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BEHAVIOURAL NEUROSCIENCE

Descending into dishonesty

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Anecdotally, a series of minor dishonest decisions can escalate and snowball into larger, more-severe acts of dishonesty. However, the neural mechanisms underlying this increase in dishonesty are not known. In a new study, Garrett, Sharot and colleagues provide empirical evidence for the escalation of dishonesty and show that reductions in the response of the amygdala to making a dishonest decision that benefits one's self predict the escalation of dishonesty in future decisions.

In each trial of the experiment, an individual (the 'advisor') was asked to advise another participant (the 'estimator'), who was played by a confederate of the researchers, in making an estimate about the sum of money in a glass jar of pennies. In a baseline block, the advisor was told that they and the estimator would both be rewarded according to the accuracy of the estimate. At the beginning of other blocks, however, the advisor was told that the rewards would be calculated according to one of several different incentive structures, but that the estimator was not aware of this change. These different reward structures were designed to examine 'self-serving' and 'other-serving' dishonesty in the advisor's advice to the estimator. In the self-harming–other-serving block, the advisor and the estimator would be penalized and rewarded, respectively, according to how much the estimator overestimated, whereas the reverse was true for the self-serving–other-harming block. With the self-serving–other-serving structure, both participants would be rewarded according to the extent by which the estimator overestimated the amount of money in the jar.

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The authors assessed the magnitude of dishonesty (measured in estimated pounds) in the advisors' responses over the course of each of the blocks. Strikingly, the extent of dishonesty increased with trial number only in blocks where dishonesty was self-serving, and the advisors' dishonesty was greater when it was self-serving than when it was self-harming. On average, the advisors' dishonesty started higher if it was self-serving than if it was self-harming, and was higher still if it was also other-serving. Interestingly, in a separate follow-up study in which self- or other-serving dishonesty was rewarded but did not affect the other or self, respectively, the authors found that dishonesty that was motivated by self-interest was larger and escalated over time, whereas other-serving dishonesty did not escalate. Thus, only self-serving dishonesty increases over time.

Some of the advisors performed the task while lying in a functional MRI (fMRI) scanner. The authors examined a region of interest that was defined by a neuroimaging database as being implicated in emotion; this region was mainly formed by the amygdala. Analysis of the advisors' responses revealed that the activity in the region of interest in response to the self-serving–other-harming, but not the self-harming–other-serving, condition became less sensitive to the magnitude of dishonesty over time. Thus, the amygdala response to dishonesty may adapt with repeated trials. Moreover, the reduction in fMRI signal in the amygdala per unit of dishonesty between a previous and a current trial predicted the increase in dishonesty between the current and the subsequent trial.

Together, these results show that dishonesty that is motivated by self-interest can escalate with repetition. The authors propose that this escalation may be attributable to an adaptation of the response in the amygdala to repeated dishonesty.

Natasha Bray

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