

Slacking on your savings? Cognitive bias could be to blame

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Despite working hard, Americans are notoriously poor at saving money. The average American working-age couple has saved only \$5,000 for retirement, while 43 percent of working-age families have no retirement

savings at all, according to a 2016 analysis of a Federal Reserve survey.

A new study by Cornell University neuroscientists suggests that, to some degree, we can blame limited savings on our brains in addition to our bills. According to the study, humans have a [cognitive bias](#) toward earning, which makes us unconsciously spend more brain power on earning than on saving. The cognitive bias is so powerful that it can even warp our sense of time.

"Fundamentally it comes down to this: saving is less valuable to our brains, which devote less attentional resources to it," said study co-author Adam Anderson, associate professor of [human development](#). "It's more than a financial problem of making ends meet. Our brains find saving more difficult to attend to."

The paper, "Differential temporal salience of earning and saving," was published July 20 in *Nature Communications*. Co-author Eve De Rosa is an associate professor of human development and Kesong Hu, a postdoctoral fellow in Anderson and De Rosa's Affect and Cognition Lab, is lead author.

In the study, the researchers created their own experiment in which individuals could earn or save money by responding to how different colors signified these opportunities. They also gave study participants a timing perception task with these same colors, measuring how quickly they processed colors as an implicit index of the potency of earning and saving for the brain.

In the first experiment, 87.5 percent of the participants earned more than they saved. And 75 percent developed warped temporal perceptions of the colors. They reported seeing earning colors appear on the computer screen first when, in fact, the savings colors did. In subsequent experiments, this temporal bias occurred even when [color](#) associations

with earning or saving were hidden and likely unconscious. The researchers have termed this bias "savings posteriority."

"Even without bills to pay, our brains put a thumb on the scales, making it easier for us to earn than save," Anderson said. "Saving is so devalued and unattended that we perceive events associated with saving as occurring later in time," De Rosa said.

The warped time perception may or may not be a mechanism for the cognitive bias to earn more than save, Anderson said. "At a minimum, it's an indication of how strong this bias is, that it can even warp our perception of time," he said. "Imagine what it could do to our bank accounts."

Even when the researchers changed the economic task to ensure study participants received an equal amount of earnings and savings, the temporal bias persisted. And the bias against saving occurred whether researchers defined saving as preventing the loss of what the participants already earned or as putting away money for future use. Either way, the results were the same: earning beat saving.

The researchers note that those who want to save more could start by trying attentional retraining—that is, practice paying attention to saving. The benefit is not so much in the everyday cash value of what one saves; it's in building the brain's capacity to pay attention to saving, which, like money in the bank, will increase over time.

"It's practicing attention and intention to save, to strengthen the value of it for your brain. It's not the amount of dollars that matters," Anderson said. Added De Rosa: "And you'll probably see other avenues and opportunities as your brain learns to value saving."

More information: Kesong Hu et al, Differential temporal salience of

earning and saving, *Nature Communications* (2018). DOI: [10.1038/s41467-018-05201-9](https://doi.org/10.1038/s41467-018-05201-9)

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