

What wealth-happiness paradox? A short note on the American case

Claude S. Fischer

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Abstract Happiness scholars have tried to resolve the seeming paradox that as Americans' wealth increased substantially over the last few decades, their happiness did not. This article questions whether the paradox is real. Demonstrations of the paradox almost always rely on GDP per capita as the measure of wealth, but that is a poor measure of a people's well-being. It is heavily and increasingly skewed; it does not account for effort. Using instead measures of household income, male income, and average wages eliminates the paradox; these indicators of affluence have grown only slowly or declined in the same period, paralleling the changes in happiness scores. Moreover, using these indicators reveals a modest but real correlation between material well-being and national happiness.

Keywords Happiness · Income · Paradox · Easterlin · Wealth · Measurement · Method

Many scholars have been trying to resolve the wealth-happiness paradox first identified in the 1970s by Easterlin (1973) and replicated ever since: Over the last few decades, it seems, Americans' wealth increased substantially, but their happiness, as measured in surveys, did not.¹ (The paradox has been identified for other nations as well, but I restrict myself here to the United States.) Researchers' answers to the paradox include psychological explanations for why greater income, at least beyond some threshold, fails to make people happier; for example, people's expectations for affluence may rise because of adaptation or because of social comparisons so as to offset advances in actual affluence. Another category of

¹ See also Easterlin (2001), Lane (2000), Layard (2005), Frey and Stutzer (2002), DiTella, MacCulloch, and Oswald (2003), Binswager (2006), Hagerty (2000), Hagerty and Veenhoven (2003), Veenhoven (2000, 2005), Schwartz (2004); Ott (2001); Alesina, Di Tella, and MacCulloch (2001), Oswald (1997), etc.

answers posits that rising wealth did make Americans happier, but contemporaneous and depressing changes, such as increasing divorce rates or declining sociability, canceled out the euphoria of greater affluence.

I argue here, in contrast, that there is no paradox to be explained; it is an illusion based on mis-specifying material well-being. Repeatedly, the paradox appears when the time trend for happiness is juxtaposed to the time trend for GDP per capita. GDP per capita, however, is an inappropriate measure of people's material well-being. First, using GDP per capita ignores the skewed distribution of the domestic product and its increasing skewness over time. Second, using GDP per capita ignores the cost in effort, the personal investment, required to gain the wealth. Once these are problems are addressed, the paradox evaporates.

I present below a simple demonstration of this argument, leaving aside the subtleties of measurement and modeling.² The basic point is clear enough. (For a more sophisticated treatment of some of these concerns, see Hout (2006).) The sources of the data I use are described in the note to this sentence.³

Happiness and income, 1972–2005

Figure 1 is a version, carried through 2005, of the standard display that greater wealth did not bring greater happiness. The happiness measure, the one most commonly used, is the General Social Survey's "HAPPY" item, asked about two dozen times over 32 years: "Taken all together, how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy?," re-scored from 1, "not too," to 3, "very happy" (right-hand scale). The wealth measure is GDP per capita (in "chained" 2000 dollars; left-hand scale). The lines represent simple, linear regressions to summarize the trend.

Here is the seeming paradox: GDP per capita, adjusted for inflation, grew greatly; the 2003–05 average was 1.8 times the 1972–74 average. Average national happiness grew not at all in the same period; it may even have declined. But GDP per capita is, I contend, a woeful representation of the general population's material well-being. A major reason is that income is heavily skewed. In 2005, the top 20% of income recipients took in 50% of the national income; the person at the 95th percentile of income brought home 3.61 times what the person at the 50th percentile did. And that skew had increased since 1972, when the estimates were 44% of national income and a 95:50 ratio of 2.75 (DeNavas-Walt et al., 2006, Table A-3). Moreover, *wealth*—i.e.,

² I refer to issues such as measurement anomalies in the GSS happiness index (Smith, 1979), preserving the categorical quality of the measure and, applying time-series appropriate models.

³ Happiness, GSS: The mean score for the national sample of the General Social Survey's HAPPY question, 1972–2004. Happiness, 1946–2005 (for Figure 5): Means for non-GSS surveys from the World Database of Happiness (Veenhoven, 2006). GDP per capita: Gross Domestic Product in chained 2000 dollars, from the Bureau of Economic Analysis (<http://www.bea.gov/bea/dn/home/gdp.htm>), divided by annual population. Median household income: DeNavas, Proctor, and Lee (2006), table A1. Median male income: Census historical tables, <http://www.census.gov/hhes/www/income/histinc/p02.html>, table P2. Mean hourly wages, 1947–99: Historical Statistics of the United States, Millennial Edition, Online (<http://www.hsus.cambridge.org/HSUSWeb/toc/hsusHome.do>), table C Ba4440-4483—Hourly and weekly earnings of production workers in manufacturing, by industry: 1947B1999. Mean hourly wages, 2000–05: Bureau of Labor Statistics, Employment, hours, and earnings from the current employment statistics (<http://www.data.bls.gov/PDQ>). I calculated inflation adjustments, where needed, using the CPI-U series.

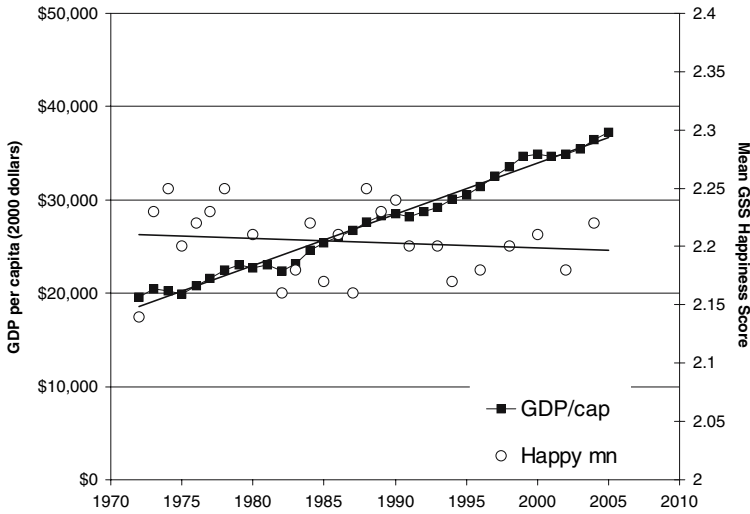


Fig. 1 Mean happiness and GDP per capita, 1972–2005

assets minus debts—is skewed much more than income is and it became increasingly skewed after 1972 (see, e.g., Fischer & Hout, 2006, Ch 6). Why would we expect that growing wealth going to a smaller and smaller proportion of the population would raise average happiness? For these—and other⁴—reasons, GDP per capita is poor way to assess a people’s material well-being.

A rough way to get around this problem is to replace GDP per capita with median household income. Figure 2 does that, using 2005 dollars. The affluence-happiness paradox remains, but it is no longer a stark contrast; median household income in 2003–05 was only 1.2 times that of 1972–74. Also, we see more variability from year to year in household income than we observe in GDP per capita, variability which might be related to variability in happiness (more on this later).

The next step is to include in our considerations what we know about *how* American households kept their incomes up in this era. To a great extent, they did it by adding workers and hours. Reports from the field suggest that sluggishness in male breadwinners’ incomes was an impetus to wives working—and also a barrier to marriage in many cases (e.g., Jacobs & Gerson, 2001). Average Americans put more painful effort (e.g., in commuting, off-hour shifts, child-care arrangements) into making money than they did before the 1970s. Such effort and pain should be factored in on the negative side of the income ledger to really measure *net* material well-being. One simple way to index that effort is to use, instead of median household income, median *male* incomes. That measure indirectly corrects for the growing female work contribution. Figure 3 displays the result.

The paradox becomes yet less paradoxical. Median male income grew only slightly; the 2003–2005 average was 1.1 times the 1972–1974 average. And we see, again, the cycles that are hardly visible in the GDP data. Alternatively, we can use

⁴ There are other reasons to reject GDP per capita for such analyses: The happiness surveys are of adults, but GDP per capita includes children in the denominator. Relatedly, the GDP per capita figure rises just because the birth rate drops. Also, an increasing proportion of GDP was held by corporations in a form not easily accessible even to shareholders.

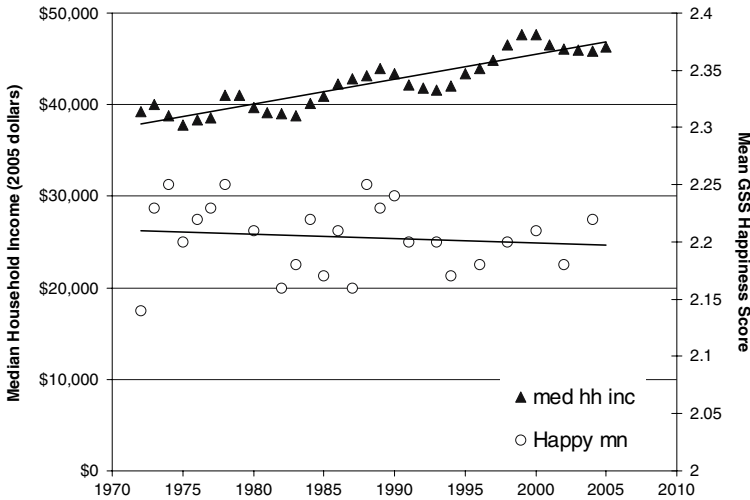


Fig. 2 Median household income and happiness, 1972–2005

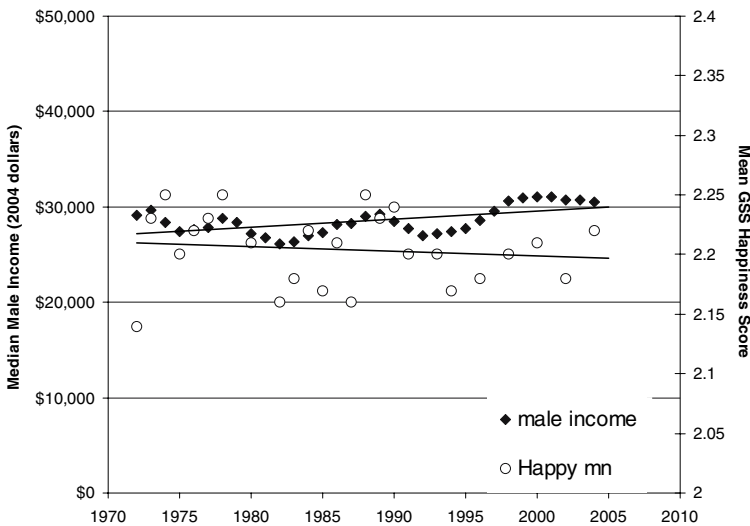


Fig. 3 Median male income and happiness, 1972–2004

for similar purposes median male *earnings* for full-time workers. That pattern (not shown) is, as we would expect, much like the one in Fig. 3. The growth in inflation-adjusted median male earnings from 1972 to 2005 was all of 1 percent. Another take would be to go gender-neutral and look at overall *hourly wages* for both men and women as a crude index of the income/effort ratio. Average hourly earnings, inflation-adjusted, of all production or non-supervisory workers in private industry *dropped* by one-tenth from 1972–74 to 2003–05; it dropped more than mean happiness. These data are displayed in Fig. 4. In sum, the closer one approximates

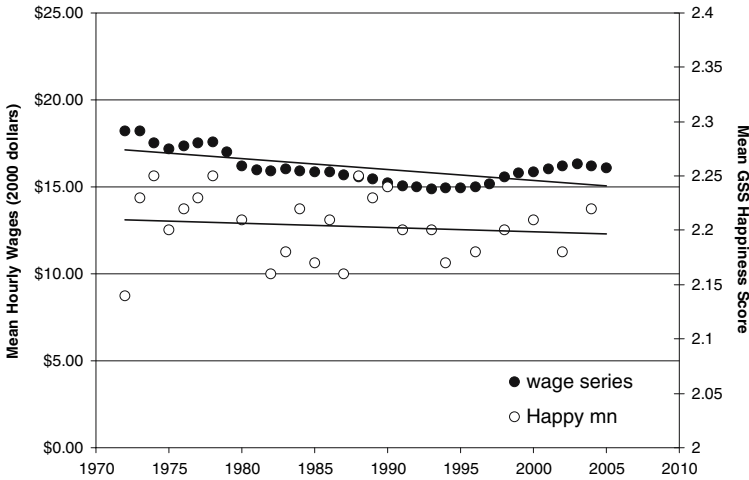


Fig. 4 Mean hourly wages and happiness, 1972–2005

changes in the real, net material well-being of average Americans, the closer the trend line for affluence looks like that of happiness—and the paradox evaporates.

Another rough-and-ready approach is to simply correlate, over time, mean happiness with the various measures of material well-being. The following table does so, in a few different ways. The first column displays the correlations over the years 1972–2004 between mean happiness in the GSS and the various income measures I have discussed. The top two entries of the first column shows that there is negligible correlation between annual happiness and either annual GDP per capita or annual median household income over a period when both the income measures grew—another display of the famous “paradox.” The bottom three rows of the column, however, show a modest but real *positive* correlation of happiness with the other—and, I argue, better—indicators of material well-being.

Inspection of the scatter plots in Figs. 1–4 suggests that there are two notable outliers in the happiness data. One is 2002: the GSS asked people how happy they were about six months after 9/11 and the depressive effects of the event seem clear. Another outlier is 1972: it is one of the years in which the “happy” question was in an unusual sequence and the General Social Survey recommends it be dropped from trend analyses (Smith, 1979). The 1972 point also has special statistical leverage because it is first in the series. The last three columns of Table 1 display the correlations holding out those points. They suggest that GDP per capita was actually a *negative* predictor of happiness—if we exclude 1972—and that median household

Table 1 Correlations, 1972–2004, of mean happiness with various economic measures

	1972–2004	Excl. 2002	Excl. 1972	Excl. 1972 & 2002
GDP per capita	-.07	-.01	-.22	-.16
Median house income	.03	.09	-.06	.00
Median male income	.21	.29	.30	.40
Median male earnings	.20	.26	.19	.26
Mean hourly wage	.19	.19	.45	.46

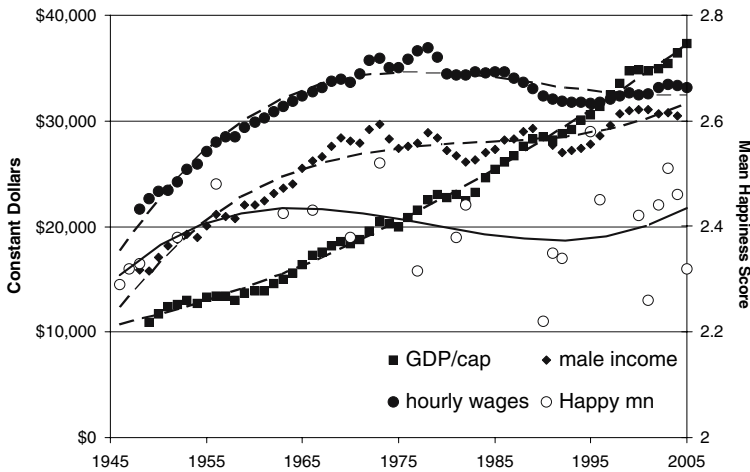


Fig. 5 GDP per capita, median male income, hourly wages (annualized), and happiness, c. 1947–2005

income was unrelated to happiness. Notably, these columns also show that the other three measures of economic well-being *positively* predicted the national rate of happiness.

Exploring a longer series

Veenhoven's World Database of Happiness provides a longer series of happiness scores from the same question, although they are from a disparate set of sources and much less consistent than the GSS. Nonetheless, they allow us to extend the window from about 30 to almost 60 years. I have taken the average happiness score for each year available, excluding those from NORC or GSS surveys so as not to overlap with the prior analysis and not to overweigh the last three decades. The happiness scores are displayed, from 1946 to 2005, in Fig. 5 as open circles. (This series is far noisier than the GSS series for 1972–2004.) The best-fitting smoother is a cubic function.⁵ I used and display three income series that are about the same length, also applying cubic smoothers for consistency.⁶

We see, first, that the GDP per capita trend (black boxes) does not parallel the happiness “trend”; the correlation is $-.08$ ($.02$ if we drop the poll taken in November, 2001, two months after 9/11). However, median male income (black diamonds) is a closer fit ($r = .11$; $.23$ without November, 2001), as is average hourly wages for production workers in manufacturing-multiplied by 2000 hours for better presentation (black circles; $r = .11$; $.13$ without 2001). More broadly, the data hint that happiness was increasing during the years of the postwar boom when affluence was also becoming more broadly shared and then happiness leveled off as affluence did for the mainstream population and inequality grew. But the happiness measures are too scattered and rough to make this more than a tentative suggestion.

⁵ The R-squared for mean happiness score X year is $.03$ for a linear regression, $.05$ for a quadratic one, and $.16$ for a cubic one ($.20$ if the November, 2001, poll is dropped).

⁶ The “hourly wages” series here is for manufacturing only, because of data limitations.

Conclusion

This back-of-the-envelope exercise provides only a crude picture of the happiness–affluence connection in late twentieth- and early twenty-first-century America. Fuller explorations would require finer measures and more complex time-series and multivariate analyses. Still, it seems clear that the “paradox” which has perplexed so many is not such a paradox after all. GDP growth has been expansive and sustained, but GDP has become increasingly unevenly distributed. At the same time, the task of keeping up with living standards and coping with sagging male earnings has required much more strenuous efforts by average American families. When we take these points into even only approximate consideration, we can see some evidence that national happiness stalled because the income/effort balance stalled for average families. We can also see that, while many things depress or raise Americans’ reports of their happiness (e.g., 9/11; adaptation; social comparisons), fluctuations in material well-being is one them.

Readers of an earlier draft have wisely pointed out limitations of this analysis. For example, a wealth-happiness paradox appears to exist in some, although not most, other countries. I leave those cases to others. Also, my analyses here are only preliminary; more sophisticated treatments are called for. Nonetheless, these data serve, I hope, to demonstrate that researchers must define and measure material well-being much more accurately and that the “fact” which has driven so much theoretical diagnoses, the supposed wealth-happiness “paradox” in America, is yet to be demonstrated to be a fact.

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