



Positive Psychology: The Science of Happiness

New Research Shows That Humans Have More Control Over Their Happiness Than Previously Thought

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What exactly is happening inside the brains of people experiencing joy and happiness?

"It's a very complicated chemical soup," explained Dr. Richard Davidson, who has made a life's work out of studying "happy brains." His lab at the University of Wisconsin is devoted to understanding how much of our joy level is set at birth, and how much we can control.



With a skull cap containing 128 sensors, Davidson's team can watch a subject's brain respond to a series of photographs, some pleasant, some distressing.

"We can challenge the brain by presenting these emotional images and look to see how you respond to them," Davidson said.

ABC News' Bill Weir underwent the test, and by studying the activity in his left prefrontal cortex, Davidson discovered that Weir's brain was "more positive than not."

"Now, it doesn't mean that you don't have episodes of negative emotion," he explained. "But those negative emotions don't linger."

People with happy brains have their parents to thank, to a certain extent, not only for happy genes, but also for loving childhoods. Studies have shown that angry or critical parents can actually alter a child's happiness level until it's set around age 16. But can adults adjust their own feelings of happiness?

Happiness Interventions

Until recently, most research psychologists were more interested in what made people depressed than what made them happy, and pharmaceutical companies have played a crucial role in promoting happiness by developing very successful anti-depressants. But evolving research in a field known as positive psychology is getting people to ask themselves how they can become happier, not through drugs, but by making changes in how they act and think.

"Antidepressants don't make people happier, they just decrease negative emotions," says University of California-Riverside psychology professor Dr. Sonja Lyubomirsky. In her new book, "The How of Happiness," Lyubomirsky argues that as much as 40 percent of our happiness "is left for the intentional activities that we can choose to engage in -- the things that we do and think every day of our lives."

What are these "intentional activities"? Scientists know that happy people practice, among other things,

more acts of kindness, are able to lose themselves in whatever they enjoy doing, and avoid dwelling on their problems.

Lyubomirsky has had lab subjects actually engage in some of these activities, and found that people can indeed force themselves to truly become happier. Not surprisingly, such happiness interventions take work, because people easily fall back to their genetically-determined happiness set points. Scientists have known for decades that a large part of our temperament is genetically pre-determined; by studying the personalities of identical twins they've found that about 50 percent of our happiness -- or unhappiness -- can be traced to our genes. Adding the 40 percent that we can control with our daily thoughts and actions still leaves about 10 percent unaccounted for. This remaining 10 percent is related to our life circumstances, such as where we live, how much money we have, our marital status, and how we look.

Hedonic Adaptation

Surprised that your life circumstances have such little influence on your happiness? Researchers have found that people eventually return to their genetically-determined happiness set points after big changes in life, as seen in lottery winners and newlyweds.

Four years ago, Caroline Johnson volunteered for the ABC show "Extreme Makeover," and received everything from a new nose to new teeth and the requisite breast implants. Did these physical improvements make her happier?

"I think about a year it made a difference," she said. "People are seeing you for the first time and they compliment you all the time. And then once it wears off, it's just normal life again."

"It's a phenomenon called hedonic adaptation," explained Lyubomirsky. "We tend to adapt to any kind of positive change & once you make \$100,000, now you sort of change your goals. Now your goal is to make even more." Identical twins reared in the same household who do not share the same levels of happiness can also provide clues about what it is in our lives that make us happy -- the 40 percent of happiness within our control. Johnson is the perfect test case for the 40 percent theory, because she herself has an identical twin, Cat Bunnell.

After Lyubomirsky gave the sisters a battery of questionnaires she "was stunned [by] how different their scores were. Caroline got a 5.5 out of 7 & pretty happy," she said. "Cat scored a 3.25 & below the midpoint on happiness."

"They have the same DNA," explained Lyubomirsky, "and so to try to explain why one is happier than the other you have to kind of look at other factors."

One reason for the happiness difference between the twins is their outlook on life. Johnson is a self-employed dog groomer whose business hit a rough patch recently, yet she remains upbeat and committed to success. "I'm very optimistic & I know where I want to be," she said. "By next summer I have definite goals that I expect to meet."

Her sister has a very different outlook on life. Regarding her future, Bunnell said, "I don't feel like I'm progressing as much as I want to in my job or just the financial situation & It just feels like it just weighs on me too much and I just feel like I'm not going to get out of it."

"We really see major differences between the level of optimism that they have," said Lyubomirsky. "(We see) Caroline being more optimistic, Cat kind of ruminating and dwelling more on sort of bad things."

'Happiness Is Really Within Us'

Perhaps another reason why Johnson is happier than her sister is her ability to nurture relationships. Johnson is married with three children, while Bunnell is a divorced single mom, struggling with the dating scene at age 37.

"I don't have somebody that can just hold me because I'm having a hard time," said Bunnell.

Regarding her prospects for finding another husband, she said, "I feel like I'm really giving up on all that."

Besides the optimism, commitment to goals, and ability to nurture relationships that might make Johnson happier than her twin, there are many more ways to affect the 40 percent of happiness in your control.

"The happiness activities are not going to surprise anyone," Lyubomirsky said. "I mean, they're things like gratitude, forgiveness, relationships, savoring the present moment, meditation. I try to sort of determine to what extent those things are supported by research."

Davidson would agree. He has studied the brains of Buddhist monks, men who spend their lives deliberately forcing positive emotions, and their happiness is off the charts. His new data claims that if a person sits quietly for a half-hour a day just thinking about kindness and compassion, their brain will show noticeable changes in just two weeks.

"In many ways, this is the most important idea in neuroscience in the last decade," he said. "Our brains are just waiting to be transformed, and they're always being transformed. But we can take responsibility and change the brain in more positive ways."

"Research is showing pretty convincingly now that happiness is really within us, it's not outside of us," said Lyubomirsky. "It's in what we do. It's sort of how we act, how we think every day of our lives."

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