

## Evolution & Behaviour

# By default, people treat immoral actions as impossible

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Imagine that you're on the way to the airport to catch a flight, but your car breaks down on the side of the road. In this situation, some of the solutions you would immediately consider seem obvious: you might call a friend, hail a taxi, or find public transportation. Upon reflection, though, the number of possible solutions you could consider is infinite. In principle, you could consider everything from trying to fix your car by banging on it, to selling your car for a ride to the airport, to hijacking the next car that drives by, to attempting to levitate and fly to the airport.

When facing open-ended problems like this, humans seem to have an impressive capacity for focusing in on the small subset of solutions that are both likely to work and would be worth pursuing. What's more, we seem to be able to come up with these kinds of solutions quickly and seemingly automatically. All of this suggests that we have some default way of representing the possibilities that are relevant in a given situation. It's not as though each time we face a new problem, we begin by considering all of the things that are technically possible, and then proceed to rule out which of those are not feasible or would have negative consequences, until we are finally left with a small subset of options that would be good to pursue. Instead, we seem to start off by implicitly treating only a small subset of options as real possibilities.

While this kind of ability will likely feel familiar, it is still not well understood how such a default representation of possibility works. In fact, almost all the existing empirical research has focused on human's ability to reason explicitly and deliberately about what would be possible, and almost none has tried to investigate the default, implicit way that humans

think about possibilities. Recently, our studies (recently [published](#) in the *Proceedings of the National Academy of Sciences*) began to make some progress on this question.

Participants in these studies were asked to read short stories about people who face different problems (like one's car breaking down on the way to the airport) and were then asked to make judgments about what would be possible or impossible for a person to do in that situation. Half of participants were asked to make these judgments extremely quickly (1500ms), forcing them to rely on the default way they think about these possibilities. The other half of participants were allowed to reflect before answering and were given unlimited time to respond. Both groups were asked about the same set of 144 different possibilities, some of which were completely ordinary (like taking a taxi), other of which were physically impossible (like levitating and flying), and others of which were immoral (like hijacking a car) or irrational (like selling one's car for a ride to the airport). If you're interested, you can try out the study for yourself, [here](#).

Participants' responses were analyzed to ask how their representation of possibility changed when they had to answer quickly or had time to reflect. For the ordinary actions like taking a taxi, there was no real difference: people judged ordinary actions to be possible whether they answered quickly or had time to reflect. There was a striking difference, though, for immoral and irrational actions. When participants carefully reflected before answering, they *rarely* judged that it was impossible for someone to pursue immoral or irrational solutions. In contrast, when they had to answer quickly, participants judged that it was actually

impossible to pursue these solutions almost 40% of the time. In short, participants' default way of thinking about what was possible tended to treat immoral actions as impossible.

Stepping back from the details of this study, it may initially seem puzzling that we would implicitly treat immoral and irrational events as if they were impossible. However, one way of understanding why this would be is to notice that this kind of error might often be useful. In most situations, immoral and irrational actions will not actually be good solutions for the problems we face. Thus, a good shortcut for finding promising solutions among the infinite number of possible actions may be to only ever consider options that are both physically viable and also morally good. Most of the time, the rest of the possibilities can simply be ignored, as if they weren't even really possible.