# Social Capital, the Economy and Well-Being

John F. Helliwell



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## INTRODUCTION

At the beginning of this review of what research has thus far revealed, and what remains to be shown, about the relations among social capital, the economy and well-being, some clarifying definitions are in order. I shall start with a discussion of each of the three concepts under review, and will then consider ways in which these may be linked.

The working definition of social capital that is emerging in an increasingly interdisciplinary literature refers to the networks, norms and understandings that facilitate cooperative activities within and among groups of individuals. In some work a measure of generalized trust in others is part of what is meant by social capital, while other researchers prefer to treat interpersonal trust as something that is generated and supported by the more valuable sorts of social capital.

Most researchers agree that since social capital refers to the existence and strength of interpersonal ties, its value to individuals within networks and outside them depends on the uses to which it is put. Distinctions are frequently made between "bonding" and "bridging" social capital, with the former focused on ties within a group, sometimes in ways that increase distance and tension between groups, and the latter typically having a wider and more inclusive radius. Many actual situations are characterized by social capital that mixes these two types in different proportions, and there is no reason to expect an either-or situation to prevail.

There are bountiful references in the literature to the Mafia, the Ku Klux Klan, the Nazi Youth and bomb plotters as cases in which strong interpersonal ties can lead to malign overall effects. Not all bonding is good for the world, a point that some critics of social capital have used to support their scepticism. On the other hand, most theoretical and empirical analysts agree that high levels of interpersonal trust, to the extent that this trust is matched by trustworthy behaviour in others, do make many aspects of life more enjoyable and more productive, in part by reducing the costs of dealing with risk and uncertainty. Hence the idea of associating the pervasiveness of trust with the more useful forms of social capital. Right from the start, it is important to note that here, as is so often the case in the social sciences, it is easier to find correlations than it is to discover the directions and strength of causation. This suggests that special heed be paid to event studies, where it is more frequently possible to show the direction of causation.

Turning to the economy, interest has traditionally been concentrated on some measure of the standard of living, with per capita GDP, or sometimes a measure of sustainable consumption, as the focus. These measures are carried out for individuals and at some level of aggregation, whether the family, the community, the province, the nation or the world. It is usually appropriate to consider individual as well as community-level measures of income, since there is evidence that the satisfaction individuals derive from their incomes is based to a large extent on comparisons with incomes of others in their community. Numerous studies, including that by Osberg and Sharpe in this volume, have proposed revisions and extensions to GDP to adjust for incomes and expenditures likely to have welfare effects that differ substantially from what is implied by the normal GDP accounting. In the light of studies to be reviewed here, linkages between the economy and well-being are likely to depend heavily not just on income levels but also on income sources.



What about well-being? Although the primary focus of psychology over the past half century has been described as the study of psychological illnesses, there have been strands of psychological and interdisciplinary literature dealing with measures of not psychological illness but well-being. Numerous studies have shown that while there is a relation between perceived well-being and the absence of negative feelings or conditions, they are by no means the same thing. There has been some advocacy of a re-balancing of psychological studies to pay more attention to the determinants and consequences of subjective measures of well-being. The results of several decades of research using these measures form the basis for much of this paper. My survey will, however, be skewed to highlight studies that focus on linkages from social capital and the economy to well-being, including those effects of social capital that flow through economic and health outcomes to well-being. In a foreshadowing of what will be reported below, my review of the literature suggests that while much of the current interest in social capital is based on its presumed economic effects, the direct linkages from social capital to well-being are, if anything, better documented and likely to be of greater theoretical and empirical significance.

How does subjective well-being relate to social progress? Analysis of subjective well-being may be thought of as a way of adopting a bottom-up approach to the definition of social progress, first by searching for a measure of satisfaction with life, and then seeing to what extent the answers depend on variables that have been thought to be important to social progress. The well-being measures themselves do not distinguish private and social life; and the extent to which the respondents care about the rights and needs of others has to be inferred from the statistical results. The use of well-being data as an approach to applied welfare economics is in its infancy, so that the results thus far in hand are more illustrative than conclusive.

The subsequent sections of the paper deal first with links between social capital and economic outcomes, then with other channels of influence between social capital and well-being, and finally with the possible implications for future research and public policy.

## DIRECT LINKAGES BETWEEN SOCIAL CAPITAL AND ECONOMIC PERFORMANCE

Robert Putnam's (1993) influential study of democracy in modern Italy documented a number of ways in which stronger horizontal ties in northern Italy were associated with more efficient local government and with higher levels of GDP per capita. This does not imply that higher levels of social capital, even of the bridging sorts considered to be most conducive to the smooth functioning of communities, are likely to give rise to sustained higher rates of economic growth, for two reasons. First, the link Putnam saw was one between levels of social capital and levels of GDP per capita, rather than one between levels of social capital and rates of growth of GDP per capita. Second, the evidence was in the form of a positive correlation, with causal influence possibly running in either or both directions or from other factors affecting both income and social capital.

Fortunately, one of the underlying reasons for the many years of Italian research by Putnam's team was the opportunity to study inter-regional differences in the consequences of devolution of powers from the national to the regional governments at the beginning of the 1980s. This devolution of powers provided the basis for an event study of the sort that could throw much light on the consequences of social capital. Putnam's hypothesis was that although there were many dimensions to the differences among the 20 regional governments in Italy, several measures of horizontal connectedness would help to predict which regions would make more effective use of the devolved powers. Several indicators of governmental effectiveness were assessed before and after the devolution, and in general the predicted results were observed — the more a region was characterized by horizontal ties of the sort referred to as bridging social capital, the more likely it was to make effective use of the new powers, and to maintain or improve the quality of services provided.



But what of the links to economic growth? It is doubtful that anyone steeped in the recent growth history of sub-national regions in Europe would find anything to support such links, since the predominant post-war pattern of convergence among the regions of Europe saw the poorer regions of Italy, which also tended to have lower levels of social capital, growing faster than the richer regions. However, since the governmental reforms took place partway through the convergence process, it was possible to test for a slowing or even a temporary reversal of convergence for those regions with low levels of social capital. Thus treating the governmental reforms as an extraneous event disturbing a conventionally modelled process of regional convergence allowed for identification of the negative growth effects of low social capital (Helliwell and Putnam 1995). During the early 1980s, the regional growth convergence in Italy was reversed, to a greater extent in those regions estimated to have lower levels of social capital. Of course, there is always the possibility that something else was behind this reversal, and the estimated effect did not have a high degree of statistical precision. But the result at least suggested that inter-regional differences in the efficiency of local government, which became even more important when greater powers were devolved to the regions, were such as to temporarily reverse the growth rankings of the regions, in favour of those with higher levels of social capital.



In the absence of more events and data calibrated for the study of the linkages between social capital and growth, many studies have simply inserted national measures of social capital, interpersonal trust, and sometimes the quality of governmental and other institutions, into cross-sectional growth regressions. This method is not likely to produce convincing results, since measures of social capital tend to be fairly stable through time and in any event to be infrequently surveyed, so that there is a risk of cross-country effects of social capital being mixed in with a whole range of other factors that differ from one country to the next but for which there are no adequate measures. My results for OECD countries and for Asian economies (Helliwell 1996*a*) were negative for both trust and the extent of organizational memberships, as were my results using data for Canadian provinces and US states (Helliwell 1996*b*). However, Knack and Keefer (1997) found that by increasing the sample to include a number of middle-income developing countries they were able to identify a statistically significant positive link to economic growth from trust, although not from organizational memberships. Zak and Knack (1998) got the same result using a sample of 40 countries, and were even more successful in finding a positive link between trust levels and investment rates. Knack (2001) reports more fully on attempts to separate organizational memberships into two types, one of which is likely to comprise memberships of organizations of a sort whose cohesiveness and success might be achieved at the expense of non-members, and hence be less likely to contribute to aggregate growth. In this work, Knack is testing the view of Olson (1982), which is that many groups are rent-seeking organizations that have negative implications for economic efficiency and growth. However, Knack (2001) and Zak and Knack (1998) found no evidence that membership in either type of organization has a significant effect on growth and no evidence that organizations of the type presumed to be rent-seeking were detrimental to growth.

Thus, as Temple (2001) notes in his recent survey, the primary evidence linking social capital and economic growth comes not from direct measures of connectedness but from international differences in trust. The influence is exerted in two ways: as a direct effect of trust on growth, and as an effect of trust on investment spending, with investment then increasing output per capita either via increases in the capital/labour ratio or through some presumed links between the pace of investment and the expected level of technological efficiency. In both cases the existence and strength of the results are sensitive to the time frames and countries used in the sample.

There is also a literature seeking links from the quality of institutions of various sorts to the quality and extent of economic growth. Some definitions of social capital include the quality of institutions, while most recent social capital research opts for a narrower definition. This does not imply a belief that institutions are unimportant, or that they are not linked closely with social capital in ways such as those illustrated by Putnam in his study of Italian regions. As argued by Woolcock (2001), the purpose of adopting a narrower definition of social capital is to achieve clarity, and also to help disentangle what social capital is from what it does. In this context, it is perhaps appropriate to think of both trust and institutional quality as, in part, consequences of social capital (as well as possible causes, of course), rather than as part of social capital narrowly defined. Temple and Johnson (1998) follow Abramovitz (1986) in describing as "social capability" the set of attitudes and institutions favourable to sustained economic and social progress, leaving the term social capital to describe, in Woolcock's (2001) words, "norms and networks that facilitate collective action." A good part of the sociological literature on social capital, as noted by Portes (1998), places primary emphasis on the contacts or networks acquired by individuals to facilitate their own actions and secondary emphasis on the consequences for their communities. There is a matching strand of economic literature emphasizing the theoretical importance of contacts and networks for individuals and trying to explain individual decisions (Glaeser 2001) to develop and extend their own networks.

Whether the focus is decisions by individuals about community participation or national-level evaluation of social capital, the theoretical and empirical contributions tend to accord a central place to trust. In an environment of trust, individuals assume that others are benevolent and do not rely on expensive safeguards or complicated contracts to support their economic and social ventures. There is a large body of game-theoretic work, in several disciplines, showing that under conditions of uncertainty (and what other conditions are there?) mutually advantageous outcomes are far more likely when dealings are characterized by the maxim treat others as one would be treated. Such behaviour has a moral force in many religions and moral philosophies, because if widespread it leads to positive outcomes for society as a whole. It also meshes with self-interested rules in situations of dense and repeated interpersonal dealings. By contrast, where general trust levels are low, individuals risk greater personal losses, and being labelled brainless dupes, if they do not play it safe. This often entails avoiding what otherwise might be good ventures, or else burdening activities with expensive protective baggage.

There is discussion and debate about the extent to which individual networks of trust and contacts are substitutes for an impersonal market governed by the rule of law. It seems clear that a legal system with defined and enforceable rules is more necessary in the absence of personal ties, but in the social capital literature the emphasis is on the extent to which trust and reliable legal systems and other public institutions are complementary. Any legal system is simpler and easier to establish and enforce if it merely codifies accepted norms of conduct.

Accepting that trust is likely to reduce the costs and risks of both economic and non-economic activities, how good are the trust measures commonly used for research purposes? The following question, which has frequently been included in international surveys since Almond and Verba (1963) conducted their path-breaking studies of post-war democracy: "In general, do you think that most people can be trusted, or that you can't be too careful in dealing with people?" Many studies repeat the same question, for two reasons: to compare results for different times and places; and because the precise phrasing of the question can influence the answer considerably, and to an extent that differs among types of respondent. For example, results from the US General Social Survey show that in response to the full question males are significantly more trusting than females, while in response to only the first half of the question females are more trusting than males (Helliwell and Putnam 1999). Also, suspicions have been raised that the question does not translate readily from one language or culture to another. However, Almond and Verba (1963) found that French-speaking and German-speaking Swiss gave similar answers to the full question, as did French-speaking and Flemish-speaking Belgians, with measured trust in all four cases much above that based on answers to the same question asked in France.



The above question asks not whether the respondents are trusting, but whether they think other people are trustworthy. Most analysts would agree that the latter, if the responses are well informed, is the appropriate measure. But what assurance is there that people are well informed, and that their answers reflect objective indicators of trustworthiness rather than media opinions or current public opinion? To address this issue, Knack (2001) compared international differences in answers to the above question with the frequency of return of money-filled wallets left experimentally in the street in different countries. He found a high correlation (0.65) between international differences in personal opinions and the corresponding international differences in the prevalence of trustworthy behaviour. Inherent in such a comparison is the assumption that when asked whether others can be trusted, respondents are answering with respect to behaviour in their own country. This assumes rather than proves the importance of national borders in defining the society to which people refer, though respondents are likely basing their answers on primarily local experience and information.

If future research is to focus on the radius of trust, and to probe more deeply into the roles of distance and national borders, more detailed questions will have to be asked. There are several reasons for wanting to know more about the extent to which distance and national borders weaken the horizontal ties emphasized in the narrower definitions of social capital, and act to set boundaries to the communities within which networks are established, norms created and trust engendered. Some of these will be explored further in the concluding section. There are studies showing that the intensity of economic linkages of various types decreases with both distance (Grossman 1997; Hazledine 2000) and national borders (McCallum 1995), to an extent far greater than can be accounted for by transportation costs, currency differences (whether these be as large as suggested by Andrew Rose 2000 or as small as suggested by Thom and Walsh 2001), tariffs or non-tariff barriers to trade (Head and Mayer 2001), or other explicit costs of doing business in and with other countries. These border effects apply to merchandise trade (McCallum 1995; Helliwell 1996*c*), service trade (Helliwell 1998, chapter 2), capital movements (Feldstein and Horioka 1980; Helliwell and McKitrick 1999), prices (Engel and Rogers 1996), migration (Helliwell 1997, 1998) and knowledge spillovers (Helliwell 1998; Keller 2000). The full extent and implications of these results are still under study (Obstfeld and Rogoff 2000; Anderson and van Wincoop 2001; Hillberry 1998, 1999; Helliwell 2000), but one possible reason for the existence of these distance and border effects, and for the fact that they will remain substantial in the future, is that they reflect the fact that trust and networks diminish the costs of dealing with uncertainty, and that such networks are themselves easier to develop and maintain where the other parties are close at hand and share many of the same norms and institutions.

## EXTENDING THE ANALYSIS: SOCIAL CAPITAL AND WELL-BEING

To get a full picture of the consequences of social capital for well-being, we must look beyond the level and rate of growth of GDP per capita. This requires that we first make some judgements about what are to be used as measures of welfare, and then establish some theoretical and empirical connections. This section will do so in two steps. First I shall review briefly some of the evidence linking social capital and health outcomes, since good health and longevity are included in various ways in all broader measures of well-being. Then I shall turn to consider some of the large literature describing the determinants of subjective well-being.

Does social capital save lives? It would seem so. One of the earliest papers, and still one of the most convincing, is a mortality study by Berkman and Syme (1979) of almost 5,000 residents of Alameda County, California, selected randomly in 1965 and followed thereafter for nine years. At the outset, the researchers collected data on several types of social networks as well as a number of important control variables. Four types of social contact were assessed: marriage, contacts with close friends and relatives, church membership, and informal and formal group associations. For each of the four types, individuals who had greater ties had lower mortality rates over the nine-year period. There was a hierarchy of effect, with marriage having the greatest effect, followed by close relatives and friends, church membership and memberships in other types of organization. A weighted index of these social contacts was found to predict not just all-cause mortality but also each of four subdivisions: ischemic heart disease, cancer, cerebrovascular and circulatory diseases, and an "all other" category including diseases of the respiratory and digestive systems, accidents and suicide. These are striking findings, but they are naturally open to fears of reverse causation. Is it not possible that those in poor physical and emotional health would be less able to develop and maintain social contacts, rendering suspect the conclusion that social networks were supportive of health? One of the great strengths of the Alameda County study is that the authors collected a full range of information on each participant's socio-economic status, self-reported health status at the time of the initial survey, year of death, health behaviour (e.g., smoking, drinking, physical inactivity, obesity, utilization of preventive health services) and availability and use of health-care services. The link between social networks and subsequent mortality was found to be independent of variations in all of the above control variables, thus reducing to essentially zero the likelihood that the 1965 social networks and the 1965-74 health outcomes were both due to differences in health status at the time of the initial survey. The authors conclude that although the precise pathways remain to be assessed, there are likely several mechanisms in play, since the results apply across many causes of death.



The results described above trace the linkages from an individual's social connections to his or her subsequent health experience. What about evidence at the community level? Do communities have characteristics that make them more likely to support good health and long life? One strand of literature in this vein (Wilkinson 1992; Ben-Shlomo, White and Marmot 1996; Kawachi et al. 1997; Mustard 1998; Wolfson et al. 1999) discusses a link between community-level income inequality and health status, higher mortality being found in communities with more unequal income distribution. Wolfson et al. (1999) show that this association is not simply a consequence of a non-linear individual-level effect of income on health, a possibility raised by Gravelle (1998). Kawachi et al. (1997) argue that social capital is to a large extent the mediating variable between income inequality and health outcomes. The relationship is also likely to vary from one health-care system to another, as universal health care, relative to a system of unequal coverage, might help to weaken or remove the link from income inequality to average health status. Thus Ross et al. (1999) argue that the universal availability of publicly financed health care in Canada may explain why the negative linkage between income inequality and health status that is significant for US states and metropolitan areas is not found in Canadian provinces or metropolitan areas. Putnam (2000, chapter 20) surveys many other studies, and also reports new evidence showing better health outcomes in states with higher values of social capital, even after adjusting for a number of key control variables.

Grjebine (2000) argues that societies are situated on a spectrum of respect for the rights of others, as established by laws and accepted norms of behaviour. He views a country's position on the spectrum to be a function of the degree of social cohesion and the extent to which important segments of its population have been marginalized. He suggests that driving manners and respect for the rules of the road are a good indicator of a country's social consensus, as shown by the number of traffic fatalities. Grjebine illustrates his proposition by contrasting France, whose holiday road toll he bemoans, with Norway, with its low rate of traffic fatalities and high scores on all measures of social capital and trust. I have done some preliminary tests of his proposition using traffic fatality and trust data for OECD countries (Helliwell 2000, 39) and find substantial support for his notion.

More than one third of the cross-country variance of late-1990s traffic fatalities is associated with mid-1990s national differences in average survey answers to the trust question described earlier. More research is needed to test the robustness of this result and to establish the likely pathways, ideally in a way that also explains the widespread, but not universal, drop in traffic fatalities over the past quarter of a century. Differences in social capital can help to explain international differences in the traffic and driving laws passed, as well as in the extent to which these laws are respected and enforced, whether by courtesy or threat of punishment. But there are also national and international changes in safety equipment, tourist traffic and mixes of vehicles to be considered. For the moment, the result is a hint rather than a demonstration that at the community level, as well as the individual level, social capital can save lives.

We have assessed thus far some of the linkages between social capital and health. Another key variable closely linked with both social capital and well-being is education. In all studies of differences among individuals in the extent of their connectedness and trust, education levels are uniformly the strongest and most consistent explanatory factors. This is potentially a powerful result, for if social capital can be shown to have an important effect on well-being, whether directly or through health or income, then calculations of the total returns to investment in education need to be broadened considerably from estimates based solely on the incomes of those with more education. A caution against the assumption that more education for all would be good for all is provided by Nie et al. (1996), who argue that while trust levels are indeed pushed upward by both individual and average education levels, participation in political and other organizations depends on relative rather than absolute education levels. If their findings are accurate, then raising average education levels will increase trust but not average participation levels. Although the issue is still unresolved, subsequent research (Helliwell and Putnam 1999) using more appropriate definitions of average education levels reestablishes the result that participation rates in most types of organization increase with both relative and average education levels.

We turn now to consider well-being more directly. The psychological study of well-being has for many decades been overshadowed by the study of negative states. One study found that articles examining negative states outnumbered those examining positive states 17 to 1 (Myers and Diener 1995). Nonetheless, the field has become increasingly active; a recent survey article (Diener et al. 1999) refers to more than 300 studies of subjective well-being published since Wilson's (1967) broad review more than 30 years ago.



Wilson's correlations profiled the happy person as a "young, healthy, well-educated, well-paid, extroverted, optimistic, worry-free, religious married person with high self-esteem, job morale, modest aspirations, of either sex and of a wide range of intelligence" (Wilson 1967, 294, quoted by Diener et al. 1999). Over the succeeding decades, less attention has been paid to the correlates of happiness, especially simple correlates, and much more attention has been paid to, and experimental research devoted to, the interdependencies, timing and causal pathways. Several strands of this research have special relevance for this paper.

Although good health still contributes to happiness, research into the subjective well-being of victims of paralysing accidents and winners of lotteries has shown a remarkable tendency for well-being to return to baseline levels (Brickman et al.

1978). Several theories are used to explain this phenomenon. The theory of endowments and contrasts (Tversky and Griffin 1991) holds that each new experience has offsetting effects on well-being. A good experience, such as a lottery win, a good meal or an exceptionally fine concert, raises well-being directly through what is called the endowment effect. However, it also enters the comparison set against which all subsequent experiences are assessed, or contrasted. If the contrast effect is weak, then the fine meal or concert leaves a glow that is not tarnished by the realization that subsequent meals and concerts are not of the same quality. If the contrast effect is dominant, then one exposure to something preferable may actually lower long-term subjective well-being. By the same token, if the contrast effect is strong, an accident victim who becomes a quadriplegic may so value his or her remaining powers and experiences as to be happier than when good health was simply taken for granted.

Another theory of the joint relevance of absolute and comparative experiences is that individuals have defined goals and aspirations, and are happier if the gaps between goals and reality are manageably small and appropriately diminishing (Michalos 1985). This leads to the question of how goals are set and adjusted. The answer turns out, naturally enough, to be complicated, with each individual's personality playing a role, along with aspirations and values absorbed from family, friends, community and the media. The role of the underlying personality, including a strong genetic influence, is a very powerful one. Results of studies with twins suggest that genetic differences account for some 40 percent of current subjective well-being and a larger share of negative emotionality (Tellegen et al. 1988).

Longer-term differences in subjective well-being, which are based less on current circumstances, are estimated to be 80 percent genetic in origin (Lykken and Tellegen 1996), although these underlying differences represent a relatively small proportion of interpersonal differences in subjective well-being at any particular time. The interaction among personality, local and community values, and life experiences helps to explain the variety of responses to what appear superficially to be similar events. Clearly, shared community values can play a role in influencing aspirations, and values and expectations can travel over long distances. If, as is often suggested, the content of domestic or foreign television and films inflates expectations about income or consumption levels, then psychological studies suggest a corresponding drop in well-being, independent of any change in actual income or consumption.

Given the established gaps between aspirations and performance, the link between actual income and subjective well-being is likely to depend on a variety of contextual variables, as well as personality traits and underlying values. The relations between income and subjective well-being have been studied cross-sectionally within a nation, over time for individuals or for aggregates, and across nations. Within communities or nations, the partial correlation varies from group to group, is not always significant and tends to be small in value. There is some indication from studies of high income earners (Diener et al. 1985) and from studies finding smaller increases in subjective well-being at higher income levels (Frey and Stutzer 2000) that there are diminishing returns to higher income, even when measured in relative terms. Lottery winners were found to be no happier than a control group of non-winners, despite their expressed satisfaction with having won the lottery (Brickman et al. 1978), although higher levels of subjective well-being were found in winners of football pools in the United Kingdom (Smith and Razzell 1975).

In a cross-national sample, a correlation was found between average per capita incomes and subjective well-being (Diener et al. 1999, 288), although Easterlin (1974, 1995) argues that this relation disappears at high income levels. In any event, the fact that good health, higher levels of education, responsive and corruption-free political systems, and average levels of social capital all have positive simple correlations with incomes per capita cautions against any inferences being drawn on the basis of simple correlations. Studies attempting to relate changes in aggregate income per capita to changes in subjective well-being across countries have found little or no relation (Oswald 1997). Disentanglement of the relations among incomes, comparison incomes and subjective well-being is likely to require individual-level data, sampled over time, along with the capacity to test a number of community-level, peer-group and national candidates for defining relative incomes.

The psychological literature offers two further cautions against the assumption, commonly made in economics, that if some is good, more is better - whether of income, information or range of choice. This assumption is presumably as common as it is because the negative consequences of satiation can be avoided by accepting the possibility of free disposal. Hence it is usually assumed that the more choice and the more information the better, as they permit the consumer to choose the best option from among a large set of possibilities. However, this assumption does not take into account the costs of decision-making and the possibility that knowing of more options will lessen satisfaction with the eventual choice. Iyengar and Lepper (1999) found that subjects offered a wider range of consumer choices were frequently less able to reach a decision and were more likely to regret the choices they did make. As trade becomes increasingly intra-industry in nature, and as the potential gains from trade are calculated more and more on the basis of the availability of product variety, we need to seriously consider the possibility that increased choice may reduce well-being.



The second caution relates to motivation. Researchers have found that those who described financial success as more important than goals related to self-acceptance, sense of community or affiliation reported lower levels of well-being, even when financial success had been achieved. Kasser and Ryan (1993, 1996) argue that this result may stem from the fact that subjective well-being is enhanced by progress towards intrinsic human needs but not towards extrinsic goals (such as wealth, beauty or fame). Subjective well-being is hence likely to flow from progress towards goals of the sort that Brunstein et al. (1998) describe as motive-congruent.

What of the direct effects of social capital on well-being? The early survey by Wilson confirmed marriage to be the social connection showing the strongest positive correlation with subjective well-being, but it dealt with other social ties to a much lesser degree. Putnam's recent results from the DDB Needham Life Style Survey (Putnam 2000, chapter 20) confirm marriage to be the most beneficial form of social interaction - equivalent to moving 70 percentiles up the income hierarchy, holding constant a range of other possibly confounding variables, such as age, gender, education, income and other forms of social engagement. Putnam's large DDB sample also allowed him to simultaneously assess the effects of education, income, and various kinds of social and civic engagement, so that each effect is an estimate of the marginal impact flowing directly rather than through one of the other channels. Thus the effect of education on subjective well-being, which he found to be very large - four years of education has the happiness equivalent of a doubling of income - is independent of the indirect effects of education on happiness, because it enables higher incomes, positive health habits, and social and civic engagement. Putnam also found a significant association between social engagement and happiness, with monthly club meetings, monthly volunteering, monthly entertaining and bi-weekly church attendance each having the happiness equivalent of four extra years of schooling or a doubling of income. Of course, these large income-equivalence measures are in part the mirror image of an earlier finding that increases in income - even increases in relative income - have fairly small impacts on subjective well-being. It is also important to remember that while these are appropriately estimated partial correlations, they are not free of the risk of reverse causation or of the possibility that both social engagement and well-being are the result of other, unmeasured, interpersonal differences. For example, the finding that certain personality types are genetically predisposed to happiness and extraversion suggests that such individuals will report higher subjective well-being and will also be more involved in their communities. These personality types routinely report higher levels of well-being and a more positive view of social interaction; hence they are more likely to engage in social interactions and to derive pleasure from them. Thus there is a need for more research that isolates personality types to permit more precise estimates of the implications of exogenous increases in social interaction for subjective well-being, abstracting from the influence of personality differences.

Measures of subjective well-being have also been used in traditional macroeconomics, such as in estimating the relative costs of inflation and unemployment and, more generally, in assessing the costs of unemployment. It has been shown that both unemployment and inflation lower subjective well-being by more than the usual measures of their economic cost. This is especially true for unemployment (Oswald 1997), so that estimates of the well-being trade-off between inflation and unemployment attach relatively more weight (Di Tella et al. 2001) to unemployment than is implied by conventional "misery indexes," which in the absence of any primary data simply assume that a 1 percentage point increase in the unemployment rate is as bad for welfare as a 1 percentage point increase in the inflation rate.

One of the most imaginative uses of well-being measures is to be found in recent work by Putnam (2001). He recognizes the need, much emphasized in this survey, to include both individual and community-wide levels of well-being determinants, in order to differentiate more clearly between absolute and relative effects. Putnam's research also suggests a framework for assessing and combining estimates of the direct and indirect effects of income, education, health and social capital on well-being. His preliminary equation explained individual-level US observations on subjective well-being by means of individual and community-level values for income, education and social capital. He found that individual levels of all three determinants had significant positive effects on well-being. State-wide measures of income had a significant negative coefficient, showing that most of the happiness effect of higher income is based on relative rather than absolute income. By contrast, the state-wide or county-level measures of social capital and education had positive effects, sometimes significantly so. One interpretation of these results is that education and social capital have positive externalities, while income has negative externalities, as assessed by means of changes in subjective well-being. Another way of expressing the point is that when other people have higher levels of education or community involvement, the typical individual has a greater sense of well-being, perhaps because he or she gains directly from contacts with these more educated and civic-minded people. By contrast, when other people (the Joneses) have higher incomes, it exposes the inferiority of one's own income, thus reducing subjective well-being.

## IMPLICATIONS FOR FUTURE RESEARCH AND PUBLIC POLICY

Several conclusions can be drawn from the foregoing survey. First, there are important linkages from measures of trust and social connectedness to well-being. Some of the influences appear to flow through economic channels, while most do not. Thus attempts to evaluate the importance of changes in trust and connectedness at the individual, community and national levels should not be limited to economic pathways.

The psychological literature on well-being provides a necessary caution against assuming that individuals function as though in an impersonal market environment marked by full information and limited interdependence of tastes, preferences and actions. In actual fact, individuals, families, communities and nations interact in the setting of norms, the establishment of institutions and the processes of daily life. More fundamentally, the social nature of human beings is never more obvious than when one reviews studies of subjective well-being. Although such studies are sometimes described as hedonistic and illustrative of a disturbing tendency towards a quest for self-gratification, the evidence shows that the structure and quality of social relations are in many ways fundamental to self-assessment of well-being.

If subjective measures of well-being are to be used to inform research and policy, there are many research gaps to be filled. As I have suggested, the primary task is to ensure that individual and community levels of variables are considered consistently, so that researchers can assess the importance of absolute and relative measures and the scope or radius of the comparison groups. The need for such an assessment in analysing the delivery and consequences of education, as stressed by Willms (2001), has relevance extending right across the social sciences.

The policy relevance of social capital and well-being research has many dimensions. For individuals, families and communities, the conclusion seems clear: well-directed efforts to remain connected are likely to be much more important than previously realized. Thus survey evidence of the sort presented by Putnam (2000) for the United States, indicating several decades of decreasing connectedness in those areas that psychological research has shown to be most important for the maintenance of well-being, ought to set off alarm bells and trigger new research. Are these trends towards increasing disengagement present in other countries? If they are found in varying degrees in different cultures and communities, why is this so? More generally, what are the geographic and political boundaries of the communities that matter most to individuals, and what are the mechanisms by which changes in one community are copied or rejected in another?



Although the primary implications relate to research needs, because so much remains to be discovered, there are some immediate implications for government policies. For example, there is evidence that the effects of government policies and decisions concerning education (Wolfe and Haveman 2001) and health are far broader, more complicated and more pervasive than previously recognized. At the risk of oversimplification, the evidence may be taken to suggest that non-economic pathways between health and education policies and well-being are more extensive and more important than those flowing through the abilities of individuals to find and keep productive employment. Many of these links flow through community ties, so that the ways in which policies are designed and implemented may be more important than the precise services that are provided. The service providers, and the perceived trustworthiness of the decision-makers and service providers, may be particularly important. In this respect, the fact that in several countries trust in government has declined faster and further than other forms of trust is especially troubling.

Trust is established slowly and lost easily. The ability to re-establish trust in government may be diminished in an era of mass communications and media spin. When messages are seen as sales pitches, their objectivity is bound to be doubted. Actions may speak louder than words in circumstances of diminished trust. All of this suggests not that policy should simply assume the public is sceptical but that it be designed and implemented with an eye to restoring a climate of trust, which is likely to require less top-down policy design, more acceptance of policy diversity to suit local styles and preferences, more experimentation, and more careful evaluation of what works and what does not. Evidence-based policy design and implementation seem more important than ever today, given the increasing evidence that government policies have had many unintended consequences for social capital, trust and the quality of civic life.

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