

Robert H. Frank

## *How not to buy happiness*

An enduring paradox in the literature on human happiness is that although the rich are significantly happier than the poor within any country at any moment, average happiness levels change very little as people's incomes rise in tandem over time.<sup>1</sup> Richard Easterlin and others have interpreted these observations to mean that happiness depends on relative rather than absolute income.<sup>2</sup>

In this essay I offer a slightly different interpretation of the evidence – namely, that gains in happiness that might have been expected to result from growth in absolute income have not materialized because of the ways in which people in affluent societies have generally spent their incomes.

In effect, I wish to propose two different answers to the question “Does money buy happiness?” Considerable evidence suggests that if we use an increase in our incomes, as many of us do, simply

to buy bigger houses and more expensive cars, then we do not end up any happier than before. But if we use an increase in our incomes to buy more of certain *inconspicuous* goods – such as freedom from a long commute or a stressful job – then the evidence paints a very different picture. The less we spend on conspicuous consumption goods, the better we can afford to alleviate congestion; and the more time we can devote to family and friends, to exercise, sleep, travel, and other restorative activities. On the best available evidence, reallocating our time and money in these and similar ways would result in healthier, longer – and happier – lives.

The main method that psychologists have used to measure human well-being has been to conduct surveys in which they ask people whether they are: a) very

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1 This paper draws heavily on chapters 5 and 6 of my book *Luxury Fever* (New York: The Free Press, 1999).

2 Richard Easterlin, “Does Economic Growth Improve the Human Lot?” in *Nations and Households in Economic Growth: Essays in Honor of Moses Abramovitz*, ed. Paul David and Melvin Reder (New York: Academic Press, 1974), and Richard Easterlin, “Will Raising the Incomes of All Increase the Happiness of All?” *Journal of Economic Behavior and Organization* 27 (1995): 35 – 47.

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Robert H. Frank is H. J. Louis Professor of Economics at the Johnson Graduate School of Management, Cornell University. His books include “Choosing the Right Pond” (1985), “Passions Within Reason,” (1988), and “Luxury Fever” (1999).

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happy; b) fairly happy; or c) not happy.<sup>3</sup> Most respondents are willing to answer the question, and not all of them respond “very happy,” even in the United States, where one might think it advantageous to portray oneself as being very happy. Many people describe themselves as fairly happy, and others confess to being not happy. A given person’s response tends to be consistent from one survey to the next.

Happiness surveys and a variety of other measures employed by psychologists are strongly correlated with observable behaviors that we associate with well-being.<sup>4</sup> If you’re happy, for example, you’re more likely to initiate social contact with friends. You’re more likely to respond positively when others ask you for help. You’re less likely to suffer from psychosomatic illnesses – digestive disorders, other stress disorders, headaches, vascular stress. You’re less likely to be absent from work or to get involved in disputes at work. And you’re less likely to attempt suicide – the ultimate behavioral measure of unhappiness. In sum, it appears that human happiness is a real phenomenon that we can measure.<sup>5</sup>

**H**ow does happiness vary with income? As noted earlier, studies show

3 See Easterlin, “Does Economic Growth Improve the Human Lot?”

4 For surveys of this evidence, see chapter 2 of Robert H. Frank, *Choosing the Right Pond* (New York: Oxford University Press, 1985) and Andrew Clark and Andrew Oswald, “Satisfaction and Comparison Income,” *Journal of Public Economics* 61 (1996): 359 – 381.

5 Ed Diener and Richard E. Lucas, “Personality and Subjective Well-Being,” in *Understanding Well-Being: Scientific Perspectives on Enjoyment and Suffering*, ed. Daniel Kahneman, Ed Diener, and Norbert Schwartz (New York: The Russell Sage Foundation, 1998).

that when incomes rise for everybody, well-being doesn’t change much. Consider the example of Japan, which was a very poor country in 1960. Between then and the late 1980s, its per capita income rose almost four-fold, placing it among the highest in the industrialized world. Yet the average happiness level reported by the Japanese was no higher in 1987 than in 1960.<sup>6</sup> They had many more washing machines, cars, cameras, and other things than they used to, but they did not register significant gains on the happiness scale.

The same pattern consistently shows up in other countries as well, and that’s a puzzle for economists. If getting more income doesn’t make people happier, why do they go to such lengths to get more income? Why, for example, do tobacco company CEOs endure the public humiliation of testifying before Congress that there’s no evidence that smoking causes serious illnesses?

It turns out that if we measure the income-happiness relationship in another way, we get just what the economists suspected all along. When we plot average happiness versus average income for clusters of people in a given country at a given time, we see that rich people are in fact much happier than poor people. In one study based on U.S. data, for example, people in the top decile of the income distribution averaged more than five points higher on a ten-point happiness scale than people in the bottom decile.<sup>7</sup>

The evidence thus suggests that if income affects happiness, it is relative, not

6 Ruut Veenhoven, *Happiness in Nations* (Rotterdam: Erasmus University, 1993).

7 Ed Diener, Ed Sandvik, Larry Seidlitz, and Marissa Diener, “The Relationship Between Income and Subjective Well-Being: Relative or Absolute?” *Social Indicators Research* 28 (1993): 195 – 223.

absolute, income that matters. Some social scientists who have pondered the significance of these patterns have concluded that, at least for people in the world's richest countries, no useful purpose is served by further accumulations of wealth.<sup>8</sup>

On its face, this should be a surprising conclusion, since there are so many seemingly useful things that having additional wealth would enable us to do. Would we really not be any happier if, say, the environment were a little cleaner, or if we could take a little more time off, or even just eliminate a few of the hassles of everyday life? In principle at least, people in wealthier countries have these additional options, and it should surprise us that this seems to have no measurable effect on their overall well-being.

There is indeed independent evidence that having more wealth *would* be a good thing, provided it were spent in certain ways. The key insight supported by this evidence is that even though we appear to adapt quickly to across-the-board increases in our stocks of most material goods, there are specific categories in which our capacity to adapt is more limited. Additional spending in these categories appears to have the greatest capacity to produce significant improvements in well-being.

The human capacity to adapt to dramatic changes in life circumstances is impressive. Asked to choose, most people state confidently that they would rather be killed in an automobile accident than to survive as a quadriplegic. And so we are not surprised to learn that severely disabled people experience a

8 See, for example, Peter Townsend, "The Development of Research on Poverty," in *Social Security Research: The Definition and Measurement of Poverty* (London: HMSO, 1979).

period of devastating depression and disorientation in the wake of their accidents. What we do not expect, however, are the speed and extent to which many of these victims accommodate to their new circumstances. Within a year's time, many quadriplegics report roughly the same mix of moods and emotions as able-bodied people do.<sup>9</sup> There is also evidence that the blind, the retarded, and the malformed are far better adapted to the limitations imposed by their conditions than most of us might imagine.<sup>10</sup>

We adapt swiftly not just to losses but also to gains. Ads for the New York State Lottery show participants fantasizing about how their lives would change if they won. ("I'd buy the company and fire my boss.") People who actually win the lottery typically report the anticipated rush of euphoria in the weeks after their good fortune. Follow-up studies done after several years, however, indicate that these people are often no happier – and indeed, are in some ways less happy – than before.<sup>11</sup>

In short, our extraordinary powers of adaptation appear to help explain why absolute living standards simply may not matter much once we escape the physical deprivations of abject poverty. This interpretation is consistent with the impressions of people who have lived or

9 R. J. Bulman and C. B. Wortman, "Attributes of Blame and 'Coping' in the 'Real World': Severe Accident Victims React to Their Lot," *Journal of Personality and Social Psychology* 35 (May 1977): 351 – 363.

10 P. Cameron, "Stereotypes About Generational Fun and Happiness vs. Self-Appraised Fun and Happiness," *The Gerontologist* 12 (Summer 1972): 120 – 123.

11 P. Brickman, D. Coates, and R. Janoff-Bulman, "Lottery Winners and Accident Victims: Is Happiness Relative?" *Journal of Personality and Social Psychology* 36 (August 1978): 917 – 927.

traveled extensively abroad, who report that the struggle to get ahead seems to play out with much the same psychological effects in rich societies as in those with more modest levels of wealth.<sup>12</sup>

These observations provide grist for the mills of social critics who are offended by the apparent wastefulness of the recent luxury-consumption boom in the United States. What many of these critics typically overlook, however, is that the power to adapt is a two-edged sword. It may indeed explain why having bigger houses and faster cars doesn't make us any happier; but if we can also adapt fully to the seemingly unpleasant things we often have to endure to get more money, then what's the problem? Perhaps social critics are simply barking up the wrong tree.

I believe, however, that to conclude that absolute living standards do not matter is a serious misreading of the evidence. What the data seem to say is that as national income grows, people do not spend their extra money in ways that yield significant and lasting increases in measured satisfaction. But this still leaves two possible ways that absolute income might matter. One is that people might have been able to spend their money in other ways that would have made them happier, yet for various reasons they did not, or could not, do so. I will describe presently some evidence that strongly supports this possibility.

The second possibility is that although measures of subjective well-being may do a reasonably good job of tracking our experiences as we are consciously aware of them, that may not be all that matters to us. For example, imagine two parallel universes, one just like the one we live in

now and another in which everyone's income is twice what it is now. Suppose that in both cases you would be the median earner, with an annual income of \$100,000 in one case and \$200,000 in the other. Suppose further that you would feel equally happy in the two universes – an assumption that is consistent with the evidence discussed thus far. And suppose, finally, that you know that people in the richer universe would spend more to protect the environment from toxic waste, and that this would result in healthier and longer, even if not happier, lives for all. Can there be any question that it would be better to live in the richer universe?

My point is that although the emerging science of subjective well-being has much to tell us about the factors that contribute to human satisfaction, not even its most ardent practitioners would insist that it offers the final word. Whether growth in national income is, or could be, a generally good thing is a question that will have to be settled by the evidence.

And there is in fact a rich body of evidence that bears on this question. One clear message of this evidence is that, beyond some point, across-the-board increases in spending on many types of material goods do not produce any lasting increment in subjective well-being. Sticking with the parallel-universes metaphor, let us imagine people from two societies, identical in every respect save one: in society A everyone lives in a house with 4,000 square feet of floor space, whereas in society B each house has only 3,000 square feet. If the two societies were completely isolated from one another, there is no evidence to suggest that psychologists and neuroscientists would be able to discern any significant difference in their respective average levels of subjective well-being. Rath-

<sup>12</sup> David G. Myers, *The Pursuit of Happiness: Who is Happy and Why?* (New York: Avon, 1993).

er, we would expect each society to have developed its own local norm for what constitutes adequate housing, and that people in each society would therefore be equally satisfied with their houses and other aspects of their lives.

Moreover, we have no reason to suppose that there would be other important respects in which it might be preferable to be a member of society A rather than society B. Thus the larger houses in society A would not contribute to longer lives, more freedom from illness, or indeed any other significant advantage over the members of society B. Once house size achieves a given threshold, the human capacity to adapt to further across-the-board changes in house size would appear to be virtually complete.

Of course, it takes real resources to build larger houses. A society that built 4,000-square-foot houses for everyone could have built 3,000-square-foot houses instead, freeing up considerable resources that could have been used to produce something else. Hence this central question: Are there alternative ways of spending these resources that could have produced lasting gains in human welfare?

An affirmative answer would be logically impossible if our capacity to adapt to every other possible change were as great as our capacity to adapt to larger houses. As it turns out, however, our capacity to adapt varies considerably across domains. There are some stimuli, such as environmental noise, to which we may adapt relatively quickly at a conscious level, yet to which our bodies continue to respond in measurable ways even after many years of exposure. And there are stimuli to which we never adapt over time but rather become sensitized; various biochemical allergens are examples, but we also see instances on a more macro scale. Thus, after several

months' exposure, the office boor who initially took two weeks to annoy you can accomplish the same feat in only seconds.

The observation that we adapt more fully to some stimuli than to others opens the possibility that moving resources from one category to another might yield lasting changes in well-being. Considerable evidence bears on this possibility.

A convenient way to examine this evidence is to consider a sequence of thought experiments in which you must choose between two hypothetical societies. The two societies have equal wealth levels but different spending patterns. In each case, let us again suppose that residents of society A live in 4,000-square-foot houses while those of society B live in 3,000-square-foot houses.

In each case, the residents of society B use the resources saved by building smaller houses to bring about some other specific change in their living conditions. In the first thought experiment, I will review in detail what the evidence says about how that change would affect the quality of their lives. In the succeeding examples, I will simply state the relevant conclusions and refer to supporting evidence published elsewhere.

Which would you choose: society A, whose residents have 4,000-square-foot houses and a one-hour automobile commute to work through heavy traffic; or society B, whose residents have 3,000-square-foot houses and a fifteen-minute commute by rapid transit?

Let us suppose that the cost savings from building smaller houses are sufficient to fund not only the construction of high-speed public transit, but also to make the added flexibility of the automobile available on an as-needed basis. Thus, as a resident of society B, you need

not give up your car. You can drive it to work on those days when you need extra flexibility, or you can come and go when needed by taxi. The *only* thing you and others must sacrifice to achieve the shorter daily commute of society B is additional floor space in your houses.

A rational person faced with this choice will want to consider the available evidence on the costs and benefits of each alternative. As concerns the psychological cost of living in smaller houses, the evidence provides no reason to believe that if you and all others live in 3,000-square-foot houses, your subjective well-being will be any lower than if you and all others live in 4,000-square-foot houses. Of course, if you moved from society B to society A, you might be pleased, even excited, at first to experience the additional living space. But we can predict that in time you would adapt and simply consider the larger house the norm.

Someone who moved from society B to society A would also initially experience stress from the extended commute through heavy traffic. Over time, his consciousness of this stress might diminish. But there is an important distinction: unlike his essentially complete adaptation to the larger house, his adaptation to his new commuting pattern will be only partial. Available evidence clearly shows that, even after long periods of adjustment, most people experience the task of navigating through heavy commuter traffic as stressful.<sup>13</sup>

In this respect, the effect of exposure to heavy traffic is similar to the effect of exposure to noise and other irritants. Thus, even though a large increase in background noise at a constant, steady level is experienced as less intrusive as

13 Meni Koslowsky, Avraham N. Kluger, and Mordechai Reich, *Commuting Stress* (New York: Plenum, 1995).

time passes, prolonged exposure nonetheless produces lasting elevations in blood pressure.<sup>14</sup> If the noise is not only loud but intermittent, people remain conscious of their heightened irritability even after extended periods of adaptation, and their symptoms of central nervous system distress become more pronounced.<sup>15</sup> This pattern was seen, for example, in a study of people living next to a newly opened noisy highway. Four months after the highway opened, 21 percent of residents interviewed said they were not annoyed by the noise, but that figure dropped to 16 percent when the same residents were interviewed a year later.<sup>16</sup>

Among the various types of noise exposure, worst of all is exposure to sounds that are not only loud and intermittent, but also unpredictably so. Subjects exposed to such noise in the laboratory experience not only physiological symptoms of stress, but also behavioral symptoms. They become less persistent in their attempts to cope with frustrating tasks, and suffer measurable impairments in performing tasks requiring care and attention.<sup>17</sup>

Unpredictable noise may be particularly stressful because it confronts the subject with a loss of control. David Glass and his collaborators confirmed this hypothesis in an ingenious experi-

14 David C. Glass, Jerome Singer, and James Pennegaker, "Behavioral and Physiological Effects of Uncontrollable Environmental Events," in *Perspectives on Environment and Behavior*, ed. Daniel Stokols (New York: Plenum, 1977).

15 Ibid.

16 N. D. Weinstein, "Community Noise Problems: Evidence Against Adaptation," *Journal of Environmental Psychology* 2 (1982): 82–97.

17 Glass et al., "Behavioral and Physiological Effects of Uncontrollable Environmental Events."

ment that exposed two groups of subjects to a recording of loud unpredictable noises. Whereas subjects in one group had no control over the recording, subjects in the other group could stop the tape at any time by flipping a switch. These subjects were told, however, that the experimenters would prefer that they not stop the tape, and most subjects honored this preference. Following exposure to the noise, subjects with access to the control switch made almost 60 percent fewer errors than the other subjects on a proofreading task and made more than four times as many attempts to solve a difficult puzzle.<sup>18</sup>

Commuting through heavy traffic is in many ways more like exposure to loud unpredictable noise than to constant background noise. Delays are difficult to predict, much less control, and one never quite gets used to being cut off by drivers who think their time is more valuable than anyone else's. A large scientific literature documents a multitude of stress symptoms that result from protracted driving through heavy traffic.

One strand in this literature focuses on the experience of urban bus drivers, whose exposure to the stresses of heavy traffic is higher than that of most commuters, but who have also had greater opportunity to adapt to those stresses. A disproportionate share of the absenteeism of urban bus drivers stems from stress-related illnesses such as gastrointestinal problems, headaches, and anxiety.<sup>19</sup> Many studies have found sharply elevated rates of hypertension among bus drivers relative to those of a variety of control groups, including a control

group of bus drivers pre-employment.<sup>20</sup> Additional studies have found elevations of stress hormones such as adrenaline, noradrenaline, and cortisol in urban bus drivers.<sup>21</sup> And one study found elevations of adrenaline and noradrenaline to be strongly positively correlated with the density of the traffic with which the bus drivers had to contend.<sup>22</sup> More than half of all urban bus drivers retire prematurely with some form of medical disability.<sup>23</sup>

A one-hour daily commute through heavy traffic is presumably less stressful than operating a bus all day in an urban area. Yet this difference is one of degree rather than of kind. Studies have shown that the demands of commuting through heavy traffic often result in emotional and behavioral deficits upon arrival at home or work.<sup>24</sup> Compared to drivers

20 D. Ragland, M. Winkleby, J. Schwalbe, B. Holman, L. Morse, L. Syme, and J. Fisher, "Prevalence of Hypertension in Bus Drivers," *International Journal of Epidemiology* 16 (1987): 208–214; W. Pikus and W. Tarranikova, "The Frequency of Hypertensive Diseases in Public Transportation," *Terapevicheskie Archives* 47 (1975): 135–137; and G. Evans, M. Palsane, and S. Carrere, "Type A Behavior and Occupational Stress: A Cross-Cultural Study of Blue-Collar Workers," *Journal of Personality and Social Psychology* 52 (1987): 1002–1007.

21 Ibid.

22 G. Evans and S. Carrere, "Traffic Congestion, Perceived Control, and Psychophysiological Stress Among Urban Bus Drivers," *Journal of Applied Psychology* 76 (1991): 658–663.

23 Gary W. Evans, "Working on the Hot Seat: Urban Bus Drivers," *Accident Analysis and Prevention* 26 (1994): 181–193.

24 David C. Glass and Jerome Singer, *Urban Stressors: Experiments on Noise and Social Stressors* (New York: Academic Press, 1972); D. R. Sherrod, "Crowding, Perceived Control, and Behavioral Aftereffects," *Journal of Applied Social Psychology* 4 (1974): 171–186.

18 Ibid., figures 5 and 6.

19 L. Long and J. Perry, "Economic and Occupational Causes of Transit Operator Absenteeism: A Review of Research," *Transport Reviews* 5 (1985): 247–267.

who commute through low-density traffic, those who commute through heavy traffic are more likely to report feelings of annoyance.<sup>25</sup> And higher levels of commuting distance, time, and speed are significantly positively correlated with increased systolic and diastolic blood pressure.<sup>26</sup>

The prolonged experience of commuting stress is also known to suppress immune function and shorten longevity.<sup>27</sup> Even daily spells in traffic as brief as fifteen minutes have been linked to significant elevations of blood glucose and cholesterol, and to declines in blood coagulation time – all factors that are positively associated with cardiovascular disease. Commuting by automobile is also positively linked with the incidence of various cancers, especially cancer of the lung, possibly because of heavier exposure to exhaust fumes.<sup>28</sup> The incidence of these and other illnesses rises with the length of commute,<sup>29</sup> and is significantly lower among those who commute by bus or rail,<sup>30</sup> and lower still among non-

commuters.<sup>31</sup> Finally, the risk of death and injury from accidents varies positively with the length of commute and is higher for those who commute by car than for those who commute by public transport.

In sum, there appear to be persistent and significant costs associated with a long commute through heavy traffic. We can be confident that neurophysiologists would find higher levels of cortisol, nor-epinephrine, adrenaline, noradrenaline, and other stress hormones in the residents of society A. No one has done the experiment to discover whether people from society A would report lower levels of life satisfaction than people from society B, but since we know that drivers often report being consciously aware of the frustration and stress they experience during commuting, it is a plausible conjecture that subjective well-being, as conventionally measured, would be lower in society A. Even if the negative effects of commuting stress never broke through into conscious awareness, however, we would still have powerful reasons for wishing to escape them.

On the strength of the available evidence, then, it appears that a rational person would have powerful reasons to choose society B, and no reasons to avoid it. And yet, despite this evidence, the United States is moving steadily in the direction of society A. Even as our houses continue to grow in size, the average length of our commute to work

25 Daniel Stokols, Raymond W. Novaco, Jeanette Stokols, and Joan Campbell, "Traffic Congestion, Type A Behavior, and Stress," *Journal of Applied Psychology* 63 (1978): 467–480.

26 *Ibid.*, table 3.

27 Anita DeLongis, Susan Folkman, and Richard S. Lazarus, "The Impact of Daily Stress on Health and Mood: Psychological and Social Resources as Mediators," *Journal of Personality and Social Psychology* 54 (1988): 486–495.

28 Koslowsky et al., *Commuting Stress*, chap. 4.

29 Koslowsky et al., *Commuting Stress*.

30 P. Taylor and C. Pocock, "Commuter Travel and Sickness: Absence of London Office Workers," *British Journal of Preventive and Social Medicine* 26 (1972): 165–172; Meni Koslowsky and Moshe Krausz, "On the Relationship Between Commuting, Stress Symptoms, and Attitudinal

Measures," *Journal of Applied Behavioral Sciences* (December 1993): 485–492.

31 European Foundation for the Improvement of Living and Working Conditions, "The Journey from Home to the Workplace: The Impact on the Safety and Health of the Community/Workers" (Dublin: European Foundation for the Improvement of Living and Working Conditions, 1984).



Table 1

Four thought experiments: the conspicuous consumption of society A versus the inconspicuous consumption of society B

Society A	Society B
1 Everyone lives in 4,000-square-foot houses and has no free time for exercise each day.	1 Everyone lives in 3,000-square-foot houses and has 45 minutes available for exercise each day.
2 Everyone lives in 4,000-square-foot houses and has time to get together with friends one evening each month.	2 Everyone lives in 3,000-square-foot houses and has time to get together with friends four evenings each month.
3 Everyone lives in 4,000-square-foot houses and has one week of vacation each year.	3 Everyone lives in 3,000-square-foot houses and has four weeks of vacation each year.
4 Everyone lives in 4,000-square-foot houses and has a relatively low level of personal autonomy in the workplace.	4 Everyone lives in 3,000-square-foot houses and has a relatively high level of personal autonomy in the workplace.

continues to grow longer. Between 1982 and 2000, for example, the time penalty for peak-period travelers increased from 16 to 62 hours per year; the daily window of time during which travelers might experience congestion increased from 4.5 to 7 hours; and the volume of roadways where travel is congested grew from 34 to 58 percent.<sup>32</sup> The Federal Highway Administration predicts that the extra time spent driving because of delays will rise from 2.7 billion vehicle hours in 1985 to 11.9 billion in 2005.<sup>33</sup>

Table 1 lists four similar thought experiments that ask you to choose between societies that offer different combinations of material goods and free time to pursue other activities. Each case assumes a specific use of the free time and asks that you imagine it to be one that appeals to you (if not, feel free to substitute some other activity that does).

32 David Schrank and Tim Lomax, *The 2002 Urban Mobility Report*, Texas Transportation Institute, <<http://mobility.tamu.edu/>>.

33 Charles S. Clark, "Traffic Congestion," *The CQ Researcher*, 6 May 1994, 387–404.

The choice in each of these thought experiments is one between conspicuous consumption (in the form of larger houses) and what, for want of a better term, I shall call inconspicuous consumption – freedom from traffic congestion, time with family and friends, vacation time, and a variety of favorable job characteristics. In each case the evidence suggests that subjective well-being will be higher in the society with a greater balance of inconspicuous consumption.<sup>34</sup> And yet in each case the actual trend in U.S. consumption patterns has been in the reverse direction.

The list of inconspicuous consumption items could be extended considerably. Thus we could ask whether living in slightly smaller houses would be a reasonable price to pay for higher air quality, for more urban parkland, for cleaner drinking water, for a reduction in violent crime, or for medical research that would reduce premature death. And in each case the answer would be the same as in the cases we have considered thus far.

34 For a detailed survey of the supporting studies, see Frank, *Luxury Fever*, chap. 6.

My point in the thought experiments is not that inconspicuous consumption is always preferable to conspicuous consumption. Indeed, in each case we might envision a minority of rational individuals who might choose society A over society B. Some people may simply dislike autonomy on the job, or dislike exercise, or dislike spending time with family and friends. But if we accept that there is little sacrifice in subjective well-being when all have slightly smaller houses, the real question is whether a rational person could find *some* more productive use for the resources thus saved. Given the absolute sizes of the houses involved in the thought experiments, the answer to this question would seem to be yes.

It might seem natural to suppose that when per capita income rises sharply, as it has in most countries since at least the end of World War II, most people would spend more on both conspicuous and inconspicuous consumption. In many instances, this is in fact what seems to have happened. Thus the cars we buy today are not only faster and more luxuriously equipped, but also safer and more reliable. If both forms of consumption have been rising, however, and if inconspicuous consumption boosts subjective well-being, then why has subjective well-being not increased during the last several decades?

A plausible answer is that whereas some forms of inconspicuous consumption have been rising, others have been declining, often sharply. There have been increases in the annual number of hours spent at work in the United States during the last two decades; traffic has grown considerably more congested; savings rates have fallen precipitously; personal bankruptcy filings are at an all-time high; and there is at least a widespread perception that employment se-

curity and autonomy have fallen sharply. Declines in these and other forms of inconspicuous consumption may well have offset the effects of increases in others.

The more troubling question is *why* we have not used our resources more wisely. If we could all live healthier, longer, and more satisfying lives by simply changing our spending patterns, why haven't we done that?

As even the most ardent free-market economists have long recognized, the invisible hand cannot be expected to deliver the greatest good for all in cases in which each individual's well-being depends on the actions taken by others with whom he does not interact directly. This qualification was once thought important in only a limited number of arenas – most importantly, activities that generate environmental pollution. We now recognize, however, that the interdependencies among us are considerably more pervasive. For present purposes, chief among them are the ways in which the spending decisions of some individuals affect the frames of reference within which others make important choices.

Many important rewards in life – access to the best schools, to the most desirable mates, and even, in times of famine, to the food needed for survival – depend critically on how the choices we make compare to the choices made by others. In most cases, the person who stays at the office two hours longer each day to be able to afford a house in a better school district has no conscious intention to make it more difficult for others to achieve the same goal. Yet that is an inescapable consequence of his action. The best response available to others may be to work longer hours as well, thereby to preserve their current positions. Yet the ineluctable mathematical logic of musical chairs assures that only 10 percent of all children can occupy

top-decile school seats, no matter how many hours their parents work.

That many purchases become more attractive to us when others make them means that consumption spending has much in common with a military arms race. A family can choose how much of its own money to spend, but it cannot choose how much others spend. Buying a smaller-than-average vehicle means greater risk of dying in an accident. Spending less on an interview suit means a greater risk of not landing the best job. Yet when all spend more on heavier cars and more finely tailored suits, the results tend to be mutually offsetting, just as when all nations spend more on armaments. Spending less – on bombs or on personal consumption – frees up money for other pressing uses, but only if everyone does it.

What, exactly, is the incentive problem that leads nations to spend too much on armaments? It is not sufficient merely that each nation's payoff from spending on arms depends on how its spending compares with that of rival nations. Suppose, for example, that each nation's payoff from spending on nonmilitary goods also depended, to the same extent as for military goods, on the amounts spent on nonmilitary goods by other nations. The tendency of military spending to siphon off resources from other spending categories would then be offset by an equal tendency in the opposite direction. That is, if each nation had a fixed amount of national income to allocate between military and nonmilitary goods, and if the payoffs in each category were equally context sensitive, then we would expect no imbalance across the categories.

For an imbalance to occur in favor of armaments, the reward from armaments spending must be *more* context sensitive than the reward from nonmilitary

spending. And since this is precisely the case, the generally assumed imbalance occurs. After all, to be second best in a military arms race often means a loss of political autonomy – clearly a much higher cost than the discomfort of having toasters with fewer slots.

In brief, we expect an imbalance in the choice between two activities if the individual rewards from one are more context sensitive than the individual rewards from the other. The evidence described earlier suggests that the satisfaction provided by many conspicuous forms of consumption is more context sensitive than the satisfaction provided by many less conspicuous forms of consumption. If so, this would help explain why the absolute income and consumption increases of recent decades have failed to translate into corresponding increases in measured well-being.