at church, in civic associations, perhaps even in Internet-based 'virtual communities'.

Although we do not, strictly speaking, include social trust within the core definition of social capital, norms of reciprocity and trustworthiness are a nearly universal concomitant of dense social networks. For that reason, social trust—that is, the belief that others around you can be trusted—is itself a strong empirical index of social capital at the aggregate level. High levels of social trust in settings of dense social networks often provide the crucial mechanism through which social capital affects aggregate outcomes. Indeed, so central is this relationship that some researchers include social trust within their definition of social capital.

Advocates of the 'social capital' lens have reported robust correlations in various countries between vibrant social networks and important social outcomes like lower crime rates, improved child welfare, better public health, more effective government administration, reduced political corruption and tax evasion, and improved market performance, educational performance, etc. (Putnam *et al.* 1993; Verba *et al.* 1995; Knack & Keefer 1997; Sampson *et al.* 1997; Putnam 2000; Woolcock 2001). For example, several studies in Italy have shown that, controlling for all the other factors that might be thought to be relevant, places of higher social capital have more efficient financial and labour markets, exactly as the theory would predict (Putnam *et al.* 1993; Helliwell & Putnam 1995; Ichino & Maggi 2000; Cainelli & Rizzitello 2003–2004; Guiso *et al.* 2004).

Not all the externalities of social capital are positive. Some networks have been used to finance and conduct terrorism, for example. Just as physical and human capital—aircraft or knowledge of chemistry, for instance—can be used for bad purposes, so can social capital. Moreover, like physical and human capital, social capital comes in many forms, not all fungible (that is, useful for the same purposes). A dentist's drill and an oil-rigger's drill are not interchangeable, though both are physical capital.

Similarly, we need to distinguish among different types of social capital, like the difference between 'bonding' social capital—these are links among people who are similar in ethnicity, age, social class, etc.—and 'bridging' social capital, which are links that cut across various lines of social cleavage. But the main point is that social networks can be a powerful asset, both for individuals and for communities.

How is *social capital* in the 'lean and mean' sense that we use it here—networks and norms of reciprocity and trust—related to subjective well-being? Empirical research on this issue is generally more limited and more recent, but such evidence as we have suggests that social connections, including marriage, of course, but not limited to that, are among the most robust correlates of subjective well-being. People who have close friends and confidants, friendly neighbours and supportive coworkers are less likely to experience sadness, loneliness, low self-esteem and problems with eating and sleeping. Indeed, a common finding from research on the correlates of life satisfaction is that subjective well-being is best predicted by the breadth and depth of one's social connections. In fact, people *themselves* report that good relationships with family members, friends or romantic partners—far more than money or fame—are prerequisites for their happiness. Moreover, the 'happiness effects' of social capital in these various forms seem to be quite large, compared with the effects of material affluence. One preliminary study in the US found evidence that being married was, in round numbers, the happiness equivalent of quadrupling one's annual income, while monthly club meetings, monthly volunteering and bi-weekly church attendance were each the happiness equivalent of a doubling of income. Because research on social capital is relatively recent, these findings have yet to be tested in other settings, and doing so is one of our purposes in this paper.

3. METHODOLOGICAL CAUTIONS

Although for stylistic simplicity we have sometimes phrased the preceding literature review in terms of the 'causes' of subjective well-being, we want to emphasize four major methodological stumbling blocks that seriously complicate causal inference in this domain.

- (i) Spuriousness: too often analysis of the social correlates of subjective well-being has been based on simple bivariate analysis, and even when some other factors are included in the analysis, sample size has limited researchers' ability to control for all variables that might be causing spurious correlation. (The alleged effect of education on subjective well-being is one case in point, as the apparent importance of education has tended to diminish as other economic and social variables are taken into account.)
- (ii) Multi-level analysis: often relevant hypotheses in this domain can be tested only by simultaneously examining variables at the individual and aggregate level. For example, to assess whether it is absolute or relative income that matters for happiness, we need to include both individual-level and community-level measures of income in our analysis. Precisely analogous questions can be posed about the effects of social networks, education, ethnicity, and so on.
- (iii) Reverse causation and selection bias: to the extent that a sunny disposition itself *affects* a person's location in the social structure, then correlations between social circumstance and subjective well-being might reflect the effects, not the causes of subjective well-being. In principle, this problem might even affect such 'hard' variables as income, but it seems even more threatening as regards social factors such as marital status and friendship patterns. It is especially apparent for the linkage between subjective well-being and subjective health status evaluations, both of which are likely to vary systematically with interpersonal differences in inherent optimism.
- (iv) Adaptation and the 'hedonic treadmill': if aspirations typically adjust quickly to changed circumstances (marriage, illness, income, etc.), then conventional cross-sectional data may overstate the permanency of social effects on happiness. For example, some studies report that although lottery winners' happiness bounds upward initially, the 'high' is short lived (Smith & Razzell 1973; Brickman *et al.* 1978). Conversely, severe physical trauma and permanent physical disability seem to have sharp negative effects on subjective well-being, but then gradually the victims become adjusted to their new circumstances, and their happiness tends to revert to the pre-trauma levels (Brickman *et al.* 1978).

The results we report here are based entirely on cross-sectional survey data. We are, therefore, precluded methodologically from addressing the second pair of issues just mentioned. Ultimately, longitudinal data and quasi-experimental methods will be necessary to resolve those uncertainties. However, the size of our samples and the abundance of measures of social context in our data do allow us to deal with the problems of spuriousness and the need for multi-level analysis. Therefore, at this stage of

research, we present not confirmed causal claims, but a kind of tour d'horizon to highlight promising domains for future work.

4. OUR RESULTS

This section brings together evidence on the determinants of life satisfaction, happiness and self-assessed health status from several different national and international surveys of data on subjective well-being. Our primary focus is on the effects of social capital on alternative measures of well-being. We shall employ results from three different sources of survey data. The first source covers 49 countries, making use of data from the WVS and EVS. We shall mainly make use of a three-wave panel of roughly 88 000 observations used earlier in Helliwell (2003a). For some purposes we shall also add data from the 1999–2000 round of the EVS. The EVS data for 1999–2000 are not added in the first instance because the latest round of the EVS did not include the question on subjective health. They are, however, used in our comparisons of subjective well-being and suicide models, where the analysis is based on national average data, increasing the need to make the number of country waves as large as possible. The WVS and EVS samples average about 1000–1500 in each country wave, with the samples generally chosen to be nationally representative. The three waves were undertaken in about 1980, about 1991–1992 and in 1995–1997. The number of transition and developing countries increases from one wave to the next, and many of the industrial countries sampled in the first wave are absent for at least one of the two following waves. This changing sample from one wave to the next seriously limits our ability to analyse the dynamics of subjective well-being.

The second data source is the Social Capital Benchmark Survey in the US. This includes, for current estimates, about 29 000 observations drawn from a national random sample supplemented by samples from many participating communities. Although this means that the sample does not exactly match national characteristics, the very large size provides a great deal of power, and many tests suggest that the results can in most respects be treated as nationally representative. Moreover, like the Canadian data, the US Benchmark Survey has a much broader set of measurements of social capital than the WVS/EVS surveys, allowing us to explore more precisely the effects on subjective well-being of many different aspects of social context.

The Canadian data are drawn from two national waves and two special over-samples (one of major urban centres and the other of forest industry communities) of a survey sponsored by the Social Sciences and Humanities Research Council of Canada. For our current analysis, the sample is about 7500. Tests reported elsewhere based on samples from the first Canadian ESC survey waves (Soroka *et al.* 2003), suggest that the parameter estimates from the national and over-sample populations are fairly consistent. However, the much larger sample size and more balanced distribution of the US Benchmark Survey mean that it is somewhat more likely to be nationally representative.

We have already discussed different ways of measuring subjective well-being. Our survey evidence gives us some basis for comparing alternative measures. The two well-being measures that we are considering are life satisfaction

measured on a 10-point scale, in the WVS and ESC samples, and happiness measured on a four-point scale in the WVS and Benchmark samples. Besides the definitional difference, we are also facing the discrepancy in the scale. To make the coefficients from survey linear estimation on the happiness equation more easily comparable with those from the 10-point life satisfaction equations, we multiplied the coefficients in the happiness equations by 2.5. An alternative way of dealing with the scale difference is to use Survey Ordered Probit estimation, which returns effects to the underlying latent index, thus making the estimates insensitive to the choice of scale. Our experiments that compared the 10-point life satisfaction and its collapsed four-point counterpart show almost exactly the same estimates. Because the survey-ordered probit results are almost identical in significance and relative size to the linear estimates using converted scales, and because the latter are easier to analyse, we report them in table 1.

The first two columns of table 1 show survey linear estimation results of life satisfaction and happiness equations from the WVS survey. The third column and the fourth columns are for the life satisfaction equation of the ESC survey and the happiness equation of the Benchmark survey, respectively.¹

Comparison of the life satisfaction results with those of the happiness question shows specific differences within an overall context of substantial similarity. The differences are generally consistent with previous research suggesting that the life satisfaction question triggers answers that are more reflective of one's whole life experience than of one's current circumstances or mood. For example, there are striking differences in all three samples (global, US and Canada) in the effects of age. Those aged over 65 have much higher life satisfaction than happiness scores. In the global sample, Scandinavians have higher measures of life satisfaction than of happiness, even though in both cases they show positive residuals. Those who report that God plays a very important role in their lives have higher reported measures of both life satisfaction and happiness, although the effect is larger and more significant for life satisfaction. The effects of trust show up more significantly (and are generally larger) in the equations for life satisfaction than in those for happiness.

In most other cases, the results from the two alternative measures of subjective well-being are fairly consistent. There are no variables where the results are generally stronger for happiness than for life satisfaction, but there are few if any variables in the equations that refer specifically to temporary circumstances that might be expected to have greater effects on happiness than on life satisfaction. One might think that this might be the case for unemployment, but even here the life satisfaction effects are stronger. In short, the 'life satisfaction' measure seems marginally better than the 'happiness' measure for our purposes of estimating the effects of relatively stable features of social context (and especially social capital), but broadly speaking, our central results do not depend on the choice of indicators of subjective well-being.

The three right-hand columns of table 1 show the estimation results for the correlates of self-assessed health status from our three survey sources: the WVS, the Canadian ESC Survey and the US Benchmark Survey. To the greatest extent possible (as described in electronic Appendix A

Table 1. Survey linear estimation of well-being and self-rated health equations. (For comparison with life satisfaction, happiness has been rescaled into a 10-point scale from the four-point scale. The comparison group is female, whose educational attainment and total household income are in the lowest categories, are aged between 18–25 years, never married, employed or not in labour force. Income effects are shown in figure 2. *, significance at the 0.05 level; **, significance at the 0.01 level.)

survey-wave	WVS 1–3	WVS 1–3	ESC 1 and 2	Benchmark	WVS 1–3	ESC 1 and 2	Benchmark
nation(s)	world	world	Canada	USA	world	Canada	USA
survey year(s)	1980s–mid-1990s	1980s–mid-1990s	2000–2003	2000	1980s–mid-1990s	2000–2003	2000
dependent variable	life satisfaction	happiness	life satisfaction	happiness	health status ^c	health status ^c	health status ^c
r ²	0.25	0.23	0.16	0.19	0.21	0.04	0.16
number of observations	83520	83520	7483	28645	83520	7483	28766
constant	2.5769**	4.3271**	5.1310**	5.7531**	2.6911**	3.1749**	2.5767**
national/community-level variables							
<i>per capita</i> median income	-0.1399	-0.2387	-0.1319	-0.106	-0.0517	0.0589	-0.0313
average membership	0.3006**	0.1644**	0.1198	-0.0022	0.1037**	-0.0615	0.1144
average trust	0.3812	0.1168	0.1308	0.8432**	1.0362**	0.0883	0.7253**
average importance of God/religion	0.8164*	0.6356**	0.8722	-0.1653	0.6430**	0.6703*	-0.0538
governance quality	0.6918**	0.4304**	—	—	0.1434*	—	—
individual level variables							
membership, 0–8 scale	0.0528**	0.0002	0.016	0.0274**	0.0161*	0.0056	0.0197**
family ^a	—	—	0.2795**	0.2108**	—	-0.008	0.0532**
friends ^a	—	—	0.5058**	0.5188**	—	0.0777	0.1186**
neighbours ^a	—	—	0.13	0.1276**	—	0.0960*	0.0626**
trust, general ^a	0.2192**	0.1403**	0.2475**	0.2117**	0.1428**	0.1026**	0.1508**
trust in neighbours ^b	—	—	0.3307**	0.4248**	—	0.0488	0.2551**
trust in police ^b	0.5519**	0.3962**	0.2519**	0.4050**	0.1330**	0.1074*	0.2292**
importance of God/religion ^a	0.4803**	0.2902**	0.1171	0.1166**	0.0583	-0.0011	-0.1069**
freq., attend religious service ^a	0.0982	0.1122*	0.1271	0.1206**	0.0009	0.0234	0.1949**
commute time to work, hours	—	—	—	-0.0827**	—	—	0.0690**
self-reported health status ^c	0.6458**	0.5382**	0.3335**	0.3512**	—	—	—
male	-0.0251	-0.0768**	-0.1836**	-0.1124**	0.1096**	0.0532*	0.0018
aged between 25–34 years	-0.1905**	-0.1987**	-0.2971**	-0.0504	-0.0813**	0.0151	-0.1209**
aged between 35–44 years	-0.3316**	-0.3272**	-0.3329**	-0.0965**	-0.2326**	-0.0597	-0.2664**
aged between 45–54 years	-0.2949**	-0.3444**	-0.3052**	-0.1178**	-0.3995**	-0.1432**	-0.4242**
aged between 55–64 years	-0.113	-0.3130**	0.0473	0.0017	-0.5674**	-0.1403**	-0.5213**
aged 65 years and up	0.1221	-0.1493*	0.4319**	0.0064	-0.7262**	-0.2413**	-0.5808**
married	0.3656**	0.4816**	0.4276**	0.3281**	-0.0287	-0.0053	0.0307
living with partner	0.2829**	0.3080**	0.4300**	0.1602**	-0.0273	0.0555	-0.026
divorced	-0.2083**	-0.2076**	-0.2670**	0.0218	-0.0553*	-0.054	0.0091
separated	-0.3658**	-0.3835**	-0.2401*	-0.1273	-0.1325**	0.0639	-0.1060*
widowed	-0.1320**	-0.2169**	0.0433	0.0476	-0.1414**	-0.0094	-0.1124**
unemployed	-0.6516**	-0.3642**	-0.8425**	-0.1684**	-0.0409	-0.0485	-0.1309**
high-school graduate equivalent	-0.1803**	-0.0452	-0.0144	0.0587	0.0705*	0.0565	0.2230**
between high school and university	-0.1359*	0.0037	-0.1086	0.0645	0.1101**	0.1094**	0.2612**
university graduate equivalent	0.0356	0.0199	-0.1131	0.0229	0.1317**	0.1596**	0.4427**

^a Index defined to be within the 0–1 range based on responses to the relevant survey questions.

^b Individual index minus national or community average of the index.

^c The 1–5 range, 5 is the most healthy, please note that unlike other surveys, Canadian ESC asked its respondents to report health status compared with others of their ages.

table of definitions), the independent variables from the three surveys have been re-coded where necessary to make them as closely comparable as possible.

We shall discuss first the subjective well-being results, and then return to discuss the health results. In other words, the first part of this section compares the subjective well-being of people who feel equally healthy, but differ in other social characteristics. Of course, in our work as in many other studies, self-assessed health status is the single most important correlate of subjective well-being, and as the right-hand columns of table 1 confirm, there are strong effects of social characteristics on subjective health status. Thus, in the second part of this section we ask about the total effects of social context on subjective well-being, both direct (i.e. controlling for health) and indirect (through health). We recognize that the causal link between health and subjective well-being is not uncontroversial, although we tend to the view that well-being is mainly an effect, not a cause, in this relationship. In any event, that relationship itself is not the focus of our work here, and we present our findings in a form that will allow readers of either persuasion to see the independent effects of social context, which is our primary focus. Including self-reported health among the predictors of subjective well-being, as we do in the first part of this section, has the added advantage of tending to offset the effects of any 'positivity' or 'optimism' response bias, because such a response bias ought to affect both self-assessed health and subjective well-being.

(a) *Age and well-being*

In all samples the cross-sectional age effect is lowest in the 35–44 or 45–54 years age group, and is usually highest for those over 65 years. It is important to note that this high subjective well-being of the elderly is a feature of equations in which physical health is already taken into account. If health is left out of the equation, the U-shaped pattern twists, and the low point appears later in life. Analysis of successive sets of Eurobarometer data show a persistent U-shape linking age and happiness, even in the absence of health data, for annual surveys over the past 30 years. Our measurement of the effects of age on subjective health assessments will be considered later, but the basic point is simple: older people are (on average) less healthy and that substantially reduces their subjective well-being, but among equally healthy respondents, older people are more satisfied with their lives. The same pattern exists, but to a lesser extent, when health is not separately taken into account. It is also worth noting that the U-shape would become shallower if marital status were not taken into account, because those who are married are happier than those who are single or widowed, and the last two conditions are more prevalent among the youngest and oldest of the survey respondents.

(b) *Income and well-being*

In all samples, those with average or higher incomes show higher reported happiness than those at the bottom of the income distribution. Equations estimated with finer income gradations, as is done in the WVS global results, show diminishing returns to relative income above median levels, especially for those living in OECD countries. For the relatively poor, money can buy happiness, but for the relatively well-off, more money does not typically mean

more happiness. Figure 2 compares the income effects in the different surveys, for happiness, life satisfaction and self-rated health.

(c) *Unemployment*

As has been long established in the literature, individuals who are unemployed show significantly lower measures of subjective well-being (Clark 2003). Our current results show that this is true for the WVS global samples, for the Canadian and US WVS sub-samples, for the ESC Canadian sample and for the US Benchmark Survey of happiness. The effect is larger for the WVS global and the ESC Canadian sample than in the US Benchmark Survey. In all cases the SWB impact remains much larger than could be imputed to a present value calculation of the likely effects of current unemployment status on current and future incomes. Unemployment is thus likely to represent much more than a loss of income, perhaps reflecting the loss of workplace social capital as well increases in family stress and individual loss of self-esteem.

(d) *Education*

Education remains what might be referred to as an instrumental variable, being associated with higher levels of subjective well-being by simple correlations, but the effects tend to drop out (especially in equations in which health status is included) for higher levels of education in more fully specified models. Education improves health and thus indirectly improves subjective well-being, but net of that effect (and of the other factors in our analysis), education appears to have no direct impact on subjective well-being.

(e) *Gender*

In the WVS/EVS global sample, overall life satisfaction is slightly higher among males than females (6.84 compared with 6.73, on the 10-point scale, in the first three waves of the WVS), but this masks offsetting national differences. For example, in Scandinavia, Asia and North America, life satisfaction is slightly higher among women than men, whereas the reverse is true, and to a larger extent, in the countries of the former Soviet Union. In more fully specified models, a gender effect sometimes arises and sometimes does not, depending on the specification of the model. One reason for the appearance of a negative male effect in some cases is that self-reported health status is worse among women than men in the WVS global sample (3.64 for women and 3.80 for men, where 5.0 is the best health status), and health status takes a strong coefficient in the life satisfaction and happiness equations. To get a more specific explanation for gender differences, we have estimated gender-specific equations. The general finding from these gender-specific equations is that the responses of males and females to different events and circumstances are strikingly similar; much more so, for example, than occurs when we model gender differences in the determinants of suicide. The only gender differences in happiness that are significant at the 1% level are that strong belief in God increases happiness more for females than males, that living in a country with a high quality of government increases happiness more for females than males, and that females are happier than males in Asia and some non-Asian developing countries. In short, unlike many other factors in our analysis, gender appears to have no strong and straightforward effect on subjective well-being.

(f) Family-level social capital

At the family level, all samples show strong effects from family-level social capital, at least as measured by marital status. There are some differences across samples, however. In the WVS samples (including those for Canada and the US), the negative effects of divorce and being widowed are larger than in the US Benchmark Survey. In all samples, being married increases both life satisfaction and happiness, especially where the alternative is being separated or divorced. (The effect of cohabitation (as married) is generally positive, although not so strongly so as marriage. Contrary to what is sometimes believed, we find that marriage appears to increase subjective well-being equally among men and women.) The results from the new US and Canadian surveys add a new dimension to the results showing the importance of family, as those having frequent interactions with extended family members reveal systematically higher subjective well-being. Having a family enhances subjective well-being, and spending more time with one's family helps even more.

(g) Faith and the church

In most samples, it is possible to establish separate positive linkages to subjective well-being from strong religious beliefs and from frequent church attendance. Comparing the ESC and Benchmark results, the effects of belief in God are almost equally strong in Canada and the US, but the linkages from church attendance to subjective well-being are much stronger in the US. There are also large differences between the two countries in the average levels of the variables themselves, with the prevalence of frequent church attendance and strong religious beliefs being more than twice as great in the US than it is in Canada. It is well known that among advanced countries religious observance is uniquely high in the US, and here we see that the impact of religious observance is also much higher in the US.

It has been suggested that church attendance creates community level social capital (whether bridging or bonding depends on the divide under consideration), while belief in God provides alternative types of support for an individual's well-being. Support for this interpretation is provided by equations modelling the extent to which individuals think that others can be trusted. For example, if the WVS/EVS global sample is used to explain individual-level answers to the generalized trust question, conditional upon the national average value for that variable, those who attend church frequently, or who belong to more community organizations, are significantly more likely to think that others can be trusted, whereas those who have strong belief in God are significantly less likely to think that others can be trusted. In all cases, this is after taking into account national-level differences in these variables. This suggests that trust in God and trust in others are substitute modes of belief for individuals. By contrast, more frequent interactions with other people in both church and community settings tend to increase the extent to which those individuals think that others can be trusted and thereby to enhance their subjective well-being.

(h) Friends and neighbours

The WVS data do not speak directly to the strength and nature of an individual's friendships. In the ESC and

Benchmark surveys there are several relevant variables, most or all of which attest to the importance of such friendships as supports for subjective well-being. Frequent interactions with friends and neighbours are both associated with systematically higher assessments of subjective well-being. This is true in both the Canadian and US samples. In both countries, frequent interactions with friends are even more important (especially in the US) than those with neighbours and family, with family contact being slightly more important than that with neighbours. In short, informal social capital—what one of us (Putnam 2000, ch. 6) has previously termed 'schmoozing'—is strongly associated with higher subjective well-being.

(i) Community involvement

All three of our survey samples have somewhat similar questions about the number of types of community organizations to which the respondent belongs. At the global level, civic participation matters for life satisfaction, as it does in some but not all of the smaller country samples. For happiness, there is no systematic global effect, although there is a strong effect in the US Benchmark data. Here, one might expect, as elsewhere, that there may be some two-way causality or joint influence from an excluded individual-level factor, such as extroversion or inherent optimism. However, studies at a more aggregate level, where individual-level personality differences should average out, tend to show undiminished effects. Another way of putting this, is that participation is likely to have positive externalities, so that any effect at the individual level is likely to carry through to the aggregate level as long as the positive externalities are more than enough to offset the loss of personality-driven individual effects. We report our latest results on this when we discuss community-level effects more generally.

(j) Trust

'Do you think that people can generally be trusted, or (alternatively) that you cannot be careful in dealing with people?' This canonical question has been asked so many times over the past half-century as to become the standard assessment of trust levels. It has been much criticized and much analysed. Fortunately, many studies have found that results based on this broadly available measure tend to be confirmed by other ways of asking people about the trustworthiness of others. The radius of the question is ill-defined. Studies that link it to other questions with more specific objects of reference (friends, neighbours, police, clerks and strangers) support the idea of using the measure to represent community-level trust. (For example, in the Benchmark Survey, a factor analysis of many different measures of social trust finds that the canonical question has the highest loading on the principal component, and over periods of 12 and 18 months, the canonical question has the highest test-retest reliability.) The level of community must extend in part to national boundaries, as cross-countries differences in average answers to this question predict differences in the frequency with which lost wallets are returned (Knack 2001). This fact, along with the fact that the question relates to the trustworthiness of others, and not to whether the individual is planning to act in a trusting manner, encourages us to use answers to this question as measures of trustworthiness. Thus we would

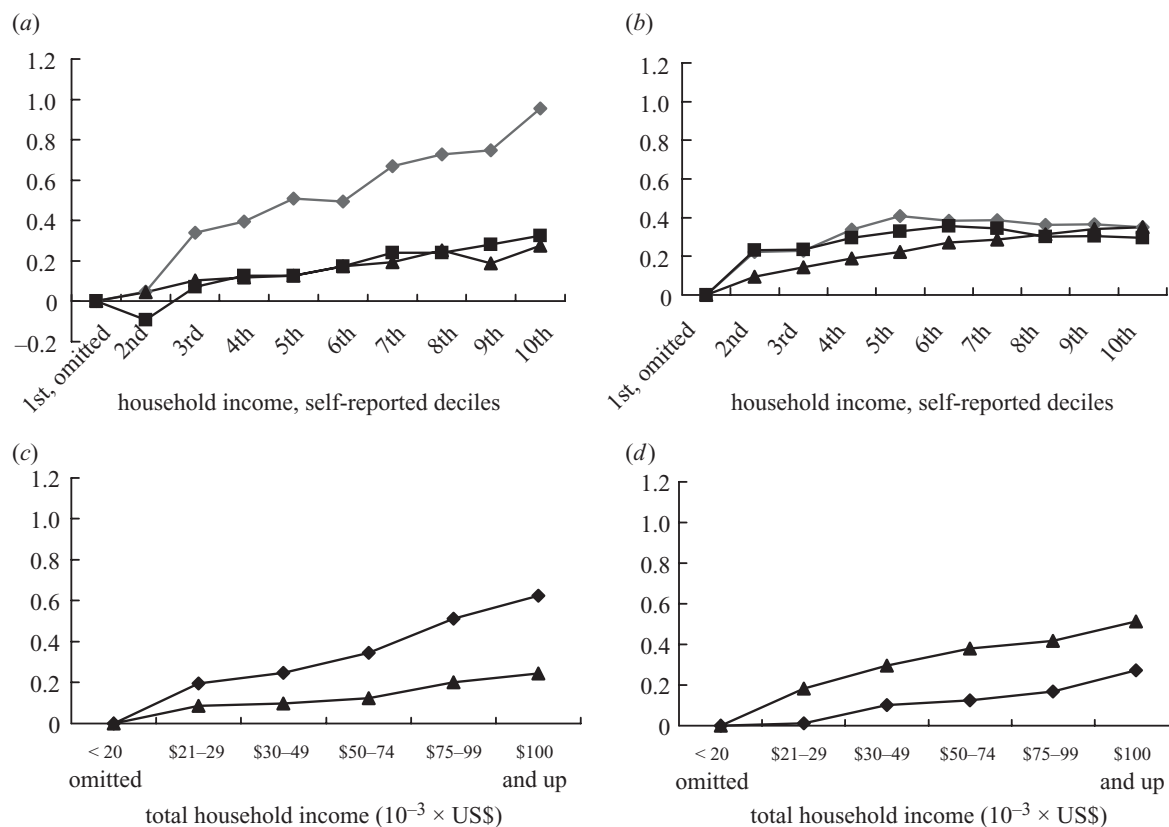


Figure 2. Well-being, self-rated health status and household income for (a) non-OECD nations, WVS Survey; (b) OECD nations, WVS Survey; (c) Canada, ESC Survey; and (d) the USA, Benchmark Survey. The y -axes show the coefficients of income controls from the survey linear regression of the 10-point life satisfaction (diamonds), 10-point happiness (originally in four-point scale) (squares), and the five-point self-rated health status (triangles). Note that WVS asked its respondents to report in what decile they think their total household income was, whereas ESC and Benchmark asked for estimates of income in dollars. Before the regression, we converted the income figures from ESC into US dollars by purchasing power. Unlike the other two surveys, the Canadian ESC asked its respondents to report health status in comparison with others of their ages.

expect to find that those who believe themselves to live among others who can be trusted will tend to report higher subjective well-being. We do not treat these measures of trust as direct measures of social capital, but modelling of trust responses by us and by others suggests that trust levels are higher in communities that have higher social capital densities.

Individuals who report themselves as living in a high-trust environment report significantly higher levels of life satisfaction and of happiness, to extents that are roughly equal across the various surveys. The statistical strength of this relation is particularly great in the US Benchmark Survey.

Although answers to the general trust question are associated with high subjective well-being at the individual level, they by no means duplicate more specific assessments of the trustworthiness of others. The US Benchmark results are especially clear on this, as their large sample size permits the separate influence of several domains of trust to be established. The results show trust in police to be especially important in the Benchmark results, even when separate account is taken of trust in government (either local or national, or, as in our equation, the average of these two measures), general trust, and trust in neighbours and in co-workers. The WVS results show the international data to have almost equally large SWB effects of trust in the police, even with aggregate measures of the quality of government taken into account. Other experiments with

the Benchmark data show that the lower measures on SWB among black Americans are related in large measure to their lower trust of the police. In short, feeling able to trust others—both those among whom one lives and works and those in authority—is strongly associated with higher subjective well-being.

(k) *Community-level effects*

Supporting the many earlier findings that the subjective well-being effects of income relate mainly to relative income, the community or national level of income has an insignificant negative effect when it is added to the life satisfaction and happiness equations. This is what might be expected when incomes are measured in absolute form, as in the US and Canadian surveys. However, the same is also true in the WVS equations, where incomes are measured relative to the national average. However, in these equations, the effects of national income depend on what else is included in the equation, as noted in Helliwell (2003a).

If we are right to interpret individual answers to the trust question as their assessments of the average level of trust governing relations in their communities, we would expect to find a significant effect of community-level trust on well-being only in equations that do not control for the individual's own perception. In table 1 we allow the individual's own perception to have an impact separate from that of others living in the same country or community. This is

done by defining the individual-level trust assessments as differences between the individual's own assessment and those of others living in the same country or community. We then enter as a separate variable, an average trust assessment of others, where the average is across the three measures of trust and across individuals in the same country or community. Our results suggest the paramourcy of the individual's own perceptions, as the individual-level assessments are always significant, whereas the community-level trust measure, while positively signed for all surveys, is significant only for the US Benchmark Survey. (Note that in the WVS analyses, 'community-level' refers to the country as a whole, whereas in the ESC and Benchmark analyses 'community-level' refers to a level closer to the census district. We suspect that the latter is a less 'noisy' proxy for the actual environment within which each respondent lives and works.)

The situation is different for community engagement, because we might expect the satisfaction obtained by an individual from his or her own involvement to be affected by the extent to which others are similarly engaged. Some have argued that satisfaction from community activities is based on their relative degree of involvement (Nie *et al.* 1996). There is the opposite possibility, more likely in our view, that greater engagement by others would increase the satisfaction gained from our own engagement. A third and intermediate possibility is that the subjective well-being provided by one's own participation is neither increased nor decreased by the extent to which others are involved in the community. Which answer we would expect to find must depend on the model estimated. For example, we and others have found that high levels of community involvement are conducive to higher levels of trust. Thus the total benefits of community-level participation would flow partly through their effects on trust, so that we would expect to find the estimated effects of community-level participation to be higher in models that did not include trust as a separate variable. Estimation of the WVS global life satisfaction does indeed support this notion, as the coefficients on both individual and national memberships rise when the trust variable is eliminated from the equation.

What do we find from the various bodies of data? As noted, for the global sample of WVS data, the community-level data are at the national level, whereas for the ESC and Benchmark surveys they are generally at the level of the census district. The latest results from the WVS are consistent with those reported in earlier papers: those nations with greater membership densities show higher average levels of life satisfaction, even after accounting for individual-level participation and estimated trust levels. For the ESC and Benchmark surveys, the community-level values of social capital variables generally neither add to nor subtract from what has already been found for the individual-level variables. If everyone in a community becomes more connected, the average level of subjective well-being would increase, but the channel appears, from these surveys, to be largely through the individual's own participation. There is no evidence here of the relative-participation effect matching the relative-income effect. The subjective well-being effects of income appear to flow entirely through relative incomes, so that community-wide increases in income are not accompanied by increases in measured life satisfaction. For measures of social capital, there appears to be no

parallel negative effect from increased participation by others. On the contrary, the WVS estimates (but not the ESC and Benchmark samples) show that greater participation by others increases subjective well-being even for those whose own participation is not increased. Until this result is replicated among communities within nations, there remains a risk that it is capturing in part, the effects of other important factors that differ among nations.

(1) *Social capital and health*

The right-hand columns of table 1 show equations for self-assessed health status, as measured on the same five-point scale used in all three surveys. These results indicate, echoing results from Berkman & Syme (1979), that there are strong links from family, friends, neighbours and community involvement to physical health. Because our equations for subjective well-being included (and thus controlled for) each individual's self-reported health as an important determinant of subjective well-being, putting the results from the two side of table 1 together allows some assessment of the total effects of social capital on well-being.

One of the biggest differences between the physical health and the subjective well-being equations relates to the effects of education, which are much larger on health than on subjective well-being (in well-being equations that include physical health). As shown in figure 2, the effects of income on self-reported health are smaller than for life satisfaction and happiness, except in the US, where the relationship is much steeper for self-reported health status than it is for happiness. All forms of social connectedness have strong positive effects on physical health, whereas strong religious beliefs do not. The age effects in the health equation are strong and almost linear, with each decade of age leading to a significant reduction in average health status. To find the overall effect of age on subjective well-being, it is necessary to combine the effects flowing through physical health with those estimated directly in the subjective well-being equation. This is done by multiplying the coefficient in the variable in question in the health equation by the health coefficient in the well-being equation, and adding this indirect effect to the direct effect of the same variable in the well-being equation. Using the linear estimation of the effects of living in a high-trust community as an example (based on the Benchmark Survey), the indirect effects flowing through health status increase the direct effects by *ca.* 30%.²

In other words, living in a high-trust community seems to improve health and thus indirectly to enhance subjective well-being, in addition to the even more powerful direct effect of a trustworthy community on subjective well-being. Generally speaking, most of our measures of social capital appear to have this 'turbocharged' effect on happiness and life satisfaction. There is a risk that the apparent effects of social capital on subjective health and on well-being can be at least partly traced to the fact that both are subjective measures. Because there are at least some international measures of measured health status, these data can be used with the national level WVS data for social capital and subjective well-being to see if similar results can be found. Of the international variation of subjective well-being, 49% can be explained by differences in the WHO measure of healthy years of life expectancy, 72% by differences across countries in subjective measures of health status, and 76%

when both measures are used. Of the variance explained by subjective health, slightly more than half is due to underlying differences in health outcomes as estimated by the WHO.

(m) *Suicide as an alternative measure of well-being*

Although we have done no new suicide research specifically for this paper, it is worthwhile bringing our earlier suicide results (Helliwell 2003*b*) into our account at this stage, for two reasons. First, it has been frequently said that the high subjective well-being and presumed high suicide rates in Scandinavian countries cast suspicion on the results linking social capital and well-being. Second, there have been many questions raised about the appropriateness of using subjective well-being data as 'true' measures of well-being. For example, the answers to subjective well-being questions may reflect momentary circumstances, may mean different things to respondents of different ages, cultures, genders and languages, and are sometimes thought to reflect too great adaptation to current circumstances to be an acceptable means for comparing the quality of life among individuals or countries.

Because the suicide data are based on behaviour rather than subjective opinions, and are collected on a population-wide basis, they provide a quite different way of measuring life satisfaction. It should be expected that the subjective well-being and suicide data might respond differently even when they are brought together for exactly the same countries and years, because the subjective well-being data are collected from a wide cross-section of the population, while the suicide data count final and often impulsive acts of individuals at the extreme lower end of the distribution from high hopes to hopelessness.

It is quite significant, therefore, that country-level measures of life satisfaction and suicide rates turn out to be explained by the same model, using the sample of 117 observations from 50 countries used previously to explain life satisfaction. Variables used included national average divorce and unemployment rates, the share of the population with a strong belief in God, two measures of social capital (extent of involvement with voluntary associations and the level of general trust), and external measures of each country's quality of government. The two equations give strikingly consistent results. Divorce and unemployment are associated with reduced life satisfaction and increased suicide (Kposowa 2000), trust and memberships are associated with increased life satisfaction and reduced suicide rates, and higher-quality government (Kaufman *et al.* 2003) is associated with increased life satisfaction (strongly) and reduced suicide (weakly). Sweden, which had previously been suggested as a puzzle because of very high subjective well-being combined with a reputedly high suicide rate, fits both equations exactly. Its better ranking on life satisfaction than on suicide reflects the different coefficients of two key variables in which Sweden differs from typical countries. Belief in God is more important in deterring suicide than in supporting life satisfaction, whereas the reverse is true for the quality of government. Sweden ranks very high on the quality of government and very low in belief in God.

The fact that the suicide data and the measures of life satisfaction show remarkably similar structures, especially with respect to the effects of social capital, thus represents a strong confirmation of the subjective well-being data. The

coefficients are much larger for the suicide equation, but there is correspondingly greater international variation of suicide rates than of average measures of subjective well-being, so that the coefficients in the two equations are almost identical when compared with the standard deviations of the variables to be explained. In addition, the fact that the international differences in suicide rates are much larger than those for subjective well-being should reassure those who think that the international differences in average subjective well-being are implausibly large. This reassurance is all the greater because the suicide and subjective well-being data seem to be equally well explained by the same equation.

Perhaps the biggest difference between the suicide and subjective well-being data and results lies in the gender differences. Suicide is roughly four times more prevalent among males than females and are explained by differing models, while the gender differences in subjective well-being are far smaller, are sometimes of differing sign, and do not lead to large differences in equation structure and coefficients. This important issue of gender differences in suicide rates aside, these two independent analyses converge on one robust central finding: social context, and especially social capital, appears to have powerful effects on well-being. The suicide results also help to resolve the inevitable doubts about the direction of causation between social capital and subjective well-being in a cross-sectional setting. If subjective well-being and suicide rates are both correlated in closely comparable ways to differences in social capital and other aspects of the economic and social environment, this increases the likelihood that social capital has a causal role in both cases.

5. CONCLUSIONS

Our new evidence confirms that social capital is strongly linked to subjective well-being through many independent channels and in several different forms. Marriage and family, ties to friends and neighbours, workplace ties, civic engagement (both individually and collectively), trustworthiness and trust: all appear independently and robustly related to happiness and life satisfaction, both directly and through their impact on health. Moreover, the 'externalities' of social capital on subjective well-being (the effects of my social ties on your happiness) are neutral to positive, whereas the 'externalities' of material advantage (the effects of my income on your happiness) are negative, because in today's advanced societies, it is relative, not absolute, income that matters. In that sense, the impact of society-wide increases in affluence on subjective well-being is uncertain and modest at best, whereas the impact of society-wide increases in social capital on well-being would be unambiguously and strongly positive.

We emphasize again that the use of causal language in talking about the social context of subjective well-being (even as we have done for stylistic convenience) is premature, because of the possibility of selection effects, reverse causation and adaptation effects. (Our previously reported suicide results certainly provide some evidence for the independent causal status of social capital.) The sort of cross-sectional survey research presented here cannot establish beyond doubt that (say) marriage and friendships enduringly foster happiness, rather than that happy people are simply more attractive mates. Nevertheless, the

patterns we report here are sufficiently strong and pervasive to justify enhanced research to explore possible mechanisms linking social capital and subjective well-being, to look for contextual and interaction effects, and to seek instrumental variables and quasi-experimental settings that would provide more leverage on issues of causation.

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ENDNOTES

¹Electronic Appendix A shows results using the US and Canadian samples of the WVS data, for comparison with the results of the more recent national surveys. The Appendix also shows results from happiness and life satisfaction equations estimated on comparable samples.

²The direct effects of 0.84 are increased by indirect effects of $0.254 = 0.725 \times 0.35$, where 0.725 is the trust effect in the health equation and 0.35 the effect of the health variable in the Benchmark happiness equation.

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GLOSSARY

- ESC: equality, security and community
 EVS: European Values Survey
 OECD: Organization for Economic Cooperation and Development
 SWB: subjective well-being
 WHO: World Health Organization
 WVS: World Values Survey

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