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PROGRESSIVE TAXATION AND HAPPINESS

THOMAS D. GRIFFITH*

Abstract: This Article explores the optimal level of income redistribution by examining the potential welfare gains from redistributive tax and spending policies. Drawing on recent research on human happiness, this Article argues that while wealthy nations are generally happier than their poorer counterparts, neither national nor individual economic growth appear to have an appreciable impact on the subjective well-being of the citizens of relatively wealthy nations. Significant causes of this finding include the problem of rivalry—that increases in the income of some depress the happiness of others—and the fact that individuals overestimate the degree to which additional consumption will improve their happiness. Studies show the level of inequality in a society also may affect levels of happiness. Ultimately, happiness research is consistent with the strongest justification for adopting a progressive tax structure—income has declining marginal utility thus redistribution can increase total welfare in a society.

INTRODUCTION

Why adopt a progressive tax rate structure? In our 1987 article *Social Welfare and the Rate Structure*, Joseph Bankman and I argued that the strongest argument for progressivity is that transferring income from richer to poorer individuals through a combination of taxation and government spending increases total welfare or utility in the society.¹ The reason such transfers increase welfare is simple: additional money produces more utility for a poor person than a rich person.²

Progressive taxation, however, may be costly. The higher marginal rates required to fund redistribution may reduce work effort³ and en-

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¹ See generally Joseph Bankman & Thomas Griffith, *Social Welfare and the Rate Structure: A New Look at Progressive Taxation*, 75 CAL. L. REV. 1905 (1987).

² *Id.* at 1947.

³ *Id.* at 1919-21.

courage individuals to engage in costly and nonproductive activities to shelter their income from taxation.⁴ The gains in social welfare from redistributing income to the poor, then, must be weighed against the losses in social welfare from reduced work effort.

The size of the efficiency costs associated with progressive taxation is a matter of debate. Professor Bankman and I argued that some of the efficiency costs of progressivity, including increased complexity and reduced taxpayer compliance, were smaller than had been suggested previously.⁵ More importantly, we argued that under any plausible assumptions regarding the costs and benefits, some level of redistribution is optimal.⁶

The question, therefore, is not *whether* redistribution is optimal, but *how much* redistribution is optimal.⁷ Determining the ideal level of redistribution requires estimating both the efficiency costs of higher tax rates and the welfare gains from redistribution. Neither is easy to do. A survey of the literature on the impact of the rate structure on work effort alone would require a lengthy article.⁸ And one still would need to examine its impact on a variety of other issues, such as the complexity of the tax code, savings rates, and tax compliance.

I do not revisit here the debate over the efficiency costs of redistribution. Instead, I look at recent research on the causes and correlates of human happiness, which may shed light on the potential gains from redistribution. The questions are important. How much, if at all, does redistributing income from the rich to the poor increase total happiness in a society? Is the answer in wealthy societies different from the answer in poor societies? If redistributive taxation and spending policies slow economic growth, does such a slowdown significantly reduce total happiness in a society? More broadly, what is the relationship between economic conditions in a society and the happiness of the members of that society?

Until fairly recently there was little serious scholarship focusing on such questions. Over the past two decades, however, there has been an explosion of what might be called "happiness studies"—research on the determinants of human happiness. In this Article, I examine some of

⁴ *Id.* at 1937–41.

⁵ *Id.* at 1929–45.

⁶ Bankman & Griffith, *supra* note 1, at 1945–67.

⁷ *Id.* at 1966–67.

⁸ See *id.* at 1910–15 (discussing briefly the literature on the impact of tax rates on the labor supply as of 1987).

the central findings of this literature and consider the implications of those findings for redistributive tax and spending policies.

Part I considers the ways in which researchers measure the happiness or subjective well-being of individuals.⁹ Part II examines studies of subjective well-being among nations.¹⁰ When nations are compared at a given point in time, the results are consistent with the standard intuition of declining marginal utility of income. Cross-national studies suggest that the citizens of richer nations tend to be happier than the citizens of their poorer counterparts, but additional income has a much greater impact on poor nations. The findings are quite different, however, for longitudinal studies on national well-being. Surprisingly, economic growth appears to have little measurable impact on the subjective well-being of the citizens of relatively wealthy nations. This raises important questions about the centrality of such growth as a matter of public policy.

Part III explores the impact of income on citizens within a nation.¹¹ The results are surprising: increases in income over time generally produce little or no improvement in the subjective well-being of individuals. A significant problem is rivalry—increases in the income of one individual depress the happiness of others.

Part IV considers the harm that individuals inflict upon themselves by overestimating the degree to which additional consumption will improve their happiness.¹² I discuss two key reasons for this overestimation. Adaptation theory suggests that luxury items lose much of their enjoyment once the recipient becomes used to having them. Aspiration theory posits that the satisfaction of individuals with their standard of living depends upon whether they have achieved their aspirations. Additional income provides little satisfaction because aspirations rise with income. Part V discusses whether inequality itself reduces individual utility even after controlling for individual income.¹³ Part VI suggests some of the implications of happiness research for tax policy.¹⁴

Before continuing, however, I should add a note on the normative basis of my analysis. My analysis in this Article is explicitly utilitarian or, more broadly, "welfarist." I assume that the government's goal in structuring a tax system—and other programs—is increasing the

⁹ See *infra* notes 20–44 and accompanying text.

¹⁰ See *infra* notes 45–82 and accompanying text.

¹¹ See *infra* notes 83–118 and accompanying text.

¹² See *infra* notes 119–151 and accompanying text.

¹³ See *infra* notes 152–176 and accompanying text.

¹⁴ See *infra* notes 177–185 and accompanying text.

utility or happiness of its citizens.¹⁵ With respect to progressive taxation, such a welfarist approach contrasts with various traditional justifications for progressivity, such as taxation according to benefits received and taxation based on equal or proportionate sacrifice. Those theories have been soundly criticized elsewhere.¹⁶

A variety of theories of distributive justice support and oppose redistribution of income.¹⁷ I do not enter this debate here.¹⁸ Rather, I simply assume that improving aggregate social welfare, as measured by the individual utility levels or happiness of the population, remains one important goal of tax policy.¹⁹

I. MEASURING HAPPINESS

A. *The Traditional Debate*

Estimating the gains from redistributing income is a thorny task. Indeed, some early critics of progressive taxation argued that it was impossible to determine that an additional dollar was worth more to a

¹⁵ The government also might (and should) have an interest in improving the well-being of noncitizens, but I do not address that complexity here.

¹⁶ The classic critique of benefits received and sacrifice theories in the legal literature is in Walter J. Blum & Harry Kalven, Jr., *The Uneasy Case for Progressive Taxation*, 19 U. CHI. L. REV. 417 (1952). This essay was reprinted one year later as a book with an updated foreword. See generally WALTER J. BLUM & HARRY KALVEN, JR., *THE UNEASY CASE FOR PROGRESSIVE TAXATION* (1953). References in this Article are for the latter. A more recent critique of arguments for progressive taxation can be found in Jeffrey A. Schoenblum, *Tax Fairness or Unfairness? A Consideration of the Philosophical Bases for Unequal Taxation of Individuals*, 12 AM. J. TAX POL'Y 221 (1995). Strangely, Professor Schoenblum classifies equal and proportionate sacrifice theories as utilitarian, even though neither seeks to maximize utility. See *id.* at 237-41. For an interesting analysis of some of the philosophical arguments for progressivity and their relationship to public opinion, see generally Marjorie E. Kornhauser, *Equality, Liberty and a Fair Income Tax*, 23 FORDHAM URB. L.J. 607 (1996).

¹⁷ See generally ROBERT NOZICK, *ANARCHY, STATE, AND UTOPIA* (1974) (opposing redistribution); JOHN RAWLS, *A THEORY OF JUSTICE* (1971) (supporting redistribution).

¹⁸ For a brief discussion of alternative measures of social welfare, see Bankman & Griffith, *supra* note 1, at 1948-50.

¹⁹ For classic utilitarian principles, see JEREMY BENTHAM, *INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION* (J.H. Burns & H.L.A. Hart eds., Clarendon Press 1996) (1789) and JOHN STUART MILL, *UTILITARIANISM* (Roger Crisp ed., Oxford Univ. Press 1988) (1861). For a more recent utilitarian argument, see R.M. HARE, *MORAL THINKING: ITS LEVELS, METHOD, AND POINT* (1981). For a powerful axiomatic argument for utilitarianism, see John C. Harsanyi, *Cardinal Welfare, Individualistic Ethics, and Interpersonal Comparisons of Utility*, 63 J. POL. ECON. 309 (1955). Essays debating utilitarianism are contained in J.J.C. SMART & BERNARD WILLIAMS, *UTILITARIANISM: FOR AND AGAINST* (1973) and *UTILITARIANISM AND BEYOND* (Amartya Sen & Bernard Williams eds., 1982).

poor person than to a rich person.²⁰ The argument constituted a small part of a broader attack on the ability to make interpersonal comparisons generally. This “ordinal revolution” dominated economic thought for decades and remains highly influential today.

Such extreme skepticism about the ability of individuals to make interpersonal utility comparisons is misplaced. Individuals make judgments about the mental states of others every day. People describe their friends and acquaintances as cheerful, sad, or in pain and behave as though these descriptors correspond to actual mental states. Indeed, no society could survive that did not make and act on judgments about the mental states of others.

To be sure, individuals cannot directly observe the subjective feelings of others. And some judgments seem more reliable than others. For example, it seems certain that Alice, who suffers severe burns in a fire, endures far greater pain than Bob, who nicks himself while shaving.

Judging the marginal utility of money is more difficult. An additional \$1000 obviously means more to a family in poverty than to a multimillionaire.²¹ Greater uncertainty exists, however, over whether an extra \$1000 will produce more happiness for Carol, who earns \$50,000 per year than for Doug, who earns twice that amount. Perhaps Doug takes great pleasure from an expensive hobby that the additional \$1000 will help him pursue, while Carol enjoys nothing more than reading classic novels which she borrows from her local library. Despite these complexities, however, it seems reasonable to believe that additional income usually offers greater utility to the poor than to the rich.

The task of estimating the rate at which the marginal utility of income declines is even thornier. One popular conjecture is that the utility from income is proportional to the logarithm of the income.²² Under this approach, the welfare gain from increasing Emily’s annual income from \$50,000 to \$100,000 per year equals the welfare gain from increasing Fred’s income from \$100,000 to \$200,000 per year. The popularity of the logarithmic utility function surely rests, in part,

²⁰ BLUM & KALVEN, *supra* note 16, at 57–63; Lionel Robbins, *The Nature and Significance of Economic Science*, in *THE PHILOSOPHY OF ECONOMICS: AN ANTHOLOGY* 113, 129–32 (Daniel M. Hausman ed., 1984).

²¹ Joshua Greene & Jonathan Baron, *Intuitions About Declining Marginal Utility*, 14 J. BEHAV. DECISION MAKING 243, 244–45 (2001).

²² The formula is $U_y = k (\log Y)$. See Bankman & Griffith, *supra* note 1, at 1952. See generally J.A. Mirrlees, *An Exploration in the Theory of Optimum Income Taxation*, 38 REV. ECON. STUD. 175 (1971).

on its significant computational advantages. It may also roughly reflect some scholars' intuitions.

My own informal surveys of students in my introductory tax course suggest a slightly more rapid drop in the marginal utility of income than that suggested by the logarithmic approach. Each year, I ask my tax students to choose between two worlds. In World A, the students would have an income of \$100,000 per year for life. In World B, the students would have an equal chance of a \$50,000 income or a \$200,000 income, for an expected value of \$125,000. In each case, income would be adjusted for inflation annually, but could not be augmented in any other way. In more than a decade of these surveys, the majority of students have always preferred World A—the certain \$100,000 income—over the lottery, despite the lottery's higher expected dollar value.²³

B. Happiness Surveys

Recent research on happiness provides more persuasive evidence than intuition or informal student polls regarding the relationship between income and individual happiness. The most common method used to estimate the subjective welfare or happiness of individuals involves simply asking them. Subjects might be asked, "Taken all together, how would you say things are these days[?] [W]ould you say that you are very happy, pretty happy, or not too happy?"²⁴ Alternatively, subjects might be asked to respond on a ten-point scale to a question, such as, "All things considered, how satisfied are you with your life as a whole these days?"²⁵

1. Self-Reported Utility and Cognitive Errors

Answers to survey questions likely act as imperfect measures of actual happiness. The meaning of terms such as "pretty happy" may vary over time, and cultural norms may vary regarding whether indi-

²³ Typically, the median student in the class shows indifference in a choice between the lottery and a certain income of about \$80,000.

²⁴ This question was asked of U.S. citizens by the National Opinion Research Center. NAT'L. OPINION RES. CTR., UNIV. OF CHI., GENERAL SOCIAL SURVEY: 1972–2000 CUMULATIVE CODEBOOK, CODEBOOK VARIABLE: HAPPY, at <http://webapp.icpsr.umich.edu/GSS/rnd1998/merged/cdbk/happy.htm> (last modified May 1, 2001).

²⁵ The life satisfaction score in the World Values Survey II is based on this question. Ed Diener & Eunkook Mark Suh, *National Differences in Subjective Well-Being*, in *WELL-BEING: THE FOUNDATIONS OF HEDONIC PSYCHOLOGY* 434, 435 (Daniel Kahneman et al. eds., 1999) [hereinafter *WELL-BEING*].

viduals should profess to being extremely happy. Responses may depend on the precise wording of the questions or, in the case of a larger survey, on the nature of the preceding questions.²⁶

Individuals also may make cognitive errors in reporting their own well-being. Studies show systematic differences between contemporaneously reported pain levels and the later memory of that pain.²⁷ An individual's subsequent memory of a painful experience can be predicted well by the peak pain level and the end pain level.²⁸

The duration of the pain has little impact on the subsequent evaluation of its severity. Indeed, adding an additional period of pain at a lower intensity to a painful experience actually can improve the retroactive evaluation of a painful experience.²⁹ In one experiment, subjects took part in two trials in which they placed one of their hands in cold water.³⁰ In the short trial, participants kept a hand in water at fourteen degrees Celsius for one minute. In the long trial, the immersion lasted a total of a minute and a half. For the first sixty seconds, subjects again kept a hand in water at fourteen degrees Celsius, but the temperature of the water then gradually was increased to fifteen degrees Celsius over the final thirty seconds—a less painful, but still unpleasant temperature. Approximately 65% of the subjects chose to repeat the long trial rather than the short trial.³¹ Thus, for most individuals, adding an extra thirty seconds of reduced pain to an already painful experience reduced the remembered unpleasantness of the experience.

Individuals may also misreport pleasant experiences and overemphasize recent events.³² If yesterday was an enjoyable day, it may skew an individual's assessment of the entire previous week.³³ Reports of current life satisfaction also may depend on minor contemporaneous posi-

²⁶ In one survey, for example, individuals were asked the following two questions: (1) "How happy are you?" and (2) "How many dates did you have in the last month?" Daniel Kahneman, *Objective Happiness*, in *WELL-BEING*, *supra* note 25, at 3, 22. If the happiness question was asked first, the correlation between the two answers was 0.12. If the dates question preceded the happiness question, the correlation was 0.66. *Id.*; see also Norbert Schwarz & Fritz Strack, *Reports of Subjective Well-Being: Judgmental Processes and Their Methodological Implications*, in *WELL-BEING*, *supra* note 25, at 61, 62–64, 79.

²⁷ Kahneman, *supra* note 26, at 19–20.

²⁸ *Id.*

²⁹ *Id.* at 20.

³⁰ *Id.*

³¹ *Id.* Similar results were obtained in laboratory experiments involving loud noises and in clinical evaluations of the reported pain of patients undergoing a colonoscopy. *Id.*

³² Arthur A. Stone et al., *Ecological Momentary Assessment*, in *WELL-BEING*, *supra* note 25, at 26, 28. See generally NORBERT SCHWARZ & SEYMOUR SUDMAN, *AUTOBIOGRAPHICAL MEMORY AND THE VALIDITY OF RETROSPECTIVE REPORTS* (1994).

³³ Stone et al., *supra* note 32, at 28.

tive or negative experiences. Subjects interviewed on a sunny day are more likely to report satisfaction with their lives as a whole than subjects interviewed when it is raining.³⁴ Subjects interviewed in a smelly, noisy laboratory report lower satisfaction with life than do subjects interviewed in a friendly office.³⁵ Conversely, subjects interviewed in an unpleasant room report greater satisfaction with their own housing.³⁶

Counterfactuals can influence assessments of well-being. Winning an Olympic silver medal for finishing second in an event would seem to be clearly better than winning a bronze medal for finishing third. Yet Olympic bronze medal winners report higher levels of satisfaction than do silver medal winners.³⁷ Apparently, bronze medal winners more easily may imagine a downward counterfactual—winning no medal at all—while silver medal winners picture the upward counterfactual—a gold medal.³⁸

2. Self-Reported Utility: Supporting Evidence

Despite potential cognitive biases, it seems that a meaningful relationship exists between self-reported utility and the respondent's underlying mental state. Notwithstanding the influence of temporary factors such as current mood, reported well-being remains fairly stable across situations. Reported levels of pleasant and unpleasant moods during work, for example, show a strong correlation with reported levels of pleasant and unpleasant moods during recreation.³⁹ Further, reported life satisfaction is fairly stable throughout an individual's life span.⁴⁰ Self-reported well-being strongly correlates with the reports of family and friends and with the amount of smiling during an interview.⁴¹ Self-reported welfare also correlates with the ability of respondents to recall positive events in their lives.⁴²

³⁴ Schwarz & Strack, *supra* note 26, at 75.

³⁵ *Id.* at 76.

³⁶ *Id.*

³⁷ *Id.* at 67.

³⁸ *Id.*

³⁹ See Ed Diener & Richard E. Lucas, *Personality and Subjective Well-Being*, in *WELL-BEING*, *supra* note 25, at 213, 215 (reporting a 0.70 correlation for pleasant moods and a 0.74 correlation for unpleasant moods). See generally Ed Diener et al., *Person X Situation Interactions: Choice of Situations and Congruence Response Models*, 47 *J. PERSONALITY & SOC. PSYCHOL.* 580 (1984).

⁴⁰ See Diener & Lucas, *supra* note 39, at 214.

⁴¹ Diener & Suh, *supra* note 25, at 437.

⁴² Galina Balatsky & Ed Diener, *Subjective Well-Being Among Russian Students*, 28 *SOC. INDICATORS RES.* 225, 238–39 (1993); Diener & Suh, *supra* note 25, at 437.

In addition, more "objective" measures of a successful life correspond with self-reported happiness. Individuals who report themselves to be happy, for example, are less likely to be absent from work, less likely to die prematurely, and less likely to have headaches, digestive disorders, and similar ailments.⁴⁵ In sum, while not without problems, research based on subjective measures of well-being may provide useful information about the causes and correlates of human happiness.⁴⁴

II. WELL-BEING AMONG NATIONS

A. Cross-National Comparisons of Well-Being

International surveys of subjective well-being find large and stable differences among nations. A study of well-being among members of the European Union from 1973 to 1998 found that year after year, citizens of Denmark were roughly five times more likely than citizens of France or Italy to describe themselves as "very satisfied" with their lives, and twelve times more likely than citizens of Portugal to report high satisfaction.⁴⁵ Global surveys, such as the World Values Survey, find similar differences in national well-being.⁴⁶ Moreover, national differences in subjective well-being do not appear to be a problem of translation, as sharp differences exist among nations speaking the same language.⁴⁷

Wealthy nations generally demonstrate much greater subjective well-being than poor nations. Figure 1 shows the relation between per capita national income and mean life satisfaction for forty-two nations based on

⁴⁵ ROBERT H. FRANK, *LUXURY FEVER* 68–71 (1999).

⁴⁴ For a good summary of the issues surrounding the measurement of individual happiness by surveys, see Bernard M.S. van Praag & Paul Frijters, *The Measurement of Welfare and Well-Being: The Leyden Approach*, in *WELL-BEING*, *supra* note 25, at 413.

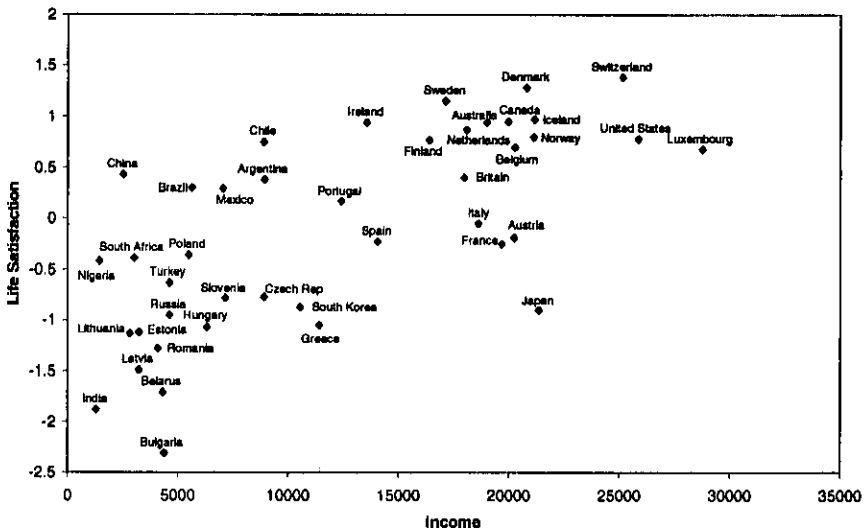
⁴⁵ Ronald Inglehart & Hans-Dieter Klingemann, *Genes, Culture, Democracy, and Happiness*, in *CULTURE AND SUBJECTIVE WELL-BEING* 165, 166–67 (Ed Diener & Eunkook M. Suh eds., 2000).

⁴⁶ Ed Diener & Shigehiro Oishi, *Money and Happiness: Income and Subjective Well-Being Across Nations*, in *CULTURE AND SUBJECTIVE WELL-BEING*, *supra* note 45, at 185, 198–201; Inglehart & Klingemann, *supra* note 45, at 170. See generally RONALD INGLEHART, *MODERNIZATION AND POSTMODERNIZATION: CULTURAL, ECONOMIC, AND POLITICAL CHANGE IN 43 SOCIETIES* (1997); *WORLD VALUES SURVEY*, <http://www.worldvaluessurvey.org/>.

⁴⁷ Inglehart & Klingemann, *supra* note 45, at 167–69; see Piet Ouweneel & Ruut Veenhoven, *Cross-National Differences in Happiness: Cultural Bias or Social Quality?*, in *CONTEMPORARY ISSUES IN CROSS-CULTURAL PSYCHOLOGY* 168, 171–73 (Nico Bleichrodt & Pieter J.D. Drenth eds., 1991).

responses to the World Values Survey II.⁴⁸ The correlation between mean income and mean life satisfaction among the nations is 0.69.⁴⁹

Figure 1: Income and Life Satisfaction in 42 Nations



The relationship between income and well-being is not uniform throughout the income distribution. For poor nations, additional income appears to have a significant impact on reported well-being. Once citizens of a nation have reached a level of reasonable financial security, however, additional income has little effect.⁵⁰

This can be illustrated by separating the above nations into the following two groups: poorer nations with a per capita income below \$15,000 and richer nations with an income above \$15,000. Figure 2 shows the least-squares linear regression line for the poorer nations in the sample.⁵¹ The slope of the line indicates that within this income

⁴⁸ See Diener & Oishi, *supra* note 46, at 199 tbl.8.2. Figure 1 is based on data from Ed Diener and Shigehiro Oishi, *Id.* Where available, income is based on purchasing power parity using U.S. dollars. Gross national product per capita is used in the few cases in which purchasing power parity is not available. *Id.* at 199. Life satisfaction is a standard score derived from the World Values Survey II and one other survey. *Id.* at 198-99.

⁴⁹ A correlation of 0.686 was obtained by the author using Microsoft Excel. See Diener & Oishi, *supra* note 46, at 198 (stating a correlation of 0.69).

⁵⁰ See Inglehart & Klingemann, *supra* note 45, at 171.

⁵¹ These calculations were made by the author using Microsoft Excel.

range, \$1000 of additional income increases life satisfaction by about one-tenth of a standard deviation.⁵²

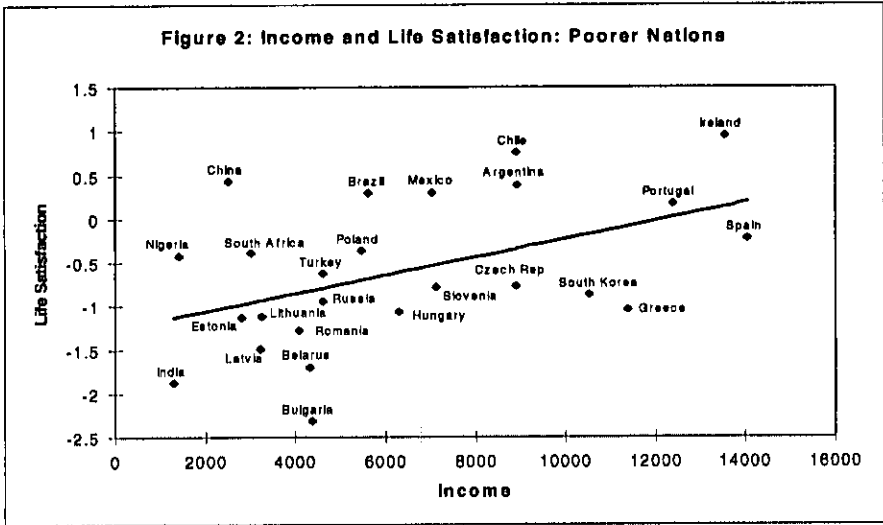
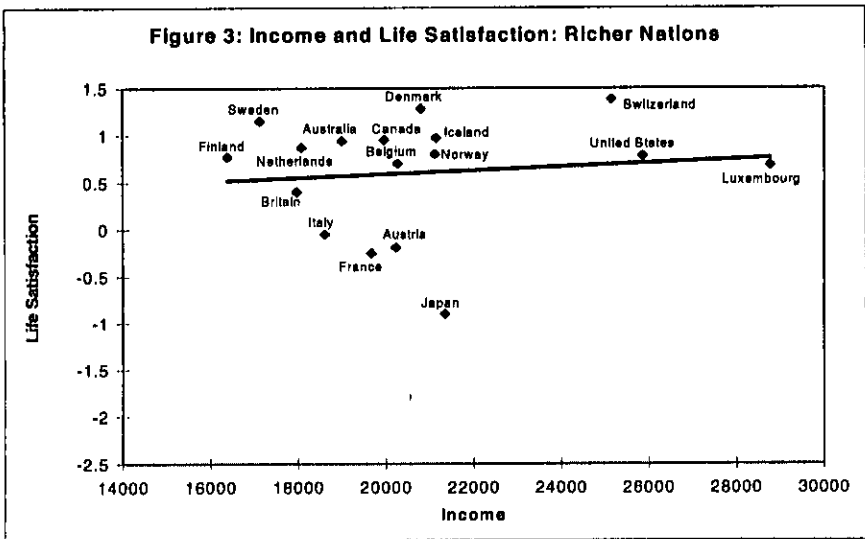


Figure 3 shows the much flatter regression line for the richer nations in the sample.⁵³ Within this income range, \$1000 of additional income increases life satisfaction less than one-fiftieth of a standard deviation.⁵⁴



⁵² The slope of the regression line is 0.000104.

⁵³ These calculations were made by the author using Microsoft Excel.

⁵⁴ The slope of the regression line is 0.000019.

The finding that additional income has a greater impact in poor nations stands in line with the discoveries of other researchers.⁵⁵ This result does not come as a surprise. Most citizens of poor nations will use extra income to satisfy basic needs; in wealthy countries, those needs already are met for most citizens.

Income does not explain, of course, all differences in national well-being. Among both richer and poorer nations, there are significant deviations from the happiness that would be predicted based on income alone. For example, individuals living in former Soviet Bloc nations show less satisfaction with life than would be predicted by their income.⁵⁶ Indeed, in a recent survey of subjective well-being, seven of the eight lowest-ranking societies were former members of the U.S.S.R.⁵⁷ By contrast, historically Protestant nations tend to have a higher level of subjective well-being than predicted by their income, even if only a small portion of the population now attends church regularly.⁵⁸

Democratic institutions and subjective well-being also show a strong correlation.⁵⁹ Nevertheless, because democracy is so closely associated with a strong economy, it is difficult to determine its independent contribution to well-being.⁶⁰ Increased democracy does not ensure increased happiness. Russia, for example, has shown a decline in happiness since adopting free elections in 1991.⁶¹ Conversely, while some scholars consider China to be the least free of the sixty-four countries included in the World Values Surveys, China nonetheless demonstrates a relatively high level of subjective well-being.⁶² More generally, the small sample size of cross-national surveys combines with a strong correlation between democratic institutions, protection of human rights, and social equality to make it difficult to determine the independent contribution of each of these factors to subjective well-being.⁶³

In sum, while not without problems, cross-national comparisons do not deviate from the traditional notion of declining marginal util-

⁵⁵ See, e.g., Diener & Oishi, *supra* note 46, at 194-97; Ruut Veenhoven, *Is Happiness Relative?* 24 SOC. INDICATORS RES. 1, 26-27, 32 (1991).

⁵⁶ See Inglehart & Klingemann, *supra* note 45, at 171.

⁵⁷ *Id.* at 171, 172-73 tbl.7.1, 174 fig. 7.3.

⁵⁸ *Id.* at 171.

⁵⁹ *Id.* at 177-79 (finding a correlation of 0.78).

⁶⁰ See *id.* at 179.

⁶¹ Inglehart & Klingemann, *supra* note 45, at 179.

⁶² See *id.* at 179-80.

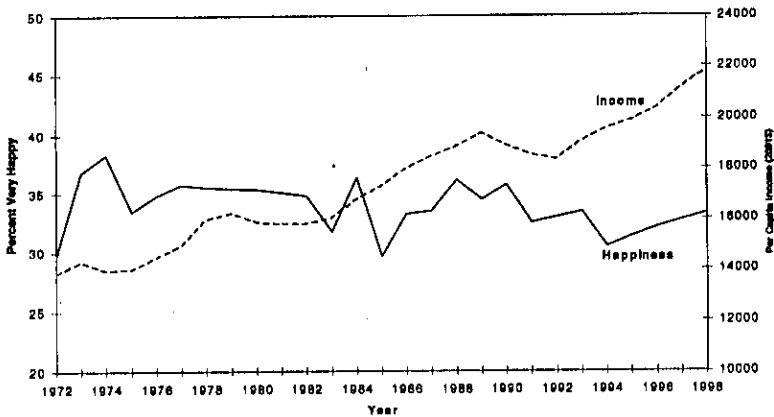
⁶³ Diener & Oishi, *supra* note 46, at 201. For studies finding almost no correlation between human rights and subjective well-being once income is controlled, see generally Ed Diener et al., *Factors Predicting the Subjective Well-Being of Nations*, 69 J. PERSONALITY & SOC. PSYCHOL. 851 (1995).

ity of income. Additional income increases the utility of the citizens of all nations but has the greatest effect where those citizens are poor.

B. Longitudinal Studies of National Well-Being

Almost universally, individuals view economic growth as an important goal for any nation. This view presumably finds ground in a belief that a high rate of economic growth will improve significantly the well-being of that nation's citizens.⁶⁴ Studies of subjective well-being over time, however, raise serious questions about this conclusion. Even high rates of economic growth may have only a modest impact on long-term happiness in developed nations.⁶⁵ Figure 4, for example, shows per capita income and stated happiness in the United States from 1972 to 1998, a period of high economic growth for the country.⁶⁶ Income is adjusted for inflation and shown in year 2001 dollars.

Figure 4: Income and Happiness in the United States 1972-1998



⁶⁴ See Andrew J. Oswald, *Happiness and Economic Performance*, 107 *ECON. J.* 1815, 1816 (1997).

⁶⁵ Short-term macroeconomic effects such as a recession, however, may have a significant impact on happiness. See Rafael Di Tella et al., *The Macroeconomics of Happiness*, 85 *REV. ECON. & STAT.* 809, 823 (2003).

⁶⁶ The income data are from the U.S. Census Bureau's Historical Income Tables—People, which incorporates data from the Current Population Survey, Annual Demographic Supplements. U.S. CENSUS BUREAU, TABLE P-1: TOTAL CPS POPULATION AND PER CAPITA MONEY INCOME: 1967 TO 2001 (published Sept. 30, 2002), <http://www.census.gov/hhes/income/histinc/p01.html> (last revised May 13, 2004). The happiness data are from the National Opinion Research Center. NAT'L. OPINION RES. CTR., UNIV. OF CHI., GENERAL SOCIAL SURVEY: 1972–2000 CUMULATIVE CODEBOOK, CODEBOOK TRENDS: HAPPY, at <http://webapp.icpsr.umich.edu/GSS/rnd1998/merged/cdbk-trn/happy.htm> (last modified May 1, 2001).

During this twenty-six year period, real per capita income in the United States grew from \$13,821 to \$21,821, an increase of 58%. At the same time, the percentage of respondents who professed to be "very happy" actually fell.⁶⁷ During the first five years of the period, from 1972 to 1976, the portion of the sample reporting to be very happy averaged 34.6%.⁶⁸ During the last five years, from 1994 to 1998, an average of only 32% professed to be very happy.⁶⁹ Other nations show similar results. Rapid economic growth in France and Japan since the end of World War II produced little increase in subjective well-being in those countries.⁷⁰

Figure 5 shows the relationship between economic growth and change in life satisfaction for the fourteen developed nations for which at least four surveys were available.⁷¹

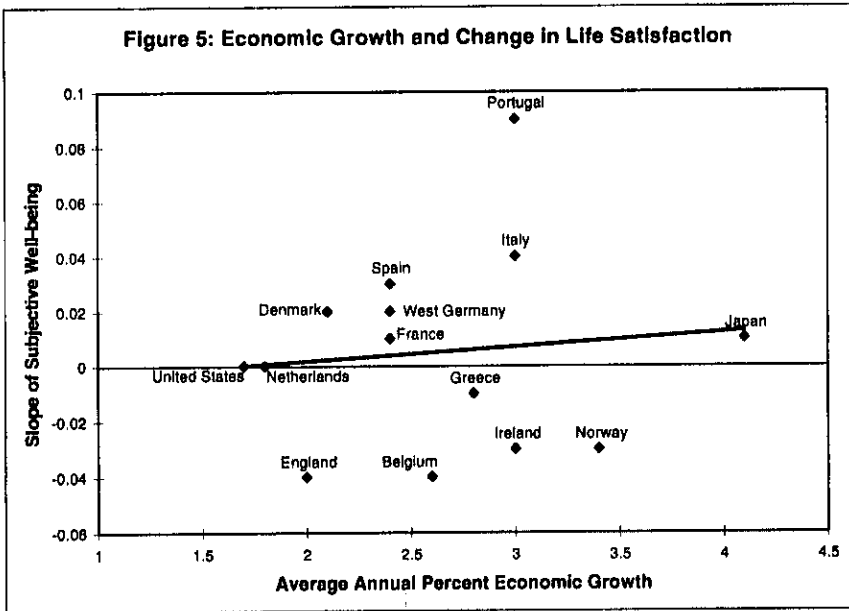
⁶⁷ Indeed, the correlation between per capita income and the portion of respondents indicating that they were "very happy" was -0.34. Alternatively, a "happiness index" can be created by assigning a value from one to three for the responses "not too happy," "pretty happy," and "very happy," respectively. There was a weak positive correlation of 0.10 between income and the happiness index. Little weight should be given, however, to the specific correlations, because for either measure of happiness, there was little change during the twenty-year period. These correlations were calculated by the author using Microsoft Excel.

⁶⁸ These calculations were made by the author using Microsoft Excel.

⁶⁹ These calculations were made by the author using Microsoft Excel. The overall happiness index, described above, averaged 2.21 for both the 1972 to 1976 and 1994 to 1998 periods. See *supra* note 67.

⁷⁰ Diener & Oishi, *supra* note 46, at 202; Ed Diener & Eunkook M. Suh, *Measuring Quality of Life: Economic, Social and Subjective Indicators*, 40 SOC. INDICATORS RES. 189, 209, 211 tbl.I (1997); Diener & Suh, *supra* note 25, at 441; see also Bruno S. Frey & Alois Stutzer, *What Can Economists Learn from Happiness Research?*, 40 J. ECON. LITERATURE 402, 413-14 (2002). For a recent study finding that happiness declined in the United States and was flat in Great Britain over the past twenty-five years, see David G. Blanchflower & Andrew J. Oswald, *Well-Being over Time in Britain and the USA*, 88 J. PUB. ECON. 1359, 1380 (2004).

⁷¹ The figures and calculations are based on data reported by Ed Diener and Shigehiro Oishi. See Diener & Oishi, *supra* note 46, at 203 tbl.8.3. Luxembourg was included in Diener and Oishi's analysis, but it is excluded here because data on that nation's economic growth rate was not stated.



The slope of the linear regression line is nearly flat and the correlation between economic growth and growth in subjective well-being is less than 0.10.⁷² Notwithstanding robust economic growth in all of the surveyed countries, the studies show inconsistent growth in subjective well-being. Only seven of the fourteen nations with a growing economy demonstrated any increase in subjective well-being, while five nations manifested a decline in well-being. Subjective well-being remained unchanged in the United States and the Netherlands. Moreover, one nation, Portugal, drove the slight growth in subjective well-being. Portugal enjoyed the strongest growth in welfare by far—more than double that of its closest competitor, Italy.⁷³ Excluding Portugal from the analysis causes the small correlation between the growth of income and welfare to disappear entirely.⁷⁴

A recent study by Michael Hagerty and Ruut Veenhoven examines a somewhat different data set including developing nations with much

⁷² The regression was calculated by the author using Microsoft Excel. The slope of the regression line is 0.00528. The correlation between economic growth and subjective well-being growth is 0.098.

⁷³ Portugal's slope of subjective well-being was 0.09. The next highest nation was Italy with a slope of 0.04. Diener & Oishi, *supra* note 46, at 203 tbl.8.3.

⁷⁴ The correlation, excluding Portugal, is -0.0239.

lower per capita incomes than previously studied.⁷⁵ Their analysis includes new data from the 1990s, but excludes some earlier surveys.⁷⁶

The authors divided the nations into three groups according to gross domestic product ("GDP") per capita.⁷⁷ (For simplicity, I refer to this as income.) Increased income positively correlates with increased happiness for each group, but poorer nations demonstrate the effect in a more significant way. In the richest nations—the United States, Japan, Norway, Denmark, and Luxembourg—an additional \$1000 per capita income increased life satisfaction on average by 0.024 units on a ten-point scale.⁷⁸ In the middle nations—the United Kingdom, Ireland, Netherlands, Belgium, France, Germany and Italy—an additional \$1000 income increased life satisfaction by 0.045 units.⁷⁹ In the poorest nations—Spain, Portugal, Greece, South Africa, Brazil, South Korea, Mexico, India, and the Philippines—an additional \$1000 income improved life satisfaction by a robust 1.67 units.⁸⁰ An extra dollar of income in a poor nation thus produced thirty-seven times as much utility as an extra dollar in a middle nation and seventy times as much utility as an extra dollar in a rich nation.⁸¹

C. Cross-National Studies: Results and Implications

There are two central findings of cross-national happiness studies. First, additional income affects poor nations more than rich nations. Second, long-term economic growth displays a surprisingly small impact on the well-being of nations once a reasonable level of economic development has been obtained.

The meager impact of economic growth on happiness in wealthy countries is a corollary, in part, of declining marginal utility of income. The impact of long-term growth on happiness, though, is even

⁷⁵ Michael R. Hagerty & Ruut Veenhoven, *Wealth and Happiness Revisited—Growing National Income Does Go with Greater Happiness*, 64 SOC. INDICATORS RES. 1, 3 (2003).

⁷⁶ See *id.* at 8–9.

⁷⁷ *Id.* at 9.

⁷⁸ See *id.* at 13 tbl.III. Average gross domestic product ("GDP") per capita (in 1995 U.S. dollars) in the richest group of nations varied from a high of \$19,874 in Norway to a low of \$17,584 in the United States. *Id.* at 10 tbl.II.

⁷⁹ See *id.* at 13 tbl.III. Average GDP per capita in the middle group of nations varied from a high of \$15,372 in France to a low of \$8953 in Ireland. *Id.* at 10 tbl.II.

⁸⁰ See Hagerty & Veenhoven, *supra* note 75, at 13 tbl.III. Average GDP per capita in the lowest income nations varied from a high of \$8144 in Spain to a low of \$321 in India. *Id.* at 10 tbl.II.

⁸¹ The calculation for a poor nation is $1.67/0.045 = 37.1$. The calculation for a rich nation is $1.67/0.024 = 69.6$.

smaller than suggested by traditional views of the declining value of money. Several wealthy nations, for example, show no increase whatsoever in reported happiness despite enormous increases in per capita income. I consider various explanations for these results below.⁸² Before then, however, I must examine the impact of income on individual well-being within a single nation.

III. INDIVIDUAL HAPPINESS WITHIN A NATION: POSITIONAL AND NONPOSITIONAL GOODS AND THE RIVALRY PROBLEM

A. *Happiness and the Income Distribution*

Research on the impact of increased income on the happiness of individuals within a single nation parallels findings from cross-national surveys. At any given time, individuals at the top of the income distribution express greater happiness than those with lower incomes, but additional income affects the happiness of the poor more than the happiness of the rich. Furthermore, even a sizeable increase in the income of all citizens through long-term economic growth exhibits little impact on subjective well-being.⁸³

Table 1 displays the relationship between income and happiness in the United States for the years 1972 to 1974 and 1994 to 1996.⁸⁴ The happiness scale is as follows: one signifies "not too happy," two means "pretty happy," and three indicates "very happy."⁸⁵

Decile	1972-74		1994-96	
	Income (1996\$)	Happiness	Income (1996\$)	Happiness
1	2522	1.92	2586	1.94
2	5777	2.09	5867	2.03
3	8694	2.17	8634	2.07
4	11,114	2.22	11,533	2.15
5	13,517	2.19	14,763	2.19
6	15,979	2.29	17,666	2.29
7	18,713	2.24	21,128	2.20
8	22,343	2.31	25,745	2.20
9	28,473	2.26	34,688	2.30
10	46,338	2.36	61,836	2.36

⁸² See *infra* notes 119-176 and accompanying text.

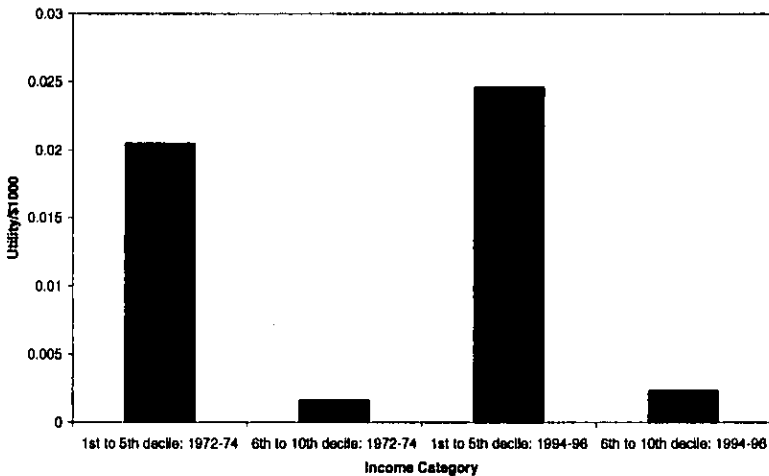
⁸³ See *supra* notes 64-81, Figure 4, and accompanying text.

⁸⁴ The data are from Frey & Stutzer, *supra* note 70, at 410 (tbl.1). The listed income is the total household income in 1996 U.S. dollars divided by the square root of the total number of household members. *Id.* at 410.

⁸⁵ *Id.*

In both the 1972 to 1974 and 1994 to 1996 surveys, households in the top deciles expressed greater happiness than those in the middle deciles, who in turn were happier than those in the bottom deciles. The relationship was not linear. Moving from the bottom decile to the fifth decile in 1996 required an additional \$12,177 and produced a utility gain of 0.25 points.⁸⁶ In this low-income range, an additional \$1000 of income produced an average increase in happiness of 0.0205 points.⁸⁷ In the same year, moving from the sixth decile to the top decile required an additional \$44,170 and produced a utility gain of 0.07 points.⁸⁸ In this high-income range, an additional \$1000 produced an average increase in happiness of only 0.0016 points.⁸⁹ Thus, an additional dollar of income over the low-income range had more than twelve times the impact on happiness of an extra dollar in the high-income range.⁹⁰ Results from the 1972 to 1974 data showed a similar decline in the marginal utility of income.⁹¹ These results are illustrated in Figure 6.

Figure 6: Utility Gain Per \$1,000 Income (1996 dollars)



⁸⁶ The calculation for additional income is \$14,763 - \$2,586 = \$12,177. The calculation for utility gain is 2.19 - 1.94 = 0.25.

⁸⁷ The calculation for average increase in happiness is 0.25/12.177 = 0.0205.

⁸⁸ The calculation for additional income is \$61,836 - \$17,666 = \$44,170. The calculation for utility gain is 2.36 - 2.29 = 0.07.

⁸⁹ The calculation for average increase in happiness is 0.07/44.17 = 0.0016.

⁹⁰ The calculation is 0.0205/0.0016 = 12.81.

⁹¹ From 1972 to 1974, an additional \$1000 produced an increase in happiness of 0.0246 in the bottom five deciles and 0.0023 in the top five deciles. An additional dollar of income within the low-income range had more than ten times the impact of an additional dollar within the high-income range.

Even a proportional increase in income does not affect high and low income levels equally. In the 1994 to 1996 data, doubling an individual's income increased happiness by 0.05 points on average in the lower five deciles. In the top five deciles, doubling income increased happiness by only 0.03 points.⁹² Other studies finding that income has a stronger relationship to happiness at the lower portion of the income distribution support these results.⁹³

In Part II.B, I noted that significant growth in per capita income has not increased the portion of citizens who call themselves very happy.⁹⁴ This phenomenon is even more striking if only U.S. households in the top decile are considered. These wealthy households experienced a much greater than average growth in income—33.4% as compared to an average increase of 8.5% for the lower nine deciles—yet these households reported no increase whatsoever in happiness.⁹⁵

B. *Happiness and Changes in Income: The Relativity Trap*

Although on average individuals with higher incomes demonstrate greater happiness than poorer individuals at any point in time, the average happiness of a cohort remains relatively constant over its members' lifetimes despite significant growth in income.⁹⁶ This finding tracks the evidence noted above, that substantial economic growth over the past several decades did little to raise the happiness levels in developed nations.⁹⁷ Some refer to this phenomenon as the "happiness paradox"—people with more money tend to have greater satisfaction with life, but increasing the income of all people does not increase reported happiness.

The happiness paradox suggests that individuals have greater concern with their relative places in the pecking order than with their absolute income. A recent survey demonstrated this phenomenon by asking Harvard graduate students in which of two worlds they would prefer to live.⁹⁸ In the first world, they would earn \$50,000 per year and

⁹² Frey & Stutzer, *supra* note 70, at 409.

⁹³ Michael Argyle, *Causes and Correlates of Happiness, in WELL-BEING, supra* note 25, at 353, 356–57 & figs. 18.1, 18.2.

⁹⁴ See *supra* notes 64–70 and accompanying text.

⁹⁵ These calculations were made by the author using data from Table 1. See *supra* note 84, Table 1, and accompanying text.

⁹⁶ Richard A. Easterlin, *Income and Happiness: Towards a Unified Theory*, 111 *ECON. J.* 465, 472 (2001).

⁹⁷ See *supra* notes 64–81 and accompanying text.

⁹⁸ Sara J. Solnick & David Hemenway, *Is More Always Better?: A Survey on Positional Concerns*, 37 *J. ECON. BEHAV. & ORG.* 373, 377 (1998).

others would get half that income. In the second world, they would earn \$100,000 per year and others would get two and a half times that income. Prices were the same in both worlds. Approximately half of the students stated that they would prefer to live in the former world, where they would be poorer, but enjoy a higher relative income.⁹⁹

Individuals exhibited much less concern with their relative positions with respect to vacations.¹⁰⁰ Again, the survey asked students to choose between two worlds. In the first world, they would get two weeks holiday and others would get only one. In the second world, they would get four weeks holiday, but others would get eight weeks. Only one out of five students selected the first option, accepting a reduced absolute number of vacation days in order to have relatively more days off than others.¹⁰¹ In short, students displayed rivalry with respect to income but not leisure.

Fredrik Carlsson, Olof Johansson-Stenman, and Peter Martinsson reached consistent results in a survey of Swedish citizens involving more plausible alternative societies.¹⁰² They asked respondents to choose the best society for a relative, living two generations in the future. The survey defined "best" as the society in which the future relative would be most content.¹⁰³

In Society A, the relative earned 27,000 Swedish kroner (SEK) per month (about \$3500) in after-tax income, which is 10% less than the average income of 30,000 SEK per month.¹⁰⁴ The survey offered three different versions of Society B.¹⁰⁵ In each version, the relative's absolute income varied but always remained lower than in Society A. In Society B, however, the relative earned 10% more than the average income. The results are shown in Table 2.¹⁰⁶

⁹⁹ *Id.* at 378. See generally Richard Layard, *Towards a Happier Society*, 2003 NEW STATESMAN 26 (discussing the survey).

¹⁰⁰ Solnick & Hemenway, *supra* note 98, at 379.

¹⁰¹ *Id.* at 378-79.

¹⁰² FREDRIK CARLSSON ET AL., DO YOU ENJOY HAVING MORE THAN OTHERS? SURVEY EVIDENCE OF POSITIONAL GOODS 11-12 (Göteborg Univ. Dept. of Econ., Working Papers in Economics No. 100, 2003), available at <http://www.handels.gu.se/epc/archive/00002855/01/gunwpe0100.pdf>.

¹⁰³ *Id.* at 6.

¹⁰⁴ *Id.* at 7, 21 tbl.1.

¹⁰⁵ *Id.*

¹⁰⁶ See *id.* Table 2 is based on data from Fredrik Carlsson, Olof Johansson-Stenman, and Peter Martinsson. See *id.* The income reduction column of Table 2, however, was calculated by the author.

	Relative's Income or Consumption	Average Income or Consumption	Income Reduction from Choosing Society B	Share of Respondents Choosing Society B
Society A	27,000	30,000		
Society B, version 1	25,250	22,950	6.5%	75%
Society B, version 2	22,000	20,000	18.5%	53%
Society B, version 3	14,800	13,450	45.2%	47%

Seventy-five percent of respondents chose a 6.5% reduction in absolute income in exchange for a higher relative income. Fifty-three percent were willing to accept an 18.5% reduction in absolute income to maintain a higher relative position. Moreover, fully 47% of the respondents chose to accept a greater than 45% reduction in absolute income in order to maintain an above-average relative income. This result is remarkable given the relatively small deviations of the proffered income choices from the mean. Nearly half of the respondents believed that their relative would be better off giving up almost half of his or her real income in order to have an income 10% above the average rather than 10% below average.

Respondents showed substantially less competition regarding leisure. Instead of focusing directly on leisure, the survey asked respondents about working hours, presuming greater familiarity with that concept.¹⁰⁷ In Society A, the relative worked forty hours per week, about 10% more than the average of thirty-six working hours per week.¹⁰⁸ Again, the survey provided three different versions of Society B. In each version, the relative worked longer hours than in Society A, but labored three to four hours less than the average number of working hours in that society.¹⁰⁹ Working hours varied as shown in Table 3.

	Relative's Working Hours per Week	Average Working Hours per Week	Work Increase from Choosing Society B	Share of Respondents Choosing Society B
Society A	40	36		
Society B, version 1	42.5	46	6.3%	40%
Society B, version 2	47	51	17.5%	19%
Society B, version 3	61	64	52.5%	10%

¹⁰⁷ CARLSSON ET AL., *supra* note 102, at 8. Note that if the number of leisure hours per week in the absence of any work is eighty, then the percentage of leisure lost by choosing Society B is equal to the percentage work increase from choosing Society B.

¹⁰⁸ *Id.* at 9, 21 tbl.1.

¹⁰⁹ *Id.* at 21 tbl.1.

Forty percent of respondents thought their relative would prefer to work an additional 2.5 hours per week in order to enjoy more leisure than the average person. Less than one in five believed their relative would be better-off working an additional seven hours per week to enjoy more leisure than others.

Surveys conducted regarding the value of the future relative's car and the safety of the car obtained similar results. Respondents exhibited greater rivalry with respect to the value of their relative's car than with respect to the safety of that car.¹¹⁰

Goods deriving much of their value from their role in improving one's comparative status in society are labeled positional goods. By this standard, income and the value of one's car might be characterized as positional goods and leisure and car safety as nonpositional goods.

Worker surveys also suggest that job satisfaction correlates more strongly with relative income than with absolute income.¹¹¹ Strong rivalry also has been found in laboratory experiments. In a recent study, a majority of subjects were willing to "burn" some of the money they would receive for participation in the experiment in order to reduce the cash earned by others.¹¹²

C. Rivalry and Tax Policy

The evidence that a significant portion of the reported happiness an individual receives from additional income comes from improving one's relative position on the income scale calls into question the traditional analysis that taxing the income from labor necessarily produces an efficiency or deadweight loss. As a positional good, the additional income earned by one individual reduces the relative position and thus the welfare of others. This decline in the welfare of others is a negative externality associated with earning additional income. Thus, the argument that taxation produces inefficiency by reducing work effort may be only half true. Taxation will reduce work effort, but that reduction may not be inefficient.¹¹³ To illustrate, consider the

¹¹⁰ *Id.* at 12, 21 tbl.1.

¹¹¹ Andrew E. Clark & Andrew J. Oswald, *Satisfaction and Comparison Income*, 61 J. PUB. ECON. 359, 360 (1996).

¹¹² Daniel Zizzo & Andrew Oswald, *Are People Willing to Pay to Reduce Others' Income?*, 63-64 ANNALES D'ECONOMIE ET DE STATISTIQUE, July-Dec. 2001, at 12 & 39 fig. 2, available at <http://www.adres.prd.fr/Annales/anciensnumeros/resumes/n6364/4.pdf>.

¹¹³ Layard, *supra* note 99, at 26; see FRANK, *supra* note 43, at 228. For an excellent analysis of the implications for regulation of concern for relative position, see generally Robert

kind of textbook example of the efficiency costs of taxation that students might encounter in an introductory law school tax class.¹¹⁴

Assume Alice currently earns an income of \$100,000 per year and works forty hours per week. She is debating whether to increase her work week by four hours in order to earn an additional \$10,000. Alice would weigh the utility gain from the additional income against the utility loss from the reduced leisure. Suppose Alice would gain ten units of utility from the additional income (one unit of utility per \$1000 of extra income) and lose eight units of utility from her reduced leisure. In a no-tax world, Alice will work the additional hours because she will receive a net gain of two units of utility.

Imagine, however, that Alice is subject to a 40% marginal tax rate on that extra income so that, after taxes, she will receive only \$6000 with a value of six units of utility. Now Alice will not work the extra hours because her utility loss of eight units from reduced leisure outweighs her utility gain of six units. The tax-induced reduction in work effort is inefficient—Alice loses the potential utility gain from working, and because she does not work, the government raises no tax revenue.¹¹⁵ This traditional example is shown in Table 4.

	Additional After-Tax Income from Longer Work Week	Utility Gain from Additional Income	Utility Loss from Reduced Leisure	Net Change in Welfare from Working
<i>No Tax World</i>				
Alice	\$10,000	+10	-8	+2
<i>40% Tax World</i>				
Alice	\$6000	+6	-8	-2

Now add to the picture Bob, who earns the same income and works the same hours as Alice but does not have the opportunity to earn additional money by working longer hours. Further, assume that Alice and Bob are rivalrous with respect to each other's income, so each gains or loses utility according to the amount their income is higher or lower than the other. Specifically, each individual receives a utility gain (loss) of one unit for each \$2500 that the individual's income is higher (lower) than that of the other.

H. Frank & Cass R. Sunstein, *Cost-Benefit Analysis and Relative Position*, 68 U. CHI. L. REV. 323 (2001).

¹¹⁴ See generally, e.g., JOSEPH BANKMAN, THOMAS GRIFFITH & KATHERINE PRATT, *FEDERAL INCOME TAX: EXAMPLES AND EXPLANATIONS* (3d ed. 2002).

¹¹⁵ Any marginal tax rate above 20% will prevent Alice from working.

Alice's ten unit gain from an additional \$10,000 of income thus can be divided into two components as follows: a positional gain of four units from her relatively higher income than Bob and a nonpositional gain of six units from the value of the extra income to her that is unrelated to her relative position as compared to Bob.

Alice's additional income produces a positional utility loss for Bob of four units—the same as the positional gain for Alice. Because Alice does not bear this positional loss, it does not influence her decision to work. It does change, however, the efficiency of her decision to work, as shown in Table 5.

	Additional Income from Alice's Longer Work Week	Positional Utility Gain (Loss)	Nonpositional Utility Gain	Utility Loss from Reduced Leisure	Net Change in Welfare from Alice's Longer Work Week
<i>No Tax World</i>					
Alice	\$10,000	+4	+6	-8	+2
Bob	0	-4	0	0	-4
Total	\$10,000	0	+6	-8	-2

Alice's decision to work produces a net utility loss of two units because Bob's loss of four units of utility must be subtracted from Alice's net gain of two units. The implementation of a 40% marginal income tax can prevent this inefficiency by discouraging Alice from working. In fact, a 40% tax rate on Alice's additional income reaches the optimal result in this example because it matches the negative externality produced by the earning of that additional income.

The potential cost of rivalrous behavior in a no-tax world becomes even larger if both Bob and Alice can vary their working hours. If Bob's preferences and opportunities equal those of Alice, he too will choose to work the longer work week because doing so will lead to a net utility gain of two units. This outcome is shown in Table 6.

	Additional Income from Longer Work Week	Positional Utility Gain (Loss)	Nonpositional Utility Gain	Utility Loss from Reduced Leisure	Net Change in Welfare from Longer Work Week
<i>No Tax World</i>					
Alice	\$10,000	0	+6	-8	-2
Bob	\$10,000	0	+6	-8	-2
Total	\$20,000	0	+12	-16	-4

The utility changes shown in Table 6 take the form of a classic prisoner's dilemma, as shown in Figure 7.

Figure 7

		Bob's Utility	
		Work	Don't Work
Alice's Utility	Work	-2, -2	+2, -4
	Don't Work	-4, +2	0, 0

In the no-tax world, Alice and Bob each are always better off working, regardless of the other's choice. If, however, both individuals work, each will be worse off than if neither worked. We may avoid the adverse results of this "worker's dilemma" by instituting a tax on additional earnings equal to the negative externality produced by those earnings. Such a tax makes both Alice and Bob better off.

Great uncertainty surrounds the precise portion of the gains from a higher income that are positional, but studies indicate the portion is not trivial. The survey of Swedish citizens discussed in Part III.B suggests that approximately half of the utility received from additional income comes from relative concerns.¹¹⁶ A survey of students at the University of Costa Rica reached similar results.¹¹⁷ Surveying the literature in 2001, Robert Frank and Cass Sunstein stated that, under the most conservative estimates, a family requires an income increase of about 3.3% to balance a 10% increase in the incomes of everyone else in the community.¹¹⁸

¹¹⁶ See CARLSSON ET AL., *supra* note 102, at 15.

¹¹⁷ See generally FRANCISCO ALPIZAR ET AL., HOW MUCH DO WE CARE ABOUT ABSOLUTE VERSUS RELATIVE INCOME AND CONSUMPTION? (Göteborg Univ. Dept. of Econ., Working Papers in Economics No. 63, 2001) (forthcoming publication in J. ECON. BEHAV. & ORG. (2004)), available at <http://www.handels.gu.se/epc/data/html/html/PDF/gunwpe0063.pdf>.

¹¹⁸ Frank & Sunstein, *supra* note 113, at 353.

In sum, if the additional consumption of goods by an individual produces a greater negative externality than the additional consumption of leisure, it is efficient to place a tax on such consumption equal to that additional externality. The optimal size of the efficient tax is unclear, but it is likely to be significant.

IV. BEYOND RIVALRY—ADAPTATION, ASPIRATION, AND THE HEDONIC TREADMILL

A. *Misjudging the Value of Money*

Part III discussed the harm that individuals impose on others by increasing their consumption of positional goods.¹¹⁹ This Part looks at the harm individuals inflict upon themselves by overestimating the additional happiness that additional consumption will produce.¹²⁰

People value money highly. When asked what change would most improve the quality of their lives, individuals most frequently respond with the answer "more money."¹²¹ The actual increase in reported happiness from additional income, however, appears to be quite modest. A study of Illinois lottery winners, for example, found that their happiness did not differ significantly from controls.¹²² Moreover, lottery winners report significantly *less* pleasure than non-lottery controls from ordinary experiences such as talking to a friend, eating breakfast, and even from hearing a funny joke.¹²³ Similarly, most people think that a 25% increase in their pay will increase greatly their satisfaction with their lives, but individuals whose incomes are currently at that level do not report significantly greater life satisfaction.¹²⁴

¹¹⁹ See *supra* notes 83–118 and accompanying text.

¹²⁰ See *infra* notes 121–151 and accompanying text.

¹²¹ FRANK, *supra* note 43, at 111 (citing ANGUS CAMPBELL, *THE SENSE OF WELL-BEING IN AMERICA* (1981)); see ADA FERRER-I-CARBONELL, *INCOME AND WELL-BEING: AN EMPIRICAL ANALYSIS OF THE COMPARISON INCOME EFFECT 3* (Tinbergen Inst., Disc. Paper No. TI 2002-019/3, 2002) (forthcoming publication in *J. PUB. ECON.* (2004)), available at <http://www.tinbergen.nl/discussionpapers/02019.pdf>.

¹²² Philip Brickman et al., *Lottery Winners and Accident Victims: Is Happiness Relative?*, 36 *J. PERSONALITY & SOC. PSYCHOL.* 917, 920 (1978).

¹²³ *Id.* at 921. Lottery winners and controls were asked to rate on a scale from zero to five how pleasant they found each of seven activities or events. In addition to the events listed in the above text, other events included watching television, getting a compliment, reading a magazine, and buying clothes. The mean score for lottery winners was 3.33. The mean score for non-winners was 3.82. *Id.* at 919–21.

¹²⁴ ROBERT E. LANE, *THE LOSS OF HAPPINESS IN MARKET DEMOCRACIES* 71 (2000).

B. *Adaptation and Aspiration Theory*

I now turn to two related explanations for the limited impact additional income has on the well-being of an individual, even when the income of others is held constant—*adaptation theory* and *aspiration theory*. Adaptation theory posits that more material goods provide additional pleasure at first, but that the impact is largely temporary.¹²⁵ Lottery winners, for example, view winning the prize as a very happy event. When surveyed one to eighteen months later, however, their happiness levels do not differ significantly from non-winning controls.¹²⁶ Moreover, as noted above, lottery winners report less pleasure from mundane life events such as watching television or hearing a funny joke.¹²⁷

Aspiration theory holds that an individual's aspiration level rises as income rises. In general, an individual's aspiration level for income is somewhat higher than the individual's current income.¹²⁸ As one earns more money, the amount of income considered satisfactory increases. The *ex ante* increase in welfare that individuals expect from a rise in income is greater than the *ex post* increase in welfare that actually occurs.¹²⁹ In retrospect, then, the rise in income is a disappointment.¹³⁰ One study found that this preference shift destroys approximately two-thirds of the welfare effect of an increase in income.¹³¹

C. *Nonmonetary Correlates of Happiness and Another Look at Economic Growth*

Recent research sheds light on a number of nonmonetary correlates of happiness. Some of the most important factors in happiness likely cannot be improved by government policy. In this vein, genetic endowment clearly plays a very important role.¹³² Identical twins sepa-

¹²⁵ Alois Stutzer, *The Role of Income Aspirations in Individual Happiness*, 54 J. ECON. BEHAV. & ORG. 89, 90 (2004); see also BRUNO S. FREY & ALOIS STUTZER, *HAPPINESS AND ECONOMICS* 12 (2002).

¹²⁶ Brickman et al., *supra* note 122, at 920–21 tbl.1.

¹²⁷ *Id.* at 919–21 tbl.1.

¹²⁸ Kahneman, *supra* note 26, at 14; see van Praag & Frijters, *supra* note 44, at 421.

¹²⁹ van Praag & Frijters, *supra* note 44, at 422.

¹³⁰ *Id.*

¹³¹ FREY & STUTZER, *supra* note 125, at 86. Individuals also make poor predictions of their behavior in other contexts, such as the ability to resist temptation. Visitors to Las Vegas, for example, tend to overestimate their capacities to resist excessive gambling, and credit card users tend to overrate their abilities to maintain a zero balance. George Lowenstein & David Schkade, *Wouldn't It Be Nice? Predicting Future Feelings*, in *WELL-BEING*, *supra* note 25, at 85, 92–94.

¹³² Diener & Lucas, *supra* note 39, at 216–17.

rated at birth, for example, tend to have similar levels of happiness.¹³³ Individuals generally maintain relatively constant levels of subjective well-being throughout their lives despite changing circumstances.¹³⁴

Love relationships significantly impact life satisfaction. Marriage is one of the strongest correlates of happiness for both men and women.¹³⁵ Living with a partner achieves the same impact on happiness as an 81% increase in income.¹³⁶ In monetary terms, marriage is worth an additional \$100,000 per year when compared to being widowed or separated.¹³⁷ More frequent sexual activity also increases happiness. A recent study estimated that increasing intercourse from once a month to once a week equals the amount of happiness generated by getting an additional \$50,000 in income for the average American.¹³⁸

It is unlikely that government policy can have a significant impact on the number of successful marriages or the frequency of spousal sexual intimacy.¹³⁹ Other factors conducive to happiness, however, may show more susceptibility to government intervention through the tax system or direct spending programs. Perhaps the reason economic growth has produced scant improvement in happiness in the United States during the past several decades comes from the fact that the additional resources from that growth have been misspent. Americans have used economic growth to purchase additional consumption rather

¹³³ *Id.* at 216.

¹³⁴ *Id.* at 214–15.

¹³⁵ Argyle, *supra* note 93, at 359. The positive impact of marriage on happiness is still found after controlling for factors such as age, gender, and income. *Id.* at 360. Marriage is also strongly correlated with improved mental health, reduced drug use, and better physical health. For a recent review of the literature, see Chris M. Wilson & Andrew J. Oswald, *How Does Marriage Affect Physical and Psychological Health? A Survey of the Longitudinal Evidence* (2002), at <http://www2.warwick.ac.uk/fac/soc/economics/staff/faculty/oswald/wilsonoswaldmarriagejan2002.pdf>.

¹³⁶ FERRER-I-CARBONELL, *supra* note 121, at 18.

¹³⁷ Blanchflower & Oswald, *supra* note 70, at 1373 (reporting the necessary "compensation" in 1990 U.S. dollars).

¹³⁸ DAVID G. BLANCHFLOWER & ANDREW J. OSWALD, MONEY, SEX AND HAPPINESS: AN EMPIRICAL STUDY 9 (Nat'l Bureau of Econ. Research, Working Paper No. W10499, 2004), available at <http://papers.nber.org/papers/w10499.pdf>.

¹³⁹ Legalizing gay marriage, however, might have a significant positive impact on the well-being of same-sex couples. See MARK STRASSER, ON SAME SEX MARRIAGE, CIVIL UNIONS AND THE RULE OF LAW 23–26, 101–10 (2002) (discussing the importance and benefits of marriage over civil unions for gays and lesbians). See generally David B. Cruz, *Just Don't Call It Marriage: The First Amendment and Marriage as an Expressive Resource*, 74 S. CAL. L. REV. 926 (2001) (discussing the importance and emotional significance of marriage to gay couples).

than additional leisure. They spend more hours at work now than they did a half century ago.¹⁴⁰

As discussed earlier, the utility of additional goods is likely to be reduced by rivalry to a greater extent than additional consumption of leisure. Moreover, evidence suggests that leisure activities, if chosen wisely, can produce a significant improvement in well-being.

Social interaction can improve happiness. Participating in regular social activities, including entertaining friends and attending cultural and social events, appears to be conducive to happiness, particularly among retirees who are less able to gain satisfaction from work-related activities.¹⁴¹ Volunteer work likely has a positive effect on the volunteer's well-being.¹⁴² Leisure time spent exercising also correlates with subjective well-being.¹⁴³ Leisure activities that occur in groups such as teams and social clubs exhibit a particular likelihood of increasing happiness by providing social support and integration.¹⁴⁴ Alternatively, individuals who spend large amounts of leisure time watching television tend to be less happy than those who engage in more interactive social activities.¹⁴⁵

Although the manner in which any individual spends leisure time is a matter of private choice, wise social programs can make it easier for individuals to make more productive use of their time off. For example, expanded community centers (combined with public transportation to get there) can encourage leisure activities involving social interaction. Publicly-funded recreational facilities can promote both healthful exercise and increased social interaction at the same time. Because good health strongly correlates with happiness, social policies to ensure adequate healthcare also demonstrate a likelihood of increasing social welfare.

Inflation and unemployment reduce happiness, even after taking into account the effect on income. The well-known "misery index" adds together the inflation rate and the unemployment rate as a measure of the distress caused by current economic conditions. Recent research, however, suggests that an additional percentage point

¹⁴⁰ FRANK, *supra* note 43, at 49; JULIET SCHOR, *THE OVERWORKED AMERICAN* 29 (1991).

¹⁴¹ Nancy Cantor & Catherine A. Sanderson, *Life Task Participation and Well-Being: The Importance of Taking Part in Daily Life*, in *WELL-BEING*, *supra* note 25, at 230, 231.

¹⁴² *See id.* at 231-32.

¹⁴³ Argyle, *supra* note 93, at 364.

¹⁴⁴ *Id.*

¹⁴⁵ *Id.* Television, however, does have a positive relaxing effect as well. On balance, moderate amounts of television probably improve well-being, but large amounts have a negative impact, especially if television viewing replaces social interaction. *See id.*

of unemployment reduces welfare substantially more than an extra percentage point of inflation.¹⁴⁶ Unemployed workers suffer reduced self-esteem, increased boredom, and less structure in their lives, in addition to lower income.¹⁴⁷ Perhaps two-thirds of the decline in welfare from unemployment derives from nonpecuniary loss.¹⁴⁸

High unemployment also reduces the welfare of those who are employed, perhaps by increasing their fear of becoming jobless.¹⁴⁹ The social costs of these indirect fears can be larger in the aggregate than the direct costs to the unemployed because they affect a much greater number of people.¹⁵⁰ Government programs to reduce unemployment or to provide support for unemployed workers thus may increase social welfare.¹⁵¹ More generally, if much of private spending is wasteful because it is motivated largely by positional concerns, then increased spending (funded by higher taxes) on nonrivalrous social programs, such as environmental clean-up and better police and fire services, may be optimal.

V. HAPPINESS AND INEQUALITY

In this Part, I discuss whether inequality negatively affects individual utility even after controlling for individual income.¹⁵² Put differently, do people, regardless of their own income, dislike living in an unequal society?

Studies on this question show mixed results. Some researchers have found a strong correlation between income equality and well-being after controlling for economic prosperity, while others have found little connection.¹⁵³ Moreover, recent research suggests that the answer is very different for Europeans and Americans. Inequality ap-

¹⁴⁶ FREY & STUTZER, *supra* note 125, at 114–15. One additional percentage point of unemployment appears to reduce welfare by about as much as 1.7 additional percentage points of inflation. See Rafael Di Tella et al., *Preferences over Inflation and Unemployment: Evidence from Surveys of Happiness*, 91 AM. ECON. REV. 335, 339 (2001).

¹⁴⁷ FREY & STUTZER, *supra* note 125, at 99–100; Argyle, *supra* note 93, at 363–64.

¹⁴⁸ FREY & STUTZER, *supra* note 125, at 99.

¹⁴⁹ Di Tella et al., *supra* note 65, at 819.

¹⁵⁰ *Id.*

¹⁵¹ See *id.* at 821 (finding that increased unemployment benefits improved societal well-being). Rafael Di Tella, Robert J. MacCulloch, and Andrew J. Oswald found no evidence that generous welfare benefits were responsible for high unemployment rates in Europe. *Id.* at 822.

¹⁵² See *infra* notes 153–176 and accompanying text.

¹⁵³ Diener & Oishi, *supra* note 46, at 205–07.

pears to have a significant impact on happiness in Europe, but little impact in the United States.¹⁵⁴

For Europeans, the distaste for inequality varies according to their political beliefs and social class. Inequality has a significant negative impact on Europeans who define themselves as leftists, but has no impact on those who define themselves as rightists.¹⁵⁵ Inequality seemingly affects the happiness of poor Europeans, but it does not affect the happiness of rich Europeans.¹⁵⁶ Similarly, Europeans who view themselves as leftists exhibit a greater likelihood than rightists of viewing unemployment as a relatively larger problem than inflation.¹⁵⁷ In the United States, conversely, only rich leftists demonstrate a distaste for inequality.¹⁵⁸

Europeans and Americans differ sharply in their views of the origins of poverty. In the United States, 60% of respondents believe that the poor are lazy, as compared to only 26% of Europeans.¹⁵⁹ Sixty percent of Europeans, but only 29% of Americans, agree that "the poor are trapped in poverty."¹⁶⁰ Fifty-four percent of Europeans, but only 30% of Americans, believe that "luck determines income."¹⁶¹

Not surprisingly, government policies reflect these differences in attitudes. Government transfers to households, including social security, amount to 17.6% of GDP in Europe but only 10.6% of GDP in the United States.¹⁶² European nations also provide larger family benefits, public healthcare systems, disability benefits, and poverty relief.¹⁶³

¹⁵⁴ Alberto Alesina et al., *Inequality and Happiness: Are Europeans and Americans Different?* 88 J. PUB. ECON. 2009, 2034 (2004).

¹⁵⁵ *Id.* at 2033–34. The definitions used are broad. Rich and poor are defined as the top and bottom halves of the income distribution. Leftist and rightist include those slightly to the left and right of the political center. For example, in the United States, leftist includes all Democrats and Independents leaning towards the Democrats. *See id.* at 2030–31.

¹⁵⁶ *Id.* at 2033–34.

¹⁵⁷ Rafael Di Tella & Robert MacCulloch, *Partisan Social Happiness*, REV. ECON. STUD. 22 (manuscript forthcoming n.d.), available at http://www.restud.org.uk/PDF/03_2004/Di_Tella_%20Macculloch.pdf (date posted Mar. 2004).

¹⁵⁸ Alesina et al., *supra* note 154, at 2033–34.

¹⁵⁹ *See* Alberto Alesina et al., *Why Doesn't the United States Have a European-Style Welfare State?* 2 BROOKINGS PAPERS ON ECON. ACTIVITY 187, 243 tbl.13. (2001).

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

¹⁶² ALBERT ALESINA & EDWARD L. GLAESER, *FIGHTING POVERTY IN THE U.S. AND EUROPE* 17 tbl.2.1 (2004). The European number is the simple average of data from the following thirteen nations: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, and Sweden. *Id.* at 17 tbl.2.1.

¹⁶³ *Id.* at 19 tbl.2.2.

Economic explanations for the intercontinental differences in views on redistribution and poverty are not persuasive. The stronger European preference for government redistribution cannot be explained by greater pre-tax inequality of income because the United States exhibits greater pre-tax inequality.¹⁶⁴ Further, despite a widespread belief among Americans that they enjoy greater social mobility than Europeans—that the poor of today may be the rich of tomorrow—data suggest that social mobility is fairly similar in the United States and Europe.¹⁶⁵

Stronger evidence exists, however, to support the idea that race plays an important role in shaping attitudes toward the poor. Racial divisions may reduce support for redistribution when minority groups are disproportionately poor.¹⁶⁶ In the United States, non-Hispanic Whites comprise 70.7% of the population, but only 46.1% of people in poverty.¹⁶⁷ The Black poverty rate of 23.6% is approximately three times higher than the non-Hispanic White poverty rate of 7.7%.¹⁶⁸ This, combined with geographic isolation, may make it easier to view the poor as the “other.”¹⁶⁹ Politicians who oppose redistribution often use racial animus to persuade even relatively poor Whites to oppose redistributive policies.¹⁷⁰

According to surveys conducted in the late 1980s and early 1990s, a majority of Whites in the United States believe that Blacks would be as wealthy as Whites if they tried hard enough.¹⁷¹ Support for welfare in the United States is higher among people who live near welfare recipients of the same race, but lower among people who live near welfare recipients of a different race.¹⁷² States that are more ethnically fragmented spend a smaller portion of their budgets on social services.¹⁷³ States with larger Black populations historically have had less

¹⁶⁴ *Id.* at 3, 57–60.

¹⁶⁵ *Id.* at 3–4, 60–68.

¹⁶⁶ *See id.* at 10, 134.

¹⁶⁷ Alesina et al., *supra* note 159, at 230.

¹⁶⁸ *Id.*

¹⁶⁹ *Id.* at 229.

¹⁷⁰ ALESINA & GLAESER, *supra* note 162, at 10.

¹⁷¹ SEYMOUR MARTIN LIPSET, AMERICAN EXCEPTIONALISM: A DOUBLE-EDGED SWORD 133 (1996); Alesina et al., *supra* note 159, at 229.

¹⁷² Alesina et al., *supra* note 159, at 229; Erzo F.P. Luttmer, *Group Loyalty and the Taste for Redistribution*, 109 J. POL. ECON. 500, 508–11 (2001).

¹⁷³ ALBERTO ALESINA ET AL., POLITICAL JURISDICTIONS IN HETEROGENEOUS COMMUNITIES (Harv. Inst. of Econ. Research, Discussion Paper No. 1949, 2002) available at <http://post.economics.harvard.edu/hier/2002papers/HIER1949.pdf>.

generous welfare programs.¹⁷⁴ International comparisons produce similar results—racially fractionalized countries tend to spend less on social services than racially homogenous nations.¹⁷⁵

Policies based on racial bias not only are unfair to the disfavored Black and Latino minorities, but directly harm all poor citizens. Policies based on racial stereotypes also may not be in the long-run self-interest even of Whites who are not poor. Poverty produces spillover effects such as higher crime rates. Moreover, all citizens are likely to be happier in a more integrated, less racially divided world. For example, prior to the civil rights movement in the 1960s, there was strong opposition to any racial mixing among most Southern Whites (and among many Northern Whites). Interviews with those same individuals today indicate that many regret their former attitudes and are happier with the current racial climate. They now realize that their former racist preferences not only had a devastating impact on Blacks, but also reduced their own well-being.¹⁷⁶

VI. TAX POLICY AND HAPPINESS

A. Positional Goods and the Luxury Tax

I argued earlier that consumption of goods generally is more rivalrous or positional than the consumption of leisure and that this difference justified a higher tax rate on consumption.¹⁷⁷ Some goods, however, are substantially more positional than others. Very expensive watches and exotic sports cars, for example, are likely to receive much of their value from their high cost. In some cases, such as rare stamps and collectibles, their only value may lie in their scarcity.

One could make the case, then, that it would be optimal to identify those goods that are consumed primarily to display the owner's wealth and subject those goods to a high luxury tax.¹⁷⁸ Well over a

¹⁷⁴ Alesina et al., *supra* note 159, at 235–36 (relying on data from 1990).

¹⁷⁵ *Id.* at 229–32.

¹⁷⁶ See generally LITTLE ROCK CENTRAL HIGH 40TH ANNIVERSARY COMM'N, SEPTEMBER, 1997—THE 40TH ANNIVERSARY OF ONE OF AMERICA'S MOST IMPORTANT CIVIL RIGHTS EVENTS (2000), at <http://www.centralhigh57.org> (last visited Oct. 15, 2004) (celebrating, through multimedia website, heroism of black students who desegregated the high school in 1957); BILL MOYERS, A WALK THROUGH THE 20TH CENTURY WITH BILL MOYERS, EPISODE 1: MARSHALL, TEXAS (Corp. for Entm't & Learning 1984) (illustrating, through documentary film, changed racial relations in town of Marshall, Texas).

¹⁷⁷ See *supra* notes 113–118 and accompanying text.

¹⁷⁸ The classic analysis of goods purchased for the purpose of demonstrating the owner's wealth or social status was made by Thorstein Veblen, who coined the phrase "con-

century ago, John Stuart Mill argued that while commodity taxes often are not optimal, taxing certain luxury goods may be an exception:

I disclaim all asceticism, and by no means wish to see discouraged, either by law or opinion, any indulgence . . . which is sought from a genuine inclination for, any enjoyment of, the thing itself; but a great portion of the expenses of the higher and middle classes in most countries . . . is not incurred for the sake of the pleasure afforded by the things on which the money is spent, but from regard to opinion, and an idea that certain expenses are expected from them, as an appendage of station; and I cannot but think that expenditure of this sort is a most desirable subject of taxation. If taxation discourages it, some good is done, and if not, no harm; for in so far as taxes are levied on things which are desired and possessed from motives of this description, nobody is the worse for them. When a thing is bought not for its use but for its costliness, cheapness is no recommendation.¹⁷⁹

When a largely positional good can be easily identified, Mill may be correct that a luxury tax is appropriate. Finding the right good to tax, however, involves great complexity. Consider, for example, the tax on luxury automobiles enacted during the William J. Clinton administration.¹⁸⁰ Few doubt that part of the value of owning a luxury automobile for many individuals may be found in the prestige associated with its purchase. Similarly, the purchase of an expensive car by one individual can reduce the welfare of others. Smith's recently purchased Mazda Miata sports car is less impressive when his neighbor Jones drives home in a new Porsche 911 Carrera. Nonetheless, it is unclear whether the luxury car tax led to the purchase of appreciably fewer positional goods. Instead, consumers may have switched to other posi-

spicious consumption." THORSTEIN VEBLEN, *THE THEORY OF THE LEISURE CLASS* 68-101 (Viking Press 1965) (1899). For a recent article advocating policy interventions to reduce the overconsumption of positional goods, see CARLSSON ET AL., *supra* note 102, at 2-3.

¹⁷⁹ JOHN STUART MILL, *PRINCIPLES OF POLITICAL ECONOMY WITH SOME OF THEIR APPLICATIONS TO SOCIAL PHILOSOPHY*, bk. 5, ch. 6, pt. 7 (W.J. Ashley, ed., Longmans, Green & Co. 1909) (1848) (basing edition on seventh edition prepared by John Stuart Mill), available at <http://www.econlib.org/library/Mill/mlPContents.html> (last visited Oct. 15, 2004).

¹⁸⁰ See Omnibus Budget Reconciliation Act of 1990, Pub. L. No. 101-508, 104 Stat. 1388-439 (repealed 2002). The Revenue Reconciliation Act of 1990 placed a 10% tax on the excess of any money spent above the threshold price of \$30,000 on automobiles. In 1998, the tax was reduced to 8% of any amount in excess of \$36,000. The tax was then phased down yearly until December 31, 2002, when it was repealed. See *id.*

tional goods which were not subject to the luxury tax. Expensive SUV's, for example, which were classified as trucks and thus were exempt from the luxury tax on cars, saw a dramatic increase in sales during the Clinton years.¹⁸¹

More to the point, many goods have a substantial positional value. Suppose, for example, instead of purchasing a Porsche 911 sports car, Jones purchases a less expensive automobile and uses the money saved to purchase a Viking range, a Subzero refrigerator, a high-definition plasma television, several Armani suits, and a week-long vacation in the Bahamas.¹⁸² Or instead Jones might use the savings to add an extra bedroom to his home. These alternative expenditures might engender greater jealousy from Jones's neighbors than the purchase of an expensive sports car. Perhaps Jones's neighbor is an environmentalist who has just purchased a gas-electric hybrid Toyota Prius and who feels only contempt for anyone buying an expensive gas-guzzling sports car.¹⁸³ In light of the large number of consumption items that have a significant positional component, it makes sense to adopt a general progressive income (or consumption) tax rather than a series of taxes on luxury items.

B. *The Structure of Redistribution*

The classic notion of declining marginal utility throughout the income distribution remains sound. Nevertheless, the traditional shape of the marginal utility curve where utility from income varies with the logarithm of income may need some adjustment. The impact of additional income on different groups may be a difference in kind rather than simply one of degree. For poor individuals, whose incomes purchase goods that satisfy basic needs, most of the goods purchased will be nonpositional. These goods are likely to have a relatively low negative externality from rivalry and may actually have a positive externality to the extent that individuals (for example, rich

¹⁸¹ See also FRANK, *supra* note 43, at 205 (noting that the explosive sales of SUVs coincided with the imposition of the tax on luxury automobiles).

¹⁸² A Porsche 911 Carrera is likely to cost at least \$80,000 and may cost more than double that amount, depending on the model and options. A well-equipped Mazda Miata costs less than \$30,000.

¹⁸³ Such neighbors might include celebrity Prius owners Bill Maher, Larry David, and Arianna Huffington. See Larry Armstrong, *Toyota's New Prius: The Hottest Hybrid*, BUS. WK. ONLINE (Sept. 4, 2003), at http://www.businessweek.com/technology/content/sep2003/tc2003094_0298_tc127.htm (noting that "what this car says about the owner is undoubtedly the reason it has a celebrity following").

leftists) have a distaste for inequality.¹⁸⁴ Income satisfying basic needs also is likely to show little decline in value from adaptation.¹⁸⁵ Thus, while politicians champion "middle-class tax cuts," such cuts are likely to produce a far smaller improvement in well-being than would be achieved by using that same revenue to provide basic services for the poor or to fund nonrivalrous public services.

CONCLUSION

The strongest traditional justification for progressive taxation is that income has declining marginal utility, and therefore, redistribution from the rich to the poor can increase total welfare in a society. Happiness research is consistent with this justification and provides important additional insights about the reasons money declines in value. Moreover, happiness research suggests that additional income spent on positional goods may have little impact on overall welfare in a society because the positional gains by one individual will be offset by the positional losses of another. In addition, adaptation and changes in aspiration levels may diminish the gains from additional consumption. The challenge for policymakers lies in the design of tax and spending policies which provide lasting improvements in the overall happiness of society.

¹⁸⁴ See Alesina et al., *supra* note 154, at 2033–34.

¹⁸⁵ See Diener & Suh, *supra* note 25, at 445–46.