

# In moral behavior, (virtual) reality is something else altogether

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This is a burning car. Credit: SISSA

"Moral" psychology has traditionally been studied by subjecting individuals to moral dilemmas, that is, hypothetical choices regarding typically dangerous scenarios, but it has rarely been validated "in the field". This limitation may have led to systematic bias in hypotheses regarding the cognitive bases of moral judgements. A study relying on virtual reality has demonstrated that, in real situations, we might be far more "utilitarian" than believed so far.

The brakes of your car fail suddenly and on your path are five people who will certainly be hit and killed. You can steer, but if you do another pedestrian will find himself on your course. Just one. What do you do: do you take action and kill one person or do you do nothing and cause five people to die? This is an example of a "[moral dilemma](#)", the type of problem [cognitive psychologists](#) use for studying the cerebral foundations of moral behaviour. Obviously, such experiments can only be conducted in a hypothetical manner, and not "in the field", but could this limitation have led cognitive psychologists to incorrect theoretical interpretations? An alternative to "real" reality is virtual reality: a group of researchers, including Indrajeet Patil, Carlotta Cogoni and Giorgia Silani of SISSA (the International School for Advanced Studies in Trieste), in collaboration with the Human-Computer Interaction Laboratory of the University of Udine, has carried out experiments involving virtual reality and found that human behaviour might be very different from what is seen in conventional tests relying on moral dilemmas.

In fact, with virtual reality the subjects' behaviour appears to be far more utilitarian than expressed in hypothetical judgements: "in tests with virtual reality people are far more likely to choose to steer and kill only one person", explains Patil, the first author of the paper. "In classic moral dilemmas, that is, when the subjects are only required to express a judgement on what they would do, they are more likely to state that they would not take any voluntary action that would result in a person being killed".

"Our results suggest that caution is needed when using data from a single type of experiment. Clearly, in most cases it isn't possible to test the scenarios envisaged in the moral dilemmas in the real world, but virtual reality, although not completely replacing "real" reality, can in any case provide a valuable method to support research."

## More in detail ...



This is a lifting magnet. Credit: SISSA

In the experiments carried out by Patil and co-workers the same subjects took part in two experimental sessions. In one they responded to hypothetical moral dilemmas presented to them in text format. In another they had to make immediate decisions (press a button to steer the car or do nothing) in the same situations as represented in virtual reality.

Data were also collected on the subjects' level of [emotional arousal](#) by recording electrodermal activity, the electrical activity of the skin.



This is a train. Credit: SISSA

"The measurements of the subjects' emotional arousal during the experiments suggest that when arousal is greater – in a [virtual reality](#) setting, which is closer to a real-life situation – the subjects respond in a utilitarian manner, that is, they choose to take action to save the greatest number of people. In a hypothetical and therefore less emotionally charged setting, the type of response was 'deontological': the moral aspect of the action was assessed independently from the practical consequences of that action. Voluntarily killing a person was considered unacceptable". As a result, when faced with moral situations in real life we may take decisions that are morally at variance from our ethical convictions.

Provided by International School of Advanced Studies (SISSA)

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