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**Tough choice.** Deciding between two desirable vacation destinations may alter people's future preferences.

## How Choosing Changes You

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By [Greg Miller \(/author/greg-miller/\)](/author/greg-miller/) | 27 March 2009 (All day) | [0 Comments \(/2009/03/how-choosing-changes-you#disqus\\_thread\)](/2009/03/how-choosing-changes-you#disqus_thread)

Economists generally assume that people make choices based on their preferences. And we do. But psychologists have long argued that the relationship goes both ways. Just as our preferences influence our choices, so too can choices influence preferences. A new study backs both sides in the debate and

identifies a component of the brain's reward circuitry that seems to keep track of changing preferences.

In 1956, psychologist Jack Brehm published the results of a now-classic experiment in which he asked housewives to rate how much they wanted a bunch of household objects (his own wedding gifts, reportedly). After the women rated the items, they were asked to choose between items they'd found equally desirable--a toaster and a watch, for instance. Then, the women were asked to rate all of the household objects again. This time, they gave a higher rating to the objects they had chosen than they had the first time around; they also poooh-pooohed the ones they'd decided against.

Brehm concluded that the act of choosing had changed the women's preferences, perhaps because they were trying to rationalize their choices. But critics of this and subsequent similar studies have argued that choosing merely reveals preferences that were already there.

The new study suggests that there is truth in both interpretations. Cognitive neuroscientists Tali Sharot, Benedetto De Martino, and Raymond Dolan, all of University College London, used fMRI to monitor brain activity in 13 volunteers as they pondered various vacation destinations. Inside the scanner, the volunteers rated how happy it would make them to go to Greece, Thailand, and dozens of other vacation hot spots. Then, outside the scanner, they chose between pairs of places they'd rated equally. Activity in the caudate nucleus, a brain region linked in previous studies to anticipating future rewards, predicted their choices. Even though they'd assigned the same rating to both places in each pair, subjects consistently chose the place that elicited greater caudate activity in the initial scanning session, the researchers report online this week in *The Journal of Neuroscience*.

That finding supports the critics' claim that choices uncover preexisting preferences, says Laurie Santos, a psychologist at Yale University. But the second part of the study supports the contention by psychologists (Brehm and Santos among them) that choices can change preferences. When subjects got back in the scanner and rated the vacation destinations a second time, they exhibited even higher caudate activity for their chosen locations. "[The] fMRI data suggest that a person's choice both reveals a preexisting preference *and* shapes

future preferences," Santos says. "It's a lovely finding that actually clarifies a huge debate in the field."

As to why we have this tendency to update our preferences after making a decision, Sharot speculates that it may help us commit to our chosen course of action instead of wasting time dwelling on what might have been. So if you've chosen the Serengeti over the beaches of Brazil this year, it's time to study up on your megafauna and put your thong away.

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