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Easterlin or Cantril: Does a Country's Income Determine its People's Happiness?

Jon Heinzman

ABSTRACT. Is high-income one way to achieve happiness? The first two researchers to investigate the question empirically looked at individual countries over time. One researcher found a positive relationship between income and happiness; the other did not. Subsequent researchers have found support for both views. This paper summarizes and critiques the arguments, finding that the answer may lie in genetics and spending habits. Although some people may be genetically predisposed to happiness, ignoring social comparisons and hedonic adaption may help one lead a happier life.

> *"The mind is its own place, and in itself can make a heaven of hell, a hell of heaven."*
>
> —John Milton, *Paradise Lost*, book 1, lines 254-255

I. Introduction

Are you happy? Maybe you think your friends are happier than you are. Maybe you think you would be happier if you bought a new car. Maybe you think you would be happier if you had more money. Hadley Cantril (1965) was the first modern economist to investigate empirically if income affects happiness. He surveyed different countries and concluded that income does affect happiness. Richard Easterlin (1974) used the same surveys and concluded that income does not affect happiness. Subsequent researchers have since argued both views. The research may be flawed, however, because respondents have trouble estimating their true happiness. If people do not know their true happiness, the survey responses are meaningless.

Because surveys are unreliable, researchers need an alternative way to measure happiness. An alternative may be to study genetics and measure happiness with blood serotonin levels. If happiness is accurately measured and found to be unrelated to income, increasing happiness may be a better national goal than increasing GDP. If so, increased production should not be the focus of society. Rather, society should focus on increasing everyone's happiness.

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II. Terminology

What is happiness? Children scream with excitement when given candy; students may do the same on Fridays. Because happiness is different for everyone, definition and measurement is difficult. The literature uses happiness, well-being, and satisfaction interchangeably, although each has a slightly different meaning (MacKerron 2012, 706). Dolan et al. (2006, 14-16) say happiness is the pleasure in peoples' lives and that it can be measured five ways: (1) preference satisfaction—wants and desires; (2) basic needs—a specified set of material and psychological needs; (3) eudaimonic—achieving potential; (4) hedonic—moods and feelings; and (5) evaluative—a person's own rating.

   Neo-classical economics uses utility theory and focuses on preference satisfaction (1), saying rational people will maximize their utility. This is different than happiness economics. Happiness economics focuses on the hedonic (4) and evaluative measurements (5), which allow each individual to judge her own happiness (MacKerron 2012, 706).

III. History

After GDP was invented by Simon Kuznets in 1937, happiness was set aside as economists focused on increasing GDP. Richard Easterlin (1974, 118) revitalized the study of happiness by introducing a paradox: increased income was expected to increase happiness, but Easterlin found evidence that income has no effect on happiness. The research connecting Easterlin to Kuznets must be studied to understand Easterlin's explanation.

   GDP was created in response to the Great Depression of the 1930s. The Department of Commerce asked the National Bureau of Economic Research to create a measure of the health of the national economy (GDP 2000). The National Bureau of Economic Research then told Simon Kuznets—who later received a Nobel Prize for his work—to create the measure. Kuznets submitted his work to Congress in 1937.

   By 1946 Kuznets was concerned about how GDP was being interpreted. Kuznets (1946, 127) said, "It [GDP] gauges the net positive contribution to consumers' satisfaction in the form of commodities and services; the burden of work and discomfort are ignored." He continued by saying national income is "merely one element in the evaluation of the

net welfare assignable to the nation's economic activity" (Kuznets 1946, 127). Economists did not heed Kuznets's warning and continued to use GDP as a measure of well-being. Kuznets's own concern about GDP influenced A.C. Pigou.

Pigou (1951) said happiness was different than material welfare. Material welfare consisted of income or possessions and was only one of many means to welfare. Pigou (1951, 288) said, "Welfare [happiness] must be taken to refer either to the goodness of a man's state of mind or to the satisfactions embodied in it." He was cautious about focusing on GDP as the way to maximum welfare. Pigou's concern influenced Moses Abramovitz.

Abramovitz (1959, 4) pointed out that "as income increases, the additional satisfactions we can obtain from economic activity come to depend more and more on the ways we earn our living rather than how much more we earn." That marked a turning point. Abramovitz was one of the first modern economists to say that income has a limited effect on happiness. In 1965 Hadley Cantril was the first to test Abramovitz's idea empirically.

Cantril (1965, 196) surveyed citizens of fourteen countries. He created a 1-10 rating scale—one the lowest and ten the highest—to ask citizens of each country about their happiness. The respondents were asked to describe the best and the worst lives they could imagine before taking the survey and to use their descriptions as baselines for 1 (low) and 10 (high). Cantril then created a socioeconomic index for each country. The socioeconomic index combined "indicators" like GNP, number of doctors, and quality of roads (Cantril 1965, 193-194). Average happiness and the socioeconomic index were then graphed together as in Figure 1.

Cantril found that countries with high socioeconomic indices were less happy than he expected. He also found that countries with low socioeconomic indices were happier than he expected (Cantril 1965, 195). Although happiness differed from expectations, the most developed countries were statistically happier than the less-developed countries. Cantril (1965, 194) concluded that happiness and income were statistically correlated; income *does* affect happiness. Richard Easterlin then used Cantril's surveys to reach the opposite conclusion that income *does not* affect happiness.
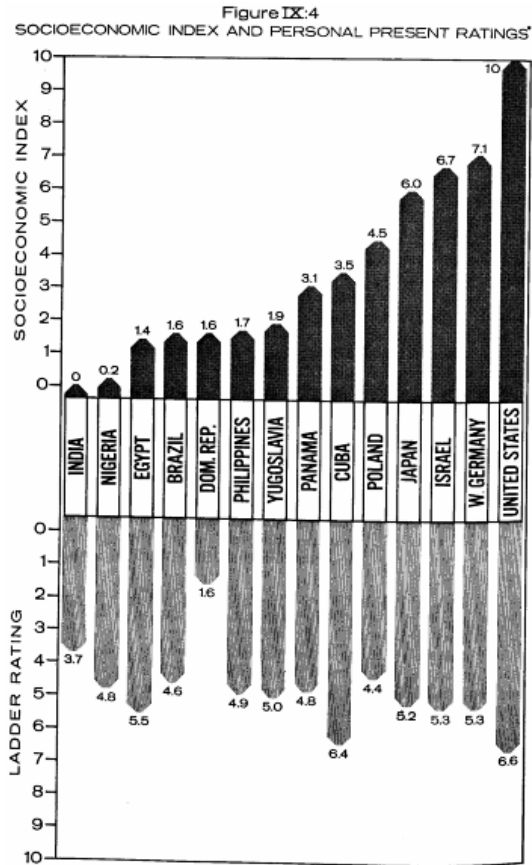
Figure 1. Happiness ratings and a socioeconomic index.
Source: Cantril 1965, 196.

IV. The Easterlin Paradox

Easterlin (1974, 99) found that rich people in one country were happier than poor people *in the same country*. This result was expected; income affects happiness. He then graphed Cantril's happiness ratings against real GNP per capita *for each country* and found that 10 of the 14 countries had happiness ratings between 4.5 and 5.5 on the 1-10 scale. These 10 countries had GNP per capita ranging from $134 to $1,860 in real 1961 US dollars, yet had similar levels of happiness. This is the first part of the

Easterlin Paradox: people in high-GDP per capita countries are not significantly happier than people in low-GDP per capita countries.

Easterlin wanted to ensure his results were valid, so he gathered new happiness ratings for nine countries—two of which were also in the first study. He then compared the happiness ratings to real GNP per capita as shown in Table 1.

TABLE 1–New happiness ratings and real GNP for nine countries. Source: Easterlin 1974, 107.

PERCENT DISTRIBUTION OF POPULATION BY HAPPINESS
NINE COUNTRIES, 1965[a]

Country	Very happy		Fairly happy	Not very happy	Other	N	Real GNP per head 1961
Great Britain	53		42	4	1	1179	$1777
United States[b]	49		46	4	2	3531	2790
West Germany	20		66	11	3	1255	1860
Thailand	13		74	12	1	500	202
Japan[c]	–	81	–	13	5	920	613
Philippines	13.5		73	13.5	0	500	282
Malaysia	17		64	15	4	502	552
France	12		64	18	5	1228	1663
Italy	11		52	33	4	1166	1077

[a]Happiness data are from World Survey III, 1965, except those for the United States and Japan, which are from Table 8 and the 1958 survey of Japanese national character, respectively. GNP data are from Rosenstein-Rodan, 1961, except those for Great Britain, France, West Germany, and Italy. For these countries GNP was estimated to bear the same proportion to the United States figure as that shown by the geometric mean estimates by Gilbert *et al.*, 1958, p. 36, extrapolated from 1955 to 1961 by the per-capita volume indexes in OECD, 1970, p. 11.

[b]1966.

[c]1958. (Question read "not happy" rather than "not very happy.")

The results were ambiguous. Easterlin said that "the four lowest income countries are neither at the top nor at the bottom…but are clustered in the middle…if there is a positive association between happiness and income, it is certainly not a strong one" (Easterlin 1974, 108). Once again he could not find evidence that happiness and income were correlated.

Easterlin (1974, 110-111) then looked at happiness over time within the United States. As shown in Table 2, the United States's GNP per

capita increased from 1946-1970, but the percent of the population that was happy was high in some years and low in other years—again showing that income does not affect happiness. This is the second part of the Easterlin Paradox: as a country's income increases, its happiness does not always increase.

TABLE 2–Happiness in the United States from 1946-1970.
Source: Easterlin 1974, 109.

PERCENT DISTRIBUTION OF POPULATION BY HAPPINESS,
UNITED STATES, 1946-1970[a]

A. AIPO Polls					
Date	Very happy	Fairly happy	Not very happy	Other	*N*
Apr. 1946	39	50	10	1	3151
Dec. 1947	42	47	10	1	1434
Aug. 1948	43	43	11	2	1596
Nov. 1952	47	43	9	1	3003
Sept. 1956	53	41	5	1	1979
Sept. 1956	52	42	5	1	2207
Mar. 1957	53	43	3	1	1627
July 1963	47	48	5[b]	1	3668
Oct. 1966	49	46	4[b]	2	3531
Dec. 1970	43	48	6[b]	3	1517

Cantril (1965) and Easterlin (1974) were the first to empirically compare happiness with a socioeconomic index. They reached different conclusions, and subsequent researchers have found support for both views. One view supports Easterlin's conclusion that income *does not* affect happiness—only non-economic variables affect happiness. The other view supports Cantril's conclusion that income *does* affect

happiness, but non-economic variables may have merely decreased happiness more than income increased happiness in Easterlin's study.

V. Arguments Supporting Easterlin

Because rich people were happier than poor people in the same country, Easterlin expected people in rich countries to be happier than people in poor countries and for people in a country to become happier as their GDP per capita increased. He found evidence that neither expectation was true and concluded that income does not affect happiness. This paper will focus on the phenomenon of people not becoming happier as their country's GDP per capita increases, because the literature does so. Evidence supporting Easterlin falls into two categories: theoretical explanations and studies that used different data and found the same results.

A. THEORETICAL EXPLANATIONS

Theoretical explanations that support Easterlin can be grouped into two categories: (1) social comparison theory and (2) hedonic adaptation theory. Social comparison theory says people evaluate themselves through comparisons with other people. Hedonic adaptation theory says people return to a former, stable level of happiness after large positive or negative events. Easterlin (1974, 111-112) grouped the two theories together under a "relative income" theory.

Easterlin (1974, 112) used the social comparison theory that James Duesenberry named "relative income theory" to explain why income does not affect happiness. Duesenberry (1949, 30-31) said that

> Every individual makes comparisons between his own living standard and those of his associates in higher or lower status positions. Every unfavorable comparison of this sort leads to an impulse to buy goods which will raise the quality of the living standard, and eliminate the unfavorable comparison. The possibility of social mobility and recognition of upward mobility as a social goal converts the drive for self-esteem into a desire for high social status…the drive operates through inferiority feelings aroused by unfavorable comparisons between living standards.

Marx (1891, 63) illustrated the same idea:

> A house may be large or small; as long as the neighboring houses are likewise small, it satisfies all social requirement for a residence. But let there arise next to the little house a palace, and the little house shrinks to a hut...if the neighboring palace rises in equal or even in greater measure, the occupant of the relatively little house will always find himself more uncomfortable, more dissatisfied, more cramped within his four walls.

Festinger (1954, 138) built upon Duesenberry's social comparison theory. He said that people have a "drive for self-evaluation and the necessity for such evaluation being based on comparison with other persons" (Festinger 1954, 138). Because people are biased towards comparing themselves only to richer people, both the rich and the poor are affected by social comparisons. Instead of being happy that they are richer than most people, rich people focus only on those people even richer than themselves. Rich people then feel inadequate, which decreases their happiness. Poor people think the same way, ignoring the people (albeit few) poorer than themselves and instead focusing on the people with more money than themselves.

Holyoak and Gordon (1983, 885) found empirical evidence for social comparison theory. Their results "indicate that the self serves as a habitual reference point with respect to friends." People do not care about having money, cars, and clothes. People care about having *more* money, cars, and clothes than their friends. If people repeatedly compare themselves with others who have more than they do, they will be chasing happiness that can never be caught.

Rich people may only *report* being happier than poor people. People may substitute the survey question about happiness for an easier question (Kahneman 2011, 97, 399). Instead of thinking about their own happiness, they could be thinking about an easier question, such as, "How many people am I richer than?" Because rich people can easily think of people poorer than themselves, they rate themselves as happy. Because poor people cannot easily think of people poorer than themselves, they rate themselves as unhappy. Rich people may not necessarily be happy, but report that they are happy. Poor people may not necessarily be unhappy, but report that they are unhappy. Kahneman (2011, 397) puts it this way: "People's evaluations of their lives and their actual experience may be

related, but they are also different."

The second theoretical explanation is hedonic adaptation theory. Brickman and Campbell (1971, 289) used the term "hedonic treadmill" to illustrate the theory. "Treadmill" is used because a person must work to buy the newest thing, although his happiness will stay at a relatively stable level—just like staying in place on a treadmill. Despite having adequate TVs, cars, and clothes, a person will never be satisfied, because he will constantly be looking for the newest thing.

The increased happiness from buying the newest thing is temporary for three reasons: habituation, contrast, and happiness bias. When someone buys a new car, her happiness increases. Having a nice car becomes the norm, however, and establishes a new reference point. Because the reference point now includes having a new car, and the excitement from buying and driving the new car fades, happiness returns to the inherent, original level—a level that may be determined by genetics (De Neve et al. 2012, 193). Imagine someone buying a new painting to put on his wall. The first few days he will admire the painting. After a few weeks or months, he will forget the painting is even there; his reference point has changed and now includes the painting. The happiness he thinks will be permanent is temporary, and he jumps from want to want, never satisfied with his current possessions.

The second reason for temporarily increased happiness is contrast. If someone were to win $1 million she would get a rush; she would be beyond excited. While she used to feel pleasure while watching TV or mowing the lawn, she now compares these activates to winning $1 million and they seem far less enjoyable.

Brickman et al. (1978, 923) found evidence for habituation and contrast. The study interviewed 22 lottery winners who won between $50,000 and $1 million. Brickman et al. (1978, 923) said that "they [lottery winners] took less pleasure than controls in a variety of ordinary events and were not in general happier than controls." The winners compared the thrill of winning to their everyday activities—formerly enjoyable activities that felt like pulling teeth when compared to winning the lottery.

The third reason for temporarily increased happiness is happiness bias. Expected happiness does not always match experienced happiness (Kahneman 1999, 10-11). When someone buys a new car she expects to become happier. Instead of focusing on the happiness she gained from buying the new car, she focuses on not being as happy as she expected.

The difference between expected happiness and experienced happiness is disappointment. Brickman et al. (1978, 926) provide evidence with lottery winners and say that people should "be made aware that severe outcomes do not have as great an impact as might be expected."

Brickman and Campbell (1971, 300) said, "There may be no way to permanently increase the total of one's pleasure except by getting off the hedonic treadmill entirely." Social comparison theory and hedonic adaptation theory explain Easterlin's conclusion that income does not affect happiness, because people primarily compare themselves to higher social classes and fall back to their inherent level of happiness. Some academics agree with Easterlin's conclusion and provide support with their own studies.

B. SUPPORTING STUDIES

 Easterlin (1995, 38) studied happiness in nine European countries. He found that some countries had a positive relationship between happiness and GDP per capita, and some countries had a negative relationship between happiness and GDP per capita. Easterlin (1995, 38) said that "satisfaction drifts upward in some countries, downward in other. The overall pattern, however, is clearly one of little or no trend in a period when real GDP per capita rises in all of these countries from 20 to 50 percent" (Easterlin 1995, 38). He again found more evidence that income does not affect happiness.

Kenny (1995, 25) used data from nine European countries and the United States, finding that "happiness is significantly and negatively related to income in three countries, while only positively related in one" (Kenny 1995, 15). Kenny's results support Easterlin by saying that after a certain level of income "there is no relationship between income and happiness" (Kenny 1995, 25). Poverty can make people sad, but once people are no longer impoverished, income does not affect happiness.

Paul and Guilbert (2013, 907) used data from Australia. The study found that "during the period of 2001-2005, real income has grown but happiness has remained constant or declined slightly in Australia" (Paul and Guilbert 2013, 907) Paul and Guilbert also tested social comparison theory and hedonic adaptation theory, concluding that "the key explanation for the observed happiness paradox" was social comparison theory. The study added that the participants who compared their income to their friends' income were significantly less happy (Paul and Guilbert

2013, 907).

Duncan (1975, 267) found evidence of the Easterlin Paradox in Detroit, Michigan. Detroit is on a smaller-scale than Easterlin's country-wide studies, but is worth mentioning because small-scale models help control for differences in government, crime, and the natural environment. Duncan looked at Detroit wives from 1955-1971 and found that "there was no change in the distribution of satisfaction [happiness]…although current-dollar median family income more than doubled and constant-dollar income increased by forty per cent" (Duncan 1975, 267).

Beja Jr. (2014, 335) used happiness data from 1973-2012 for nine European countries. The study found evidence that supports both Easterlin and Cantril. Beja Jr. concluded that income has a statistically significant effect on happiness, but because the effect is so small, income does not have an economically significant effect on happiness (Beja Jr. 2014, 341).

The effect is so small that happiness increased 0.015 points on the ten-point scale for each year of 5% growth in GDP. While income does affect happiness, the effect is negligible.

Support for Easterlin's conclusion that income does not affect happiness includes theoretical explanations and studies that used different data but found the same results. The theoretical explanations include social comparison theory and hedonic adaptation theory. Studies supporting Easterlin cover Detroit, the United States, Australia, and nine European countries. Yet not all academics found evidence for Easterlin's conclusion; some academics found evidence for Cantril's conclusion.

VI. Arguments Supporting Cantril

Some academics found evidence that supports Cantril instead of Easterlin. The studies supporting Cantril are more recent than the studies supporting Easterlin, and so most of the studies use newer econometric techniques. Easterlin says income does not affect happiness—only non-economic variables affect happiness. The studies supporting Cantril say income does affect happiness, but non-economic variables may have merely overwhelmed the effect of income on happiness.

Hagerty and Veenhoven (2000, 8) used data from Veenhoven's World Database of Happiness from 1972-1994 in the United States. The happiness ratings were on a 1 (low) to 4 (high) scale and were converted to a 1-10 scale for easy comparison with Easterlin's results. The study

concluded that income does affect happiness, because the coefficients on income were positive and significant (Hagerty and Veenhoven 2000, 8).

Di Tella and MacCulloch (2008, 25) covered a different period, studying happiness in the United States from 1975 to 1999. The study found that "the probability that people declare themselves happy is increasing with income…the increase in income per capita has been one of the biggest contributors to raising happiness" (Di Tella and MacCulloch 2008, 38). Easterlin (1974) may have merely been unlucky in using data that ended before the United States experienced increased happiness.

Campbell (1981, 38) covered a longer period, saying that "in number of people who described their lives as 'very happy,' this country [United States] declined quite sharply between 1957 and 1972 but then turned upward again in the later 1970s" (Campbell 1981, 38). This is during a period when United States GDP per capita increased. He says Cantril's conclusion that income does affect happiness is correct. Easterlin was led to the wrong conclusion, because during the years that happiness decreased, "political assassinations, racial conflict, revolt on the campuses…and the tragedy of Vietnam" decreased happiness more than income increased happiness (Campbell 1981, 29).

Blanchflower and Oswald (2004, 1372) updated Easterlin (1995) with United States data from 1972-1998 and also studied Great Britain with data from 1975-1998. The study said that happiness within the United States declined, and happiness within Great Britain increased, although GDP per capita increased in both countries. Blanchflower and Oswald (2004, 1372) then ran regressions with variables such as marriage, age, race, and education. The study said that income was correlated with happiness, but the effect was insignificant because non-economic variables had a much larger effect (Blanchflower and Oswald 2004, 1372). Just like Campbell (1981), Blanchflower and Oswald (2004) support Cantril's conclusion that increasing income does increase happiness. Easterlin incorrectly concluded that income does not affect happiness, because non-economic variables overwhelmed income's effect on happiness, resulting in no net increase in happiness.

Angeles (2011, 67) agreed with Campbell (1981) and Blanchflower and Oswald (2004), saying that Easterlin is incorrect, because "the effect of higher incomes has been more than counteracted by changes in other socioeconomic variables…a constant level of average happiness is perfectly consistent with rising average incomes once we consider that

income is not the only determinant of happiness changing over time…a mere 3.6% of the variation in happiness scores can be explained by income" and that less marriage and more divorce are "more than enough to overcome the positive effect [on happiness] of rising incomes" (Angeles 2011, 68).

Studies that used different surveys than Cantril (1964) still reached conclusions that supported Cantril. Studies supporting Cantril say that Easterlin reached the wrong conclusion, because Easterlin did not consider non-economic variables that decreased happiness more than income increased happiness. The evidence is from both the United States and European countries. Which view is right? This paper will critique each view in the following section.

VII. Critiquing Both Views

Convincing evidence supports both Easterlin and Cantril. The lottery study by Brickman et al. (1978) and the theoretical explanations offered by Duesenberry (1949) and Kahneman (1999) make Easterlin hard to ignore. Evidence that non-economic variables decreased happiness more than income increased happiness makes Cantril hard to ignore. But both Easterlin and Cantril have weaknesses in their arguments. Easterlin did not account for non-economic variables in his original study. Cantril did not account for the difference between economic and statistical significance. Both views, however, were affected by unreliable survey data.

A. STRENGTHS OF EASTERLIN'S VIEW

Brickman et al (1978), Duesenberry (1949), and Kahneman (1999) support Easterlin's strongest arguments. The Brickman et al. (1979) lottery study observed a pure income effect. The results were clear: winning the lottery did not permanently increase happiness. How can one argue that money increases happiness when lottery winners were not happier six months after winning? Duesenberry's (1949) social comparison theory is reasonable. People compare themselves to others. Why else would people buy brand-name clothing? The goal is not to have sufficient money and adequate clothing. The goal is to win the competition to have the most money and the nicest clothes. Kahneman's (1999) happiness bias (the difference between expected and experienced

happiness) is also reasonable. If people are focusing on the disappointment from not being as happy as they expected from buying a car, they are not focusing on the happiness the car was supposed to provide in the first place.

B. STRENGTHS OF CANTRIL'S VIEW

Arguments supporting Cantril say income affects happiness, but non-economic variables decreased happiness more than income increased happiness. Such a story is also reasonable and is evinced by Blanchflower and Oswald (2004), Angeles (2011), and Campbell (1981). Blanchflower and Oswald (2004) and Angeles (2011) said that less marriage and more divorce could decrease happiness more than income increased happiness. The argument is reasonable. People get married because they believe marriage will make them happier. Fewer married people mean fewer people that are happy. Campbell's (1981) idea that assassinations, racial conflict, and the Vietnam War decreased happiness also makes sense. Why would people be happier if they are discriminated against or see a son maimed in Vietnam?

C. WEAKNESSES OF EASTERLIN's VIEW

Survey biases weaken Easterlin's argument. Respondents have a central tendency that biases them towards saying a number in the middle of the 1-10 happiness scale (Choi and Pak 2005, 8). Imagine a card that solicits donations. The directions are to circle one option: $1, $5, $10, $15, or $20. One is likely to circle $10 because of the central tendency bias. One is hesitant to select an extreme regardless of the magnitude of the options; if the donation options were $15, $20, $25, $30, and $35, one is likely to select $25. In the happiness survey, respondents will most likely select a number between 4 and 6—exactly what is seen in the results.

If respondents are biased towards happiness ratings between 4 and 6, then—assuming a normal distribution—respondents are equally unlikely to report happiness below 4 and above 6. The number of respondents with happiness ratings at 2 will be the same as the number at 8. The extreme values would cancel each other out when averaging the ratings, making the ratings meaningless.

These biases could even occur when respondents are trying their best to answer the survey question. But are respondents actually answering the

survey question? Kahneman (2011, 98-99, 399) says no. A question about happiness is hard to answer—maybe too hard. When people face a difficult question they often replace the question with an easier one. Instead of thinking about their overall happiness, respondents may be thinking about how happy they are with their test scores, lunch, or dating life.

The last bias is the difference between the remembering self and the experiencing self (Kahneman 2011, 381, 390). The difference between the two can be explained with ice cream. Imagine eating your favorite ice cream cone. Once you get to the last bite, however, you find a bug. The experiencing self enjoyed eating the ice cream the entire time. When you tell your friends, however, the experiencing self is ignored and your remembering self focuses on the bug. You tell your friend the entire experience was miserable, although you enjoyed eating the ice cream until the end.

When respondents answer the survey question about happiness, they focus on their remembering self. They focus on important or recent events in their lives, instead of rating their overall happiness. If the important or recent events were miserable, the respondents would provide a low rating. If the events were enjoyable, the respondents would provide a high rating (assuming they overcome the central tendency bias). With biases severely affecting survey answers the happiness ratings cannot be trusted.

D. WEAKNESSES OF CANTRIL'S VIEW

The biases that hurt Easterlin's view also hurt Cantril's view. Many studies supporting Cantril use econometrics. Econometrics is dependent on the quality of happiness ratings. If the happiness ratings are unreliable, how reliable are the econometric results? Suppose, however, the happiness ratings were reliable. The studies still need to overcome the difference between statistical and economic significance. Beja Jr. (2014, 341) estimated that a 5% growth in income increases happiness by 0.015 on a ten-point scale. Income may statistically affect happiness, but the effect is meaningless in reality.

Cantril's view says that non-economic variables decreased happiness as much as income increased happiness, resulting in relatively stable happiness ratings over time. This is not reasonable. The argument says that the change in happiness from the non-economic variables is the same as the change in happiness from income. Too much sadness from the non-

economic variables and happiness would decrease, too little and happiness would increase. Even if less marriage decreases happiness, the effect would have to change each year, because income changes each year. If the effect of marriage did not change, income would eventually overcome marriage's effect on happiness. Because both views have limitations, researchers have looked for alternatives.

E. AN ALTERNATIVE

Easterlin and Cantril both have weaknesses. Survey biases are difficult to ignore, especially if respondents are not answering the right question and have different experiencing and remembering selves. If survey results are ignored, Easterlin's view is stronger than Cantril's, because Easterlin is backed by stronger theory. Social comparisons and hedonic adaptation can be noticed every day. Why else would someone pay hundreds of dollars for sunglasses that offer no medical benefit above a ten-dollar pair? The theory behind Cantril says that non-economic variables balance the effect of income on happiness—an unreasonable explanation. If the amount of income does not affect happiness, what does affect happiness? Recent studies have pointed to alternatives: genetics and *how* money is spent.

De Neve et al. (2012) studied pairs of twins. The happier twin generally had the short version of the serotonin transport gene, while the sadder twin generally had the long version of the gene. Serotonin is a molecule that binds to receptors in the brain and causes feelings of happiness. Think of the transporters as vacuum cleaners that suck up serotonin. Twins with the long version of the serotonin transport gene have more transporters. More transporters mean more serotonin is sucked up. More sucked up serotonin means less serotonin available to bind to receptors to cause feelings of happiness. The study concluded the serotonin transport gene accounts for roughly 33% of a person's happiness.

Dunn et al. (2011, 115) said increased income does not increase peoples' happiness, because people are not spending their money on the right things. The study gives consumers eight recommendations:

1. Buy more experiences and fewer material goods
2. Use their money to benefit others rather than themselves
3. Buy many small pleasures rather than fewer large ones

4. Eschew extended warranties and other forms of overpriced insurance
5. Delay consumption
6. Consider how peripheral features of their purchases may affect their day-to-day lives
7. Beware of comparison shopping
8. Pay close attention to the happiness [product reviews] of others

Recommendations (1), (2), and (3) are ways to avoid social comparisons and hedonic adaptation. While experiences are susceptible to social comparisons, they are less susceptible than material goods. A coworker can brag about their vacation, but because people do not see the vacation everyday like they would a new car, they forget to be envious. Other people cannot judge a person's vacation as inferior, because they do not know what the vacation was like or even if the person went on one. People are seen with cars, shoes, and sunglasses every day. If one has inferior goods, everyone will let him know that, as a person, he is inferior.

Spending money on other people protects against hedonic adaptation. If someone is focused on what she can provide to others, she is less focused on buying the newest thing for herself. Small pleasures protect against social comparisons, because the small pleasures are inherently not compared. No one is inferior for buying a Snickers instead of a MilkyWay. Status is not displayed with the small things. Status is displayed with the large things. Houses, cars, jewelry, the items that cost thousands of dollars display status—not the one-dollar candy bar. People forget to enjoy the small things, because they are too busy being unhappy and focusing on the large things.

Maybe Easterlin and Cantril were both correct. Easterlin may have been right that increased income does not increase happiness when the individual is affected by social comparisons and hedonic adaptation. Cantril may have been right that increased income may increase happiness, but only if one shields oneself from social comparisons and hedonic adaptation and spends money on the right things. Such a task is so difficult, however, that income does not affect happiness for the average person. Shielding and proper spending may be goals forever out of reach.

VIII. Conclusion

Cantril and Easterlin wanted to answer the question of whether income

affects happiness. Cantril concluded that income does affect happiness, while Easterlin concluded that income does not affect happiness. Subsequent researchers have since argued both views. Their research may be flawed, however, because of issues with survey biases. Social comparison theory and hedonic adaptation theory provide strong support for Easterlin's conclusion. Most people cannot avoid social comparisons and hedonic adaptation, which negatively affect happiness.

Happiness is determined by controllable and uncontrollable factors. People can choose their spending habits and the level to which social comparisons and hedonic adaptation decrease their happiness. People cannot choose their genetics (yet). If one has discipline, increased income could lead to a happier life. Controlling spending and ignoring social comparisons and hedonic adaptation may be the most effective ways to happiness, but having the right gene could sure make things easier. Future research could attempt to find an alternative to surveys as a method to measure happiness—perhaps measuring serotonin levels with a blood test. Future research could also find shields against social comparisons and hedonic adaptation. Maybe people just need to be taught how to ignore the effects of comparison and adaptation. Money may make life more comfortable, but it does not guarantee happiness.

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