

## The Science Behind the Smile

An Interview with Daniel Gilbert by Gardiner Morse



Artwork: **Yue Minjun**, *Untitled*, 2005, oil on canvas, 100 x 80 cm

Harvard psychology professor Daniel Gilbert is widely known for his 2006 best seller, *Stumbling on Happiness*. His work reveals, among other things, the systematic mistakes we all make in imagining how happy (or miserable) we'll be. In this edited interview with HBR's Gardiner Morse, Gilbert surveys the field of happiness research and explores its frontiers.

### **HBR: Happiness research has become a hot topic in the past 20 years. Why?**

**Gilbert:** It's only recently that we realized we could marry one of our oldest questions—"What is the nature of human happiness?"—to our newest way of getting answers: science. Until just a few decades ago, the problem of happiness was mainly in the hands of philosophers and poets.

Psychologists have always been interested in emotion, but in the past two decades the study of emotion has exploded, and one of the emotions that psychologists have studied most intensively is happiness. Recently economists and neuroscientists joined the party. All these disciplines have distinct but intersecting interests: Psychologists want to understand what people feel, economists want to know what people value, and neuroscientists want to know how people's brains respond to rewards. Having three separate disciplines all interested in a single topic has put that topic on the scientific map. Papers on happiness are published in **Science**, people who study happiness **win Nobel prizes**, and **governments all over the world** are rushing to figure out how to measure and increase the happiness of their citizens.

### **How is it possible to measure something as subjective as happiness?**

Measuring subjective experiences is a lot easier than you think. It's what your eye doctor does when she fits you for glasses. She puts a lens in front of your eye and asks you to report your experience, and then she puts another lens up, and then another. She uses your reports as data, submits the data to scientific analysis, and designs a lens that will give you perfect vision—all on the basis of your reports of your subjective experience. People's real-time reports are very good approximations of their experiences, and they make it possible for us to see the world through their eyes. People may not be able to tell us how happy they were yesterday or how happy they will be tomorrow, but they *can* tell us how they're feeling at the moment we ask them. "How are you?" may be the world's most frequently asked question, and nobody's stumped by it.

There are many ways to measure happiness. We can ask people "How happy are you right now?" and have them rate it on a

scale. We can use magnetic resonance imaging to measure cerebral blood flow, or electromyography to measure the activity of the “smile muscles” in the face. But in most circumstances those measures are highly correlated, and you’d have to be the federal government to prefer the complicated, expensive measures over the simple, inexpensive one.

### **But isn’t the scale itself subjective? Your five might be my six.**

Imagine that a drugstore sold a bunch of cheap thermometers that weren’t very well calibrated. People with normal temperatures might get readings other than 98.6, and two people with the same temperature might get different readings. These inaccuracies could cause people to seek medical treatment they didn’t need or to miss getting treatment they did need. So buggy thermometers are sometimes a problem—but not always. For example, if I brought 100 people to my lab, exposed half of them to a flu virus, and then used those buggy thermometers to take their temperatures a week later, the average temperature of the people who’d been exposed would almost surely be higher than the average temperature of the others. Some thermometers would underestimate, some would overestimate, but as long as I measured enough people, the inaccuracies would cancel themselves out. Even with poorly calibrated instruments, we can compare large groups of people.

A rating scale is like a buggy thermometer. Its inaccuracies make it inappropriate for some kinds of measurement (for example, saying exactly how happy John was at 10:42 AM on July 3, 2010), but it’s perfectly appropriate for the kinds of measurements most psychological scientists make.

### **What did all these happiness researchers discover?**

Much of the research confirms things we’ve always suspected. For example, in general people who are in good romantic relationships are happier than those who aren’t. Healthy people are happier than sick people. People who participate in their churches are happier than those who don’t. Rich people are happier than poor people. And so on.

That said, there have been some surprises. For example, while all these things do make people happier, it’s astonishing how little any one of them matters. Yes, a new house or a new spouse will make you happier, but not much and not for long. As it turns out, people are not very good at predicting what will make them happy and how long that happiness will last. They expect positive events to make them much happier than those events actually do, and they expect negative events to make them unhappier than they actually do. In both field and lab studies, we’ve found that winning or losing an election, gaining or losing a romantic partner, getting or not getting a promotion, passing or failing an exam—all have less impact on happiness than people think they will. A recent study showed that very few experiences affect us for more than three months. When good things happen, we celebrate for a while and then sober up. When bad things happen, we weep and whine for a while and then pick ourselves up and get on with it.

### **Why do events have such a fleeting effect on happiness?**

One reason is that people are good at synthesizing happiness—at finding silver linings. As a result, they usually end up happier than they expect after almost any kind of trauma or tragedy. Pick up any newspaper, and you’ll find plenty of examples. Remember Jim Wright, who resigned in disgrace as Speaker of the House of Representatives because of a shady book deal? A few years later he told the *New York Times* that he was “**so much better off, physically, financially, emotionally, mentally and in almost every other way.**” Then there’s Moreese Bickham, who spent 37 years in the Louisiana State Penitentiary; after his release he said, “**I don’t have one minute’s regret. It was a glorious experience.**” These guys appear to be living in the best of all possible worlds. Speaking of which, Pete Best, the original drummer for the Beatles, was replaced by Ringo Starr in 1962, just before the Beatles got big. Now he’s a session drummer. What did he have to say about missing out on the chance to belong to the most famous band of the 20<sup>th</sup> century? “**I’m happier than I would have been with the Beatles.**”

One of the most reliable findings of the happiness studies is that we do not have to go running to a therapist every time our shoelaces break. We have a remarkable ability to make the best of things. Most people are more resilient than they realize.

### **Aren’t they deluding themselves? Isn’t real happiness better than synthetic happiness?**

Let’s be careful with terms. Nylon is real; it’s just not natural. Synthetic happiness is perfectly real; it’s just man-made. Synthetic happiness is what we produce when we don’t get what we want, and natural happiness is what we experience when we do. They have different origins, but they are not necessarily different in terms of how they feel. One is not obviously better than the other.

Of course, most folks don’t see it that way. Most folks think that synthetic happiness isn’t as “good” as the other kind—that people who produce it are just fooling themselves and aren’t really happy. I know of no evidence demonstrating that that’s the case. If you go blind or lose a fortune, you’ll find that there’s a whole new life on the other side of those events. And you’ll find

many things about that new life that are quite good. In fact, you'll undoubtedly find a few things that are even better than what you had before. You're not lying to yourself; you're not delusional. You're discovering things you didn't know—*couldn't* know until you were in that new life. You are looking for things that make your new life better, you are finding them, and they are making you happy. What is most striking to me as a scientist is that most of us don't realize how good we're going to be at finding these things. We'd never say, "Oh, of course, if I lost my money or my wife left me, I'd find a way to be just as happy as I am now." We'd never say it—but it's true.

**Is being happy always desirable? Look at all the unhappy creative geniuses—Beethoven, van Gogh, Hemingway. Doesn't a certain amount of unhappiness spur good performance?**

Nonsense! Everyone can think of a historical example of someone who was both miserable and creative, but that doesn't mean misery generally promotes creativity. There's certainly someone out there who smoked two packs of cigarettes a day and lived to be 90, but that doesn't mean cigarettes are good for you. The difference between using anecdotes to prove a point and using science to prove a point is that in science you can't just cherry-pick the story that suits you best. You have to examine *all* the stories, or at least take a fair sample of them, and see if there are more miserable creatives or happy creatives, more miserable noncreatives or happy noncreatives. If misery promoted creativity, you'd see a higher percentage of creatives among the miserable than among the delighted. And you don't. By and large, happy people are more creative and more productive. Has there ever been a human being whose misery was the source of his creativity? Of course. But that person is the exception, not the rule.

**Many managers would say that contented people aren't the most productive employees, so you want to keep people a little uncomfortable, maybe a little anxious, about their jobs.**

Managers who collect data instead of relying on intuition don't say that. I know of no data showing that anxious, fearful employees are more creative or productive. Remember, contentment doesn't mean sitting and staring at the wall. That's what people do when they're bored, and people *hate* being bored. We know that people are happiest when they're appropriately challenged—when they're trying to achieve goals that are difficult but not out of reach. Challenge and threat are not the same thing. People blossom when challenged and wither when threatened. Sure, you can get results from threats: Tell someone, "If you don't get this to me by Friday, you're fired," and you'll probably have it by Friday. But you'll also have an employee who will thereafter do his best to undermine you, who will feel no loyalty to the organization, and who will never do more than he must. It would be much more effective to tell your employee, "I don't think most people could get this done by Friday. But I have full faith and confidence that you can. And it's hugely important to the entire team." Psychologists have studied reward and punishment for a century, and the bottom line is perfectly clear: Reward works better.

**So challenge makes people happy. What else do we know now about the sources of happiness?**

If I had to summarize all the scientific literature on the causes of human happiness in one word, that word would be "social." We are by far the most social species on Earth. Even ants have nothing on us. If I wanted to predict your happiness, and I could know only one thing about you, I wouldn't want to know your gender, religion, health, or income. I'd want to know about your social network—about your friends and family and the strength of your bonds with them.

**Beyond having rich networks, what makes us happy day to day?**

The **psychologist Ed Diener** has a finding I really like. He essentially shows that the *frequency* of your positive experiences is a much better predictor of your happiness than is the *intensity* of your positive experiences. When we think about what would make us happy, we tend to think of intense events—going on a date with a movie star, winning a Pulitzer, buying a yacht. But Diener and his colleagues have shown that how good your experiences are doesn't matter nearly as much as how many good experiences you have. Somebody who has a dozen mildly nice things happen each day is likely to be happier than somebody who has a single truly amazing thing happen. So wear comfortable shoes, give your wife a big kiss, sneak a french fry. It sounds like small stuff, and it is. But the small stuff matters.

I think this helps explain why it's so hard for us to forecast our affective states. We imagine that one or two big things will have a profound effect. But it looks like happiness is the sum of hundreds of small things. Achieving happiness requires the same approach as losing weight. People trying to lose weight want a magic pill that will give them instant results. Ain't no such thing. We know exactly how people lose weight: They eat less and exercise more. They don't have to eat *much* less or exercise *much* more—they just have to do those things consistently. Over time it adds up. Happiness is like that. The things you can do to increase your happiness are obvious and small and take just a little time. But you have to do them every day and wait for the results.

**What are those little things we can do to increase our happiness?**

They won't surprise you any more than "eat less and exercise more" does. The main things are to commit to some simple behaviors—meditating, exercising, getting enough sleep—and to practice altruism. One of the most selfish things you can do is help others. Volunteer at a homeless shelter. You may or may not help the homeless, but you will almost surely help yourself. And nurture your social connections. Twice a week, write down three things you're grateful for, and tell someone why. I know these sound like homilies from your grandmother. Well, your grandmother was smart. The secret of happiness is like the secret of weight loss: It's not a secret!

### If there's no secret, what's left to study?

There's no shortage of questions. For decades psychologists and economists have been asking, "Who's happy? The rich? The poor? The young? The old?" The best we could do was divide people into groups, survey them once or maybe twice, and try to determine if the people in one group were, on average, happier than those in the others. The tools we used were pretty blunt instruments. But now millions of people are carrying little computers in their pockets—smartphones—and this allows us to collect data in real time from huge numbers of people about what they are doing and feeling from moment to moment. That's never been possible before.

One of my collaborators, Matt Killingsworth, has built an experience-sampling application called **Track Your Happiness**. He follows more than 15,000 people by iPhone, querying them several times a day about their activities and emotional states. Are they at home? On a bus? Watching television? Praying? How are they feeling? What are they thinking about? With this technology, Matt's beginning to answer a much better question than the one we've been asking for decades. Instead of asking *who* is happy, he can ask *when* they are happy. He doesn't get the answer by asking, "When are you happy?"—because frankly, people don't know. He gets it by tracking people over days, months, and years and measuring what they are doing and how happy they are while they are doing it. I think this kind of technology is about to revolutionize our understanding of daily emotions and human well-being. (See the sidebar "The Future of Happiness Research.")

### The Future of Happiness Research

by Matthew Killingsworth

You'd think it would be easy to figure out what makes us happy. Until recently, though, researchers have had to rely mainly on people's reports about their average emotional states over long periods of time and on easily surveyed predictors of happiness, such as demographic variables. As a result, we know that married or wealthy people are, on average, happier than unmarried or less-well-off people. But what is it about being married or having money that makes people happy?

Focusing on average emotional states also smooths out short-term fluctuations in happiness and consequently diminishes our ability to understand the causes of those fluctuations. For example, how do the moment-by-moment details of a person's day affect that person's happiness?

We can now begin to answer questions like these, thanks to the smartphone. For an ongoing research project called **Track Your Happiness**, I have recruited more than 15,000 people in 83 countries to report their emotional states in real time, using devices they carry with them every day. I created an iPhone web app that queries users at random intervals, asking them about their mood (respondents slide a button along a scale that ranges from "very bad" to "very good"), what they are doing (they can select from 22 options including commuting, working, exercising, and eating), and factors such as their level of productivity, the nature of their environment, the amount and quality of their sleep, and their social interactions. Since 2009 I have collected more than half a million data points—making this, to my knowledge, the first-ever large-scale study of happiness in daily life.

One major finding is that people's minds wander nearly half the time, and this appears to lower their mood. Wandering to unpleasant or even neutral topics is associated with sharply lower happiness; straying to positive topics has no effect either way. The amount of mind-wandering varies greatly depending on the activity, from roughly 60% of the time while commuting to 30% when talking to someone or playing a game to 10% during sex. But no matter what people are doing, they are much less happy when their minds are wandering than when their minds are focused.

All of this strongly suggests that to optimize our emotional well-being, we should pay at least as much attention to where our minds are as to what our bodies are doing. Yet for most of us, the focus of our thoughts isn't part of our daily planning. When you wake up on a Saturday morning and ask, "What am I going to do today?" the answer is usually about where you'll take your body—to the beach, to the kids' soccer practice, for a run. You ought to also ask, "What am I going to do with my mind today?"

A related stream of research examines the relationship between mind-wandering and productivity. Many managers, particularly those whose employees do creative knowledge work, may sense that a certain amount of daydreaming is a good thing, providing a mental break and perhaps leading people to reflect on related work matters. Unfortunately, the data so far

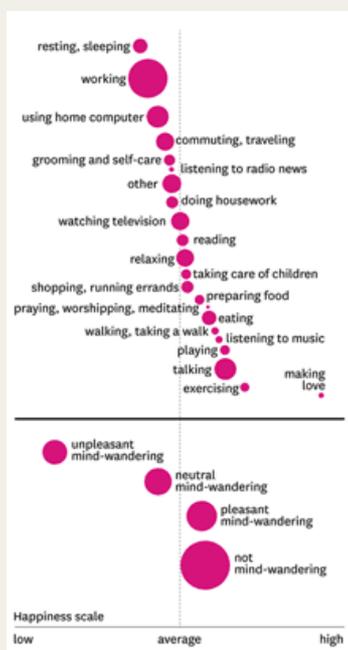
suggest that, in addition to reducing happiness, mind-wandering on the job reduces productivity. And employees' minds stray much more than managers probably imagine—about 50% of the workday—and almost always veer toward personal concerns. Managers may want to look for ways to help employees stay focused, for the employees' *and* the company's sakes.

The data are also beginning to paint a picture of variations in happiness within an individual and from one individual to the next. The most striking finding here is that happiness differs more from moment to moment than it does from person to person. This suggests that it's not the stable conditions of our lives, such as where we live or whether we're married, that are the principal drivers of happiness; it could be the small, everyday things that count the most.

It also suggests that happiness on the job may depend more on our moment-to-moment experiences—our routine interactions with coworkers, the projects we're involved in, our daily contributions—than on the stable conditions thought to promote happiness, such as a high salary or a prestigious title. A priority of my current and future research is to deploy this tracking technology in the workplace and, I hope, at last reveal what actually makes employees happy.

### A Focused Mind Is a Happy Mind

Participants were queried about mood and mind-wandering during 22 activities. The balls represent their activities and thoughts. The farther to the right a ball is, the happier people were, on average. The larger the ball, the more frequently they engaged in the activity or thought.



**Matthew Killingsworth** is a doctoral student in psychology at Harvard University. To participate in his study, go to [trackyourhappiness.org](http://trackyourhappiness.org).

### What are the new frontiers of happiness research?

We need to get more specific about what we are measuring. Many scientists say they are studying happiness, but when you look at what they're measuring, you find they are actually studying depression or life satisfaction. These things are related to happiness, of course, but they are not the same as happiness. Research shows that people with children are typically less happy on a moment-to-moment basis than people without children. But people who have kids may feel fulfilled in a way that people without kids do not. It doesn't make sense to say that people with kids are happier, or that people without kids are happier; each group is happier in some ways and less happy in others. We need to stop painting our portrait of happiness with such a fat brush.

### Will all this research ultimately make us happier?

We are learning and will continue to learn how to maximize our happiness. So yes, there is no doubt that the research has helped and will continue to help us increase our happiness. But that still leaves the big question: What kind of happiness *should* we want? For example, do we want the average happiness of our moments to be as large as possible, or do we want the sum of our happy moments to be as large as possible? Those are different things. Do we want lives free of pain and

heartache, or is there value in those experiences? Science will soon be able to tell us how to live the lives we want, but it will never tell us what kinds of lives we should want to live. That will be for us to decide.

