

Motivation through punishment

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Scolding does not necessarily cause a change of behaviour as researchers at the Institute of Psychology of the University of Würzburg have found. Credit: University of Würzburg

The goal of punishment usually is to stop undesirable behaviour. But in fact, punishment may also have a facilitative to motivating effect, as researchers at the Institute of Psychology of the University of Würzburg have found.

Parents scold their children to correct their [behaviour](#), hoping that their offspring will discontinue their misbehaviour as a result. Paradoxically, this kind of [punishment](#) can have the opposite effect. Professor Andreas Eder at the Institute of General Psychology of the University of Würzburg made this discovery during a research project. He has now published his findings in the *Journal of Experimental Psychology: General*.

Electric shock as punishment

The team of project leader Eder asked test participants to complete a simple task. A number would flash up on a screen. "The participants had to decide whether the number is greater than or smaller than five," the scientist explains. They had to communicate their decision by hitting a key—the left key was for values from one to four and the right key for six to nine.

But previously, the participants had learned that

when pressing one of the two keys, they would receive a slightly painful electric shock. "They had come to expect discomfort when hitting this key," Eder says. The scientists assumed that the participants would press the shock-delivering key more slowly.

Surprisingly, the exact opposite was the case. The participants pressed the pain-inducing key even more quickly than before. The scientists were taken aback by this outcome; apparently, punishment alone is not sufficient to stop undesirable behaviour. The scientists assumed that the rapid pressing was caused by heightened arousal. "It could have been that the participants wanted to get the pain over with quickly and would therefore press it more rapidly because they were afraid," Eder says.

But another experiment showed that physical arousal is not responsible for the effect. "Again, the participants were asked to solve the task. Again there were two keys: one causing a weak [electric shock](#), the other delivering a rather strong one."

It turned out that the participants pressed the key more quickly only when this was followed by a weak shock. There was no facilitative effect upon receiving a strong [shock](#), despite the fact that the person was more aroused by the latter. So increased arousal is not a plausible explanation for the effect. Then why did the participants expose themselves to the pain more quickly?

"We were able to show that punishment alone does not automatically suppress the punished behaviour," Eder says. Instead, it can even facilitate the punished behaviour when applied regularly. "That is the case when the punitive stimulus is used as feedback to control behaviour." So if it is about the consequence of the behaviour which is anticipated before pressing the key, it should also be possible to induce the reaction facilitation using a neutral stimulus. "A vibration should suffice in that case," Eder says. This assumption was confirmed in further experiments.

Put more simply: The brain uses behavioural consequences to trigger an action more easily, even if the consequences are disagreeable.

The type of punishment is decisive

The psychologist says, "It is not that punishment does not work generally. But it does not always cause the behaviour to be suppressed." This seems to be the case even when the [participants](#) know that something unpleasant will follow. A paradoxical facilitative [effect](#) of punishment is likely if there is no alternative to the punished behaviour in a situation when an action needs to be taken quickly and the punishment is rather mild.

In the case of children, therefore, it is important also to give clear feedback for the desired behaviour as an orientation for the child. Because the child can only learn to stop undesirable behaviour when there is a clear alternative to the problematic behaviour. Everyday educational practices should focus on pointing out these alternatives to the child.

More information: Andreas B. Eder et al, Shocking Action: Facilitative Effects of Punishing Electric Shocks on Action Control., *Journal of Experimental Psychology: General* (2017). [DOI: 10.1037/xge0000332](#)

Provided by University of Würzburg

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