

Researchers track eye movements to sway moral decisions

Altering the timing of a decision on the basis of gaze manipulates choices.

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Our choice between two moral options might be swayed by tracking our gaze, and asking for a decision at the right moment.

People asked to choose between two written moral statements tend to glance more often towards the option they favour, experimental psychologists say. More surprisingly, the scientists also claim it's possible to influence a moral choice: asking for an immediate decision as soon as someone happens to gaze at one statement primes them to choose that option.

It's well known that people tend to look more towards the option they are going to choose when they are choosing food from a menu, says Philip Pärnamets, a cognitive scientist from Lund University in Sweden. He wanted to see if that applied to moral reasoning as well. "Moral decisions have long been considered separately from general decision-making," he says. "I wanted to integrate them."

In a paper published today in the *Proceedings of the National Academy of Sciences*¹, Pärnamets and his colleagues explain how they presented volunteers with a series of moral statements, such as 'murder is sometimes justified,' 'masturbating with the aid of a willing animal is acceptable' and 'paying taxes is a good thing.' Then the psychologists tracked the volunteers' gaze as two options appeared on a screen. Once the tracker had determined that a person had spent at least 750 milliseconds looking at one answer and 250 milliseconds at the other, the screen changed to prompt them to make a decision. Almost 60% of the time, they chose the most viewed option — indicating, says Pärnamets, that eye gaze tracks an unfolding moral decision.

Next Pärnamets presented the same choices to a new group of participants. This time, the computer randomly selected one of the answers in advance. The volunteers were told to make their choice once the eye-gaze tracking equipment showed they had spent at least 750 milliseconds looking at that answer and at least 250 milliseconds looking at the other. Even when the volunteer happened to look at the other option for longer, this protocol ensured they would only be asked to make a decision when their gaze rested on the computer's choice. The responses were biased towards the randomly selected option, with it being chosen 58% of the time. Detailed analysis, says Pärnamets, showed that the answer the volunteer was looking at when a response was demanded had a strong influence on which option was chosen.

Though a final effect 8% higher than chance may seem small, Pärnamets says he wasn't expecting anything larger. "These are moral questions where your looking patterns shouldn't be playing a part in determining your decision to begin with," he says.

Real-life choices

But Patricia Churchland, a neurophilosopher at the University of California, San Diego, isn't sure that the laboratory experiment has much relevance to moral choices in real life. She objects to a basic assumption that underlies the experiment: namely, that people usually make moral decisions quickly, without taking time to reflect. This is a theory that has become popular among some psychologists, she says, but in her opinion the evidence for it is weak. Churchland also points out that in real life, people are generally not presented with written moral options to choose between.

Pärnamets, though, says he thinks the principles of eye gaze and a quick forced choice could apply to a moral decision outside the laboratory. Imagine you are walking with a friend to the theatre, he says, when you approach a homeless man asking for change. As you consider whether to give money, your eyes flick between the theatre and the man. Then your friend suddenly tugs your arm, asking you to hurry or you will be late. Could the direction and duration of your gaze influence what you decide?

The example may seem contrived, but Churchland concedes that it is not too surprising that eye movement might be tied into the decision process. "You probably do pay more attention to the one you are likely to choose," she says.

But Churchland is still doubtful that the choices the study participants made in the laboratory were true reflections of moral reasoning, rather than split-second judgements made because the experimenter demanded a choice. One statement, for example, asserted: 'Moral rules are a bad guide to our moral behaviour since there are so many exceptions to them.' "There are people who discuss that for a whole semester!" Churchland says. "So it's no surprise to me that when people are asked to respond to that in less than three seconds, their answers are manipulable."

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References

1. Pärnamets, P. *et al. Proc. Natl Acad. Sci. USA* <http://dx.doi.org/10.1073/pnas.1415250112> (2015).

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The 3-second timeframe was imposed to keep the subjects from gaming the experiment rather than to properly model moral decision-making. The study begins by stating: "Moral cognition arises from the interplay between emotion and reason.." I don't see that 3 seconds allows a person's feeling brain to connect with their thinking brain to produce emotionally informed yet reasoned successive responses to a 98-question battery. If you force people to make snap judgments within an artificial environment, they may perform with instant conditioned or thinking brain answers, yes. But if the study's results really support the finding that "...moral choices are no different.." then deciding whether "One should never intentionally harm another person" is no different than a "top of the head" answer to "Is Denmark larger than Sweden?"

<http://surfaceyourrealfself.com/2015/04/01/can-you-give-emotional-yet-reasoned-responses-in-3-seconds-to-moral-questions-surfaceyourrealfself/>

