How Are Income and Net Worth Related to Happiness?

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Abstract: Research-based evidence on the relationship between money and happiness indicates a surprisingly weak correlation between the two. Some researchers have argued that the reason for the low correlation is because household income, rather than wealth (net worth), has been the traditional measure of economic status in such studies. Previous research from Australia points to wealth being a better predictor of financial satisfaction and happiness with life in general. We report data from the United States that concurs in showing that net worth is in fact a stronger correlate of satisfaction with one's financial situation than is household income, but we could not demonstrate that net worth is also more strongly associated with happiness with life in general. Most notably, our study—using mood as an indicator of well-being and therapy-seeking for sadness/loneliness as a sign of ill-being—failed to find a strong relationship between these two variables and either income or net worth. Even considered together in a multiple correlation, income and wealth were not strongly associated with either measure of life happiness.

Introduction

I t is now generally accepted that psychological motives drive people's behaviors in financial matters. As Hersh Shefrin, a professor of finance at Santa Clara University, concluded in the "Final Remarks" section of his book *Beyond Greed and Fear: Finance and the Psychology of Investing,* "Psychology is hard to escape; it touches every corner of the financial landscape, and it's important. Financial practitioners need to understand the impact that psychology has on them and those around them. Practitioners ignore psychology at their peril."[1] Obviously, it is therefore prudent for the financial services professional to be at least conversant with various aspects of client psychology.[2]

Money and Happiness

The relationship between financial well-being and happiness is an aspect of client psychology that deserves attention from all providers of financial services, especially ones who are wealth managers.[3] This notion may sound heretical since the primary function of the financial adviser is to help clients improve their economic circumstances, not to foster psychological well-being. However, most people would agree with the following observation offered by economists Bruno Frey and Alois Stutzer: "Happiness is generally considered to be the ultimate goal in life; virtually everybody wants to be happy."[4] Indeed, happiness is listed as one of our "rights" in the Declaration of Independence. Consequently, considerations about happiness impinge on all life matters, including financial issues. Even some hard-nosed economists are willing to concede this point: "Economic things matter only insofar as they make people happier."[5]

Some readers may wonder why one needs to even bother investigating the relationship between money and happiness since the answer is so clear and intuitively obvious. After all, the underlying, universally accepted assumption with respect to money is that, of course, "more is always better." The rich(er) should obviously be happier given that wealth is correlated with many favorable life circumstances, including better health, increased longevity, fewer stresses, less violent crime, and even lighter prison sentences when caught in a criminal act.[6] Not surprisingly, until recently, most economists also took it as a fundamental law that greater happiness derives from an improvement in financial status because the additional money can be used to meet unfulfilled needs. However, in 2002, a seminal paper in the academic literature titled "What Can Economists Learn from Happiness Research?" was published by Frey and Stutzer that challenged this assumption.[7]

An often asked question is whether money can buy happiness. Many people assume that the answer is always "yes," but unfortunately, the answer is "intricate" according to Ed Diener and Robert Biswas-Diener,[8] and it does not allow for a simple and definitive yes or no. The matter of money and happiness is a bit more complex than previously assumed, given the research results. Although there currently exists a substantive interdisciplinary perspective on the matter of money and happiness,[9] nonetheless, some unanswered questions and controversies remain.[10] This paper begins with a review of the research evidence regarding the impact that money has on happiness. We then address one of the issues that has been explored in only a few studies, namely, whether income or net worth is the better determinant of satisfaction with one's financial status as well as one's happiness with life in general. Our own empirical data is presented to answer the question.

Measuring Happiness

In studying happiness, the first problem is one of definition. The most direct approach is of course to simply ask people how happy they feel. For instance, the General Social Surveys[11] include the following global question: "Taken all together, how would you say things are these days—would you say you are very happy, pretty happy or not too happy?" In addition, concepts such as "utility," "positive affect," "satisfaction," and "subjective well-being" have been used as proxy measures of happiness.[12] Although there are obvious shades of difference between these concepts, they are nonetheless related closely enough to happiness to allow for consideration of studies using words other than "happiness" per se, despite the nuances.[13]

Typically, the global judgments that people make about their degree of happiness are fairly stable. Furthermore, people's judgments about their own happiness are generally corroborated by spouses and friends,[14] so there is some proof of their validity as well. Perhaps even stronger evidence for the validity of the answers is that they are associated with physical markers such as electroencephalographic recordings,[15] physiological responses to induced stress,[16] the duration of smiles,[17] and even suicide rates.[18]

However, Nobel Laureate Daniel Kahneman and his colleagues contend that global judgments of happiness require an evaluation, which could be influenced by what other questions are asked. A more recent approach to assessing happiness, advocated by Kahneman, requires people to "report their feelings in real time."[19] In other words, the person is asked how she or he feels at the time the question is being asked. Called the random experience sampling method, it has the advantage of capturing the person's emotional state at a given moment rather than relying on a retrospective report.

The random experience sampling method is not without critics, however. According to Tania Burchardt, "Some economists have suggested that questions about satisfaction are not the right way to measure utility, because they implicitly invite respondents to use cognition and comparison, rather than assessing moment-by-moment affect or mood. Differences between the two types of measure are certainly of interest, but it is far from clear that utility should be interpreted as some aggregation of affect rather than drawing on the distinctively human faculty of critical reflection on, and appraisal of, our own lives."[20] Notably, even the proponents of the random experience sampling approach to measuring happiness acknowledge that it produces lower correlations with variables known to be associated with happiness.[21] Some research shows that current mood is a substantial component on any single global self assessment of happiness.[22]

Research Focus on Income and Happiness

The research on happiness and money has generally involved income, probably because wealth is much harder to capture in surveys.[23] Broadly speaking, three kinds of studies have been conducted to test the relationship between income and happiness. The first type (micro) examines the happiness of a group of people at a given point in time in a certain country and correlates the people's happiness to their incomes. The second kind (macro) looks at various countries to see if there are differences between the aggregate (average or median) happiness of different nations as a function of their per capita income. That is, by aggregating across individuals, a single data point comes to represent the happiness of the entire nation. The third line of research considers happiness levels over time, at either the individual level or aggregate level.

Income and Happiness Differences between Persons

Studies dealing with individual differences in happiness within a particular nation have been conducted in a large number of countries. As most readers probably suspect intuitively, typically, the people in a given society who have more money are happier with life than are the people with less money.[24] Contrary to what intuition tells us, however, differences in the *degree* of happiness by income are rather modest and much smaller than most people would assume. Economist Richard Easterlin's review of available studies indicates that on average the correlation between income and happiness is only about .20, meaning that income can only explain about 4% of the differences in people's happiness.[25] Moreover, the link between income and

happiness is due mainly to the difference in happiness between the poor and the middle class rather than between the middle class and the rich.[26] Consider, for example, the results of the 2004 General Social Survey, summarized in Table 1. As Kahneman and colleagues aptly observed: "Those with incomes over $90,000 were nearly twice as likely to report being 'very happy' as those with incomes below $20,000, although there is hardly any difference between the highest income group and those in the $50,000 to $89,999 bracket."[27] Another survey showed that even the super wealthy (i.e., the *Forbes'* 100 wealthiest Americans) report being only about one point higher than average on a life satisfaction scale ranging from 0 to 6.[28]

Notably, correlations between income and happiness at the individual (micro) level are stronger in poor nations than in rich nations.[29] The largest difference in happiness between the rich and the poor occurs in the underdeveloped countries. The research thus suggests that more money does indeed lead to substantially greater happiness when the initial income is at the subsistence level. Once a comfortable middle-class lifestyle is achieved, however, additional income is subject to the laws of diminishing returns, with each additional dollar producing a progressively smaller return in happiness. This point of diminishing returns is reached fairly quickly—when one's basic biological and psychological needs can be met fully. In other words, money does produce happiness if the increased income brings the person out of poverty and into middle class, but it does not necessarily guarantee happiness if the individual upgrades his or her lifestyle from one that is merely comfortable to one that is luxurious. The observed marginal utility of income has been used as support for the logic of progressive taxation.

At times, anecdotal evidence is recounted in newspaper articles to suggest that wealth leads to misery. The following newspaper headline from *The Boston Globe* (December 14, 2004) is typical: "For lottery winner, $113m hasn't bought happiness." A study of sudden wealth by Gallo questions whether one can generalize from the experiences of lottery winners to people who acquired their wealth by more traditional means.[30] While money may not bring happiness, it generally does not produce misery.

TABLE 1

Self-Reported Happiness as a Function of Household Income on the 2004 General Social Survey

Response	Under $20,000	$20,000-$49,999	$50,000-$89,999	$90,000 and Above
Not too happy	17.2%	13.0%	7.7%	5.3%
Pretty happy	60.5%	56.8%	50.3%	51.8%
Very happy	22.2%	30.2%	41.9%	42.9%

Income and Happiness Differences between Countries

In addition to micro-level studies that focus on individuals, statistics on aggregate happiness and gross national product have been compiled in various countries and allow one to examine the situation at the macro level. Here, the unit of analysis is the country rather than an individual. In these studies, each country in a sense is treated as an "individual." Studies that compare poor and rich nations on the average degree of happiness of their citizens generally find much stronger correlations, somewhere on the order of .60 to .70,[31] but again, taking the very poor countries out of the mix lowers the correlation coefficient. According to Layard, the leveling off point is when a nation reaches a per capita income of about $15,000 to $20,000, and the most dramatic increase in well-being occurs when the average national income jumps from about $5,000 to $15,000 a year.[32]

The difference between the magnitude of the income-happiness relationship at the micro and macro levels may seem perplexing, but it is attributable to some extent to the well-established statistical principle of averaging.[33] One could thus legitimately argue that the small impact that income appears to have on happiness at the micro level is due to errors of measurement. As noted previously, generally the measures of happiness employed in most national surveys rely on just one self-reported item. It is a well-established psychometric principle that single-item measures of any given characteristic have a tendency to be less reliable than a scale composed of multiple items.[34] On the other hand, some macro studies have been questioned because the aggregate may hide important differences. For example, in countries with relatively similar average per capita incomes, the distributions of income could be very different.

Moreover, a question has been raised about whether the relationship between national income and national happiness is a function of the income of the country per se or some other characteristic that is associated with higher income.[35] Nations with better standards of living also tend to be democracies that respect human rights, so it has been theorized that perhaps it is the open nature of the society that is the primary force behind the greater happiness in the richer countries.[36]

However, other researchers point to the fact that there is almost no relationship between human rights and happiness once there is a control for income. Some data suggest that collectivist cultures are characterized by lower happiness relative to individualistic cultures.[37] Political instability lowers happiness; the residents of the former Soviet bloc are less happy than would be expected based solely on their incomes.[38]

Changes in Happiness over Time

A number of studies have examined aggregate levels (mean or median) of happiness in different countries over time using both cross-sectional data (e.g., Eurobarometer Surveys, U.S. General Social Survey) and panel data (e.g., the German Socio-Economic Panel and the European Community Household Panel). In these studies, it has been observed rather consistently that growth in per capita income over time in developed countries (such as the United States, Great Britain, France, and Japan) did not lead to corresponding increases in the happiness of their populations. In other words, while in most of the industrialized world the per capita income has grown in real terms over the last 50 years, overall happiness has not increased much, if at all.

In 1974, Easterlin observed that income per capita had doubled between 1946 and 1970, yet average happiness had remained flat.[39] The situation was no different in the decades that followed, according to Diener and Biswas-Diener: "From 1974 to 1994 productivity in the United States increased so that it required 3 days of work for a wage earner to purchase a color T.V. compared to 3 weeks just 20 years earlier, and substantially less time to buy most other items such as food, leisure, and travel."[40] Yet in the General Social Surveys of the United States, the percentage of respondents describing themselves as very happy fell from 34% to 30% between the early 1970s and the late 1990s. In Great Britain, the level of happiness remained flat during this same time frame.[41] Other signs that happiness has not kept up with increases in per capita income include the higher incidence of depression.[42]

These bleak findings about happiness over time have been challenged by Veenhoven, who points to nations such as Brazil where growth in income was followed by an increase in happiness.[43] Hagerty and Veenhoven

reviewed previous studies and claim that low statistical power could be responsible for not finding any statistically significant differences.[44] By using a longer time series and adding countries with low gross domestic product/capita to the analysis, they improved the sensitivity of the research design and were able to show that increases in national income were associated with greater national happiness in seven of 21 countries. But the increase in happiness was greatest when the initial income was low and tended to be more short term rather than long term. Analysis of more recent data by Oswald[45] and Hagerty[46] also detected a small increase in happiness with growth in national income, but others have not.[47] However, nearly all researchers agree that in Japan, happiness has definitely declined with economic growth.

The Easterlin Paradox

Although the evidence is not indisputable, the conventional wisdom is that although society has grown more affluent over the years, people have not become correspondingly happy. This finding is rather surprising given that happiness and income are correlated to some extent when examined at any given point in time. This inconsistency has come to be known as the "Easterlin Paradox," named after the economist who first observed it. Several interrelated mechanisms have been advanced to account for this paradox, most notably adaptation, relative standards, and aspiration level.[48]

Adaptation

One explanation is a psychological process called "adaptation" or "habituation."[49] All organisms, including human beings, have a reference point for what is typical or normal. Anything that improves one's position beyond that point registers as a positive change, whereas any deviation to a level below that point is viewed as a negative event. When a change first occurs, the person is sensitive to it. After a while, however, one tends to habituate (get accustomed) to the change and begins to take it for granted and ignore it so that the improvement is no longer appreciated to the same extent as it was initially. People are believed to have happiness "set points" to which they eventually revert after experiencing temporary positive or negative spikes in affect due to life events. Therefore,

unless salary increases continuously, happiness will revert to its set point. It has been reported that even the euphoria of winning a large sum in a lottery doesn't last long.[50] Studies on twins suggest that this happiness "thermostat" is determined more by heredity than by environment.[51]

We continually recalibrate the neutral point. Frey and Stutzer contend that over time people habituate to up to 70 % of any increase in income,[52] although analyses by others indicate that the extent of the adaptation may be somewhat lower.[53] Kahneman and Thaler suggest that payments in bonuses rather than salary may produce longer-term pleasure because a bonus is less likely to alter the reference point.[54] Interestingly, people tend to overestimate how much joy or sorrow a future event will produce ("impact bias"), so they tend to believe that a new higher level of income will create more pleasure for them than it actually does once they attain it.[55]

Relative Income as Basis for Happiness

A number of studies have shown that it is the perceived (subjective) adequacy of income that matters more to life satisfaction than its objective adequacy.[56] The title of one of Easterlin's articles is: "Will Raising the Incomes of All Increase the Happiness of All?" Unfortunately, the preponderance of evidence suggests that the answer to Easterlin's question is "no."[57]

Stated differently, the question is whether people's happiness with their financial status is based on a relative (comparative) or on an absolute standard. The evidence points to "relative" income rather than "absolute" income being a stronger determinant of happiness as revealed by studies in the United States,[58] Canada,[59] Switzerland,[60] Germany,[61] and even in developing countries.[62] Increasing everyone's income proportionately will not improve everybody's happiness because people's rankings will not have changed. Compared to others, they will still occupy the same rung on the economic ladder as before. Note, for example, that Luttmer found that if one's neighbors earn more than one does, then the individual feels less happy than if the neighbors earn less.[63] In a very wealthy neighborhood, even a rich person may feel "relatively deprived."[64] Happiness tends to improve if an individual's rank in the income distribution improves. For example, in a panel study in Germany spanning the years 1990-

2002, D'Ambrosio and Frick found that both satisfaction with income and satisfaction with life in general were more highly correlated with changes in income rank than with changes in absolute income.[65] Being surrounded by folks who are better off than you could be detrimental to your mental health, whereas being a big fish in a small pond could have its advantages.[66]

Aspiration Levels

After we habituate to a given salary, we generally aspire to a higher salary. Once an income is sufficient to meet the basic needs, the income necessary to be happy tends to be relative rather than absolute, increasing as a function of both one's prior income and the income of a reference group.[67] If an individual feels that he or she is doing less well than the reference group, that person will be unhappy no matter what the absolute income. For instance, Clark and Oswald found that the higher the pay of the reference group, the lower was workers' satisfaction with their own compensation.[68] Frequently, one's neighbors serve as the peer group,[69] but even in a particular neighborhood, one's reference group is typically established on the basis of age and education. In Luttmer's study, the happiness of any particular individual was affected most by how much neighbors with similar educational credentials earned.[70]

Hedonic Treadmill

Frequently, increased income comes at a price, such as less leisure time.[71] Moreover, happiness is partly a function of one's past income, and so the more money that is earned, the more money that is needed to remain happy to the same degree. This continuous yearning for more as we get more is called the "hedonic treadmill." Some researchers argue that having modest aspirations (and meeting them) is the key to happiness. A number of writers have described the negative consequences that unbridled materialism can produce,[72] but Johan Norberg takes issue with those who call for society to get off the hedonic treadmill: "The critics who think that they can conclude from the stability of happiness that zero growth is preferable overlook that loss of income undermines happiness. And growth makes non-zero-sum games possible. Without it, whenever someone succeeds and gains, someone else has to fail."[73]

Income, Wealth, and Happiness

Recently, Australian researchers Headey, Muffels, and Wooden made the following observation: "The claim that money, and by extension economic growth, have little effect on happiness is almost entirely based on weak relationships between survey measures of happiness and measures of household income."[74] They contend that the studies using income underestimate the extent of the difference between the happiness of the rich and the poor, and that wealth (net worth) is more highly correlated to happiness than is income.

There exists greater variation in wealth than in income, and the correlation between wealth and income is far from perfect.[75] In Sweden, the correlation between total income and wealth equaled .37 in 1992, similar to the value obtained in the United States that same year.[76] But in the United States the correlation seems to be increasing over time. According to Rodríguez, Díaz-Giménez, Quadrini, and Ríos-Rull, between 1992 and 1998 the correlation of income and wealth rose from .33 to .60.[77] But even .60 only explains 36% of the variance. As Rodriguez et al. observed: "When we talk about the rich, it is not clear whether we are referring to the earnings-rich, the income-rich, or the wealth-rich, and the same ambiguity applies to the earnings-poor, the income-poor, and the wealth-poor."[78]

It is not unreasonable to expect wealth to be a better predictor of happiness given that some families with high income may be living beyond their means,[79] which can be quite stressful. Lee Eisenberg, author of the best-seller *The Number*, devotes a chapter to what he terms the "debt warp," in which he discusses the huge loan burden facing many Americans:

> Total consumer debt ($6.5 trillion) in the United States is now reckoned to exceed the much-fretted-over national debt, although it gets a fraction of the attention. Personal debt in the United States in 2002 was equal to the gross national products of Great Britain and Russia combined. Revolving credit card debt is, for millions of households, the financial lifeline that connects them to the biggest-ticket items in their lives, such as medical bills, tuition costs, and car payments. It comes as no news, of course, but plastic, once a convenience, is now society's everyday financing tool.[80]

Headey and Wooden analyzed data from persons participating in the Household, Income and Labour Dynamics in Australia (HILDA) survey to determine the impact of income and wealth on life satisfaction (happiness) as well as on financial satisfaction.[81] Working under the controversial assumption that well-being and ill-being are not necessarily opposite ends of the same continuum, they measured both well-being and ill-being. Assessment of well-being consisted of two single questions with numerical answers that ranged from 0 = totally dissatisfied to 10 = totally satisfied. The one question dealt with life satisfaction ("All things considered, how satisfied are you with your life?") and the other one with financial satisfaction ("your financial situation"). The measure of life ill-being consisted of the sum score of five questions about the presence of mental health problems (anxiety, depression, etc.), while the measure of financial ill-being was based on answers to eight questions reflecting financial distress (e.g., inability to pay bills, patronizing a pawn shop, skipping meals, not heating the house, requesting aid from friends or family, etc.).

The results of the Headey and Wooden study are summarized in Table 2.[82] As hypothesized by them, relative to income, wealth did indeed bear a stronger relationship with the measures of well-being and ill-being. Furthermore, both income and wealth were more strongly linked to financial well-being/ill-being than to the two measures of life satisfaction in general. However, even the better measure of financial status, namely wealth, only accounted for a small fraction of the variation in the positive measure of life satisfaction as well as the negative measure of life satisfaction. That is, wealth explains only 2.25% and 2.56% of the variation in well-being and ill-being, respectively. Using income, the relationship between money and happiness is even lower (1.21% for well-being and 1.00% for ill-

TABLE 2		
Correlations between Income and Wealth with Measures of Well-Being and Ill-Being		
Well-Being	**Income**	**Wealth**
Financial satisfaction	.27	.33
Life satisfaction	.11	.15
Ill-Being		
Financial stress	.26	.43
Mental health	.10	.16

being). When income and wealth were entered into a regression equation along with demographic variables (sex, age, marital status, education, employment status, disability status), the combination explained 8.1% of the variance in well-being and 10.9% of the variance in ill-being.

Admittedly, wealth is a somewhat better predictor of happiness compared to income, but one has to wonder whether the authors may be a bit overly enthusiastic in their proclamation: "This paper has shown that objective economic circumstances matter a good deal more to well-being and ill-being or, one can loosely say, to happiness than previously believed."[83] In fact, their ability to predict happiness is still rather low in an absolute sense, and it is not markedly different from other empirical studies that considered the joint contributions of different types of objective indicators of prosperity.[84]

Moreover, it is not entirely clear—based on another study conducted by Bruce Headey—that the same relationship holds across different countries.[85] Headey and his colleagues studied the link between income, wealth, financial satisfaction, and life satisfaction in five national household panels: Australia, Great Britain, Germany,

TABLE 3										
Percentage Overlap by Country between Income and Net Worth and Life Satisfaction (LS) and Financial Satisfaction (FS)										
	Australia		**Germany**		**Netherlands**		**Great Britain**		**Hungary**	
	LS	**FS**	**LS**	**FS**	**LS**	**FS**	**LS**	**FS**	**LS**	**FS**
Income	0.5%	3.6%	2.9%	9.0%	NA	8.4%	1.3%	8.2%	4.2%	4.1%
Net worth	1.9%	9.0%	3.6%	9.0%	NA	9.0%	1.7%	4.8%	2.0%	2.0%
Combined	1.7%	9.2%	4.2%	12.1%	NA	15.3%	2.4%	10.7%	4.9%	5.3%

Hungary, and The Netherlands. With the exception of The Netherlands, satisfaction with both one's financial situation and life situation was assessed. Their results are shown in Table 3, in the form of the square of the Pearson correlations rather than simple correlations. This format allows one to see how much of the variance in the one variable can be explained by the other variable. In Australia, the greater importance of wealth over income for both financial and life satisfaction is evident, but in the case of Hungary, the situation seems to be the reverse. With respect to life satisfaction, net worth is the stronger correlate in Australia, Germany, and Great Britain, but the difference is minimal in the case of Great Britain. In terms of a correlation with financial satisfaction, net worth is the better predictor in Australia, Great Britain, and perhaps The Netherlands, but not in Germany or Hungary. In all countries, neither net worth nor income accounts for much of the variance in life happiness. Combined, income and net worth are most highly correlated to life satisfaction in Hungary, where they explain less than 5% of the variance.

Given the national differences, we sought to determine whether in the United States it is income or wealth that is the stronger correlate of happiness with one's financial status and satisfaction with one's life in general. The study to be reported in this article employs both a measure of well-being and a measure of ill-being of life satisfaction, replicating the feature of the study conducted in Australia by Headey and his colleagues. However, our measure of well-being differs from theirs in that it is based on mood rather than a global evaluation. Like their measure of ill-being, ours involves mental health issues.

Method

Sample

The data came from a survey, administered to a sample of convenience residing in Kansas, that dealt with satisfaction with marriage and financial behaviors. A total of 1,318 surveys were mailed, of which 36 were undeliverable. Five hundred and three surveys were completed and returned on time and another 16 came back after the analysis was started. Of the 503 questionnaires returned by the deadline, 3 were not usable due to a

large number of unanswered questions. After allowing for the 36 undeliverable questionnaires, this translates into an effective response rate of about 37%. Due to missing information on the variables of interest to this study, 32 cases were further eliminated, reducing the sample size to 468. The average respondent in this study was college-educated (57%), white (94%), female (72%), 44 years of age, married (72%) for about 19 years, employed full-time (86%) with a median household income of $55,736 and one child living at home.

Measures

Five of the items on the survey addressed the question of interest: (1) household income, (2) net worth, (3) financial satisfaction, (4) mood when completing the survey, and (5) whether the respondent was receiving professional counseling because of unhappiness or loneliness. Details about these measures follow.

Household Income

This item required the respondent to pick one of 10 ranges on the scale. The ranges were in increments of $10,000. Shown in Table 4 is the distribution of the sample's household income. It has been reported that it may be helpful to adjust household income for household size, and a number of approaches have been proposed.[86] The simplest adjustment for household size is to divide the household income by household size to get a

TABLE 4

Distribution of Household Income

Income Rating	Percent
1 = Less than $20,000	3.6%
2 = $20,001–$30,000	12.6%
3 = $30,001–$40,000	10.9%
4 = $40,001–$50,000	14.5%
5 = $50,001–$60,000	14.5%
6 = $60,001–$70,000	14.3%
7 = $70,001–$80,000	11.5%
8 = $80,001–$90,000	7.1%
9 = $90,001–$100,000	3.8%
10 = More than $100,000	7.1%
Total	100.0%

per capita income. A limitation of per capita income, however, is that it underestimates the standard of living for larger families as compared to smaller families. In essence, for a family of two to have the same standard of living as a single person requires 1.41 times the income that the one person earns rather than twice as much because of economies of scale. (The 1.41 is the square root of 2.) Similarly, a family of four with twice the income of the single person would have the same standard of living as the single person (square root of 4). We experimented with both types of adjustments and were

surprised to find that neither produced the desired effects. That is, the adjusted income correlated less than the unadjusted household income with variables that theoretically should be related to household income. Therefore, we decided to rely on the unadjusted household income in our analyses.

Net Worth

A 10-point numerical scale was used to assess net worth. Three of the points had verbal descriptors labeled: 1 = In Serious Debt, 5 = About Breakeven, and 10 = Money Left Over. Table 5 indicates that close to 16% of the respondents rated their net worth below breakeven, whereas over three quarters of the sample viewed their net worth as being above breakeven. The most frequently used point was 10, which was selected by about 38% of the sample.

Financial Satisfaction

A 10-point scale was also the basis for assessing satisfaction with the one's financial situation. Only the two endpoints had verbal labels associated with the numbers, with 1 equaling "Extremely Unsatisfied" and 10 equaling "Extremely Satisfied." The distribution of financial satisfaction ratings is available in Table 6. It may be instructive to dichotomize the distribution into 5 and below versus 6 and above. Under this scheme, approximately 45% of the respondents fall on the less satisfied end of the scale and 55% are on the more satisfied end of the continuum. The average rating was 5.59 ($SD = 2.04$).

Mood When Completing Survey

The respondents' well-being was captured by asking them to indicate how they were feeling at the time they were completing the survey. Three options were permitted: (a) gloomy, (b) neutral, and (c) happy. This was the first question on the survey. The mood of the respondents when completing the survey was primarily neutral (56.4%). Of the people who were not neutral, nearly nine times as many described themselves as happy rather than as gloomy (39.1% versus 4.5%). This type of question represents a sampling of the respondent's feelings at a random moment in her or his life and is thus more in line with the experience sampling procedure for measuring happiness advocated by Kahneman et al.[87] The

TABLE 5

Distribution of Self-Assessed Net Worth

Net-Worth Rating	Percent
1 (in serious debt)	2.6%
2	3.6%
3	5.6%
4	3.4%
5 (about breakeven)	9.0%
6	4.9%
7	7.7%
8	14.5%
9	11.1%
10 (money left over)	37.6%
Total	100.0%

TABLE 6

Distribution of Financial Satisfaction Ratings

Degree of Satisfaction	Percent
1 (extremely unsatisfied)	2.8%
2	3.6%
3	12.0%
4	14.3%
5	12.6%
6	15.0%
7	20.7%
8	14.5%
9	3.4%
10 (extremely satisfied)	1.1%
Total	100.0%

process used in our study differs from the standard experience sampling method in that the person's mood was assessed only once, whereas in the standard procedure, the mood would be measured a number of times and aggregated to come up with what constitutes the person's typical mood. However, since a typically happy person experiences positive moods more frequently, at any one time one is less likely to find that a generally happy person reports being gloomy or neutral.

Sad/Lonely Help

A good indicator of ill-being is seeking help for one's unhappiness. Professional help was sought by 129 (about 28%) of the sample because they felt sad or lonely. The question of seeking therapy should appeal to those readers who question whether we can really trust what people say they feel. Economists generally prefer such revealed behavior to self reports of mental states because they are less subjective and hence are viewed to be more valid. As Frey and Stutzer note, " Suicide is sometimes considered a more valid measure of happiness because it refers to revealed behavior. But suicide only captures the tail end of the distribution of mental well-being."[88] Our indicator—use of professional help—also suffers from focusing on the tail end of unhappiness, but less so than suicide. Admittedly, the question deals with loneliness as well as happiness, so it is not a pure measure of happiness. However, the confounding may not be as serious as it first might appear. To begin with, happy people have a lower incidence of mental illness.[89] Moreover, loneliness is a state of mind that increases the risk of being unhappy.[90]

Results

Simple Correlations between the Measures of Happiness

Using product-moment correlation procedures (Pearson and point-biserial) we intercorrelated our three measures of "happiness" to determine how much overlap there exists among them. All three correlation coefficients were statistically significant ($p < .001$), but small in magnitude: financial satisfaction with mood $r = .24$, mood with sad/lonely $r = .23$, and mood with financial satisfaction $r = .20$. In other words, there is not much overlap in the three measures of happiness. Based on these correlations, it would be difficult to predict the one variable from the other with precision.

Simple Correlations between Happiness and Financial Status

Next, these three measures of happiness were correlated with both income and net worth. The results of the data analysis in terms of product-moment correlation coefficients appear in Table 7. Financial satisfaction was significantly related to both income and wealth. The same was true of seeking help for sadness/loneliness. On the other hand, mood was not significantly correlated with either income or net worth.

Descriptively, financial satisfaction showed a higher correlation with net worth than it did with household income. Moreover, the difference in the magnitude of the two correlation coefficients was statistically significant. This finding is consistent with the results obtained by Headey and Wooden.[91]

TABLE 7

Product-Moment Correlations between Measures of Happiness and Income and Net Worth

Happiness Measure	Income	Net Worth	t-test for Significance of the Difference	p-value
Financial satisfaction	.41[c]	.52[c]	2.59	.010
Mood	-.01	.06	1.38	.084
Seeking help for sadness/loneliness	.25[c]	.10[a]	3.04	.002

[a]p<.05, [b]p<.01, [c]p<.001

From a statistical significance perspective, mood could not be proven to be related to either income or wealth, but descriptively at least, its correlation to net worth is a bit higher. However, seeking help for sadness/loneliness was more strongly related to income than it was to net worth, which is contrary to the results obtained by Headey and Wooden.[92] In other words, our results concur with theirs in showing that net worth (wealth) rather than income is a better predictor of financial satisfaction, but we found the opposite to be true of the mental health measure. In our data, the correlation was stronger for income ($r = .25$) than for net worth ($r = .10$). In contrast, they found their mental health measure to be more strongly correlated with wealth ($r = .16$) than with income ($r = .10$), but the difference is very slight.

Regression Analyses

To see if taking into account both income and net worth together could improve one's ability to predict happiness from income and wealth, three regressions were performed. In each regression, income and wealth served as the two predictors (independent variables). The three criterion (dependent) variables were in turn: (a) financial satisfaction, (b) mood, and (c) seeking help for sadness/loneliness. Given the continuous nature of the first two dependent variables, the regressions were ordinary least squares (OLS). Because "seeking help for sadness/loneliness" is dichotomous, a logistic regression was performed instead of OLS.

Table 8 summarizes the results of the two OLS regressions. To begin with, one should consider the information in the second row where the measure of happiness is financial satisfaction. Recall from Table 7 that net worth by itself had a correlation of .52 with financial satisfaction.

Likewise, by itself, household income had a correlation of .41. Financial satisfaction correlated at .568 (R) with the linear combination of income and net worth. In other words, together income and net worth explain about 32% (R square of .322) of the variance in financial satisfaction. The linear combination of these two variables correlated with financial satisfaction at a higher magnitude than either one alone, but because income and wealth are themselves correlated ($r = .40$, $p < .001$), the correlation did not improve as much as it would had the two predictor (independent) variables been uncorrelated with each other.

The linear combination takes advantage of chance relationships within the data, so a regression equation developed on a particular sample will not work as well in a new sample. This results in what is termed "shrinkages." The shrinkage will be greater the more predictor variables one uses in the equation and the smaller the sample that is used to compute this equation. Given that we only have two predictors and a fairly large sample, the expected shrinkage (based on a formula developed for that purpose) is small, as shown by the adjusted R square of .319 (which is not much of a change from the R square of .322).

The standardized *beta* weights in Table 8 indicate the relative importance of income and net worth in the prediction of financial satisfaction when one accounts for the intercorrelations between them. Note that the *beta* for net worth (.426) is almost twice the size of the *beta* for income (.242), so financial satisfaction is more a function of net worth than income. On this point our results concur with those of Headey and Wooden based on their Australian sample.[93]

We now turn our attention to mood as the criterion variable. The adjusted R square is zero, which means that essentially one is not likely to find a meaningful relationship

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TABLE 8

OLS Model Summaries of the Prediction of Financial Satisfaction and Mood on the Basis of Income and Net Worth

Criterion	R	R-Square	Adjusted R Square	Beta for Income	Beta for Net Worth
Financial satisfaction	.568	.322	.319	.242	.426
Mood	.069	.005	.000	-.042	.073

between mood and the combination of income and net worth. The two variables together do not improve our ability to predict mood on the basis of either one alone.

The third criterion was seeking therapy for sadness/loneliness. The multivariate relationship between seeking therapy for sadness/loneliness and income and net worth—analyzed by means of a logistic regression—suggested that, in this relationship, the more important variable is income rather than net worth. A statistic called the odds ratio indicates the relative importance of the two predictors after the intercorrelation between income and net worth is taken into account statistically. The odds ratio for income is .779 while the odds ratio for net worth is 1.001. The further the value of the odds ratio is from 1, the greater the relative importance of the predictor. On this basis, income is more important than net worth when seeking treatment for sadness is concerned. People with lower incomes are much more likely to experience sadness intense enough to require the help of a professional.

The logistic regression technique does not result in a multiple correlation (R), as is the case with OLS regression. However, approximations to the R square have been developed. The Cox & Snell R square equaled .062 and the Nagelkerke R square was .089. Thus, by knowing income and net worth, one can explain about 6% to 9% of the variance when predicting whether an individual is experiencing sadness to the point of requiring therapy. Both low income and low net worth are associated with a greater probability of sadness/loneliness, but the degree of predictability is low.

Discussion

The purpose of our research was to assess whether income or net worth is more highly correlated with several measures of happiness. Two of the measures dealt with happiness with life in general and the third with happiness with one's financial situation. The impetus for looking at this issue was recent articles by Australian researchers who contend that the conclusion that money and happiness are correlated weakly is due to the reliance by prior researchers on income as a measure of financial standing. Their analysis of Australian data showed that happiness with one's financial situation as well as with life in general was more of a function of wealth than income.

However, the simple correlations as well as the multiple correlations they derived from their data are still fairly low in absolute terms, even when both income and wealth are included in the mix. Moreover, the relationships seem to vary by country. More research in this issue was needed, and we had data that we believed could add to a further understanding of this topic.

Recall that some researchers contend that the moment-by-moment approach is the most appropriate way to assess happiness, but that others question its value over a global self-rating. We had data on mood when completing a survey, and using it as a measure of happiness permitted us to examine the issue with a different operational definition than used by Headey and Wooden.[94] Given the viewpoint that it is better to ask about current mood rather than for a global evaluation of how happy or satisfied in life one is, we looked at how happiness, as defined by a mood, would correlate with income and net worth. We found that this single "snapshot" of mood correlated very poorly with both income and net worth.

One could reasonably argue that mood is transitory and, therefore, that the readings of mood should be taken over an extended period of time and averaged, and that the average should be correlated with the financial measures. Data of this sort were reported by Kahneman et al.[95] on workers who were asked to rate their feelings every 25 minutes during the workday. Their results did not differ from ours. According to Kahneman: "The correlation between personal income and the average happiness rating during the day was just 0.01 (p = .0.84)."[96] One therefore needs to wonder whether the moment-by-moment measurement approach to assessing happiness is in fact sounder than the global evaluation method.

Compared to mood, our global measure of life satisfaction exhibited a higher correlation with financial status, albeit the values were still low. The global measure of ill-being we used was seeking counseling for feelings of sadness/loneliness. The individuals in our sample who were getting professional help to deal with their negative feelings had both lower household incomes and lower net worth. In this respect, our results are in agreement with numerous prior studies, including the one by Headey and Wooden,[97] in showing that mental health issues are related to financial status. However, our results

differ from Headey and Wooden's on the relative importance of income and wealth. Whereas in our data we found income to be the better predictor, they reported it to be wealth. Perhaps the reason for the discrepant results is how the constructs were defined in the two studies. Taking income and net worth into account together improves the ability to predict mental health, but the improvement is marginal, and even with the two together, the relationship is still weak. Thus, our results do not show a strong relationship between life happiness and financial status, which is in agreement with the conventional wisdom on this topic.

Both income and net worth showed stronger correlations with satisfaction with one's financial standing than with one's satisfaction with life in general. Of the two, net worth showed the stronger relationship with financial satisfaction, which concurs with the results reported by Headey, Muffels, and Wooden for Australia and Great Britain, but is contrary to the experience in Germany and Hungary.[98] Moreover, these two variables were more strongly associated with financial satisfaction than with life satisfaction, which is consistent with Headey, Muffels, and Wooden's findings in Australia, Germany, Great Britain, and to a slight extent in Hungary.

The study of happiness and its relationship to income and net worth is not merely of theoretical interest. The topic has direct implications on the way financial services professionals deal with clients and the types of client outcomes advisers should reasonably expect. Clients most often seek the guidance of financial services professionals in an effort to reach specific financial goals. Underlying nearly all such goals is the notion of maximizing happiness. A client who saves for retirement, for instance, is not only doing so to meet his or her financial obligations in later life but also to have the resources to pursue activities that will enhance happiness. As Eisenberg indicates in his book on retirement planning, the search for the "number" (amount of money needed for retirement) requires facing psychological issues.[99] The frightening implication of the literature on the Easterlin Paradox and the hedonic treadmill concept is that for some people, no "number" may ever suffice, at least for very long. Bernstein is quite correct in referring to the implications of this research as "the retirement calculator from hell."[100]

What a financial services professional accomplishes with a client will certainly have an impact on the client's financial situation and may have implications as well as for other areas of a client's life. Sometimes how such services impact the nonfinancial aspects of a client's life pose a puzzle for both the client and adviser. The results of research on the relation of financial status and happiness with life indicate that we should not be surprised when changes in either income or net worth have little effect on a client's nonfinancial happiness. Both client and adviser need to realize that, while a life filled with money worries can be a deterrent to happiness and financial security will allow for financial peace of mind, being financially successful will not guarantee happiness with other aspects of life.

Financial satisfaction is just one piece in the "happiness with life" puzzle. Economic factors other than income and wealth have been linked with happiness. Moreover, genetic and demographic characteristics also play a critical part. A high unemployment rate lowers the happiness of both the unemployed individual and the society at large. Its negative impact thus seems to extend beyond purely pecuniary reasons.[101] Clark, Georgellis, and Sanfey describe unemployment as a "scarring" experience.[102] In the United States, self-employment results in greater happiness than being employed by an organization, even taking into account hours worked and earnings,[103] probably because of the greater autonomy that self-employment affords. This is not necessarily the case in undeveloped countries because, as Graham, Eggers, and Sukhtankar explain, self-employment means "you're in the informal sector and you're not there by choice. You're selling matches on the street to survive."[104]

Demographic characteristics that seem to play a role in happiness include age, sex, marital status, health status, and religion.[105] In a number of countries, age has been found to have a U-shaped relationship with happiness; in the United States and Great Britain, the low point occurs at about age 40, while in Latin America it happens at a somewhat older age, but the shape of the distribution is the same. Contrary to all the jokes, being married has rather consistently been reported to be associated with higher levels of happiness in all countries.[106] Sex differences in happiness have been observed, but they are not universal; women are happier than men in the United

States, whereas in Latin America men are happier than women. The religious are happier than the unreligious. Recent research points to the existence of a "two-way street" between success and happiness. It has been postulated that perhaps the more successful people are happier not only because success results in happiness, but also because being cheerful is a factor in being successful.[107]

So, suppose a client asks you whether money can buy happiness. The best answer is that it may, but that it certainly does not guarantee it. What one does with the money may be the critical factor. Consider the opinions of the Forbes 100, mentioned earlier. Approximately 80% of the 49 respondents to the survey agreed with the statement, "Money can increase OR decrease happiness, depending on how it is used." If you have doubt, just look to Warren Buffet as an example. ∎

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