

## SCIENCE

# Why Big Liars Often Start Out as Small Ones

By ERICA GOODE OCT. 24, 2016

People who tell small, self-serving lies are likely to progress to bigger falsehoods, and over time, the brain appears to adapt to the dishonesty, according to a new study.

The finding, the researchers said, provides evidence for the “slippery slope” sometimes described by wayward politicians, corrupt financiers, unfaithful spouses and others in explaining their misconduct.

“They usually tell a story where they started small and got larger and larger, and then they suddenly found themselves committing quite severe acts,” said Tali Sharot, an associate professor of cognitive neuroscience at University College London. She was a senior author of the study, published on Monday in the journal *Nature Neuroscience*.

Everyone lies once in a while, if only to make a friend feel better (“That dress looks great on you!”) or explain why an email went unanswered (“I never got it!”). Some people, of course, lie more than others.

But dishonesty has been difficult to study. Using brain scanners in a lab, researchers have sometimes instructed subjects to lie in order to see what their brains were doing. Dr. Sharot and her colleagues devised a situation that offered participants the chance to lie of their own free will, and gave them an incentive to do so.

A functional MRI scanning device monitored brain activity, with the researchers concentrating on the amygdala, an area associated with emotional

response.

Participants in the study were asked to advise a partner in another room about how many pennies were in a jar. When the subjects believed that lying about the amount of money was to their benefit, they were more inclined to dishonesty and their lies escalated over time. As lying increased, the response in the amygdala decreased. And the size of the decline from one trial to another predicted how much bigger a subject's next lie would be.

These findings suggested that the negative emotional signals initially associated with lying decrease as the brain becomes desensitized, Dr. Sharot said.

“Think about it like perfume,” she said. “You buy a new perfume, and it smells strongly. A few days later, it smells less. And a month later, you don't smell it at all.”

Functional imaging is a blunt instrument, and the meaning of fluctuations in brain activity is often difficult to interpret. Dr. Sharot agreed that the study could not determine exactly what type of response the decreased activity in the amygdala represented.

“We know for sure it's related to lying,” she said. “Whether it's their negative emotional reaction, that's only speculation, based on the parts of the brain we looked at.”

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But the researchers included numerous checks on the study's results and replicated some parts of it before publication. The research was led by Neil Garrett, a doctoral student at University College London at the time. Dan Ariely of Duke University and Stephanie C. Lazzaro of University College London were also authors of the report.

Christian Ruff, a professor of decision neuroscience at the University of Zurich, noted that in previous research, it had been “really, really difficult to characterize the neural processes that underlie purposeful lying.”

The new study, he said, provided one way of doing that, and showed the importance of considering the emotional component of dishonesty.

Amitai Shenhav, a psychologist at Brown University who has studied moral decision-making, also praised the study, calling it “nicely executed.”

He said the findings were “suggestive of a slippery slope.” But he added that it was still not entirely clear what was driving people down that slope.

For example, Dr. Shenhav said, it could be that the act of lying by itself increased the propensity for acting dishonestly, “like gradually pushing our foot off a brake.” Or that the subjects, who were not punished in any way for their dishonesty, concluded that lying in that environment was not so bad.

“We need to be cautious when generalizing to real-world dishonesty that is typically associated with threats of reprimand” or damage to someone's reputation, he said.

In the study, the subjects — 80 adults, most of them university students — were asked to help the unseen partner guess the number of pennies in the jar. The partner, the subject was told, would then tell the researchers the guess. (The partner was in reality a confederate of the scientists.)

In some cases, the subjects were given an incentive to lie: They were told that they would be paid more if their partners overestimated the money in the jar, and that the higher the overestimation, the more they would be paid. Their partners' payments, however, would depend on how accurate the estimates were.

In other cases, the participants were told that both they and their partners would be paid more for overestimating the number of pennies; still others were told that their payments depended on the accuracy of the estimates, while their partners would be paid more for overestimating.

Dr. Garrett said he hoped that the study could be repeated in other, more realistic settings, and that another study could be done to look at what might stop people from escalating their dishonesty.

“How do you stop it? How do you prevent it?” he asked.

But Dr. Ruff said that if the findings from this study held up, the message seemed clear.

“The implication is that we should watch out that we don’t tolerate lies, in order to prevent people from lying when it really matters,” he said.

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