

HAPPINESS AND ECONOMIC POLICY

HAPPINESS: A NEW APPROACH IN ECONOMICS

BRUNO S. FREY* AND
ALOIS STUTZER**

A remarkable new development

Economics has substantially changed over the last few years. There is a noteworthy development underway. The Economics of Happiness provides an innovative theoretical and empirical analysis of individual well-being.¹ Based on these insights economics is likely to change considerably in the future.

Standard economics is being transformed in three respects:

- (1) Happiness and life satisfaction are measurable, which allows us to proxy the concepts of utility or individual welfare in a satisfactory way. What was considered a revolution in the 1930s, when Sir John Hicks, Lord Lionel Robbins and others claimed that utility cannot and need not be measured, has been reversed. Measuring happiness has allowed us to extend economic theory into various new areas. For instance, it is now possible to identify biases in decision-making. Standard economic theory based on the concept of “revealed preference” equates the utility expected when deciding between consumption bundles with the utility actually experienced when consuming them. Happiness research shows that individuals make biased decisions when choosing between alternatives. As a consequence

of these biases in judgment, they find themselves less satisfied with life than they could be according to their own evaluation (see, e.g., Kahneman and Thaler 2006; Stutzer and Frey 2007).

- (2) The economic analysis of subjective well-being teaches us how human beings value goods and services, as well as how they value social conditions. The effects of income, unemployment and other economic, social and genetic factors on well-being are empirically identified. The new insights include non-material values such as the value of autonomy and social relations with friends and family. Economic activity is seen as contributing to human happiness. This does not exclude that other goals such as loyalty, responsibility, self-esteem, freedom or personal development also matter.
- (3) Economic happiness research is relevant at two levels of policy, at the constitutional level where the rules of the game are determined and at the post-constitutional level where political decisions are taken within these rules. Happiness research shows that democracy and federalism are fundamental institutions that raise people’s life satisfaction. In the current politico-economic process, the life satisfaction approach makes it possible to capture individuals’ preferences and individuals’ welfare for public goods in a novel way. Aggregate happiness indicators may also become a relevant input in the post-constitutional political discourse.

A short introduction to the economic analysis of happiness

Happiness research in economics takes reported subjective well-being as a proxy measure for individual welfare. “Subjective well-being” is used in psychology for an individual’s evaluation of the extent to which he or she experiences positive and negative affect, happiness or satisfaction with life.² The economic study of individual happiness is based on recognizing that everyone has his or her own ideas

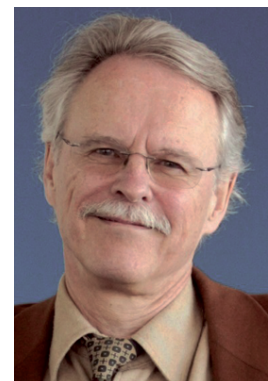
* Warwick Business School, University of Warwick and Institute for Empirical Research in Economics, University of Zurich, email: bsfrey@iew.uzh.ch.

** Department of Business and Economics, University of Basel, email: alois.stutzer@unibas.ch.

Both authors are also affiliated with CREMA – Center for Research in Economics, Management and the Arts, Switzerland.

¹ There are several surveys of the state of economic research on subjective well-being available in the form of journal articles (e.g. Di Tella and MacCulloch 2006, Dolan et al. 2008, Frey and Stutzer 2002b, Stutzer and Frey 2010) and books (e.g., van Praag and Ferrer-i-Carbonell 2004, Layard 2005, Frey and Stutzer 2002a, Frey 2008).

² The empirical study of subjective well-being used to be the province of hedonic psychology (for reviews, see Diener et al. 1999; Kahneman et al. 1999).



about happiness and the good life, and that revealed behavior is an incomplete indicator of individual well-being. Individuals' welfare can nevertheless be captured and analyzed: individuals can be asked how satisfied they are with their lives. They are assumed to be good judges of the overall quality of their lives.

The measures of subjective well-being, happiness and life satisfaction are elicited with (a) global self-reports in surveys, (b) the Experience Sampling Method, which collects information on individuals' actual experiences in real time in their natural environments, and (c) the Day Reconstruction Method, which asks people to reflect on how satisfied they felt at various times during the day (on the latter two techniques, see Stone et al. 1999; Kahneman et al. 2004). In recent research, neurophysiological correlates of subjective well-being have been found with electro-encephalography and neuroimaging techniques (Urry et al. 2004).

Reported subjective well-being W can be modeled in a microeconomic function $W_{it} = \alpha + \beta X_{it} + \varepsilon_{it}$. Thereby, true well-being serves as the latent variable. $X = x_1, x_2, \dots, x_n$ are known variables, like socio-demographic and socio-economic characteristics, or environmental, social, institutional and economic conditions for individual i at time t . Each factor that is correlated with reported subjective well-being can be identified separately. This approach has been successfully applied in numerous studies on the correlates of subjective well-being.

The relationship of income to happiness

Individuals with higher income can buy more material goods and services. It is therefore often taken as self-evident that higher income and consumption levels provide higher well-being. Research on subjective well-being allows us to test this notion empirically.

The analysis of the relationship between income and happiness at a particular point in time and place (country) has found that richer people, on average, report higher subjective well-being (see Clark et al. 2008 for a review). The relationship between income and subjective well-being, both in simple regressions and when a large number of other factors are controlled for in multiple regressions, proves to be statistically (usually highly) significant.

Another question is whether an increase in income over time raises reported subjective well-being. A

striking relationship is observed. There is evidence that people in industrialized countries are not becoming happier over time, despite economic growth. This was first observed and documented by Easterlin (1974). The Easterlin Paradox provoked reactions in two directions. One reaction was to challenge the empirical findings. Stevenson and Wolfers (2008), e.g., dismiss the long-term evidence for Japan as a result of changes in survey questions. Others document that there are Western countries like Denmark, Germany and Italy that experienced substantial real per capita income growth as well as a (small) increase in reported satisfaction with life in the 1970s and 80s (Diener and Oishi 2000). However, for the United States, a negative time trend is also found when individual characteristics are controlled for (Blanchflower and Oswald 2004). Another position that can be taken is to accept that there is no clear cut trend, positive or negative, in self-reported subjective well-being over periods of twenty to thirty years in rich countries. Instead, the results indicate that there is more to subjective well-being than just the absolute level of income.

Happiness research in economics has explored two processes so far disregarded in the discipline.

- (1) Additional material goods and services initially provide extra pleasure, but it is usually only transitory. Higher happiness with material things wears off. Satisfaction depends on change and disappears with continued consumption. This process, or mechanism, that reduces the hedonic effects of a constant or repeated stimulus, is called hedonic adaptation.
- (2) Social comparisons with relevant others matter.³ People compare their position relative to other individuals. Higher income people also have a higher relative income and consumption compared to others, and therefore a higher status in society.

The two processes suggest that people adopt ever higher aspirations. This can explain why individuals with high income at a given point in time report higher subjective well-being than those with low income (social comparison effect) while there is no clear statistical relationship between income per capita and average life satisfaction in industrialized countries over time (adaptation effect).

³ Many economists in the past (e.g., Veblen 1899 and Duesenberry 1949) have noted that individuals compare themselves to significant others with respect to income or consumption.

There is now also direct empirical evidence for the important role of income aspirations in individual welfare from two empirical studies for Germany and Switzerland (Stutzer and Frey 2004, Stutzer 2004). This was made possible by using two data sets that both include individual data on reported satisfaction with life, as well as income evaluation measures as proxies for people's aspiration levels. It is found that higher income aspirations reduce people's satisfaction with life. In Switzerland and the New German Laender, the negative effect of an increase in the aspiration level on well-being is of a similar absolute magnitude as the positive effect on well-being of an equal increase in income. The higher the ratio between aspired income and actual income, the less satisfied people are with their life, *ceteris paribus*. This supports the notion of a relative utility concept.

The relationship between unemployment and unhappiness

The new classical macroeconomics argues that unemployment is voluntary: those not working just refuse to do so at the prevailing wage rate. An important reason why the reservation wage is higher than the prevailing wage is that unemployment benefits are too high. People prefer not to work and to cash in these benefits. Happiness research in economics offers a new approach to contribute productively to this debate about the individual and social costs of unemployment.

Unemployment first of all reduces the individual well-being of those personally affected. In their innovative work for Britain, Clark and Oswald (1994, p. 655) summarize their results as follows: "Joblessness depresses well-being more than any other single characteristic including important negative ones such as divorce and separation." For Germany, based on individual panel data, Winkelmann and Winkelmann (1998) find a negative effect of personal unemployment on life satisfaction that would require a seven-fold increase in income to compensate. Importantly, in these two analyses, indirect effects (like income losses) that may, but need not, accompany personal unemployment are kept constant. Being unemployed therefore has psychic costs over and above the potential decrease in the material living standard.⁴

⁴ For references and a discussion of psychological and social factors determining the drop in life satisfaction of people who become unemployed, see Frey and Stutzer (2002a: 95–109). The specific effect of social work norms on unemployed people's subjective well-being is studied empirically in Clark (2003) and Stutzer and Lalive (2004).

High unemployment rates also have non-negligible effects on people who are not personally affected by unemployment. Based on survey data from population samples from European Union member countries between 1975 and 1992, Di Tella et al. (2003) show that aggregate unemployment decreases average reported life satisfaction. The potential reasons include direct effects of unemployment on crime and public finances, but also workplace specific aspects like changes in working hours and salaries. Moreover, high unemployment also affects anticipated economic distress, as, for instance, the probability that a worker may himself experience a spell of unemployment in the future increases. A large literature documents the importance of self-reported job security on individuals' well-being (see, e.g., Green 2006).

In an empirical study, Luechinger et al. (2010) isolate the latter source of reduced individual welfare: the negative anticipatory feelings of angst and stress due to economic insecurity. In order to distinguish between general negative externalities of unemployment and changes in economic risks to individuals, workers are studied in two sectors of the economy that differ fundamentally in their exposure to economic shocks – people working in the private sector and those working in the public sector. Public sector employees usually enjoy extended protection from dismissal and work in organizations that rarely go bankrupt. Thus, for institutional reasons these workers face a reduced risk of losing their jobs in comparison with workers in the private sector. In their study for Germany, they find that people working in the private sector are affected more strongly by general economic shocks than are those working in the public sector suggesting that a substantial fraction of the psychic costs brought about by general unemployment is due to increased economic insecurity.

The discussion reveals that research on happiness has identified two major aspects that are largely neglected in standard economics. (1) Unemployment is not simply an underutilization of resources and not simply a decision between choosing to stay employed (at a low wage), and becoming unemployed (with unemployment benefits). Individuals experience a loss in psychic well-being when being unemployed beyond the reduction in income involved. (2) The utility losses experienced go beyond those who are actually unemployed. Individuals with a job are also negatively affected by a higher unemployment rate, an important reason being that they experience a rise in economic insecurity.

The Life Satisfaction Approach

One of the major contributions of happiness research directly relevant for public policy refers to the new instruments that enable individuals' preferences and individuals' welfare to be captured. As a consequence, insights of happiness research increase political competition in the current politico-economic process. There is a demand for happiness research by politicians, public officials and representatives of special interest groups as they hope to strengthen their position in the competition for votes or in bargaining for government policies. A case in point is information about the value of public goods and public bads for cost-benefit analyses.

Within happiness research, a promising complementary method is emerging that avoids some of the major difficulties inherent in previous approaches.⁵ It is called the Life Satisfaction Approach (LSA; for a review, see Frey et al. 2010). With reported subjective well-being as a proxy measure for individual welfare, public goods can be directly evaluated in utility terms. The marginal utility of public goods or the disutility of public bads is estimated by correlating the amount of public goods or public bads with individuals' reported subjective well-being. By measuring the marginal utility of a public good or the marginal disutility of a public bad, as well as the marginal utility of income, the tradeoff ratio between income and the public good can be calculated.⁶

The LSA has, for example, been used to value air pollution (Luechinger 2009; Welsch 2006), airport noise nuisance (van Praag and Baarsma 2005) and terrorism (Frey et al. 2009). Recent studies applying the LSA have already reached a high standard, and the preconditions for its application are better understood and formulated. What has so far been an academically driven development of a new method may soon become an empirical tool that is in demand in the political process.

Concluding remarks

Only a selection of possible applications and recent advances in the economic study of individual happi-

ness can be presented here. Many more have been undertaken. No attempt has been made to be comprehensive. Rather, the intention is to convey to the reader that happiness research opens new ways of tackling old questions and makes it possible to investigate issues in innovative ways that have so far been difficult, or even impossible, to address empirically. The examples provided cover several fields of study, ranging from income aspirations and unemployment to limited willpower and utility misprediction. This suggests that the new approach is likely to be useful for many different issues in economic research.

References

- Blanchflower, D. G. and A. J. Oswald (2004), "Well-Being Over Time in Britain and the USA", *Journal of Public Economics* 88(7–8), 1359–86.
- Clark, A. E. (2003), "Unemployment as a Social Norm: Psychological Evidence from Panel Data", *Journal of Labor Economics* 21(2), 323–51.
- Clark, A. E. and A. J. Oswald (1994), "Unhappiness and Unemployment", *Economic Journal* 104(424), 648–59.
- Clark, A., P. Frijters and M. Shields (2008), "Relative Income, Happiness and Utility: An Explanation for the Easterlin Paradox and Other Puzzles", *Journal of Economic Literature* 46(1), 95–144.
- Di Tella, R. and R. MacCulloch (2006), "Some Uses of Happiness Data in Economics", *Journal of Economic Perspectives* 20(1), 25–46.
- Di Tella, R., R. MacCulloch and A. J. Oswald (2003), "The Macroeconomics of Happiness", *Review of Economics and Statistics* 85(4), 809–27.
- Diener, E. and S. Oishi (2000), "Money and Happiness: Income and Subjective Well-Being Across Nations", in E. Diener and E. M. Suh, eds., *Culture and Subjective Well-Being*, MIT Press, Cambridge, Mass., 185–218.
- Diener, E., E. M. Suh, R. E. Lucas and H. L. Smith (1999), "Subjective Well-Being: Three Decades of Progress", *Psychological Bulletin* 125(2), 276–302.
- Dolan, P., T. Peasgood and M. White (2008), "Do We Really Know What Makes Us Happy? A Review of the Economic Literature on the Factors Associated with Subjective Well-Being", *Journal of Economic Psychology* 29(1), 94–122.
- Duesenberry, J. S. (1949), *Income, Savings and the Theory of Consumer Behavior*, Harvard University Press, Cambridge, Mass.
- Easterlin, R. A. (1974), "Does Economic Growth Improve the Human Lot? Some Empirical Evidence", in P. A. David and M. W. Reder, eds., *Nations and Households in Economic Growth: Essays in Honour of Moses Abramowitz*, Academic Press, New York and London, 89–125.
- Freeman, A. M., III. (2003), *The Measurement of Environmental and Resource Values: Theory and Methods*, Resources for the Future, Washington, DC.
- Frey, B. S. (2008), *Happiness: A Revolution in Economics*, MIT Press, Cambridge, Mass.
- Frey, B. S. and A. Stutzer (2002a), *Happiness and Economics: How the Economy and Institutions Affect Well-Being*, Princeton University Press, Princeton and Oxford.
- Frey, B. S. and A. Stutzer (2002b), "What Can Economists Learn from Happiness Research?", *Journal of Economic Literature* 40(2), 402–35.
- Frey, B. S., S. Luechinger and A. Stutzer (2009), "The Life Satisfaction Approach to the Value of Public Goods: The Case of Terrorism", *Public Choice* 138(3–4), 317–45.

⁵ For different established stated preference and revealed preference methods for the valuation of public goods see, e.g., Freeman (2003).

⁶ The LSA is compared to the standard non-market valuation techniques in Kahneman and Sugden (2005) and Dolan and Metcalfe (2008).

Frey, B. S., S. Luechinger and A. Stutzer (2010), "The Life Satisfaction Approach to Environmental Valuation", *Annual Review of Resource Economics* 2, 139–60.

Green, F. (2006), *Demanding Work. The Paradox of Job Quality in the Affluent Economy*, Princeton University Press, Princeton.

Kahneman, D. and R. Sugden (2005), "Experienced Utility as a Standard of Policy Evaluation", *Environmental and Resource Economics* 32(1), 161–81.

Kahneman, D. and R. H. Thaler (2006), "Anomalies: Utility Maximization and Experienced Utility", *Journal of Economic Perspectives* 20(1), 221–34.

Kahneman, D., E. Diener und N. Schwarz, eds. (1999), *Well-Being: The Foundations of Hedonic Psychology*, Russell Sage Foundation, New York.

Kahneman, D., A. B. Krueger, D. A. Schkade, N. Schwarz and A. A. Stone (2004), "A Survey Method for Characterizing Daily Life Experience: The Day Reconstruction Method", *Science* 306(5702), 1776–80.

Layard, R. (2005), *Happiness: Lessons from a New Science*, Penguin, New York.

Luechinger, S. (2009), "Valuing Air Quality Using the Life Satisfaction Approach", *The Economic Journal* 119(536), 482–515.

Luechinger, S., S. Meier and A. Stutzer (2010), "Why Does Unemployment Hurt the Employed? Evidence from the Life Satisfaction Gap between the Public and the Private Sector", *Journal of Human Resources* 45(4), 998–1045.

Stevenson, B. and J. Wolfers (2008), *Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox*, Brookings Papers on Economic Activity, Spring, Brookings Institution Press, Washington, DC.

Stone, A. A., S. S. Shiffman and M. W. DeVries (1999), "Ecological Momentary Assessment", in D. Kahneman, E. Diener and N. Schwarz, eds., *Well-Being: The Foundations of Hedonic Psychology*, Russell Sage Foundation, New York, 26–39.

Stutzer, A. (2004), "The Role of Income Aspirations in Individual Happiness", *Journal of Economic Behavior and Organization* 54(1), 89–109.

Stutzer, A. and B. S. Frey (2004), "Reported Subjective Well-Being: A Challenge for Economic Theory and Economic Policy", *Schmollers Jahrbuch: Zeitschrift für Wirtschafts- und Sozialwissenschaften* 124(2), 191–231.

Stutzer, A. and B. S. Frey (2007), "What Happiness Research Can Tell Us About Self-Control Problems and Utility Misprediction", in B. S. Frey and A. Stutzer, eds., *Economics and Psychology. A Promising New Cross-Disciplinary Field*, MIT Press, Cambridge, Mass., 169–95.

Stutzer, A. and B. S. Frey (2010), "Recent Advances in the Economics of Individual Subjective Well-Being", *Social Research: An International Quarterly* 77(2), 679–714.

Stutzer, A. and R. Lalive (2004), "The Role of Social Work Norms in Job Searching and Subjective Well-Being", *Journal of the European Economic Association* 2(4), 696–719.

Urry, H. L., J. B. Nitschke, I. Dolski, D. C. Jackson, K. M. Dalton, C. J. Mueller, M. A. Rosenkranz, C. D. Ryff, B. H. Singer and R. J. Davidson (2004), "Making a Life Worth Living: Neural Correlates of Well-Being", *Psychological Science* 15(6), 367–72.

van Praag, B. M. S. and B. E. Baarsma (2005), "Using Happiness Surveys to Value Intangibles: The Case of Airport Noise", *Economic Journal* 115(500), 224–46.

van Praag, B. M. S. and A. Ferrer-i-Carbonell (2004), *Happiness Quantified – A Satisfaction Calculus Approach*, Oxford University Press, Oxford.

Veblen, T. (1899), *The Theory of Leisure Class*, Modern Library, New York.

Welsch, H. (2006), "Environment and Happiness: Valuation of Air Pollution Using Life Satisfaction Data", *Ecological Economics* 58(4), 801–13.

Winkelmann, R. and L. Winkelmann (1998), "Why Are the Unemployed So Unhappy? Evidence from Panel Data", *Economica* 65(257), 1–15.