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18 COGNITIVE SCIENCES

Children

18 The Upside of Sharing

Even if stressed-out parents may not fully agree: Children are born helpers. Even infants are surprisingly cooperative and willing to share, as researchers at the Max Planck Institute for Evolutionary Anthropology in Leipzig have now shown. Humans evidently have a natural propensity for helpfulness – quite unlike our closest relatives, the chimpanzees.

26 Letter by Letter

Children learn to speak almost effortlessly, even in multiple languages. But why are reading and writing often so difficult, even despite years of instruction? Scientists at the Max Planck Institute for Human Development in Berlin are investigating this question. Their findings provide important starting points for systematically supporting children with reading difficulties.

34 Take a Bite or Resist?

From a very early age, children exhibit a remarkable sense of fairness and justice. The older they get, the more they develop such social skills as compassion and empathy. Researchers at the Max Planck Institute for Human Cognitive and Brain Sciences in Leipzig are analyzing how the social behavior of children develops, and which regions of the brain play a role in this.

ON THE COVER Resisting a sweet temptation is hard even for most adults. Children will grab one of their favorite cookies much faster if the plate is within reach. We aren't born with the ability to control impulses – it must be developed over time. Researchers are taking a closer look at children's behavior.

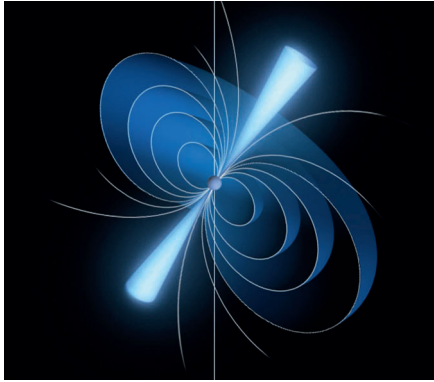
12 Taken in: Microloans are usually of little benefit to the poor and of far more to the banks.

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VIEWPOINT

- 12 **Failing by Installment**
With the financial markets broadening their international reach, there was hope that microcredit might alleviate poverty and lead to the emancipation of women in the "global South." Sadly, however, there are no indications that microfinance has had a positive effect. Can we use debt to create more social justice?



48 Sent out: Pulsars are rotating neutron stars that emit bright cones of light from their magnetic poles.



56 Warded off: Stefan H.E. Kaufmann has devoted his life as a researcher to the fight against tuberculosis.



72 Stored up: Wetlands such as those in Scotland store large amounts of carbon.

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- 48** **How Cosmic Clocks Tick**
Pulsars are the most compact material objects in the universe. Their diameter is approximately equal to that of the city of Munich, but they contain the mass of the Sun. These extreme conditions make them ideal test objects for the theory of general relativity.

BIOLOGY & MEDICINE

- 56** **In the Shadow of Tuberculosis**
Personal Portrait:
Stefan H. E. Kaufmann

MATERIAL & TECHNOLOGY

- 64** **A Slippery Slope for Every Drop**
The research being undertaken by the scientists at the Max Planck Institute for Polymer Research in Mainz could not only put an end to the annoying smears on window panes, it could also make it possible to produce self-cleaning solar panels or even more effective heart-lung machines.

ENVIRONMENT & CLIMATE

- 72** **The Perpetual Pump**
The hydrological cycle tirelessly distributes water between land, ocean, atmosphere and cryosphere. Researchers at the Max Planck Institute for Meteorology in Hamburg study the exact details of how this happens and which feedback mechanisms play a role.

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