

Economics and Well-Being

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Modern, empirical research on happiness was initiated by social psychologists. Important contributions have been made by a variety of researchers including Argyle (1987), Csikszentmihalyi (1990), Michalos (1991), and Lyubomirsky (2008). Most influential have been the collected volumes edited by Kahneman et al. (1999) and the work conducted by Diener and his colleagues (e.g., Diener, 1984, 2000; Diener and Biswas-Diener, 2002, 2008; Diener and Oishi, 2000). Happiness has, of course, been a central issue for philosophers, in particular Aristotle (for an account, see McMahon, 2006), but they have not undertaken any quantitative research.

The founding father of an economics of happiness is Easterlin (1974), but van Praag (1968) preceded him. Based on empirical data for the United States, Easterlin argued that increasing income does not raise happiness. This unconventional contribution was neglected at that time, as was a similar discussion by Scitovsky (1976) in his book *The Joyless Economy*. A major reason for

disregarding this insight was that economists assumed that it is not possible to measure utility in a satisfactory way. Surveys were not taken to be an acceptable method because they were thought to be superficial and even misleading because the respondents had no interest in telling what they really feel, and tended to answer in a misleading way. Subjects were thought to only express their true preferences when they chose between given options. This belief in the 'revealed preference approach' was only shaken when psychologists demonstrated that it is possible to capture subjective well-being by surveys.

Happiness research found more general interest in the discipline shortly before the turn of the century (e.g., Clark and Oswald, 1994; Frank, 1997; Oswald, 1997). Thereafter happiness research has become increasingly prominent, especially since the survey article by Frey and Stutzer (2002a) in the *Journal of Economic Literature*. Since then, a considerable number of books (e.g., Frey, 2008; Frey and Stutzer, 2002b; Graham and Pettinato,

2002; Lane, 2000; Layard, 2005; Weimann et al., 2015; World Happiness Report, 2016), articles (e.g., Bruni and Porta 2007; Easterlin, 2002; Frey and Stutzer, 2007), and surveys (e.g., Dolan et al., 2008; Frey and Stutzer, 2005) have been published.

From the beginning, there has been a close interaction between psychologists and economists due to the shared empirical orientation. This applies in particular to issues of measurement (e.g., Kahneman et al., 2004), but goes far beyond it. The study of happiness is a fine example of fruitful interdisciplinary research; however, the work undertaken by psychologists and economists differs in some respects. Economic research emphasizes more strongly material determinants of happiness, in particular income and unemployment. Moreover, economists are also interested in identifying the impact of institutional conditions on happiness, such as the extent of democracy and good governance, or political decentralization (e.g., Frey and Stutzer, 2000; Helliwell and Huang, 2008).

Many different concepts of well-being can be distinguished. On one extreme, there are momentary feelings of joy and pleasure, or affective happiness (which can be captured by the Experience Sampling Method); on the other extreme *eudaimonia*, or ‘good life’, reflecting the quality of life achieved by developing and fulfilling one’s potential. In between these two concepts is contentment with life, normally called *subjective life satisfaction*. It captures the answer to the question: ‘taken overall, how satisfied are you with the life you lead?’ The answers are collected on a scale ranging from 0 (‘totally dissatisfied’) to 10 (‘totally satisfied’). This is the concept most often used in economics; for simplicity it is often called ‘happiness’. There are now many collections of data with many thousands of observations, such as the World Value Survey or the Gallup World Poll. The best data to identify the determinants of happiness in linear (Ordinary Least Squares) and non-linear (e.g., probit or tobit) regressions are panels (such as the German

Socio-Economic Panel [SOEP]) in which the same person is repeatedly asked about his or her subjective well-being, as well as about a host of potential determinants and environmental factors.

Economists have paid great attention to whether a particular factor is a determinant or a consequence of happiness. For example, being unemployed makes people unhappy, but unhappy people find it more difficult to find a job because they are less attractive and enterprising. Similarly, income raises happiness and happy people are more prone to be successful in their job and more likely to achieve a higher income, as well as have better relationships and health (De Neve et al., 2013; Lyubomirsky et al., 2005) and even more evolutionary success (Diener et al., 2015a). It is difficult to separate the two causal effects. One possibility is to consider an exogenous change in a determinant (e.g., an unexpected increase in income due to a lottery gain) and to then analyze how subjective well-being is affected. While this is an important issue, for reasons of space it will not be considered further here.

This contribution does not intend to provide a complete survey of the economic determinants of well-being. We restrict ourselves to the most important effects identified in the research. This contribution is also not intended to give an ‘objective’ view of the research on happiness in economics. Rather, we rely strongly on our own research (e.g., Frey, 2008; Frey and Stutzer, 2013; Stutzer and Frey, 2010).

The second section discusses the relationship between happiness and income at the individual and the aggregate levels. In addition to the level of people’s income, we discuss the impact of its increase over time, and the distribution between individuals. It is also shown in what respect aggregate happiness indicators can serve as complements to Gross National Product (GNP) often (but wrongly) used to compare the material well-being of countries over time and in international comparisons. The third section deals

with research showing that unemployment turns out to have a major negative impact on happiness. The fourth section discusses the relationship between happiness and inflation (i.e., the continuous rise of the general price level). The fifth section is devoted to some additional determinants of subjective well-being analyzed by economists (i.e., marriage and television viewing). The sixth section reviews work showing that individuals tend to be poor at predicting their own future happiness, and the final section provides our conclusion.

HAPPINESS AND INCOME

Individual Level: The Importance of Income and Income Aspirations

The economic research on subjective well-being finds results deviating from the assumptions codified in economic theory. Standard economics is based on the notion that people's utility depends on what they have in absolute terms. People with higher income have more opportunities to attain whatever they desire, in particular they can buy and consume more goods and services. Higher income and consumption levels therefore lead to a higher well-being level. Happiness research, in contrast, highlights that people do not mainly focus on the absolute income level but rather compare their income to the income level of other individuals. Relative income plays a more important role than standard economic theory assumes.

There is a large empirical literature with a robust and general result: people with higher income report higher subjective well-being at a particular point in time and place (for reviews, see Clark et al., 2008, or Lawless and Lucas, 2011). Some research suggests, however, that this result does not necessarily hold for observations over time. People, especially in industrialized countries, do not always become happier over time, despite strong

economic growth. This result, first documented by Easterlin (1974), has been repeatedly found (e.g., Blanchflower and Oswald, 2004; Easterlin, 1995, 2001; Easterlin and Angelescu, 2009). For the United States, even a negative trend in subjective well-being over time is observed (Blanchflower and Oswald, 2004). But these findings have been challenged, for example by Stevenson and Wolfers (2008). There are Western countries like Denmark, Germany, and Italy, while experiencing substantial real per capita income growth, also show a (small) increase in reported satisfaction with life in the 1970s and 1980s (Diener and Oishi, 2000).

A crucial insight of these findings is that life satisfaction does not increase at the same rate as real income per capita. People with low income experiencing a rise in income enjoy a substantial increase in life satisfaction, but this effect gets weaker and weaker with increasing incomes. People with very high income experience almost no rise in life satisfaction when their income increases.

To explain that apparent paradox, economic well-being researchers consider various aspects. The first explanation highlights the notion that people make social comparisons with relevant others. It is not the absolute level of income that matters most, but rather one's position relative to other individuals. Higher income people not only have a higher relative income compared to others, but also enjoy a higher status in society (Frey and Stutzer, 2002b).

Another explanation focuses on the fact that changes in income influence life satisfaction, not just levels of income. The effect of income on life satisfaction disappears when consumption persists. Happiness that is based on consumption wears off, with additional material goods and services only providing extra pleasure in the beginning (Frank, 1999). This mechanism is referred to as adaptation.

In addition, higher income people change the peer group with which they compare themselves. As they shift their standards,

they no longer perceive themselves to have a higher income in comparison to relevant others. If the members of the peer group gain a similar increase in income, relative income stays constant, which reduces the size of the effect of income on life satisfaction.

A further important explanation refers to the role of income aspirations. Empirical studies for Germany and Switzerland (Stutzer, 2004) find evidence that higher income aspirations reduce people's satisfaction with life. In Switzerland and the New German Laender, the negative effect on subjective well-being of an increase in the income aspiration level 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*. Thus, reported subjective well-being depends on the gap between income aspirations and actual income.

Together, these explanations can explain the apparently paradoxical result that has been found. People with higher income at a given point in time report higher subjective well-being than those with low income because the 'social comparison effect' suggests that individuals derive satisfaction from being superior to others. The 'aspiration effect' intensifies this mechanism because for rich people the relative gap between income aspirations and actual income is smaller. The 'adaptation effect' proposes that people get used to a higher income and therefore do not derive any extra satisfaction from it after some time, so that people in industrialized countries do not report higher or just slightly higher life satisfaction over time, despite strong economic growth.

Income at the Aggregate Level

Distribution of income

In most countries, citizens consider a distribution of income produced solely by the market without any state interference to be

unacceptable (Deaton, 2005). Accordingly, there is a strong demand for redistribution by the government (e.g., Alesina and La Ferrara, 2005). As a consequence, modern governments redistribute generously on a large scale. This development has increased markedly in the twentieth century. At the end of the nineteenth century, the share of government transfers was less than 1 percent of gross domestic product (GDP) in both Europe and the United States. By the end of the twentieth century, this share had multiplied to 14 percent of GDP in the United States and 22 percent in Europe.

The effect of redistributing income on subjective well-being is ambiguous. On the one hand, there are studies showing that the impact of an unequal distribution of income decreases reported happiness. This may be because people care about the well-being of others and about inequality within a society. For example, Schwarze and Härpfer (2007) analyzing SOEP data present evidence for Germany that people of all income classes report lower life satisfaction when regional income inequality increases. Alesina et al. (2004) analyzing data from the Eurobarometer also observe that inequality reduces life satisfaction. On the other hand, some studies suggest the opposite: inequality raises subjective well-being (Clark, 2003). The effect of inequality in income on happiness differs markedly between Europe and the United States (Alesina and Glaeser, 2004; for a survey, see Deaton, 2005).

These results for Europe and the United States can be explained by differences in the extent – or the belief of the extent – of upward social mobility. Most Americans believe in the possibility of moving up the social and income ladders, and so a large inequality in income indicates large opportunities in the future. In contrast, the majority of Europeans believe that social mobility is low and restricted. Therefore, Europeans dislike an unequal income distribution. Sixty percent of Americans believe that the poor are lazy rather than just unlucky, whereas only

26 percent of Europeans think so (Alesina et al., 2001).

In general, capturing the effect of income inequality on happiness is made difficult by several effects. Inequality may also affect individual happiness indirectly through health and income. For example, lower inequality improves health and increases income, which in turn raises happiness (Helliwell, 2003).

Aggregate subjective well-being indicators as complements to the GNP

At the aggregate level, research on subjective well-being can also contribute to measure human welfare. The most widely used method is to construct an overall measure of economic activity. Today, GNP has established itself as the most important indicator. It is used to compare standards of living across countries, as well as the rate of growth over time. Although the GNP has a great advantage – being based on a theory analyzing relations between individuals and firms involved in creating goods and services on markets – it is faced with severe problems. It excludes, for instance, a major part of social as well as household activities and does not capture free services, such as those now widely available on the Internet. These factors will play an even more important role in a digitalized future. Despite these shortcomings of the GNP as a welfare indicator being generally known, the concept is still at the center of public debate and media attention.

Aggregate happiness indicators can serve as complements to GNP. Indicators of aggregate happiness have several advantages over GNP as a measure of social well-being. On the one hand, measures of happiness also cover non-material aspects of human value creation, such as the influence of social relations, autonomy, and self-determination. These are insufficiently, or not at all, included in traditional GNP. Measures of happiness also consider outcome aspects of elements already included in GNP through input measures. This is particularly the case for the vast

area of government activity (measured in GNP by the costs of material and of labor input). Measures of well-being capture the subjectively evaluated outcomes in line with the basic methodological approach of economics. On the other hand, the capabilities approach and the Human Development Index compiled by the United Nations measure objective functioning (Sen, 1999).

Aggregate happiness indicators provide new and complementary information about preference satisfaction. This information should become a relevant input in the political discourse if one follows the idea that voters hold governments responsible for the state of the economy. An aggregate well-being indicator should intensify competition between politicians, with Diener et al. (2015b) going so far as to propose ‘National Accounts of Subjective Well-being’. They get incentives to justify their actions in terms of a broader and better understanding of individual welfare. It can also be useful in strengthening the competition between political units and political parties. Such a competition should bring the outcome of the current politico-economic process closer to citizens’ preferences.

UNEMPLOYMENT

Classical economists thought of unemployment as a social problem with negative consequences for society. The economic policy proposals made in the wake of Keynes and his followers were an effort to overcome exactly this problem and to establish full employment instead. The rise of new classical macroeconomics changed this evaluation completely (e.g., Snowdon and Vane, 2005). This economic school argues that unemployment is completely voluntary. Those not working just prefer not to work but to enjoy leisure. They do so at the prevailing wage rate because the reservation wage is higher than the prevailing wage. The new classical macroeconomics reasons that unemployment

benefits are too high. People simply prefer not to work and to cash these benefits. Happiness research in economics offers a new approach to productively contribute to this debate about the individual and social costs of unemployment.

Unemployment Reduces Subjective Well-Being

A general finding of happiness research is that unemployment reduces the individual well-being of those affected by it. Not having work depresses well-being more than any other single factor, including important negative ones such as divorce and separation (Clark and Oswald, 1994; Winkelmann and Winkelmann, 1998). The effect of being unemployed is so strong that it would require a seven-fold increase in income to be compensated. It is important to underline that indirect effects (in particular income losses) are kept constant in these two analyses. For this reason, the studies show that being unemployed has psychic costs over and above the potential decrease in the material living standard.

High unemployment rates also have non-negligible effects on people who themselves are not affected by unemployment. Aggregate unemployment decreases average reported life satisfaction even if the personal employment status is kept constant (Clark and Oswald, 1994).

Costs of Unemployment for the Employed

Two broad categories of potential reasons can be identified for why workers' well-being decreases when unemployment rates increase. The first category suggests that a high rate of unemployment may have general negative effects on society that affects everybody in a region. This includes not only the direct effects of unemployment on crime and

public finances, but also the general increase in income inequality within a society. The increase in income inequality may trigger some workers' empathy with unemployed persons. The second category suggests that high unemployment rates affect factors specific to every person's individual workplace, for instance, changes in working hours and salaries (Frey, 2008).

General effects of unemployment on society

Higher unemployment rates, for example, have been observed to increase crime. These kind of social problems affect people in general in that specific area. If higher crime rates were also reflected in lower reported well-being, this would contribute to the statistical relationship between unemployment rates and subjective well-being. But people also seem to care about the well-being of others and about inequality within a society (Schwarze and Härpfer, 2007).

Effects of unemployment on people's individual workplaces

High unemployment rates also affect individuals' current and future economic situations. These effects can be based on real consequences as well as on anticipated behavior.

Because in times of high unemployment, the pressure on salaries increases, the average wage drops. And as income correlates positively with people's well-being (see earlier), lower salaries lead to lower life satisfaction. In addition, actual working hours may even rise in recessions for the employed as firms cut costs and the impossibility to change jobs may enable firms to force employees to work more hours than they would prefer. This, in turn, reduces people's leisure time, sometimes without financial compensation.

While the aforementioned effects on salaries and working hours refer to realized consequences, high unemployment also has an effect on anticipated economic distress, for instance the probability that a worker may himself lose his job increases. A large

literature documents the importance of self-reported job security on individuals' well-being (e.g., De Witte, 1999; Green, 2006). People may also expect salary decreases, reduced promotion opportunities, and fewer possibilities to change jobs in a time of economic distress.

In an empirical study, Luechinger et al. (2010) isolated feelings of angst and stress as sources of reduced individual welfare due to economic insecurity. To distinguish between general negative externalities of unemployment and changes in economic risks to individuals, the authors studied workers 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 face a reduced risk of experience spells of unemployment in comparison with employees in the private sector because public-sector employees usually enjoy extended protection from dismissal and work in organizations that very rarely go bankrupt. The researchers used data from the SOEP for West Germany between 1984 and 2004. During this period, West Germany experienced large differences and fluctuations in regional unemployment rates, from approximately 4 percent to almost 20 percent. The general results show that people working in the private sector are affected more strongly by general economic shocks than those working in the public sector. These findings suggest that an important fraction of the psychic costs caused by general unemployment is largely due to increased economic insecurity.

To conclude, research on happiness has brought to light two major aspects that are widely neglected by new classical macroeconomics. The first is that unemployment does not simply mean an insufficient utilization of resources and is not simply a decision between choosing to stay employed (at a low wage) and becoming unemployed (with unemployment benefits). Rather, individuals experience a loss in well-being beyond the reduction in income when they are

unemployed. The second is that the utility losses experienced go beyond those people who are actually unemployed. Workers still having a job are also negatively affected by a higher unemployment rate. In future research, the various well-being costs of unemployment should be systematically related to labor market institutions.

INFLATION

If standard economists consider the costs of inflation (an increase in the general price level), they distinguish between anticipated and unanticipated inflation. They state that anticipated price increases are no problem because individuals can adjust to them with little, if any, cost. The picture is different when price increases come as a 'shock' because no such adjustment is possible. When the inflation is volatile it is more costly for people to adjust. They need to invest considerable effort in informing themselves about, and hedge against, expected price increases. They can make many potential errors, for instance in underestimating the extent of future inflation or how a particular price will change in comparison with other prices.

As a consequence, some economists set the price of even a high anticipated inflation as very low (between 0.3 percent and 0.45 percent of national income for 10 percent yearly inflation; Fischer, 1981; Lucas, 1981). This suggests that an anti-inflationary policy is rarely worth the cost it causes by raising unemployment and real income loss. Many other economists would strongly disagree. They claim that stable prices are an indispensable condition for a sound economy because only when prices are stable can actors behave rationally. Most economists would take an intermediate position: rampant inflation is seen as very dangerous for the economy, whereas a constant (hence more predictable) but low inflation (e.g., 1–5 percent per year)

should not cause any major problems. The picture emerging from the existing empirical evidence on the costs of inflation is indeed far from clear (see the survey by Driffill et al., 1990).

An extensive survey of the United States, Germany, and Brazil (Shiller, 1997) draws a slightly different picture with respect to peoples' feelings. The authors show that people are concerned about other issues connected with inflation than economists typically are. People seem to underestimate the fact that inflation probably increases their own nominal income as well. They concentrate on the possible harm, but not on the possible benefits that inflation might bring to their standard of living. In addition, the survey identifies other concerns usually neglected by economists. One is that inflation enables some people to exploit others in an unfair and dishonest way; another is that inflation can undermine the moral basis of society because many fear that inflation might produce political and economic chaos and a loss in national prestige due to the falling exchange rate.

Economic research on happiness finds that inflation systematically and markedly lowers reported individual well-being. A study of twelve European countries over the period 1975–1991 (Di Tella et al., 2001) shows that an increase in the inflation rate by 5 percentage points (a historically likely event) reduces subjective well-being by 0.05 units. This means that 5 percent of the population is shifted downward from one life-satisfaction category to the next lower one (e.g., from being 'very satisfied' to 'fairly satisfied'). This effect is substantial, although not very large.

The crucial point is now to study the tradeoff between inflation and unemployment. The results reported on the effect of unemployment on happiness can now be combined with the results concerning inflation just discussed (Di Tella et al., 2001; Wolfers, 2003). The important question is 'by how much, on average, must a country reduce its inflation in order to tolerate a 1-percentage-point

increase in unemployment?' A 1-percentage-point increase in unemployment is calculated to compensate for a 1.7-percentage-point decrease in the inflation rate. Thus, if unemployment rises by 5 percentage points (e.g., from 3 to 8 percent), the inflation rate must decrease by 8.5 percentage points (e.g., from 10 to 1.5 percent per year) to keep the population equally satisfied. The popular 'Misery Index', which simply adds the unemployment rate to the inflation rate, assigns the same weight to each variable. Well-being research shows that this presents a strongly distorted picture of the tradeoff between unemployment and inflation by attributing too little weight to the effect of unemployment, relative to inflation. The negative effect of rising unemployment is considerably stronger relative to the negative effect of increasing inflation, although this effect is found to different extents (Di Tella et al., 2001; Wolfers, 2003).

SOME ADDITIONAL DETERMINANTS OF HAPPINESS

Marriage

The standard economic view on marriage focuses on specialization and the division of labor. Becker's (1973, 1974; for a survey, see Pollak, 2002) ground-breaking work on the economics of marriage is based on the gains married people acquire from household production and specialization of labor for different tasks. The possible specialization with respect to the tasks in marriage is considered to offer substantial opportunities to increase the well-being of both partners. Other, more sociological theories focus on spouses' joint consumption of household public goods, or on reciprocity and social equality in homogamous relationships (homogamy describes the tendency for 'like to marry like'). Becker's model predicts mating to be negatively assorted with respect to wages and positively assorted with respect to education.

In marriage, people are seen to engage in a long-term relationship with a strong commitment to a mutually rewarding exchange. Every spouse expects some benefits from the partner's expressed love, gratitude, and recognition, as well as from security and material rewards. This is summarized in the protection perspective of marriage. It is not surprising that economists have studied financial benefits in particular (as part of the protective effects). From this point of view, marriage provides basic insurance against adverse life events and allows gains from economies of scale and specialization within the family (Becker, 1981). This is reflected in married people earning higher incomes than single people, *ceteris paribus* (Chun and Lee, 2001).

But increased earnings are not the main benefit. Other benefits from marriage, as studied in psychology, sociology, and epidemiology, are even more important. When compared with single people, married persons have better physical and psychic health (e.g., less substance abuse and less depression), and live considerably longer (Gardner and Oswald, 2004). The effect of marriage on people's happiness is analyzed in a large number of studies covering different countries and time periods. It has been found that marriage correlates with higher levels of happiness (Diener et al., 2000; Stack and Eshleman, 1998; see also Coombs, 1991; Myers, 1999). This result remains even if the base level of happiness is controlled (Anusic et al., 2014; Yap et al., 2012). Married persons report greater subjective well-being than persons who have never been married or have been divorced, separated, or widowed.

Happiness research can help to study the validity of the assumption. Data on subjective well-being can be studied to provide evidence on who benefits more and who benefits less from marriage. The two claims about the major sources of increased well-being in marriage were tested with data on reported satisfaction with life from the SOEP (Stutzer

and Frey, 2006). The findings reveal a noticeable and clear pattern: as the year of marriage approaches, people report higher satisfaction on average but it decreases after the date of marriage.

There are different explanations for this somehow unexpected pattern. While some psychologists suggest that marital transitions cause short-term changes in subjective well-being (Johnson and Wu, 2002), others take it as evidence of adaptation (Lucas et al., 2003). Adaptation means that people become accustomed to a stimulus that is pleasant or unpleasant. In this context, it indicates that after some time of living with a partner in a close relationship they return more or less to their base-line level of subjective well-being. It is difficult to assess whether this adaptation is truly hedonic, or whether married people start using a different scale (satisfaction treadmill) for what they consider a satisfying life.

A third explanation is that many people might marry only if they expect to experience a rewarding relationship in the future. Their predictions of their future well-being as spouses are based on their current well-being. Therefore, the last year before marriage becomes the last year in which life satisfaction increases because the couples experience an unexpected happy time in their relationship at this time.

One of the main predictions of Becker's (1974) theory of marriage is that the gain from marriage is positively related to couples' relative difference in wage rates. The reason may be that a large relative difference in wage rates makes specialization in either running the household or participation in the labor market more beneficial. The results in Stutzer and Frey (2006) support this main prediction in Becker's model. Before marriage, individuals who will be in marriages with large differences in relative wage rates were less happy on average than those with small differences. This indicates that couples with large differences in relative wage rates benefit more from marriage.

To test the second hypothesis ('like to marry like'), the differences between marriage partners in their level of education are considered and measured by the number of years of schooling. It is hypothesized that couples with small differences in the level of education gain more from marriage than those with large differences. Although for the years before marriage there are no systematic differences in the well-being of people who become partners in marriages with small and large differences in education, a different picture is shown after marriage. Couples with differences in education below the median report on average higher satisfaction with life. For the first seven years, the joint statistical significance of the differences is higher than ninety-nine percent. This finding supports again the hypothesis that couples with similar educational background benefit more from marriage (Stutzer and Frey, 2006).

The basic assumptions of standard economics on marriage are underpinned by economic happiness research. When their life satisfaction before marriage is compared, couples with large relative wage differences (and consequently a high potential gain from specialization) benefit more from marrying than couples with small relative wage differences. In the same manner is the importance of similarities between partners emphasized. Spouses with small differences in their level of education stand to gain on average more satisfaction from marriage than spouses with large differences. However, findings indicate that the differences diminish after a longer period of time of being married.

When a marriage dissolves, an individual's well-being pursues a similar course to that in marriage, just with a negative sign (Gardner and Oswald, 2006, with British data). Divorce is traumatic, but just in the short run; the happiness of the former couple initially falls drastically, and it affects men and women equally. Nevertheless, two years after the marital breakdown both are, on average, significantly better off than two years before the breakdown. Seen in this sense, divorce is

a beneficial process. Somewhat surprisingly, it does not seem to be important whether a person remarries quickly after divorce or not, and whether there are any dependent children.

Watching Television

In many countries nowadays, watching television is still one of the most important activities people engage in. They must obviously enjoy this voluntary activity or else they would not engage in it. The standard neoclassical economic theory of revealed preference assumes people themselves know best what provides them with utility and are free to choose the amount of television consumption they prefer. According to this theory, individuals watch so much television because it provides them with considerable utility.

However, developments particularly in economic and psychological research cast doubt on this conclusion. The theory of revealed preference has been questioned (most prominently by Sen, 1982, 1995). It is argued that it is not possible to infer the utility produced by observing behavior, simply because individuals do not always act in their own best interest. Over the years many researchers have identified anomalies and biases in behavior (e.g., Thaler, 1992). These anomalies undermine the direct link between observed behavior and utility gained. For example, people are often poor at predicting the utility derived from future consumption.

People may also be subject to habits they do not fully control. They may often consume more of some goods, such as drugs, alcohol, or tobacco, than is beneficial for them. Gruber and Mullainathan (2005) show empirically that smokers consider themselves by their own evaluation to be better off when smoking is restricted by a tax. This can be due to a self-control problem (Schelling, 1984).

Television viewing is a prominent case where the consumption decisions made by individuals are systematically distorted

according to their own evaluations. The self-control problem may be triggered mainly by television viewing's offer of immediate benefits at marginal immediate costs, while many costs are only experienced in the future. For this reason, television viewing does not generally maximize utility, rather on average people become less happy as they watch more television (Frey et al., 2007). Subjective well-being data are used to study whether people commit systematic errors in their choice of time they spend watching television. If this hypothesis were true, there should be a negative correlation between the extent of television viewing and life satisfaction, even after controlling for a large number of covariates of individual well-being. However, a negative correlation between television consumption and subjective well-being could also be the result of reverse causation. Unhappy people watch more television than happy people. Television viewing may serve as a substitute for something that is missing from the person's life (e.g., human relationships or more active forms of leisure for the lonely and bored) and involves negative long-term consequences for well-being. The negative correlation might even be the result of a self-enforcing circle.

The existing data allow us to investigate whether the utility costs of extensive television consumption depend on the opportunity cost of time. This offers indirect evidence on the direction of causality. One can argue that it is mainly people with significant opportunity costs of time who regret the amount of time they spend watching television. People with flexible working hours, who can freely transfer time between leisure and work, should suffer primarily because they have high opportunity costs of time. In contrast, people with low opportunity costs of time, such as retired or unemployed people or individuals with fixed working hours, are little burdened by their self-control problem. They should experience no significant utility loss, even if they spend many hours watching television.

Television consumers have a tendency to overconsumption in the sense that the individuals concerned later regret that they devoted so much time to viewing. However, it seems difficult to overcome this weakness of will because it is a self-control problem. This is due to the immediate benefits and the negligible immediate marginal cost of engaging in this activity. In contrast with away-from-home-activities like going to the cinema or the theater, or participating in any other outdoor activity, there is no need to be appropriately dressed before leaving home, buy a ticket, or reserve a seat in advance. Television viewing does not require any special physical or cognitive abilities (Kubey and Csikszentmihalyi, 1990). Most of the costs resulting from such consumption behavior are not experienced immediately. The negative effects of insufficient sleep, for example, only arise the next day. The consequences of underinvestment in social contacts, education, or career take much longer to appear and may not be linked to watching television. These characteristics of the consumption good may induce many individuals to fall prey to excessive television viewing. There is some (anecdotal) evidence that persons may have self-control problems with regard to their television viewing behavior. Forty percent of US adults and 70 percent of US teenagers admit that they watch too much television (Kubey and Csikszentmihalyi, 2002). They even crave television and admit being addicted to it (Kubey and Csikszentmihalyi, 2002; McIlwraith, 1998).

Research finds that people who spend a lot of time watching television do report on average lower life satisfaction, *ceteris paribus* (Frey et al., 2007). This negative effect is much larger for people with high opportunity costs of time than for those with low opportunity costs of time. The correlations observed are strong and they remain even if one controls for a large set of individual characteristics. Moreover, a systematic structure in the data suggests that individuals have systematically imperfect foresight and control

over their own behavior. The utility gained from watching television is lower than that which could be achieved. This is clearly a shortcoming in human decision making. It is reflected in efforts to reduce this utility loss. Time-constrained persons rely on all kinds of rules designed to restrict their television viewing. For instance, they try to make it a rule to watch only the news, place uncomfortable sitting opportunities in front of the television, place the television in an unattractive room, or even decide not to have a television at all. Despite these efforts, the empirical results indicate that some of the individuals in question are not able to compensate fully for their self-control problem.

MISPREDICTING FUTURE HAPPINESS

Individuals find it difficult to predict the utility gained from consuming goods and services in the future. Social psychologists have studied this issue under the term 'affective forecasting' (Wilson and Gilbert, 2003), attributing it to cognitive biases due to focalism, the empathy gap, and impact bias. An empirical study based on data of subjective well-being identifies the misprediction of future happiness for the important activity of commuting (Frey and Stutzer, 2014). It reveals that people who spend more time commuting report lower life satisfaction. While they are likely to be more satisfied with their salary and their living conditions, they are not fully compensated for the burden of commuting. This corresponds to an overestimation of the happiness gained from the job and housing options compared to the physical burden of spending time travelling from the home to the job and back.

More generally, people tend to overestimate goods and activities with extrinsic attributes (such as the job and the income going with it) compared to goods and activities characterized by intrinsic attributes (such as spending time with family and friends).

This tendency makes people worse off according to their own best interests in so far as future happiness is concerned. This result has been generalized to various other areas where people tend to overestimate the future utility gained from consumption such as a new apartment, house, or fancy car (Odermatt and Stutzer, 2015). However, some persons may be able to overcome this deficiency by adopting self-binding rules that help them to redress the balance in favor of goods and activities with strong intrinsic attributes over those with strong extrinsic characteristics.

CONCLUSION

Research on happiness has become a joint endeavour of psychologists and economists. Of course there are also other disciplines involved, such as sociology (e.g., Veenhoven, 1993, 1999, 2000) and political science (e.g., Inglehart, 1990; Lane, 2000). Economists have focused on the influence of economic factors on well-being. This research has helped them to overcome the restrictions imposed by the 'revealed preference approach'. Some results conform to traditional views held by economists. In particular, the impact of income on subjective utility being positive, but marginally decreasing with increasing levels of income. Others are difficult to reconcile with standard economics. According to this view, unemployed persons with the same income should be happier than those who have to labor in order to gain it. But this totally disregards the value of having a job and deriving income by one's own effort rather than being dependent on the state. Similarly, economic happiness research shows that self-employed persons are happier than those working as employees in firms. The reason is that they value autonomy highly, compensating them for the higher risk, harder work, and, on average, lower income that accompanies self-employment. Happiness research has been a fine case of

interdisciplinary work in the social sciences, and has been a source of inspiration to economics.

REFERENCES

- Alesina, A., & Glaeser, E. L. (2004). *Fighting Poverty in the US and Europe: A World of Difference*. Oxford: Oxford University Press.
- Alesina, A., & La Ferrara, E. (2005). Preferences for redistribution in the land of opportunities. *Journal of Public Economics*, *89*, 897–931.
- Alesina, A., Di Tella, R., & MacCulloch, R. (2004). Inequality and happiness: are Europeans and Americans Different? *Journal of Public Economics*, *88*, 2009–2042.
- Alesina, A., Glaeser, E. L., & Sacerdote, B. (2001). Why doesn't the US have a European style welfare state? *Brookings Papers on Economic Activity*, *2*, 187–277.
- Anusic, I., Yap, S. C. Y., & Lucas, R. E. (2014). Does personality moderate reaction and adaptation to major life events? Analysis of life satisfaction and affect in an Australian national sample. *Journal of Research in Personality*, *51*, 69–77.
- Argyle, M. (1987). *The Psychology of Happiness*. London: Methuen.
- Becker, G. S. (1973). A theory of marriage: Part I. *Journal of Political Economy*, *81*, 813–846.
- Becker, G. S. (1974). A theory of marriage: Part II. *Journal of Political Economy*, *82*, S11–S26.
- Becker, G. S. (1981). *A Treatise on the Family*. Boston, MA: Harvard University Press.
- Blanchflower, D. G., & Oswald, A. (2004). Well-being over time in Britain and the USA. *Journal of Public Economics*, *88*, 1359–1386.
- Bruni, L., & Porta, P. L. (2007). *Handbook on the Economics of Happiness*. Cheltenham, UK and Northampton, MA: Edward Elgar.
- Chun, H., & Lee, I. (2001). Why do married men earn more: productivity or marriage selection? *Economic Inquiry*, *39*, 307–319.
- Clark, A. E. (2003). Unemployment as a social norm: psychological evidence from panel data. *Journal of Labor Economics*, *21*, 323–351.
- Clark, A. E., & Oswald, A. J. (1994). Unhappiness and unemployment. *Economic Journal*, *104*, 648–659.
- Clark, A. E., Frijters, P., & Shields, M. A. (2008). Relative income, happiness, and utility: an explanation for the Easterlin Paradox and other puzzles. *American Economic Review*, *46*, 95–144.
- Coombs, R. H. (1991). Marital status and personal well-being: a literature review. *Family Relations*, *40*, 97–102.
- Csikszentmihalyi, M. (1990). *Flow: The Psychology of Optimal Experience*. New York, NY: Harper and Row.
- De Neve, J. E., Diener, E., Tay, L., & Xuereb, C. (2013). The objective benefits of subjective well-being. *World Happiness Report 2013*, *2*, 54–79.
- De Witte, H. (1999). Job insecurity and psychological well-being: review of the literature and exploration of some unresolved issues. *European Journal of Work and Organizational Psychology*, *8*, 155–177.
- Deaton, A. (2005). Measuring poverty in a growing world. *Review of Economics and Statistics*, *87*, 1–19.
- Di Tella, R., MacCulloch, R. J., & Oswald, A. J. (2001). Preferences over inflation and unemployment: evidence from surveys of happiness. *American Economic Review*, *91*, 335–341.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542–575.
- Diener, E. (2000). Subjective well-being: the science of happiness and a proposal for a national index. *American Psychologist*, *55*, 34–43.
- Diener, E., & Biswas-Diener, R. (2002). Will money increase subjective well-being? *Social Indicators Research*, *57*, 119–169.
- Diener, E., & Biswas-Diener, R. (2008). *Happiness: Unlocking the Mysteries of Psychological Wealth*. Malden, MA: Blackwell.
- Diener, E., & Oishi, S. (2000). Money and happiness: income and subjective well-being across nations. In E. Diener & E. Suh (Eds), *Culture and Subjective Well-Being* (pp. 185–218). Cambridge, MA: MIT Press.
- Diener, E., Gohm, C. L., Suh, E. M., & Oishi, S. (2000). Similarity of the relations between marital status and subjective well-being across cultures. *Journal of Cross Cultural Psychology*, *31*, 419–436.
- Diener, E., Kanazawa, S., Suh, E. M., & Oishi, S. (2015a). Why people are in a generally good

- mood. *Personality and Social Psychology Review*, 19, 235–256.
- Diener, E., Oishi, S., & Lucas, R. E. (2015b). National accounts of subjective well-being. *American Psychologist*, 70, 234–242.
- 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, 94–122.
- Driffill, J., Mizon, G. E., & Ulph, A. (1990). Costs of inflation. In B. Friedman & F. Hahn (Eds), *Handbook of Monetary Economics* (Vol. 2, pp. 1011–1066). Amsterdam: North-Holland.
- Easterlin, R. A. (1974). Does economic growth improve the human lot? Some empirical evidence. In P. David & M. Reder (Eds), *Nations and Households in Economic Growth: Essays in Honour of Moses Abramowitz* (pp. 89–125). New York, NY: Academic Press.
- Easterlin, R. A. (1995). Will raising the incomes of all increase the happiness of all?. *Journal of Economic Behavior & Organization*, 27, 35–47.
- Easterlin, R. A. (2001). Income and happiness: towards a unified theory. *The Economic Journal*, 111, 465–484.
- Easterlin, R. A. (2002). *Happiness in Economics*. Cheltenham UK and Northampton MA: Edward Elgar.
- Easterlin, R. A., & Angelescu, L. (2009). Happiness and growth the world over: time series evidence on the happiness-income paradox. Discussion Paper Series, IZA DP No. 4060.
- Fischer, S. (1981, December). Towards an understanding of the costs of inflation: II. In Brunner, K. & Meltzer A. H. (Eds), *Carnegie-Rochester Conference Series on Public Policy* (Vol. 15, pp. 5–41). North-Holland.
- Frank, R. H. (1997). The frame of reference as a public good. *The Economic Journal*, 107, 1832–1847.
- Frank, R. H. (1999). *Luxury Fever: Why Money Fails to Satisfy in an Era of Excess*. New York, NY: Free Press.
- Frey, B. (2008). *Happiness. A Revolution in Economics*. Cambridge, MA: MIT Press.
- Frey, B. S., & Stutzer, A. (2000). Happiness, economy and institutions. *The Economic Journal*, 110, 918–938.
- Frey, B. S., & Stutzer, A. (2002a). What can economists learn from happiness research? *Journal of Economic Literature*, 40, 402–435.
- Frey, B. S., & Stutzer, A. (2002b). *Happiness and Economics: How the Economy and Institutions Affect Well-Being*. Princeton, NJ: Princeton University Press.
- Frey, B. S., & Stutzer, A. (2005). Happiness research: state and prospects. *Review of Social Economy*, 63, 207–228.
- Frey, B. S., & Stutzer, A. (2007). *Economics and Psychology: A Promising New Cross-Disciplinary Field*. Cambridge MA: MIT Press.
- Frey, B. S., & Stutzer, A. (2013). Economics and the study of individual happiness. In S. A. David, I. Boniwell, and A. C. Ayers (Eds), *The Oxford Handbook of Happiness* (pp. 431–447). Oxford: Oxford University Press.
- Frey, B. S., & Stutzer, A. (2014). Economic consequences of miscalculating utility. *Journal of Happiness Studies*, 15, 937–956.
- Frey, B. S., Benesch, C., & Stutzer, A. (2007). Does watching TV make us happy? *Journal of Economic Psychology*, 28, 283–313.
- Gardner, J., & Oswald, A. J. (2004). How is mortality affected by money, marriage, and stress?. *Journal of Health Economics*, 23, 1181–1207.
- Gardner, J., & Oswald, A. J. (2006). Do divorcing couples become happier by breaking up?. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, 169, 319–336.
- Graham, C., & Pettinato, S. (2002). *Happiness and Hardship: Opportunity and Insecurity in New Market Economies*. Washington, DC: Brookings Institution Press.
- Green, F. (2006). *Demanding Work: The Paradox of Job Quality in the Affluent Economy*. Princeton, NJ: Princeton University Press.
- Gruber, J. H., & Mullainathan, S. (2005). Do cigarette taxes make smokers happier? *Advances in Economic Analysis and Policy*, 5, 1–43.
- Helliwell, J. F. (2003). How's life? Combining individual and national variables to explain subjective well-being. *Economic Modelling*, 20, 331–360.
- Helliwell, J. F., & Huang, H. (2008). How's your government? International evidence linking

- good government and well-being. *British Journal of Political Science*, 38, 595–619.
- Inglehart, R. F. (1990). *Culture Shift in Advanced Industrial Society*. Princeton, NJ: Princeton University Press.
- Johnson, D. R., & Wu, J. (2002). An empirical test of crisis, social selection, and role explanations of the relationship between marital disruption and psychological distress: a pooled time-series analysis of four-wave panel data. *Journal of Marriage and Family*, 64, 211–224.
- Kahneman, D., Diener, E., & Schwarz, N. (1999). *Well-Being: The Foundations of Hedonic Psychology*. New York, NY: Russell Sage Foundation.
- Kahneman, D., Krueger, A. B., Schkade, D., Schwarz, N., & Stone, A. (2004). Toward national well-being accounts. *The American Economic Review*, 94, 429–434.
- Kubey, R., & Csikszentmihalyi, M. (1990). *Television and the Quality of Life: How Viewing Shapes Everyday Experience*. Hillsdale, MI: Lawrence Erlbaum.
- Kubey, R., & Csikszentmihalyi, M. (2002). Television addiction is no mere metaphor. *Scientific American*, 286, 74–80.
- Lane, R. E. (2000). *The Loss of Happiness in Market Economies*. New Haven, CT: Yale University Press.
- Lawless, N. M., & Lucas, R. E. (2011). Predictors of regional well-being: a county level analysis. *Social Indicators Research*, 101, 341–357.
- Layard, R. (2005). *Happiness: Lessons from a New Science*. London: Penguin.
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2003). Reexamining adaptation and the set point model of happiness: reactions to changes in marital status. *Journal of Personality and Social Psychology*, 84, 527–539.
- Lucas, R. E., Jr. (1981). Discussion of Stanley Fischer, 'Towards an Understanding of the Costs of Inflation: II.' *Carnegie-Rochester Conference Series on Public Choice*, 15, 43–52.
- Luechinger, S., Meier, S., & Stutzer, A. (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, 998–1045.
- Lyubomirsky, S. (2008). *The How of Happiness: A Scientific Approach to Getting the Life You Want*. New York, NY: Penguin Press.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: does happiness lead to success? *Psychological Bulletin*, 131, 803–855.
- McIlwraith, R. D. (1998). 'I, addicted to television': the personality, imagination, and TV watching patterns of self-identified TV addicts. *Journal of Broadcasting & Electronic Media*, 42, 371–386.
- McMahon, D. (2006). *The Pursuit of Happiness: A History from the Greeks to the Present*. London: Allen Lane.
- Michalos, A. C. (1991). *Global Report on Student Well-Being. Volume 1: Life Satisfaction and Happiness*. New York, NY: Springer.
- Myers, D. G. (1999). Close relationship and quality of life. In D. Kahneman, E. Diener, & N. Schwarz (Eds), *Well-Being: The Foundations of Hedonic Psychology* (pp. 376–393). New York, NY: Russell Sage Foundation.
- Odermatt, R., & Stutzer, A. (2015). (Mis)predicted subjective well-being following life events. IZA Discussion Paper No 9252.
- Oswald, A. J. (1997). Happiness and economic performance. *Economic Journal*, 107, 1815–1831.
- Pollak, R. A. (2002). Gary Becker's contributions to family and household economics. *Review of Economics of the Household*, 1, 111–141.
- Schelling, T. C. (1984). Self-command in practice, in policy, and in a theory of rational choice. *American Economic Review*, 74, 1–11.
- Schwarze, J., & Härpfer, M. (2007). Are people inequality averse, and do they prefer redistribution by the state? Evidence from German longitudinal data on life satisfaction. *The Journal of Socio-Economics*, 36, 233–249.
- Scitovsky, T. (1976). *The Joyless Economy: An Inquiry into Human Satisfaction and Dissatisfaction*. Oxford: Oxford University Press.
- Sen, A. K. (1982). *Choice, Welfare and Measurement*. Cambridge UK: Blackwell.
- Sen, A. K. (1995). Rationality and social choice. *American Economic Review*, 85, 1–24.

- Sen, A. K. (1999). *Development as Freedom*. New York, NY: Alfred Knopf.
- Shiller, R. J. (1997). Why do people dislike inflation? In C. Romer & D. Romer (Eds), *Reducing Inflation: Motivation and Strategy* (pp. 13–65). Chicago, IL: University of Chicago Press.
- Snowdon, B., & Vane, H. R. (2005). *Modern Macroeconomics: Its Origins, Development and Current State*. Northampton, MA: Edward Elgar.
- Stack, S., & Eshleman, J. R. (1998). Marital status and happiness: a 17-nation study. *Journal of Marriage and the Family*, 60, 527–536.
- Stevenson, B., & Wolfers, J. (2008). Economic growth and subjective well-being: reassessing the Easterlin Paradox. *Brookings Papers on Economic Activity*: 1–87.
- Stutzer, A. (2004). The role of income aspirations in individual happiness. *Journal of Economic Behavior and Organization*, 54, 89–109.
- Stutzer, A., & Frey, B. S. (2006). Does marriage make people happy, or do happy people get married? *Journal of Socio-Economics*, 35, 326–347.
- Stutzer, A., & Frey, B. S. (2010). Recent advances in the economics of individual subjective well-being. *Social Research*, 77, 679–714.
- Thaler, R. H. (1992). *The Winner's Curse: Paradoxes and Anomalies of Economic Life*. New York, NY: Free Press.
- van Praag, B. M. S. (1968). *Individual Welfare Functions and Consumer Behaviour: A Theory of Rational Irrationality*. Amsterdam: North-Holland.
- Veenhoven, R. (1993). *Happiness in Nations: Subjective Appreciation of Life in 56 Nations 1946–1992*. Rotterdam: Erasmus University Press.
- Veenhoven, R. (1999). Quality-of-life in individualistic society: a comparison in 43 nations in the early 1990s. *Social Indicators Research*, 48, 159–188.
- Veenhoven, R. (2000). Freedom and happiness: a comparative study in 46 nations in the early 1990s. In E. Diener & E. Suh (Eds), *Culture and Subjective Well-Being* (pp. 257–288). Cambridge, MA: MIT Press.
- Weimann, J., Knabe, A., & Schoeb, R. (2015). *Measuring Happiness: The Economics of Well-Being*. Cambridge MA: MIT Press.
- Wilson, T. D., & Gilbert, D. (2003). Affecting forecasting. *Advances in Experimental Social Psychology*, 35, 345–411.
- Winkelmann, L., & Winkelmann, R. (1998). Why are the unemployed so unhappy? Evidence from panel data. *Economica*, 65, 1–15.
- Wolfers, J. (2003). Is business cycle volatility costly? Evidence from surveys of subjective well-being. *International Finance*, 6, 1–31.
- World Happiness Report (2016). Update. Available from <http://worldhappiness.report> (accessed 29 January 2018).
- Yap, S. C. Y., Anusic, I., & Lucas, R. E. (2012). Does personality moderate reaction and adaptation to major life events? Evidence from the British Household Panel Study. *Journal of Research in Personality*, 46, 477–488.