

Even scientists look for purpose in nature, study finds

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(Medical Xpress)—A team of researchers in Boston University's Psychology Department have found that, despite years of scientific training, even professional chemists, geologists, and physicists from major universities such as Harvard, MIT, and Yale cannot escape a deep-seated belief that natural phenomena exist for a purpose.

Although purpose-based "teleological" explanations are often found in religion, such as in creationist accounts of the earth's origins, they are generally discredited in science. When physical scientists have time to ruminate about the reasons why natural objects and events occur, they explicitly reject teleological accounts, instead favoring causal, more mechanical explanations.

However, the study by lead author Deborah Kelemen, associate professor of psychology, and collaborators Joshua Rottman and Rebecca Seston finds that when scientists are required to think under [time pressure](#), an underlying tendency to find purpose in nature is revealed. The results provide the strongest evidence yet that the human mind has a robust default preference for purpose-based explanation that persists from early in development.

The study is published online in the October edition of the [Journal of Experimental Psychology: General](#) (published by the [American Psychological Association](#)).

To test the hypothesis that there is a natural preference for teleological

explanations, the researchers asked a group of physical scientists from top-ranked [American universities](#) to judge explanations such as "Trees produce oxygen so that animals can breathe" or "The Earth has an [ozone layer](#) in order to protect it from UV light" under speeded conditions so they had little time to reflect on their answers. Another group of scientists made judgments of the same statements without any time restriction. The researchers found that, despite maintaining high accuracy on control items, scientists who were under time pressure demonstrated greater acceptance of scientifically unwarranted purpose-based explanations than their un-speeded colleagues who generally rejected them. This same pattern of heightened purpose-orientation also held among two control groups—undergraduates and college graduates from the local community in the same age cohort as the scientists—although the scientists' overall endorsement of inaccurate purpose-based explanations was lower by comparison.

In a second test, the researchers found that despite their years of scientific training, chemists, [geologists](#), and physicists showed no less of a purpose bias than English and history professors whose science knowledge was substantially lower.

Provided by Boston University

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