

Two Recommendations on the Pursuit of Happiness

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ABSTRACT

While any improvement in wealth and consumption will likely increase happiness, the increased happiness may or may not last long. In this article we offer two recommendations to make the increased happiness sustainable. The first one—to invest resources to promote adaptation-resistant rather than adaptation-prone consumption—seeks to make the increased happiness sustainable within a generation. The second recommendation—to invest resources to promote inherently evaluable rather than inherently inevaluable consumption—seeks to make the increased happiness sustainable across generations.

Most of us now possess more wealth and enjoy better consumption goods than our parents' and grandparents' generations. Are we happier? Research suggests that in developed countries wealth has increased multiple times since the Second World War, but reported happiness and life satisfaction have virtually stagnated (Blanchflower and Oswald 2004b; Easterlin 1974, 1995). A question weighs on the minds of researchers, policy makers, and the general public alike: how can happiness increase as wealth accumulates and consumption improves? In recent decades, psychologists, economists, and other behavioral scientists have all tried to address this question (for example, Clark, Frijters, and Shields 2007;

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Diener and Oishi 2000; Diener and Biswas-Diener 2002; Diener et al. 1999; Easterlin 1995; Frey and Stutzer 2004, 2002; Kahneman 1994; Kahneman, Diener, and Schwarz 1999; Kahneman, Wakker, and Sarin 1997; Layard 2005; Oswald 1997; Parducci 1995; Seligman 2002; Tian and Yang 2007; Veenhoven 1991).

This article examines how to increase the average happiness level within a generation and across generations. One way is to further increase the wealth of the society (for example, gross domestic product per capita) and thus its corresponding consumption levels. Many economists endorse this approach. Another approach is to optimize the way in which wealth is consumed without increasing the amount of aggregate wealth per se. These two approaches are complementary. In this article, we focus on the latter approach and refer to the scientific study of this approach as “hedonomics,” to distinguish it from economics (Hsee, Hastie, and Chen 2008).

Within the hedonomic approach, we offer two specific recommendations to increase the average level of happiness in a society. The first recommendation is based on the observation that some experiences are prone to hedonic adaptation and other experiences are relatively resistant to hedonic adaptation, which suggests an emphasis on pursuing adaptation-resistant rather than adaptation-prone positive experiences and avoiding adaptation-resistant rather than adaptation-prone negative experiences. The second recommendation rests on the observation that the influence of wealth on happiness can be either relative or absolute, which suggests a focus on producing goods that are inherently easy to evaluate and have an absolute effect on happiness, rather than goods that are inherently difficult to evaluate and have only a relative effect on happiness. These recommendations have different implications. The first is to produce prolonged happiness within a generation; the second is to increase happiness across generations.

Certain caveats are in order. First, we do not assume that the pursuit of the average happiness of a society is the only goal policy makers should pursue; we simply assume that it should be an important consideration. Although many scholars have realized the importance of happiness (for example, Cabanac and Bonniot-Cabanac 2007; Diener et al. 2000; Kahneman et al. 2004; Layard 2005) and may have even over-emphasized its importance (for discussions, see, for example, Frey and Stutzer 2007; Loewenstein 2008), policy makers are far from using happiness principles to guide their decisions, and articles such as this may help them move toward that direction.

Second, the shades of meaning expressed by the word “happiness” operate at different levels. The kind of happiness derived from reading Tolstoy’s *War and Peace* or from volunteering at a homeless shelter differs from the kind of happiness enjoyed while watching a situation comedy or riding a Ferris wheel. Some people might prefer using the terms “meaningful,” “rewarding,” or “satisfying” to words such as “happy” or “pleasant” when describing the first type of experience. While the distinction of these different levels of happiness is important, the current article is concerned only with hedonic (positive versus negative) aspects of experiences.

Finally, the recommendations we offer in this article are not intended to comprise an exhaustive list of methods to increase happiness. Numerous other ways exist, such as promoting positive personalities and traits (for example, Lyubomirsky 2007; Seligman 2002). Our approaches are not concerned with individual personality or idiosyncratic beliefs but rely on how wealth is used and perceived. In the rest of this article, we review the relevant literature and elaborate on each recommendation in turn. In the general discussion section, we explore the relationship between the two recommendations.

1. PROMOTING ADAPTATION-RESISTANT CONSUMPTION

Any improvement in a consumption variable, be it an increase in the size of a home or an increase in the speed of a computer, can at least temporarily raise one’s happiness. The problem is that the increased happiness may not last long. One of the obstacles to creating lasting happiness is hedonic adaptation. Hedonic adaptation is the tendency to feel less hedonically sensitive to an ongoing stimulus with the passage of time (see, for example, Diener, Lucas, and Scollon 2006; Frederick and Loewenstein 1999; Helson 1964). For example, a person who upgrades his laminate countertop to granite may feel happy at first, but as time goes by he adapts to the granite countertop and no longer feels particularly happy while in his kitchen. Hedonic adaptation applies to a wide range of experiences, including both positive events such as marriage (Lucas and Clark 2006) or winning a lottery (Brickman, Coates, and Janoff-Bulman 1978) and negative events such as the loss of a family member (Oswald and Powdthavee 2008) or becoming disabled (Brickman, Coates, and Janoff-Bulman 1978; Ubel, Loewenstein, and Jepson 2005).

Given that humans are so remarkably adaptable, the question arises, do we adapt to everything? To answer this, imagine three isolated societies: the baseline society, the short-commute society, and the large-home society. In the baseline society, the average living space is 400 square feet per person and the average commute time between home and work is 60 minutes per day. The large-home society is the same as the baseline society except that the government subsidizes more spacious buildings so that the average living space is now 500 square feet per person while the commute time remains 60 minutes. The short-commute society is the same as the baseline society except that instead of subsidizing better housing, the government uses the same amount of resource to subsidize faster transportation systems so that the average commute is now 30 minutes per day while the average living space remains 400 square feet per person.

Relative to the baseline society, will members in the large-home society or in the short-commute society be happier? We predict that in the short run people in the large-home society may be happier but in the long run people in the short-commute society will be happier. When people move from a small home to a large home they will initially feel happy, but before long they will adapt and become hedonically insensitive to the new home size. When people's commuting decreases, they will also initially feel happy, but they will not easily adapt or become insensitive to this improvement.

Consistent with our data, Stutzer and Frey (2004) found that people who commuted long hours on average had higher income but that this higher income did not compensate for the long commute in terms of their happiness. Frey and Stutzer's analysis suggests that people do not adapt to commuting but seem to adapt to a higher labor income.

Generally speaking, events that are stable and certain are easy to adapt to, and events that are variable or uncertain are difficult to adapt to (Kurtz, Wilson, and Gilbert 2007; Frederick and Loewenstein 1999; Kahneman and Thaler 1991). Thus, unstable or uncertain good events will create longer lasting happiness than their stable and certain equivalents, and unstable or uncertain bad events will create longer lasting misery than their stable and certain equivalents. Consistent with these views, Kurtz et al. (2007) found that a gift from a mysterious source (uncertain condition) created longer lasting happiness than an equivalent gift from a certain condition. In the negative domain, Smith et al. (2008) found that colostomy patients with hope of recovery (uncertain outcome) adapted more slowly to their misery than colostomy patients without

hope of recovery (see also Van Boven and Gilovich [2003] for a related point regarding experiences versus material possessions and Scitovsky [1978] for a discussion regarding pleasure versus comfort).

The size of a home is rather stable and certain. In contrast, the thrill or misery of a rush-hour commute remains uncertain. The commuter has to cope with new situations every day—catching trains, traffic delays, and so on. Moreover, long commutes incur high opportunity costs and leave commuters with less time to sleep, less time to spend with family members, and less time and energy to engage in intimate relationships. Since sleep, social interaction, and intimate relationships are inherently evaluable types of experiences and are essential to one's happiness (Kahneman et al. 2004; Blanchflower and Oswald 2004a, 2004b), we predict that people in the short-commute society will be happier.

The trade-off between home size and commute time is just one example of a trade-off between adaptation-prone versus adaptation-resistant events. We face similar choices all the time: whether to use our money to buy a better car or to take a vacation, whether to use our money to remodel our kitchen or to dine out with friends, or, more broadly, to pursue what Scitovsky (1978) distinguished as comfort or pleasure activities. There are at least two reasons why individuals and marketers often fail to make hedonically optimal decisions involving such trade-offs. First, they fail to anticipate the power of hedonic adaptation (Wilson and Gilbert 2005). Second, even if they could accurately predict hedonic adaptation, a consumer's decisions are often driven by anticipated immediate pleasure, while a marketer's decisions are often driven by anticipated immediate profits. An improvement in an adaptation-prone condition (for example, larger living space) may generate more short-term, immediate happiness than an equally costly or effortful improvement in an adaptation-resistant event (for example, shorter commute time), even though in the long run the reverse is true. Therefore, consumers and marketers tend to favor the short-lived but adaptation-prone improvement.

This fact provides policy makers with the opportunity to play a constructive role and fund research that better identifies which improvements are adaptation prone and which are adaptation resistant. With this information, government funds could be allocated to support adaptation-resistant improvements rather than adaptation-prone improvements and government policies adopted to encourage businesses to do likewise.

2. PROMOTING INHERENTLY EVALUABLE CONSUMPTION

One of the most fundamental questions for students of happiness is whether happiness is relative or absolute. By saying that happiness is absolute, we mean that happiness depends on the absolute amount of wealth and the absolute consumption level, regardless of whether it also depends on relative wealth and consumption levels. By saying that happiness is relative, we mean that happiness depends only on relative wealth and consumption levels, that is, the difference between one's wealth and consumption levels and one's knowledge (perception) about the wealth and consumption levels of other people (Festinger 1954). While standard economic theory assumes the importance of absolute values, many psychologists and a growing number of economists believe that happiness is relative (for example, Clark, Frijters, and Shields 2007; Easterlin 1995; Luttmer, 2005; McBride 2001; Parducci 1995).

Yet this begs the question, is happiness always relative? More than a mere intellectual curiosity, this question carries important social implications. Understanding whether relative or absolute wealth and consumption levels determine happiness helps predict what happens when wealth and consumption levels rise from one generation to the next. If happiness depends on absolute wealth and consumption levels, then raising wealth and consumption levels across generations is likely to increase happiness. If happiness depends only on relative wealth and consumption levels, then raising wealth and consumption levels across generations is just a zero-sum game and is unlikely to affect happiness.

Existing findings are mixed. Some suggest that raising wealth cannot increase happiness, as consistent with the relative view. For example, although real (inflation-adjusted) income in developed countries has increased multiple times in the last half-century, reported life satisfaction has remained virtually the same (see, for example, Easterlin 1974, 1995). Other data suggest that raising wealth can increase happiness, as consistent with the absolute view. For example, reported life satisfaction is on average higher in wealthy nations than in poor nations (for example, Diener et al. 1993; Kahneman 2008; Leigh and Wolfers 2006; Stevenson and Wolfers 2008), and increases in reported happiness are associated with increases in gross domestic product per capita (for example, Di Tella, MacCulloch, and Oswald 2003).

We assert that happiness is neither always relative nor always absolute but instead depends on the nature of the consumption experience. To illustrate, imagine three isolated societies: the baseline society, the better

jewelry society, and the better heater society. In the baseline society, members on average have only inexpensive jewelry and ineffective heating systems. The better jewelry society is identical to the baseline society in all aspects except that members on average possess better jewelry, for example, larger diamonds. The better heater society is also identical to the baseline society except that members on average possess better heating systems and enjoy warmer temperatures in the winter. Within each society, some members possess better jewelry than others, and some members possess better heating systems than others.

In which society are members the happiest on average and in which society are members the least happy on average? According to the relativist view, happiness is derived only from comparison. Because the three societies are isolated, then on average members in the three societies will be equally happy (or unhappy), and within each society those who possess better jewelry or better heating systems are happier than those who possess inferior jewelry or inferior heating systems. According to the absolute view, happiness depends on absolute consumption levels, so members in the better jewelry society and members in the better temperature society will be happier on average than members in the baseline society.

We propose that members in the better jewelry society will not be happier than members in the baseline society, yet members in the better heating society will be. Hsee et al. (forthcoming) distinguish between two types of consumption variables: type A (inherently evaluable) and type B (inherently inevaluable). A variable is type A if human beings (and maybe even primates) have an innate, shared, and stable scale to assess its desirability. Examples include ambient temperature, amount of sleep, orgasm, availability of social companions (or loneliness), stress, fatigue, and so on. Conversely, a variable is type B if human beings have no innate scale to gauge its desirability and must evaluate it on the basis of external reference information, for example, comparison with what other people possess. Examples include the size of a diamond, the brand of a purse, the horsepower of a car, the price of a stock, and so on.

We wish to make several clarifications. First, type A and type B variables are not two discrete states but form two ends of a continuum, with the great majority of consumption variables falling in between. Furthermore, certain consumption variables are inherently inevaluable in some range and inevaluable in other ranges. For example, the difference between a 10-inch television screen and a 20-inch television is likely inherently evaluable, because an increase from 10 to 20 inches would

reduce the viewer's eye strain; however, the difference between a 60-inch screen and a 90-inch screen is less likely to be inherently evaluable. The same can be said of the size of a home. Second, type A variables may differ from type B variables in that they are more associated with basic survival needs (Veenhoven 1991), and they are better suited for private consumption (Frank 2000; Solnick and Hemenway 2005). Finally, experiences with both type A and type B variables are subject to the influence of external reference information, including social comparison. The key difference between the two types of experiences is not whether they can be affected by external reference points but whether they have an inherent and stable reference scale. Type A experiences may be thought to resemble a foam ball, while type B experiences resemble a Play-Doh ball. Bouncing either one will distort its shape, but the foam ball will return to its original or "inherent" form, whereas the Play-Doh ball will flatten because it has no inherent shape but instead retains changes in response to environmental forces.

Whether happiness during the consumption of a good is absolute or relative depends on whether the relevant variable of the good is type A or type B (Hsee et al. forthcoming). If it is type A, happiness is absolute; if it is type B, happiness is relative. This proposition has been supported by both lab and field data (Hsee et al. forthcoming). In a large-scale telephone interview study conducted during the winter, randomly selected respondents from China's 31 officially designated large cities were asked about their happiness with their room temperature and with their jewelry possessions. The results support our inherent-evaluability thesis: within each city, people who owned more expensive jewelry reported greater happiness about their jewelry than people who owned less expensive jewelry, and people who enjoyed warmer room temperatures reported greater happiness about their room temperatures than people in colder rooms. Between cities, however, residents of cities with more expensive jewelry were not any happier on average about their jewelry than residents of cities with less expensive jewelry, yet respondents in cities with warmer room temperatures were still happier on average about their room temperatures than those in cities with colder room temperatures. Assuming that respondents compare themselves to people within a city than between cities, we consider these results evidence for our proposition that room temperature (a type A variable) has an absolute effect on happiness while jewelry value (a type B variable) has only a relative effect on happiness.

Our analysis has implications for how to increase happiness across

generations. A generation is a social milieu, like a society. Just as people in the better jewelry society are not happier on average than people in the baseline society but people in the warmer temperature society are happier, our future generation will not be happier than us if increased wealth is spent on improving type B consumption but will be happier than us if it is spent on improving type A consumption. (The reader may dispute the cross-generation analogy, because in the society example, the societies are isolated, but people in a new generation may compare themselves with an old generation. Indeed, they may, but people in the old generation may also have compared themselves with an even older generation. To the extent that a new generation is always better off than an old generation by roughly the same rate, this cross-generational comparison will yield a constant effect on each generation and will not make one generation happier than another.)

Thus, to make future generations happier, we recommend investing resources in improving type A variables—letting every family enjoy heating in the winter and air conditioning in the summer; developing effective drugs for people with sleeping disorders, depression, or migraine headaches; building better sanitary systems so that fewer people will suffer from insect bites and diseases; providing services and organizing events so that people could more easily socialize with each other; and so on. Compared with previous generations, we already have more comfortable room temperatures, more effective medicines, better sanitary systems, better communication systems, and so on. Yet there is significant room for improvement, especially in developing countries.

Our analysis seems at odds with the Easterlin paradox—the finding that happiness has not increased in the last few decades in developed countries while wealth has (for example, Blanchflower and Oswald 2004a, 2004b; Easterlin 1995). As wealth increases, type A consumption should also improve. Then why does life satisfaction refuse to follow suit? There are several possible reasons. First, when reporting life satisfaction, respondents may attend more to money and goods than to the hedonic quality of their consumption experiences. Second, happiness with money and consumption is only one component of life satisfaction; other determinants of life satisfaction may have worsened across generations and neutralized any improvements in inherently evaluable consumptions. Third, improvements in developed countries in recent decades may have focused on type B variables, and according to our theory, improvements in type B variables across generations do not increase happiness. This speculation is corroborated by findings that in less de-

veloped nations life satisfaction does increase as wealth increases (for example, Clark, Frijters, and Shields 2007) and that life satisfaction in less developed countries is lower on average than life satisfaction in developed countries (for example, Diener et al. 1993; Kahneman 2008; Leigh and Wolfers 2006). To the extent that inherently evaluable variables relate more to basic biological needs than to higher order needs, developing nations have more room to improve inherently evaluable goods than do developed nations.

Even in developed countries, there are still deficiencies in domains we believe are type A. For example, not all Americans have adequate heating in the winter, and many suffer from insomnia, depression, and social isolation. The free-market system does not always encourage manufacturers to produce type A goods rather than type B goods. It may be more profitable to manufacture imitation diamonds than more cost-effective medicines and more profitable to design fashionable winter coats than warmer winter coats. This is where policy makers can play a constructive role by investing government resources to develop type A goods or services or introducing regulatory policies to provide incentives to businesses to do so.

To achieve this, policy makers first need to know which variables are type A and which are type B. Theoretically, type A versus type B is defined by the extent to which one has an inherent evaluation scale for that variable. Operationally, one can identify whether a variable is type A or type B by drawing on people's intuition. While lay intuition may not always be correct, it should not be systematically wrong either. Alternatively, one may adopt a more scientific method to empirically identify a variable as type A or type B. Suppose that x_1 and x_2 are two levels of variable X . Recruit three groups of respondents (or primates?) who have not socially learned about which level of X is desirable or undesirable. Let everyone in group 1 experience x_1 , everyone in group 2 experience x_2 , and some in group 3 experience x_1 and some in group 3 experience x_2 , and then assess everyone's happiness. The three groups should be isolated, but members in each group should know what level of X other members get. Define $D_{\text{between}} = e_{\text{group1}}(x_1) - e_{\text{group2}}(x_2)$ and $D_{\text{within}} = e_{\text{group3}}(x_1) - e_{\text{group3}}(x_2)$, where $e_{\text{group1}}(x_1)$ is the mean happiness level of group 1, $e_{\text{group2}}(x_2)$ is the mean happiness level of group 2, and $e_{\text{group3}}(x_1)$ and $e_{\text{group3}}(x_2)$ are the mean happiness levels of those in group 3 who receive x_1 and x_2 , respectively. Notice that D_{between} reflects X 's absolute effect and D_{within} reflects X 's absolute effect or its relative effect or both. Assume that $D_{\text{within}} > 0$. Then whether X is type A or type B

can be identified as follows. If D_{between} is close in magnitude to D_{within} , then X is type A. If D_{between} is small relative to D_{within} or is zero, then X is type B.

One could apply this method to a wide range of variables and then classify them as type A or type B or somewhere in between, hence forming a type A/B menu. We believe that such a menu would be highly valuable to policy makers. If they intend to make future generations happier, policy makers could use this menu to decide where to invest their resources.

3. GENERAL DISCUSSION

To increase the average happiness of members in a society, policy makers could adopt an economic approach to stimulate the economy and increase individual wealth and consumption, which will likely increase happiness. But the increased happiness may not continue. To ensure sustainable happiness, policy makers need to know how to allocate resources, a question that hedonomics seeks to address. In this article we have made two hedonomic recommendations: (1) invest resources to improve adaptation-resistant consumption and (2) invest resources to improve type A (inherently evaluable) consumption.

These two recommendations are theoretically distinctive and are intended to serve different purposes. Improving adaptation-resistant consumption can produce long-lasting happiness within the life span of a generation. Improving inherently evaluable consumption can increase happiness from one generation to the next.

Figures 1–4 describe how our theory predicts the change in happiness as the consumption variable improves over time. Across the four graphs, the consumption variable is either adaptation prone or adaptation resistant and either inherently evaluable or inherently inevaluable. In each figure, the x -axis is time. The solid curve is the consumption variable, and each step-up indicates an improvement in the consumption variable. Each dashed curve represents the happiness of one generation with that variable. In our illustrations, there are two consecutive generations.

In all the four cases (Figures 1–4), an improvement in the objective consumption variable leads to an improvement in happiness within a given generation. However, how long the increased happiness lasts within the generation depends on whether the consumption variable is adaptation resistant or prone. In the adaptation-resistant case, the im-

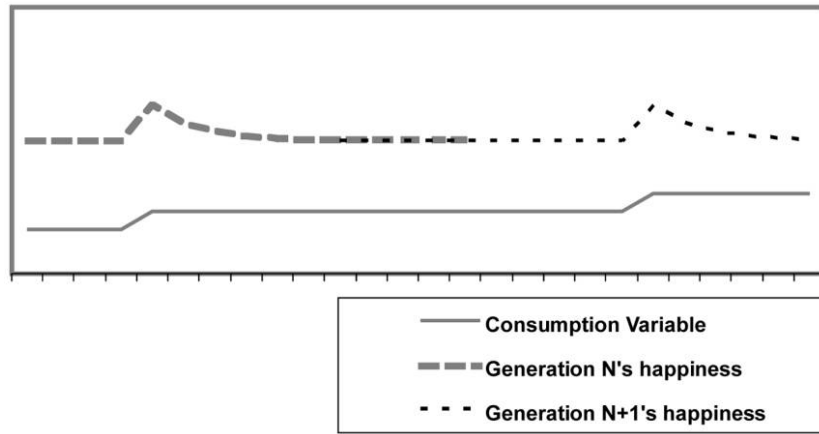


Figure 1. Happiness with an adaptation-prone, inherently inevaluable consumption variable

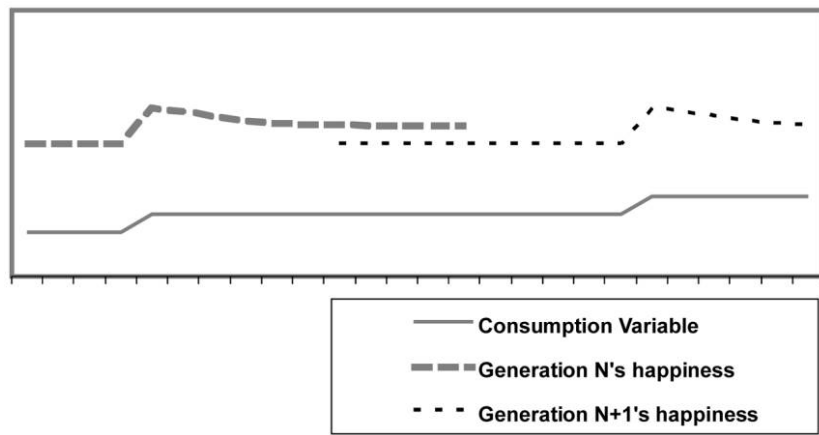


Figure 2. Happiness with an adaptation-resistant, inherently inevaluable consumption variable.

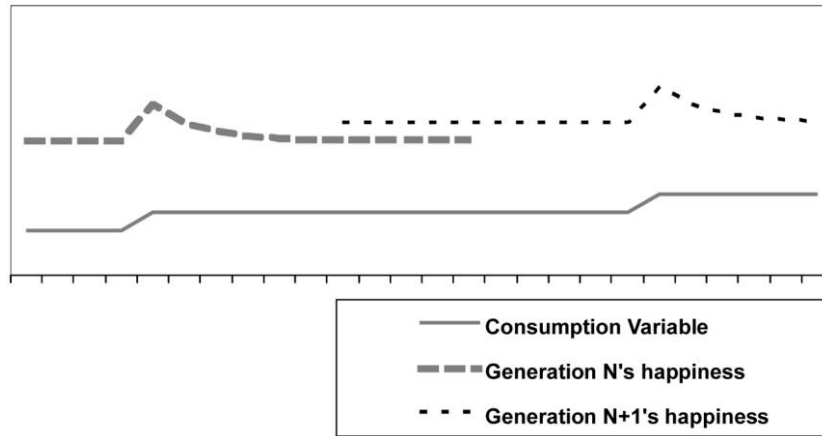


Figure 3. Happiness with an adaptation-prone, inherently evaluable consumption variable

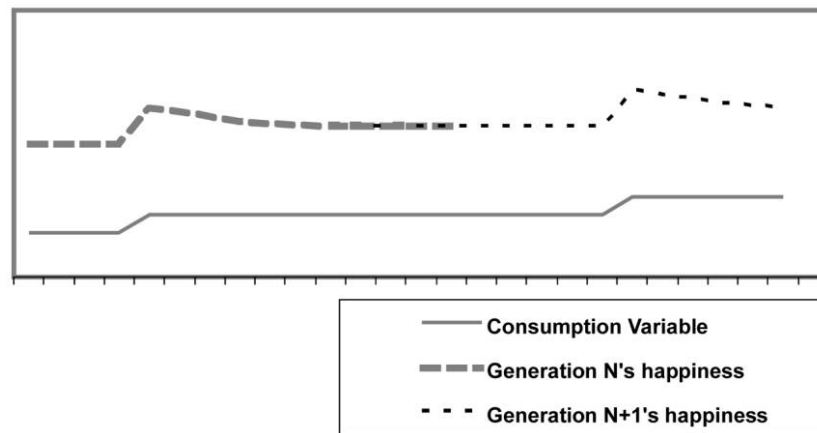


Figure 4. Happiness with an adaptation-resistant, inherently evaluable consumption variable

proved happiness tapers off very slowly. In the adaptation-prone case, it retreats rapidly. However, an improvement in an adaptation-resistant variable does not necessarily lead to an improvement in happiness across generations. Whether the new generation is happier than the old generation depends on whether the consumption variable is inherently evaluable or inevaluable. In the inherently evaluable case, the new generation is happier; in the inherently inevaluable case, it is not. In sum, hedonic adaptation and inherent evaluability lead to different consequences. How adaptation prone a consumption variable is determines how fast happiness within a generation tapers off after an improvement in the variable. How inherently evaluable a consumption variable is determines how much happiness increases from one generation to the next when there is an improvement in the variable between the two generations.

The messages from this analysis can be summarized as follows:

1. Any improvement in a consumption variable can make the affected people happier, at least for a short while.
2. To make the increased happiness sustainable across time within a generation, the improvement has to be adaptation resistant.
3. To make a new generation happier than an old one, the improvement has to be inherently evaluable.

Despite the theoretical separation between hedonic adaptation and inherent evaluability, we suspect that these two constructs are related. Specifically, adaptation-resistant variables are usually those that are inherently evaluable, and vice versa. For example, compared with the size of a diamond, ambient temperature is both more inherently evaluable and more resistant to adaptation. Although the twentieth time taking a bath in 20°C water will be less irritating than the first bath in 20°C water, it will still be less pleasant than the twentieth time taking a bath in 40°C water. This speculation is corroborated by results from the field study on jewelry and room temperature previously cited. Recall that variation in room temperature revealed both a within-city effect and a between-city effect, whereas difference in jewelry value revealed only a within-city effect. Presumably room temperature was something the respondents normally experience and had adapted to. The fact that it still exerted a significant between-city effect suggests that adaptation to temperature is slow or incomplete. It awaits future research to further identify the relationships between hedonic adaptation and inherent evaluability.

To conclude, we recommend prioritizing the improvement of inherently evaluable and adaptation-resistant consumptions. Such improvements not only will produce long-lasting happiness within a generation but also will make the next generation happier.

REFERENCES

- Blanchflower, David G., and Andrew J. Oswald. 2004a. Money, Sex and Happiness: An Empirical Study. *Scandinavian Journal of Economics* 106: 393–415.
- . 2004b. Well-Being over Time in Britain and the USA. *Journal of Public Economics* 88:1359–86.
- Brickman, Philip, Dan Coates, and Ronnie Janoff-Bulman. 1978. Lottery Winners and Accident Victims: Is Happiness Relative? *Journal of Personality and Social Psychology* 36:917–27.
- Cabanac, Michel, and Marie-Claude Bonniot-Cabanac. 2007. Decision Making: Rational or Hedonic? *Behavioral and Brain Functions* 3:1–45.
- Clark, Andrew E., Paul Frijters, and Mike Shields. 2007. Relative Income, Happiness and Utility: An Explanation for the Easterlin Paradox and Other Puzzles. *Journal of Economic Literature* 46:95–144.
- Diener, Ed, and Robert Biswas-Diener. 2002. Will Money Increase Subjective Well-Being? *Social Indicators Research* 57:119–69.
- Diener, Ed, Richard E. Lucas, and Christie N. Scollon. 2006. Beyond the Hedonic Treadmill: Revising the Adaptation Theory of Well-Being. *American Psychologist* 61:305–14.
- Diener, Ed, and Shigehiro Oishi. 2000. Money and Happiness: Income and Subjective Well-Being across Nations. Pp. 185–218 in *Culture and Subjective Well-Being*, edited by Diener Ed and Eunkook M. Suh. Cambridge, Mass.: MIT Press.
- Diener, Ed, Ed Sandvik, Larry Seidlitz, and Marissa Diener. 1993. The Relationship between Income and Subjective Well-Being: Relative or Absolute? *Social Indicators Research* 28:195–223.
- Diener, Ed, Eunkook M. Suh, Richard E. Lucas, and Heidi L. Smith. 1999. Subjective Well-Being: Three Decades of Progress. *Psychological Bulletin* 125: 276–302.
- Di Tella, Rafael, Robert J. MacCulloch, and Andrew Oswald. 2003. Macroeconomics of Happiness. *Review of Economics and Statistics* 85:809–27.
- Easterlin, R. A. 1974. Does Economic Growth Improve the Human Lot? Some Empirical Evidence. Pp. 89–125 in *Nations and Households in Economic Growth: Essays in Honour of Moses Abramovitz*, edited by Paul A. David and Melvin W. Reder. New York: Academic Press.

- . 1995. Will Raising the Incomes of All Increase the Happiness of All? *Journal of Economic Behavior and Organization* 27:35–47.
- Festinger, Leon. 1954. A Theory of Social Comparison Processes. *Human Relations* 7:17–140.
- Frank, Robert H. 2000. *Luxury Fever: Money and Happiness in an Era of Excess*. Princeton, N.J.: Princeton University Press.
- Frederick, Shane, and George Loewenstein. 1999. Hedonic Adaptation. Pp. 302–29 in *Well-Being: The Foundations of Hedonic Psychology*, edited by Daniel Kahneman, Ed Diener, and Norbert Schwarz. New York: Russell Sage Foundation.
- Frey, Bruno S., and Alois Stutzer. 2002. *Happiness and Economics: How the Economy and Institutions Affect Human Well-Being*. Princeton, N.J.: Princeton University Press.
- . 2004. Economic Consequences of Mispredicting Utility. IEW Working Paper No. 218. University of Zurich, Institute for Empirical Research in Economics, Zurich.
- Helson, Harry. 1964. Current Trends and Issues in Adaptation-Level Theory. *American Psychologist* 19:26–38.
- Hsee, Christopher K., Reid Hastie, and Jingqiu Chen. 2008. Hedonomics: Bridging Decision Research with Happiness Research *Perspectives on Psychological Science* 3:224–43.
- Hsee, Christopher K., Yang Yang, Naihe Li, and Luxi Shen. Forthcoming. Wealth, Warmth and Well-Being: Whether Happiness Is Relative or Absolute Depends on Whether It Is about Money, Acquisition or Consumption. *Journal of Marketing Research*.
- Kahneman, Daniel. 1994. New Challenges to the Rationality Assumption. *Journal of Institutional and Theoretical Economics* 150:18–36.
- . 2008. The Sad Tale of the Aspiration Treadmill—the Edge Annual Question. http://www.edge.org/q2008/q08_17.html#kahneman.
- Kahneman, Daniel, Ed Diener, and Norbert Schwarz, eds. 1999. *Well-Being: The Foundations of Hedonic Psychology*. New York: Russell Sage Foundation.
- Kahneman, Daniel, Alan B. Krueger, David A. Schkade, Norbert Schwarz, and Arthur A. Stone. 2004. A Survey Method for Characterizing Daily Life Experience: The Day Reconstruction Method. *Science* 306:1776–80.
- Kahneman, Daniel, and Richard H. Thaler. 1991. Economic Analysis and the Psychology of Utility: Applications to Compensation Policy. *American Economic Review* 81:341–46.
- Kahneman, Daniel, Peter P. Wakker, and Rakesh Sarin. 1997. Back to Bentham? Explorations of Experienced Utility. *Quarterly Journal of Economics* 112: 375–405.
- Kurtz, Jaime L., Timothy D. Wilson, and Daniel T. Gilbert. 2007. Quantity versus Uncertainty: When Winning One Prize Is Better Than Winning Two. *Journal of Experimental Social Psychology* 43:979–85.

- Layard, Richard. 2005. *Happiness: Lessons from a New Science*. New York: Penguin.
- Leigh, Andrew, and Justin Wolfers. 2006. Happiness and the Human Development Index: Australia Is Not a Paradox. *Australian Economic Review* 39: 176–84.
- Loewenstein, George F. 2008. That Which Makes Life Worthwhile. Commentary on National Time Accounting: The Currency of Life, by Alan B. Krueger, Daniel Kahneman, David Schkade, Norbert Schwarz and Arthur A. Stone. Working paper. Carnegie-Mellon University, Department of Social and Decision Sciences, Pittsburgh.
- Lucas, Richard E., and Andrew E. Clark. 2006. Do People Really Adapt to Marriage? *Journal of Happiness Studies* 7:405–26.
- Luttmer, Erzo F. P. 2005. Neighbors as Negatives: Relative Earnings and Well-Being. *Quarterly Journal of Economics* 120:963–1002.
- Lyubomirsky, Sonia. 2007. *The How of Happiness: A Scientific Approach to Getting the Life You Want*. New York: Penguin Press.
- McBride, Michael. 2001. Relative-Income Effects on Subjective Well-Being in the Cross-Section. *Journal of Economic Behavior and Organization* 45: 251–78.
- Oswald, Andrew J. 1997. Happiness and Economic Performance. *Economic Journal* 107:1815–31.
- Oswald, Andrew J., and Nattavudh Powdthavee. 2008. Death, Happiness, and the Calculation of Compensatory Damages. *Journal of Legal Studies* 37: S217–S251.
- Parducci, Allen. 1995. *Happiness, Pleasure, and Judgment: The Contextual Theory and Its Applications*. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Scitovsky, Tibor. 1976. *The Joyless Economy: An Inquiry into Human Satisfaction and Consumer Dissatisfaction*. New York: Oxford University Press.
- Seligman, Martin. 2002. *Authentic Happiness: Using the New Positive Psychology to Realize Your Potential for Lasting Fulfillment*. New York: Free Press.
- Smith, Dylan M., George Loewenstein, Aleksandra Jankovich, and Peter Ubel. 2008. The Dark Side of Hope: Lack of Adaptation to Temporary versus Permanent Colostomy. Working paper. Carnegie-Mellon University, Department of Social and Decision Sciences, Pittsburgh.
- Solnick, Sara J., and David Hemenway. 2005. Are Positional Concerns Stronger in Some Domains Than in Others? *American Economic Review* 95:147–51.
- Stevenson, Betsey, and Justin Wolfers. 2008. Economic Growth and Subjective Well-Being: Reassessing the Easterlin Paradox. Working paper. University of Pennsylvania, Wharton School, Philadelphia.
- Stutzer, Alois, and Bruno S. Frey. 2004. Stress That Doesn't Pay: The Commuting Paradox. Working Paper No. 151. University of Zurich, Institute for Empirical Research in Economics, Zurich.

- Tian, Guoqiang, and Liyan Yang. 2007. A Formal Economic Theory for Happiness Studies: A Solution to the Happiness-Income Puzzle. Texas A&M University, Department of Economics, College Station.
- Ubel, Peter A., George Loewenstein, and Christopher Jepson. 2005. Disability and Sunshine: Can Hedonic Predictions Be Improved by Drawing Attention to Focusing Illusions or Emotional Adaptation? *Journal of Experimental Psychology: Applied* 11:111–23.
- van Boven, Leaf Van, and Thomas Gilovich. 2003. To Do or to Have? That Is the Question. *Journal of Personality and Social Psychology* 85:1193–1202.
- Veenhoven, Ruut. 1991. Is Happiness Relative? *Social Indicators Research* 24: 1–34.
- Wilson, Timothy D., and Gilbert, Daniel T. 2005. Affective Forecasting: Knowing What to Want. *Current Directions in Psychological Science* 14:131–34.