Chapter 2 Happiness: Research and Policy Considerations

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1 On the State of Happiness Research

Some years ago, not even social science professionals knew about the modern, empirically orientated research on happiness. The situation has changed dramatically since then. Happiness research belongs to the hottest subjects not only in economics but far beyond. This fact is revealed by the great interest young scholars pay to the new subject.

Happiness research has been covered by a substantial number of survey articles (e.g. Frey and Stutzer 2002a; Dolan et al. 2008; Stutzer and Frey 2010; MacKerron 2012); books (e.g. Frey and Stutzer 2002b; Layard 2005; Gilbert 2006; Diener and Biswas-Diener 2008; Frey 2008; Easterlin 2010; Graham 2011); and collections of articles (e.g. Kahneman et al. 1999; Easterlin 2002; Frey and Stutzer 2013). As some of these contributions are quite recent and examine the subject well, there is no need to provide yet another overview of happiness research in this book. Let it suffice to outline five reasons that shall show why it is still a fascinating field and well worthwhile to be pursued:

1. Happiness research goes far beyond standard economics as it is still included in most textbooks and even scientific treaties. While the subject has recently received great prominence, it is not yet accepted by the more conservative branch of economics.

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- 2. Happiness research is based on a skillful use of survey methods. The task is to capture the subjective well-being of individuals. This approach firstly contrasts to standard economics, which focuses on objective measures of what is considered individual "well-being", such as income. Secondly, the survey approach also contrasts to the recent surge of laboratory experiments, which seek to find evidence on human behavior under controlled, and therefore often contrived, conditions.
- 3. Happiness research has become politically most relevant. This is illustrated by the statements made by the governments of France, the United Kingdom and China, which claim to be pursuing the happiness of their respective populations (see, for instance, the Sarkozy Report by Stiglitz et al. 2009). More recently, the United Nations have engaged in an effort to develop practical rules and approaches for the pursuit of this goal (Diener 2005; Royal Government of Bhutan 2012).
- 4. Happiness research is one of the only truly interdisciplinary endeavors. It has been championed by social psychologists, in particular Ed Diener (1984). Economists were even earlier (van Praag 1968; Easterlin 1974). Sociologists and political scientists are also very active in the field (e.g. Lane 2000).
- 5. There are many open and little explored issues in happiness research waiting for adequate and stimulating analyses. Examples are:
 - The causality issue, in particular between income and happiness. People with higher incomes are clearly happier but happier people are also able to gain a higher income. It is difficult to empirically distinguish the strength of the effect of income on happiness, and that of happiness on income.
 - The measurement of happiness. There are three major types of subjective wellbeing: affective or short run; life satisfaction, where an overall assessment of one's life is considered; and the most fundamental concept of eudaimonia, which refers to a "good life". The refinement of the tools that allow measuring these different dimensions of happiness is an ongoing process.
 - The determinants of happiness, many of which are not yet well explored. This applies in particular to how consumption influences subjective well-being. It is known that psychological factors such as the inability to correctly predict the utility derived from future consumption and limited self-control have a considerable impact on well-being.
 - The effects of war and civil unrest on people's well-being. Little is known about these, although it is intuitively obvious that deadly strife strongly reduces happiness (Frey 2011a, 2012).
 - The policy implications. While happiness research has provided us with valuable insights of what makes people satisfied with their lives, it remains open in what way this knowledge can and should be used for policy purposes (e.g. Frey and Stutzer 2006, 2010, 2012; Frey 2011b; Frey and Gallus 2012, 2013),

For reasons of space, this text focuses on one of these issues, namely the use of the results gained from happiness research for public policy.

2 Happiness Policy

There are two levels at which policy decisions are taken, as pointed out by the constitutional point of view (Buchanan and Tullock 1962; Frey 1983; Mueller 1996): In the current politico-economic process decisions are taken within given rules of the game. At the constitutional level these rules as such are determined. Happiness research can affect public policy at both levels.

2.1 Happiness Research Within Given Rules of the Game

Happiness research is directly relevant for public policy due to the new instruments, which allow for the measurement of individuals' preferences and welfare. As a consequence, political competition in the current politico-economic process is intensified. Politicians, bureaucrats and members of interest groups are interested in the results of happiness research as they hope to strengthen their position in the competition for votes or in the bargaining about government policies. They have a stake in the knowledge that is gained about the value to individuals of certain public goods or public bads.

2.1.1 How Individuals Value Public Goods

Providing public goods is a basic function of government. Government agencies are increasingly required by law to provide cost-benefit analyses of government programs. The benefits from public goods are difficult to capture since they are not traded on economic markets. A number of different approaches for the evaluation of public goods have been developed (Freeman 2003). Two kinds of valuation methods have mainly been used:

- *Revealed preference methods.* The behavior of individuals is employed to infer the value they attribute to public goods by examining their market transactions in private goods. Examples are the hedonic market approach and the travel cost approach.
- *Stated preference methods.* Individuals are directly asked to attribute a value to a particular public good. The most important method is contingent valuation.

Based on happiness research, a new and promising method emerges: The "*Life Satisfaction Approach*" (see Frey et al. 2010). Reported subjective well-being is a proxy measure for individual welfare with which public goods can be directly evaluated. The marginal utility of public goods or the disutility of public bads is estimated by identifying the effect of public goods or public bads on happiness. This approach avoids major problems inherent in the other evaluation methods. The contingent valuation method often faces the problem that the questions asked are perceived to be hypothetical and unfamiliar to the respondents. They may also fail to adequately consider the effect of their budget constraints and of substitutive

goods. Superficial answers are likely to result (Kahneman and Knetsch 1992). The respondents may also answer strategically in order to support the provision of a public good or to prevent that of a public bad. The Life Satisfaction Approach is not affected by these problems. The respondents need only state their own life satisfaction with some degree of precision (Kahneman and Sugden 2005; Dolan and Metcalfe 2008). Thus, the Life Satisfaction Approach has for instance been used to value airport noise nuisance (van Praag and Baarsma 2005), terrorism (Frey et al. 2009), droughts (Carroll et al. 2009), air pollution (Welsch 2006; Luechinger 2009) and flood hazards (Luechinger and Raschky 2009). To our knowledge, there are no such studies on public goods rather than on public bads. The Life Satisfaction Approach is likely to become a widely used empirical method that will help inform the political process.

2.1.2 Aggregate Happiness Indicators as Complements to GNP

National happiness indicators have increasingly been used to complement the most commonly employed measure of a country's degree of development and prosperity, namely the Gross National Product (GNP). France, the United Kingdom, Australia and several other nations now engage in producing national indicators of well-being. The European Social Survey provides comparative information on a wide range of aspects of subjective well-being (Huppert et al. 2009).

Aggregate happiness indicators have several interesting qualities in comparison to traditional measures of economic activity (see also Frey and Stutzer 2010):

- Happiness measures combine *non-material* aspects of human well-being in the form of social relations, autonomy, and self-determination. These play no role in the standard national accounts.
- Happiness measures include *outcome* aspects of components inadequately included in the national product via input measures. This holds in particular with respect to government activity in which GNP is measured by the costs of material and of labor.
- Measures of happiness consider *subjectively* evaluated outcomes and are thus in line with the fundamental methodological approach of economics.

In sum, aggregate happiness indicators provide new and complementary information about preference satisfaction. This information will become a relevant input for the political discourse.

2.2 Happiness Research in the Design of the Rules of the Game

The results of happiness research help to inform the public about the institutions that are most amenable to their own life satisfaction. Concerning the stage where the rules of the game are set, research has shown the important role of direct democratic decision making in citizens' well-being (Frey and Stutzer 2000), the effect of mandatory retirement and mandatory schooling on happiness (Charles 2004; Oreopoulos 2007), the consequences of social work norms and birth control rights on women's well-being (Pezzini 2005; Lalive and Stutzer 2010), and the relation between working time regulation and people's subjective well-being (Alesina et al. 2005).

3 Maximization of Happiness by Government?

3.1 Supporting Arguments for Happiness Maximization

Standard microeconomics remains fundamentally marked by the ordinalist revolution. Individual welfare is taken to be measurable only in an ordinal, but not in a cardinal way. Interpersonal comparisons of utility are thought to be impossible. Here the countermovement of happiness research sets in. Both cardinality and interpersonal comparability may be less of a problem on a practical level than on a theoretical one (Kahneman et al. 2004: 432). For many applications, milder assumptions suffice. An important example is the valuation of public goods and public bads, based on the Life Satisfaction Approach discussed above. Life satisfaction scores are reported on an ordinal scale. Using adequate statistical techniques, like ordered probit or ordered logit estimates, the ordinal information is sufficient to measure the value of public goods and to compare their marginal utility to the marginal utility of income. This allows us to calculate compensating surplus. The Life Satisfaction Approach does not require interpersonal comparability at the level of the individual to evaluate public goods. It suffices that the specific response frames of individuals do not systematically vary over space or over time between different groups exposed to different levels of a public good.

If cardinal measurement and interpersonal comparisons of happiness are considered to be possible, it may be claimed that one or more social welfare functions exist which could be used to derive policies for democratic governments. An unweighted sum of individual cardinal welfare or happiness could be considered 'democratic' as it attributes equal weight to each person.

National happiness as a proxy for social welfare meets an old dream in economics. Bentham (1789) and later on Edgeworth (1881) suggested that maximizing social welfare should be the ultimate goal of economic policy. This idea was introduced into modern economics by Tinbergen (1956) and Theil (1964). In the recent literature, the notion that national happiness should be a guideline for policy has been championed by Layard in his influential book "Happiness" (2005). The proposal seems to support the idea of social welfare maximization. However, for a number of important reasons, the presumed "socially optimal" values for the various determinants of happiness should not be used as policy targets to be pursued by democratic governments.

3.2 Objections to Happiness Maximization

Classical welfare economics, shaped by Robbins (1938) and Hicks and Allen (1934), has for a long time raised fundamental arguments against the use of the concept of aggregate social welfare instead of individual welfare. The two most important and partially interconnected (Sen 1970) objections to the concept of aggregate social welfare are, first, the impossibility of cardinal measurement and of interpersonal comparisons of *individual* welfare and, second, the impossibility theorem relating to *aggregate* or *social* welfare.

Based on the arguments and the evidence presented above, it becomes evident that the first reason is not valid for reported subjective well-being. There is indeed a satisfactory empirical approximation to individual welfare. In contrast, the impossibility of aggregating individual preferences to a social welfare function under non-dictatorial conditions remains fundamental. Arrow (1951) and the subsequent field of "Social Choice" have mathematically proved that, given a number of "reasonable" conditions, no social welfare function exists. Individual orderings of outcomes cannot in general be ranked consistently, except in a dictatorship. This impossibility result has proved to be robust to modifications of the assumptions (Sen 1970, 1999; Slesnick 1998). Hammond (1991: 220-21) concludes: "There is no way we can use empirical observations on their own to produce an ethically satisfactory cardinalization, let alone an ethically satisfactory social welfare ordering". Empirical observations are not sufficient to produce an acceptable social welfare function in a democracy. It is essential to consider additional aspects. Measuring individual welfare in terms of happiness does not solve the fundamental impossibility result. The social welfare maximization approach disregards political institutions and processes. It corresponds to the "benevolent dictator" view rejected by Constitutional Political Economy (Buchanan and Tullock 1962; Frey 1983; Brennan and Buchanan 1986; Mueller 1996, 2003; Vanberg 2005). A "socially optimal" policy cannot be imposed from above, i.e. by maximizing an aggregate social welfare function. Democracy is characterized by constitutionally designed rules and institutions. These allow citizens to reveal their preferences, while politicians (the government) are given an incentive to put them into reality.

3.2.1 Strategic Reactions by Citizens

The social welfare maximizing approach, based on empirically estimated happiness functions, disregards the institutions on which democracy is based. Citizens are held passive and they are alienated from the state. A happiness maximization approach in this regard is inimical to democracy. It disregards the interaction between citizens and politicians, the influence of interest groups and the resulting information and learning processes.

Once the citizens know that their government uses the national happiness index to pursue its policy, the respondents to a happiness survey have an incentive to misrepresent their own well-being. Citizens leaning to the left are reluctant to state that they happy in a society ruled by a right-wing government. Conversely, they tend to indicate a higher level of happiness if a left-wing government rules their nation. Up to now, the answers to the surveys could be considered, and have actually been shown (Diener et al. 2012), to be truthful. This is no longer the case when the respondents become aware that their evaluations enter a national happiness index that is used for political purposes. Citizens start to act strategically, resulting in a distorted national happiness indicator which can no longer be trusted to truly represent the citizen's subjective well-being. While such reactions to government interventions lead to similar problems in other policy areas, they are especially salient in the case of happiness indicators. Such indicators are based on subjective answers to surveys, which can more easily be manipulated than more objective data. Such a reaction reflects a more basic phenomenon, which even applies to the natural sciences. The Heisenberg Uncertainty Principle states that the observation of a system by itself fundamentally disturbs it. In the social sciences, both the observation and public reporting can change the actual behavior of the people involved. This reaction is related to Goodhart's Law and the Lucas Critique (see Chrystal and Mizen 2003). According to Goodhart's Law (1975), any observed statistical relationship - such as the happiness function - will tend to collapse once pressure is placed upon it for control purposes. The Lucas Critique (1976) deals with econometric modeling. When the policy target changes (for instance when an aggregate happiness indicator is introduced), the expectations of private agents adjust, which changes behavior in a rational-expectations model – the result being that the previous estimates are no longer accurate.

Another important aspect relates to the fact that people have preferences for *processes* over and above outcomes, called 'procedural utility' (for a survey see Frey et al. 2004). These processes raise their well-being from living and acting under institutionalized processes. They contribute to a positive sense of self, and address innate needs of autonomy, relatedness and competence (Ryan and Deci 2001). Individuals enjoy procedural utility as income earners and consumers; as citizens subjected to different political and societal procedures; in organizations, as employees confronted with different organizational procedures; and in law, as litigants (Frey and Stutzer 2005; Olken 2008). Procedures matter greatly to people. They experience a significant loss in autonomy, and therefore reduced well-being, when they are just asked in a survey about their happiness, while leaving the rest to government.

Happiness research also fails to provide a rule about the scope and limitations of government intervention in the private sphere. For example, should the government be allowed to prohibit the consumption of alcohol if this were to raise the population's happiness in the long run, or should this be left to the discretion of individuals?

Even more importantly: To what extent should the government be allowed to change the preferences of its citizens? Many interventions might affect people's well-being in the future due to a change in preferences. Two cases are discussed:

- The government could adopt a policy reducing people's material aspirations. As a result they will be more appreciative of future material benefits.
- The government could raise the National Happiness Indicator by inducing people to take a "happiness pill". Should such policies be accepted? Abstracting from possible health issues, the potential of such an intervention seems promising: People would be more productive (Oswald et al. 2006). They would be friendlier towards one another and engage in more pro-social behavior. A self-reinforcing trend would be likely to materialize since happiness is contagious (Christakis and Fowler 2011). Inequalities in people's genetic dispositions to experience happiness would be corrected for. Given that 50-80 % of a person's feeling of happiness is attributed to the "genetic lottery" (Walker 2011: 129), this is not a minor intervention. However, the negative consequences would be tremendous: The work motivation for some tasks would decrease and important products and services would cease to be procured. A happiness pill would furthermore negate the importance of the procedure with which happiness is attained (see, e.g., Frey et al. 2004). It would eliminate downsides, which - although painful - serve as an important reference point allowing people to actually perceive moments of happiness. Lastly, governments would make use of this new drug not to the benefit of all, but rather to their own advantage.

Both issues, the reduction of people's aspirations and the dispensation of a happiness pill, must be decided at a fundamental level. It cannot be answered within the happiness maximization calculus alone. A feasible and theoretically consistent approach is to resort to the constitutional level, where people make such fundamental decisions behind the veil of uncertainty.

The most fundamental issue is whether happiness actually is the ultimate goal to be maximized. Other valid goals, for instance, are loyalty, responsibility, selfesteem, freedom or personal development. Whether happiness is the prime goal of individuals, or whether it is only one of several goals, has for centuries been a controversial issue in philosophy (Sugden 2005; Bruni 2006; McMahon 2006; Bruni and Porta 2007).

3.2.2 Manipulation by Government

The decision to maximize social welfare in terms of a national happiness has so far been assumed not to influence the measurement of subjective well-being. This assumption is highly debatable. Indeed, the political relevance of aggregate happiness would certainly induce the government, public bureaucracy and interest groups to manipulate and distort the national happiness index in their favor. Such behavior has been shown to be at play with other politically important economic indicators. As the rate of unemployment has become a sensitive issue among the voters, governments have started to influence it. They aspire to paint a better picture of the state of the labor market than what is actually the case. For instance, people who have been unemployed for a long time are no longer defined as being in the workforce; this lowers the official unemployment rate. The way of measuring budget deficits was manipulated by a considerable number of European countries when the rules for entering the European Monetary Union required that budget deficits did not exceed 3 % of GDP and that public debt did not exceed 60 % of GDP (Forte 2001; von Hagen and Wolff 2004). Most notably Greece and Italy resorted to accounting tricks or "creative accounting". This practice does not necessarily violate the law, but it is clearly against the spirit of the law and violates accounting standards. It uses the rules, the flexibility provided by them and the omissions within them in order to make financial statements which look different from what is intended by the rules (Jameson 1988). Such distortions of economic indicators were so widespread that "[...] the determining factor for achieving membership of the planned European Monetary Union (EMU) seems to [have relied] on widespread use of public-sector creative accounting measures" (Dafflon and Rossi 1999: 59–60).

In the rare case that a government is unable to manipulate a particular indicator in its favor, it has an incentive to create new indicators. This is easily possible in the case of happiness. A variety of indicators may capture individual well-being. Governments and pressure groups will choose those indicators most beneficial to their respective interests, or will create new ones better suited to their purposes.

3.3 An Appropriate Policy Approach

The above discussion suggests that public policy should not seek to maximize the national happiness index. Rather, government should *improve the nature of the political processes*. Individuals should have more opportunities for advancing what constitutes their idea of a good life, both individually and collectively. They should be made aware that different issues require different measures and indicators of well-being. Happiness research should remain open to constructing a number of different indicators, reflecting well-being according to different aspects of life. Plurality is a necessary consequence of the procedural view outlined above. This is in stark contrast to the maximization approach requiring one single objective. From a constitutional standpoint, people are best served with comparative institutional analyses on subjective well-being.

4 Concluding Remarks

Happiness research has provided us with substantial and useful insights into the determinants of the subjective well-being of individuals. In contrast to indirect material measures such as national income, the determinants of well-being form a welcome basis for public policy more orientated towards the welfare of the citizens. This contribution points out that the gained knowledge should not induce governments to try to directly maximize individuals' utility. Rather, governments should provide the conditions that allow individuals to choose their own way to happiness.

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References

- Alesina, A., Glaeser, E., & Sacerdote, B. (2005). Work and leisure in the United States and Europe: Why so different? In M. Gertler & K. Rogoff (Eds.), *NBER macroeconomics annual 2005* (pp. 1–64). Cambridge, MA: MIT Press.
- Arrow, K. J. (1951). Social choice and individual values. New York: Wiley.
- Bentham, J. (1789). An introduction to the principles of morals and legislation. Oxford: Clarendon Press.
- Brennan, G., & Buchanan, J. M. (1986). *The reason of rules: Constitutional political economy*. Cambridge, MA: Cambridge University Press.
- Bruni, L. (2006). *Civil happiness Economics and human flourishing in historical perspective.* Oxon: Routledge.
- Bruni, L., & Porta, P. L. (Eds.). (2007). Handbook on the economics of happiness. Cheltenham/Northampton: Edward Elgar.
- Buchanan, J. M., & Tullock, G. (1962). The calculus of consent. Logical foundations of constitutional democracy. Ann Arbor: University of Michigan Press.
- Carroll, N., Frijters, P., & Shields, M. A. (2009). Quantifying the costs of drought: New evidence from life satisfaction data. *Journal of Population Economics*, 22(2), 445–461.
- Charles, K. K. (2004). Is retirement depressing? Labor force inactivity and psychological wellbeing in later life. In S. W. Polachek (Ed.), Accounting for worker well-being: Research in labor economics (Vol. 23, pp. 269–299). Amsterdam: Elsevier.
- Christakis, N. A., & Fowler, J. H. (2011). Connected: the surprising power of our social networks and how they shape our lives. New York: Little, Brown & Co.
- Chrystal, K. A., & Mizen, P. D. (2003). Goodhart's law: Its origins, meaning and implications for monetary policy. In D. Paul (Ed.), *Central banking, monetary theory and practice: Essays in honour of Charles Goodhart* (Vol. 1, pp. 221–243). Cheltenham/Northampton: Edward Elgar.
- Dafflon, B., & Rossi, S. (1999). Public accounting fudges towards Emu: A first empirical survey and some public choice considerations. *Public Choice*, 101(1–2), 59–84.
- Diener, E. (1984). Subjective well-being. Psychological Bulletin, 95, 542-575.
- Diener, E., (2005). *Guidelines for national indicators of subjective well-being and ill-being*. Urbana: University of Illinois at Urbana Champaign.
- Diener, E., & Biswas-Diener, R. (2008). *Happiness: Unlocking the mysteries of psychological wealth*. Malden: Blackwell.
- Diener, E., Inglehart, R., & Tay L. (2012). The validity of life satisfaction measures. *Social Indicators Research*, in Press.
- Dolan, P., & Metcalfe, R. (2008). Comparing willingness-to-pay and subjective well-being in the context of non-market goods (Centre for Economic Performance Discussion Paper No. 0890). London: School of Economics.
- Dolan, P., Peasgood, T., & White, M. (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.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. A. David & M. W. Reder (Eds.), *Nations and households in economic growth: Essays in honour of Moses Abramowitz* (pp. 89–125). New York: Academic.
- Easterlin, R. A. (Ed.). (2002). Happiness in economics. Cheltenham: Edward Elgar.
- Easterlin, R. A. (2010). Happiness, growth, and the life cycle. Oxford: Oxford University Press.

- Edgeworth, F. Y. (1881). *Mathematical psychics: An essay on the application of mathematics to the moral sciences*. London: Kegan Paul.
- Forte, F. (2001). The Maastricht "Excessive Deficit" rules and creative accounting. In R. Mudambi, P. Navarra, & G. Sobbrio (Eds.), *Rules and reason*. Cambridge: Cambridge University Press.
- Freeman, A. M., III. (2003). *The measurement of environmental and resource values: Theory and methods*. Washington, DC: Resources for the Future.
- Frey, B. S. (1983). *Democratic economic policy. A theoretical introduction*. Oxford: Martin Robertson.
- Frey, B. S. (2008). Happiness: A revolution in economics. Cambridge, MA: MIT Press.
- Frey, B. S. (2011a). Peace, war and happiness: Bruder Klaus as well-being facilitator. *International Journal of Wellbeing*, 1(2), 226–234.
- Frey, B. S. (2011b). Subjective well-being, politics and political economy. Swiss Journal of Economics and Statistics, 147(4), 397–415.
- Frey, B. S. (2012). Well-being and war. International Review of Economics, 59(4), 363–375.
- Frey, B. S., & Gallus, J. (2012). Happiness policy and economic development. International Journal of Happiness and Development, 1(1), 102–111.
- Frey, B.S., & Gallus, J. (2013). Political economy of happiness. Applied Economics, 45, 4205–4211.
- Frey, B. S., & Stutzer, A. (2000). Happiness, economy and institutions. *Economic Journal*, 110(466), 918–938.
- Frey, B. S., & Stutzer, A. (2002a). What can economists learn from happiness research? Journal of Economic Literature, 40(2), 402–435.
- Frey, B. S., & Stutzer, A. (2002b). *Happiness and economics: How the economy and institutions affect well-being*. Princeton/Oxford: Princeton University Press.
- Frey, B. S., & Stutzer, A. (2005). Happiness research: State and prospects. *Review of Social Economy*, 62(2), 207–228.
- Frey, B. S., & Stutzer, A. (2006). Mispredicting utility and the political process. In E. J. McCaffery & J. Slemrod (Eds.), *Behavioral public finance* (pp. 113–140). New York: Russell Sage Foundation.
- Frey, B. S., & Stutzer, A. (2010). Happiness and public choice. Public Choice, 144(3-4), 557-573.
- Frey, B. S., & Stutzer, A. (2012). The use of happiness research for public policy. Social Choice and Welfare, 38(4), 659–674.
- Frey, B. S., & Stutzer, A. (2013). *Recent developments in the economics of happiness*. Cheltenham: Edward Elgar Publishing.
- Frey, B. S., Benz, M., & Stutzer, A. (2004). Introducing procedural utility: Not only what, but also how matters. *Journal of Institutional and Theoretical Economics*, 160(3), 377–401.
- Frey, B. S., Luechinger, S., & Stutzer, A. (2009). The life satisfaction approach to the value of public goods: The case of terrorism. *Public Choice*, 138(3–4), 317–345.
- Frey, B. S., Luechinger, S., & Stutzer, A. (2010). The life satisfaction approach to environmental valuation. Annual Review of Resource Economics, 2, 139–160.
- Gilbert, D. (2006). Stumbling on happiness. New York: Knopf.
- Goodhart, C. A. E. (1975). Money, information and uncertainty. London: Macmillan.
- Graham, C. L. (2011). *The pursuit of happiness: An economy of well-being*. Washington, DC: Brookings.
- Hammond, P. J. (1991). Interpersonal comparisons of utility: Why and how they are and should be made. In J. Elster & J. E. Roemer (Eds.), *Interpersonal comparisons of well-being* (pp. 200–254). Cambridge: Cambridge University Press.
- Hicks, J. R., & Allen, R. G. D. (1934). A reconsideration of the theory of value, I. *Economica*, 1, 52–75.
- Huppert, F. A., Marks, N., Clark, A., Siegrist, J., Stutzer, A., Vittersø, J., & Wahrendorf, M. (2009). Measuring well-being across Europe: Description of the ESS well-being module and preliminary findings. *Social Indicators Research*, 91(3), 301–315.
- Jameson, M. (1988). Practical guide to creative accounting. London: Kogan Page.
- Kahneman, D., & Knetsch, J. L. (1992). Valuing public goods: The purchase of moral satisfaction. Journal of Economics and Management, 22(1), 57–70.

- Kahneman, D., & Sugden, R. (2005). Experienced utility as a standard of policy evaluation. *Environmental and Resource Economics*, 32(1), 161–181.
- Kahneman, D., Diener, E., & Schwarz, N. (Eds.). (1999). Well-being: The foundations of hedonic psychology. New York: Russell Sage Foundation.
- Kahneman, D., Krueger, A. B., Schkade, D. A., Schwarz, N., & Stone, A. A. (2004). Toward national well-being accounts. *American Economic Review*, 94(2), 429–434.
- Lalive, R., & Stutzer, A. (2010). Approval of equal rights and gender differences in well-being. *Journal of Population Economics*, 23, 933–962.
- Lane, R. E. (2000). *The loss of happiness in market economies*. New Haven/London: Yale University Press.
- Layard, R. (2005). Happiness: Lessons from a new science. New York: Penguin.
- Lucas, R. E. (1976). Econometric policy evaluation: A critique. In B. Karl & A. H. Meltzer (Eds.), *The Phillips curve and labor markets* (Carnegie-Rochester Conference Series on Public Policy, Vol. 1, pp. 19–46). New York: North-Holland.
- Luechinger, S. (2009). Valuing air quality using the life satisfaction approach. The Economic Journal, 119(536), 482–515.
- Luechinger, S., & Raschky, P. A. (2009). Valuing flood disasters using the life satisfaction approach. *Journal of Public Economics*, *93*(3–4), 620–633.
- MacKerron, G. (2012). Happiness economics from 35000 feet. *Journal of Economic Surveys*, 26(4), 705–735.
- McMahon, D. (2006). *The pursuit of happiness: A history from the Greeks to the present*. London: Allen Lane.
- Mueller, D. C. (1996). Constitutional democracy. New York: Oxford University Press.
- Mueller, D. C. (2003). Public choice III. Cambridge/New York/Melbourne: Cambridge University Press.
- Olken, B. (2008). Direct democracy and local public goods: Evidence from a field experiment in Indonesia (Washington DC: NBER Working Paper No. 14123).
- Oreopoulos, P. (2007). Do dropouts drop out Too soon? Wealth, health, and happiness from compulsory schooling. *Journal of Public Economics*, *91*(11–12), 2213–2229.
- Oswald, A.J., & Proto, E., Sgroi D. (2006). *Happiness and productivity* (Bonn: IZA Discussion Paper 4645).
- Pezzini, S. (2005). The effect of women's rights on women's welfare: Evidence from a natural experiment. *Economic Journal*, 115(502), C208–C227.
- Robbins, L. C. (1938). Interpersonal comparisons of utility: A comment. *Economic Journal*, 48, 635–641.
- Royal Government of Bhutan. (2012). Wellbeing and happiness: A new development paradigm. Proposal to convene a two-year international expert working group to elaborate the details of the new paradigm. Draft: 8th Aug. http://www.sustainable.unimelb.edu.au/files/mssi/Bhutan_ Proposal-International-Expert-Working-Group_2012-14.pdf. Last accessed 22 Jan 2013.
- Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141–166.
- Sen, A. K. (1970). Collective choice and social welfare. San Francisco: Holden-Day.
- Sen, A. K. (1999). Development as freedom. New York: Alfred Knopf.
- Slesnick, D. T. (1998). Empirical approaches to the measurement of welfare. *Journal of Economic Literature*, 36(4), 2108–2165.
- Stiglitz, J., Sen, A. K., Fitoussi, J. -P. (2009). Report by the Commission on the Measurement of Economic Performance and Social Progress.www.stiglitz-sen-fitoussi.fr.
- Stutzer, A., & Frey, B. S. (2010). Recent advances in the economics of individual subjective wellbeing. Social Research, 77(2), 679–714.
- Sugden, R. (2005). Correspondence of sentiments: An explanation of the pleasure of interaction. In L. Bruni & P. Pier Luigi (Eds.), *Economics and happiness. Framing the analysis*. Oxford: Oxford University Press.
- Theil, H. (1964). *Optimal decision rules for government and industry*. Amsterdam: North Holland. Tinbergen, J. (1956). *Economic policy: Principles and design*. Amsterdam: North Holland.

- van Praag, B. M. S. (1968). Individual welfare functions and consumer behavior A theory of rational irrationality. Amsterdam: North-Holland.
- van Praag, B. M. S., & Baarsma, B. E. (2005). Using happiness surveys to value intangibles: The case of airport noise. *Economic Journal*, 115(500), 224–246.
- Vanberg, V. J. (2005). Market and state: The perspective of constitutional political economy. *Journal of Institutional Economics*, 1(1), 23–49.
- von Hagen, J., & Wolff, G. B. (2004). What do deficits tell us about debts? Empirical evidence on creative accounting with fiscal rules in the EU (Series 1: Studies of the Economic Research Centre. Discussion Paper No. 38), Deutsche Bundesbank.

Walker, M. (2011). Happy-people-pills for all. International Journal of Wellbeing, 1, 127-148.

Welsch, H. (2006). Environment and happiness: Valuation of air pollution using life satisfaction data. *Ecological Economics*, 58(4), 801–813.