

Dow Jones Reprints: This copy is for your personal, non-commercial use only. To order presentation-ready copies for distribution to your colleagues, clients or customers, use the Order Reprints tool at the bottom of any article or visit www.djreprints.com

• [See a sample reprint in PDF format.](#) • [Order a reprint of this article now](#)

MIND AND MATTER: ROBERT M. SAPOLSKY

What Drives Us to Do the Right Thing?

A Look at Recent Brain Research on Voluntary Giving Versus Avoiding Punishment

By ROBERT M. SAPOLSKY



Jan. 2, 2014 10:43 a.m. ET

Consider your average preschool, which ends each day with parents picking up their kids. But there's a problem: A handful of parents are habitually late. The school sends out a note, urging timeliness: "Please be considerate of our wonderful staff who, after a long day of caring for your kids, are tired and want to go home," etc.

This works with some parents, but there are still chronic offenders. The school finally becomes punitive. Parents who are late start getting a fine added to the tuition bill. What happens? Against all seeming logic, the incidence of tardiness increases.



Parents who are perpetually late to pick up their kids from preschool might face fines added to the tuition bill, but the punishment doesn't seem to curb their behavior. *Getty Images*

I've seen the equivalent in the academic world. Faculty do certain chores spontaneously because they are good departmental citizens. Some do lots, others are slackers, but things get done. Then an administrator pronounces that this voluntary act is now required X times a year. The slackers that had been doing less than X now do the required X. But those who used to do more than X shift to X as well.

These paradoxical effects occur because introducing punishment re-categorizes the behavior. An act that once made you a mensch now makes you an administration toady. When an authoritarian hand imposes a floor of "at least," recipients of the edict often turn it into a ceiling of "at most." Show up late at the preschool before the era of fines and you were being inconsiderate. Show up late now and you're just incurring another preschool expense.

It turns out that doing the right thing voluntarily is very different from doing it to avoid punishment. Recent research even reveals a basis in the brain for this distinction.

In one experiment, a participant in an economic game is given money. In the first round, she chooses whether to share any of it with another anonymous participant. In the second, she makes the same choice knowing that the other player can punish her afterward if he is unhappy. No surprise, the amount shared increases, and the magnitude of that increase indicates the extent of "sanction-induced norm compliance."



Prior brain imaging work had shown that such compliance was associated with increased activity in a brain region called the right lateral prefrontal cortex (rLPFC). This was truly interesting, given that the prefrontal cortex is involved in impulse control and gratification postponement.

But this was only a correlation between rLPFC activation and sanction-induced norm compliance. Reporting in the journal *Science*, researchers from the University of Zurich took things a step further, actually controlling activity in the rLPFC by using transcranial direct current stimulation. Depending on the polarity of the current used, they could either activate or inhibit the brain region with the flick of a switch.

When they activated the rLPFC in subjects, sanction-induced norm compliance increased; when they inhibited the rLPFC, the opposite occurred. Altering rLPFC activity didn't change how punitive participants anticipated the other player would be in response to their offer; it simply changed their degree of compliance to the threat of punishment.

The researchers also were able to demonstrate that this was a social act. Manipulating the rLPFC didn't change behavior when people played against a



Yarek Waszul

computer "preprogrammed to respond in the same way as a human."

What about voluntary giving? The preschool scenario suggests it wouldn't be increased by rLPFC stimulation. Different neural circuitry would be involved. Critically, not only did stimulating the rLPFC not increase voluntary sharing; it decreased it (and, conversely, inhibiting the rLPFC increased it).

Einstein once said that you can't simultaneously prepare for war and peace. There's something analogous here. This key brain region can't simultaneously prompt you to do the right thing because it's the right thing and because otherwise you're going to get your butt kicked.

Copyright 2013 Dow Jones & Company, Inc. All Rights Reserved

This copy is for your personal, non-commercial use only. Distribution and use of this material are governed by our [Subscriber Agreement](#) and by copyright law. For non-personal use or to order multiple copies, please contact Dow Jones Reprints at 1-800-843-0008 or visit www.djreprints.com