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Three questions about happiness

JOHN F. HELLIWELL*

Vancouver School of Economics, University of British Columbia, Vancouver, BC, Canada

Abstract: The paper by Frijters, Clark, Krekel and Layard makes a strong historical case for treating happiness as a primary measure of human welfare. They argue that it is now time to revamp the science of policy-making to re-establish this central tradition, building on recent progress in measuring and understanding subjective wellbeing. I agree with them. There are three key questions raised in or by their presentation that need further evidence. I shall try to address these in turn. The questions relate to how to measure happiness, how to measure and deal with inequality and how to take due account of the social context of wellbeing, including the need to achieve consistency between individual and societal happiness.

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How best to measure happiness to support public policies?

The Frijters *et al.* paper (this issue) recognizes but does not adjudicate among various measures of subjective wellbeing and indices constructed from a range of indicator variables. In my view, there is now enough evidence in hand to establish clear relationships among the available measures. The central role is and should be played, as argued by Aristotle, by people's own evaluations of the quality of their lives. When we were explaining in the World Happiness Report 2015 why we had no hesitation in using people's own life evaluations instead of some constructed index of social and economic indicators, here are the four main reasons we offered:

> First, we attach fundamental importance to the evaluations that people make of their own lives. This gives them a reality and power that no expert-constructed index could ever have. For a report that strives for objectivity, it is very important that the rankings depend entirely on the basic data collected from population-based samples of individuals, and not at all on what we think might or should influence the quality of their lives. Thus the

* Correspondence to: Vancouver School of Economics, University of British Columbia, 6000 Iona Dr, Vancouver, BC V6T 1L4, Canada. Email john.helliwell@ubc.ca

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> average scores simply reflect what individual respondents report to the Gallup World Poll surveyors. The Report editors have no power to influence the averages beyond the choice of the number of survey years to use to establish sufficiently large samples.
>
> Second, the fact that life evaluations represent primary new knowledge about the value people attach to their lives means we can use the data as a basis for research designed to show what helps to support better lives.
>
> Third, the fact that our data come from population-based samples in each country means that we can calculate and present confidence regions about our estimates, thus providing a way to see if the rankings are based on differences big enough, or not, to be statistically meaningful. If a number of adjacent ranked countries all have values well within the sampling range of variance, then it can be concluded that they deserve to be treated as having statistically equivalent average life evaluations.
>
> Fourth, all of the alternative indexes depend importantly, but to an unknown extent, on the index-makers' opinions about what is important. This uncertainty makes it hard to treat such an index as an overall measure of well-being or even to work out the extent to which variations in individual components are affecting overall scores. Even where this decomposition is done, there is no way of establishing its validity, since the index itself is just the sum of its parts, and not an independent measure of well-being. (Helliwell *et al.*, 2015, pp. 19–20)

Should positive and negative emotions be seen as competing with life evaluations as measures of human happiness, and possibly be preferred to them, as argued at different times by both Bentham and Kahneman (Kahneman *et al.*, 1997)? Or are positive emotions instead better seen, as argued by Aristotle, as contributing to life evaluations rather than being sufficient measures on their own? The empirical evidence from the Gallup World Poll, shown for example in table 2.1 of the World Happiness Report 2019, is that positive emotions (but not the absence of negative ones) contribute to life evaluations above and beyond the six main variables (gross domestic product (GDP) per capita, healthy life expectancy, social support, freedom, generosity and trust) used to represent different aspects of life. This finding was predicted by Aristotle and demonstrated more recently by Fredrickson (2004). Introducing positive emotions into the explanation of life evaluations significantly lowers the coefficients on a sense of freedom and having someone to count on in times of trouble, suggesting that positive emotions are likely mediators for how those variables influence life evaluations (e.g., Lyubomirsky & Layous, 2013). Analogously, positive emotions are strongly correlated with both of those variables, while negative emotions are most strongly correlated with absence of social support and presence of corruption.

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What about measures of a purposeful life, sometimes measured and treated as primary indicators of wellbeing? For example, a life purpose question is included as one of four wellbeing measures regularly collected by the UK Office for National Statistics (along with life satisfaction and two emotional measures: happiness yesterday and anxiety yesterday) as the central statistical base for the measurement of national wellbeing. The resulting measures are much more highly correlated with life evaluations than they are with either positive or negative emotions. Interestingly, having children at home, which is often found to be negatively correlated with life evaluations (presumably as contributors to excess demands on bandwidth that is sometimes scarce at those ages when family and career pressures combine), is positively correlated with the answers to the life purpose question (for experimental evidence to this effect, see Nelson *et al.*, 2013). In a similar vein, it might be expected, when further analysis is possible, that life purpose contributes to positive overall life evaluations, as Aristotle saw to be likely, and as has already been found in relation to a sense of freedom to make key life decisions. A sense of purpose is thus best seen, as is a sense of freedom, not as an independent overall measure of wellbeing, but rather as a key contributing factor, a right-hand-side variable likely to be useful in explaining overall life evaluations.

Evidence continues to accumulate showing that life evaluations, positive affect and negative affect, long thought to capture different aspects of wellbeing (Diener *et al.*, 1999), actually represent wellbeing in a consistent manner. Of these three ways of measuring subjective wellbeing, life evaluations provide the most encompassing indicator of the quality of life. The three most common forms of life evaluation are life satisfaction questions of the sort advocated by the Organisation for Economic Co-operation and Development (OECD, 2013), questions asking how happy people are with their lives as a whole and the Cantril ladder question used in the Gallup World Poll, wherein people are asked to think of their lives as a ladder, with the worst possible life for them as a 0 and the best as a 10. Where these different life evaluation questions have been asked of the same respondents in the same survey (satisfaction with life (SWL) and the Cantril ladder in one year of the Gallup World Poll, and SWL and happy with life regularly in the European Social Surveys), they tell structurally equivalent stories about the correlates of a good life, even though the means and shapes of the distributions of the answers differ among the questions.

Although positive and negative emotions are not suitable as overall measures of the quality of life, they are important in other key ways. Their short-term nature makes them natural for use as outcome variables in experimental and time-use studies. They are also the most important means of measuring weekend effects, which show up in daily emotional reports but not in life

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evaluations (Helliwell & Wang, 2015, figure 2), thus demonstrating the congruence of the two types of measure. Furthermore, the frequency of a number of positive and negative emotions (especially positive emotions; e.g., Cohen & Pressman, 2006) has been found to predict a number of future health outcomes, including mortality from both sickness and suicide. Only recently has it become more common to collect positive emotion and life evaluation data as part of the data used to track and diagnose physical health, so it is still too early to determine the relative importance of emotions and life evaluations as predictors of various health outcomes and, of course, vice versa.

Some have argued that it is misleading to use 'happiness' as a generic term to cover subjective wellbeing more generally. While 'subjective wellbeing' is more precise, it simply does not have the convening power of 'happiness'. The main linguistic argument for using happiness in a broader generic role is that happiness plays two important roles within the science of wellbeing, appearing once as a prototypical positive emotion and again as part of a cognitive life evaluation question. This double use has sometimes been used to argue that there is no coherent structure to happiness responses. The converse argument made in the World Happiness Reports (see also Helliwell & Aknin, 2018) is that this double usage helps to justify using happiness in a generic role, as long as the alternative meanings are clearly understood and credibly related. Evidence from a growing number of large-scale surveys shows that the answers to questions asking about the emotion of happiness differ from answers to judgmental questions asking about a person's happiness with life as a whole in exactly the ways that theory would suggest. Answers to questions about the emotion of happiness relate well to what is happening at the moment. Evaluative answers, in response to questions about life as a whole, are supported by positive emotions, as noted above, but they are also driven much more by a variety of life circumstances than are answers to questions about emotions, including income, health and social trust.

Only life evaluations among all of the individual or composite indicators listed by Frijters *et al.* (this issue) meet two primary tests for an encompassing measure. First, they are themselves overall assessments of the quality of life, without needing any further construction or manipulation. Second, since they are primary measures and all-encompassing in their scope, they provide the research base for answering the fundamental questions about the quality of life: What does tend to lead to a better life, as seen by those doing the living?

How should inequality be seen through the happiness lens?

How should wellbeing policies recognize and respond to the large and in many places growing gaps between the haves and have-nots? Frijters *et al.* (this issue)

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recognize the importance of distribution, but reach no specific conclusions. It is possible to go further. If life evaluations are the appropriate measure of individual and average wellbeing, then the spread of this distribution should be the primary measure of inequality. And if people on average share the preferences of those who have advocated a range of inequality-averse social welfare functions, we might expect to find that people are happier living in communities or nations where differences in wellbeing between the haves and have-nots are smaller. Furthermore, if that should turn out to be the case, then the weight that typical citizens attach to wellbeing inequality can be used to evaluate policies that affect the distribution of wellbeing. What does the evidence show?

Several international and domestic wellbeing surveys have been used to show that wellbeing inequality, as measured by the standard deviation of the distribution of Cantril ladder scores, had a larger and more pervasive negative link to national average scores than did measures of income inequality (Goff *et al.*, 2018). This effect was seen to persist even when using several ways to offset the negative bias imparted by top-end truncation of the ladder scale, and it was seen to be stronger for those individuals who reported a wish to see inequality reduced. Subsequent research has found that ratios of the percentiles of the national distributions of responses to the Cantril ladder question, which are better insulated against possible end-point effects, has an even stronger negative partial correlation with national average happiness levels. Average life evaluations are therefore already adjusted for the welfare effects of inequality, according to how the average respondent's happiness is correlated with the 75th to 25th percentile ratio. There is thus no need to further adjust the mean of the wellbeing distribution to reflect inequality, as this is already done by survey respondents. This analysis illustrates another advantage of having a direct measure of wellbeing. Those who have used GDP per capita as a proxy measure of welfare have had to adjust for inequality by assuming some form for the underlying welfare function to derive an implicit trade-off between average income and the inequality of its distribution (e.g., Atkinson & Brandolini, 2010). By contrast, having a directly measured umbrella indicator for wellbeing permits direct estimation to replace assumptions about the extent to which inequality, whether of income or wellbeing itself, affects welfare.

Policies that affect happiness will therefore have total effects on wellbeing that reflect their combined influence on the levels and distribution of wellbeing. In this way, policies that have their primary impact on people who are most disadvantaged will increase average wellbeing by more than just their effects flowing through the wellbeing of the disadvantaged themselves. This is because others are happier living in these new circumstances with more equally distributed wellbeing. Beyond this, there is also evidence that policies

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having a positive effect on overall social trust provide larger wellbeing gains for individuals who are unemployed, in ill health or subject to discrimination (Helliwell *et al.*, 2018), all of which are conditions that are more prevalent among those at the bottom end of the wellbeing distribution. Individuals within a society and among societies differ in the extent to which their happiness is affected by inequality (Alesina *et al.*, 2014). Goff *et al.* (2018) have found that those whose life evaluations are most negatively affected by happiness inequality are also in favor of policies directed to reduce inequalities. Average life evaluations are already adjusted for the welfare effects of inequality since they account for individuals' aversion to inequality, which is estimated to be of substantial size (Goff *et al.*, 2018). These estimates in turn can be used to help rank policies that have differing impacts on the inequality of wellbeing.

A clear focus on wellbeing inequality is by this means likely to deliver a more efficient set of policy options to be considered, and to be a better way of ranking their overall effects on the level and distribution of happiness.

Accounting for the social context of wellbeing

Another advantage of having a direct measure of utility is that it helps establish the relative importance of various factors influencing wellbeing, and perhaps thereby to increase the attention paid to factors not previously taken into account. Such is the case for variables measuring the nature and quality of the social context. Early happiness research did establish the importance of strong and satisfactory relationships with family and friends (Diener & Seligman, 2002). However, there were few systematic attempts to explore the comparable social contexts at work, in the community and more generally in the ways in which people interact with each other and with their governments. Early surveys tended to be relatively weak in relevant social measures, with some national and international social surveys providing notable exceptions.

When surveys did permit the relevant social contexts to be assessed, they were quickly seen to be of first-order importance, thereby triggering interest in more and better data. One key set of social variables, driven by interest in social capital (Putnam, 1994, 1995; OECD, 2001), relates to various aspects of trust and to individual and community-wide measures of social engagement. Where separate questions have been asked about the climate of trust in the workplace, the neighborhood, the police and in society in general, they all appear to be independently important (Helliwell & Putnam, 2004). And two-level models show that social trust and sociability have positive contextual effects above and beyond their individual-level effects (Bjørnskov, 2008). Positive contextual effects for measures of sociability tend to appear if the local community is defined on a sufficiently fine-grained basis (Han *et al.*, 2013).

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Valuing social capital

Using life satisfaction equations to estimate an equivalent financial value (via compensating differentials) implies high values for a trustworthy environment. At the global level, these have been estimated to average 20% of World Bank estimates of total wealth (comprising stocks of produced, natural, human and social capital for 132 countries with available data for social trust and capital stocks; Hamilton *et al.*, 2017).

In the workplace, to have a job where trust in management is 1 point higher on a 10-point scale has been estimated to be worth the equivalent, in terms of life satisfaction, to a 30% higher income (Helliwell & Huang, 2011).

One especially interesting trust question asks respondents how likely their lost wallet would be to be returned if found, alternatively, by a stranger, a neighbor or a police officer. To return a lost wallet is a generous prosocial act, going far beyond any formal definition of trustworthiness. As such, it is no surprise that people are much happier living in communities or countries where wallet return is thought to be likely. Wallet return questions were asked in 132 countries in the 2006 Gallup World Poll. Those with a high expected wallet return were significantly happier, by an amount more than equivalent to a doubling of income (Helliwell & Wang, 2011, table 2-d). These expectations of wallet return reflect underlying realities, as the average national rates of expected wallet return, if found by a stranger, are highly correlated ($r = 0.83$, $p < 0.001$) with the actual return of wallets for the 16 countries in both samples in a recent large experimental study (Cohn *et al.*, 2019).

Valuing the community

Having large-scale surveys that include some measures of social connection opens doors to measuring the importance of having a sense of belonging in one's local community. This, too, has turned out to be of first-order importance, both at the individual level and in explaining differences among communities in their average life evaluations. At the individual level, having a strong sense of belonging to one's local community is strongly supportive of life satisfaction, even after taking into account strong positive correlations with several types of trust (Helliwell & Wang, 2011, table 3). Estimates from the Canadian General Social Survey show that differences among respondents in their sense of belonging to their local communities explains more of their life evaluations than does household income. The sense of community belonging is itself estimated to depend on several measures of community strength, including several types of trust, the extent and warmth of social connections and time spent living in the neighborhood (Helliwell & Barrington-Leigh, 2012).

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Across communities, differences in the average sense of community belonging are even more important correlates of average life satisfaction. They explain (in terms of partial correlations measured by standardized β values) four times as much as do inter-community differences in income for life satisfaction among 1215 equally sized neighborhoods and communities defined by natural and built community boundaries (Helliwell *et al.*, 2019).

Valuing and enabling prosocial behavior

There is also a closely related research stream with strong implications for the design and delivery of public policies that studies the happiness consequences of prosocial motivations and behavior (Aknin *et al.*, 2019). Some evidence suggests that people who volunteer are happier and healthier than non-volunteers based on cross-sectional surveys in many countries (Borgonovi, 2008; Haski-Leventhal, 2009). In the same vein, Brown and colleagues (2003) found that mortality rates were lower for individuals who provided instrumental support to family, friends and neighbors, as well as emotional support to their spouse (see also Schwartz & Sendor, 1999; Thomas, 2009). Engaging in other forms of kindness, such as financial generosity, appears to have similar benefits. Charitable activity is also correlated with greater life evaluations, as individuals who recently donated money to charity reported greater levels of life satisfaction in most countries around the globe than non-donors (Aknin *et al.*, 2013a).

Establishing causal directions linking prosocial behavior and happiness

Since causation in these cases is likely positive in both directions, experiments have been used to establish causal linkages from prosocial actions to subjective wellbeing, where the latter is usually measured by positive affect, given the typically small-scale and temporary nature of the experimental interventions. Participants randomly assigned to engage in kind acts for other people or for the world reported greater positive emotions and decreased negative emotions compared to controls (Nelson *et al.*, 2016). Similarly, individuals randomly assigned to provide emotional support to partners displayed greater activation in pleasure centers of the brain than individuals not able to support their partners (Inagaki & Eisenberger, 2012). Moreover, people randomly assigned to spend money on others, called prosocial spending, report greater positive emotion than people randomly assigned to spend money on themselves (Dunn *et al.*, 2008, 2014). This latter finding has been detected in hundreds of people from rich and poor countries around the globe (Aknin *et al.*, 2013a), as well as among ex-offenders (Hanniball *et al.*, 2019). Even children

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under the age of two smile more when giving treats away to others than when receiving treats themselves (Aknin *et al.*, 2012).

When do prosocial acts work best to produce happiness?

Experiments have also been used to study the conditions under which prosocial acts are more likely to increase happiness, and the results confirm that social capital and prosocial behavior are mutually supportive. For example, prosocial actions have been shown to have greater happiness benefits if they facilitate social interactions (Aknin *et al.*, 2013b), if they are undertaken for altruistic rather than selfish motivations (Konrath *et al.*, 2012; Veerasamy *et al.*, 2015), if they are done voluntarily (Weinstein & Ryan, 2010) and if they are thought to be of greater benefit for others.

Happiness in its turn has long been known to incite prosocial actions (Isen & Levin, 1972). Although this makes unpacking the causal chain more complicated, such positive feedbacks create desirable multiplier effects from interventions that enable prosocial behavior to flourish.

Thus, prosocial acts produce greater happiness benefits in conditions where they are supported by strong social capital, as measured by trust and positive social interactions. And the resulting happiness improves the climate for subsequent prosocial behavior. This positive synergy provides many opportunities to improve the design and delivery of public services.

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