The truth we'll doubt: Does the "decline effect" [analyzed by Lehrer] mean that all science is "truthy"?

By John Horgan, Scientific American, Dec 13, 2010

http://ww.scientificamerican.com/blog/post.cfm?id=the-truth-well-doubt-does-the-decli-2010-12-13

Why does Lehrer's article [immediately above] make me uneasy?

First of all, early on he seems to suggest that the decline effect reflects changes in the phenomenon being measured, which is what Rhine meant by the term; only gradually does Lehrer make it clear that he attributes the effect to reporting bias. Some readers might still conclude that Lehrer is talking about an objective rather than subjective phenomenon; a colleague of mine was left with this impression after hearing Lehrer discuss "The Truth Wears Off" on National Public Radio. Moreover, Lehrer too quickly rules out fraud, especially in the case of reporting on drug trials, where the financial stakes are huge; he attributes the decline effect to "subtle omissions and unconscious misperceptions, as researchers struggle to make sense of their results."

But these are quibbles. My main complaint is that Lehrer makes science as a whole sound much "truthier" than it really is. His article was first pointed out to me by my friend Valerie, who believes in homeopathy and tarot cards. The article confirmed her suspicions that mainstream science and medicine may not be based on evidence any more solid than her supposedly (and IMHO, actually—sorry, Valerie) pseudoscientific beliefs. Lehrer's broad-brush critique will no doubt also cheer global-warming deniers, creationists, postmodernists and other pesky challengers of scientific orthodoxy.

Lehrer himself seems to have realized that he went too far. On his blog *The Frontal Cortex*, he dismisses the notion that "The Truth Wears Off" implicitly undermines the status of the theory of evolution by natural selection and global warming, which are "two of the most robust and widely tested theories of modern science." He also denies that he is "some sort of Derridean postmodernist, trying to turn publication bias into an excuse to not believe in anything."

But here is how Lehrer ends his article: "Just because an idea is true doesn't mean it can be proved. And just because an idea can be proved doesn't mean it's true. When the experiments are done, we still have to choose what to believe." This assertion is absurd. We may choose to believe in psychoanalysis rather than behaviorism, because both are equally flimsy. But the evidence is rock-solid for quantum mechanics, general relativity, the germ theory of infectious disease, the genetic code and many other building blocks of scientific knowledge, which have yielded applications that have transformed our world. There's nothing truthy about a hydrogen bomb.

If Lehrer didn't really mean that belief in a given scientific claim is always a matter of choice, why did he say it? He apparently decided, like many scientists, that truthiness would make a bigger splash than truth.