Why do some people resist science?

Deena Skolnick Weisberg and Paul Bloom think they know

Many people hold beliefs that clash with science, such as the efficacy of unproven medical interventions, the mystical nature of out-of-body experiences, and the legitimacy of astrology and ESP. The tenacity of these non-scientific beliefs is frustrating to many scientists, who wonder: Why do people believe these weird, unproven things?

Actually, this resistance to scientific ideas has a perfectly rational basis. Scientific facts are often themselves weird, because they contradict basic beliefs about the world that even children hold. For example, one year-olds know that objects will fall to the ground if unsupported. It is therefore difficult for them to understand that the Earth is round; if it were, the people and things on the other side should fall off. One reason that people resist science, then, is that science is often unintuitive.

But this does not fully explain adult resistance to science. After all, almost all of us eventually learn that the Earth is round, and we accept other strange scientific facts as well, like the fact that apparently solid objects are mostly empty space. So why are facts like these accepted while others, such as evolution, are not?

Trust in scientists

Not surprisingly, scientists will argue that a rational person should trust the scientists. We agree, but it’s worth noting that some skepticism toward scientific authority is clearly rational. Scientists have personal biases due to ego or ambition — just read any grant proposal. There are also political and moral biases, particularly in social science research dealing with contentious issues such as the long-term effects of being raised by gay parents or the explanation for gender differences in test scores. It would be naive to ignore all this, and someone who accepted all ‘scientific’ information would be a patsy.

People who disagree with what scientists have to say about social issues might reasonably infer that it is not safe to trust their statements in general.

But this rejection of science would be mistaken in the end. The community of scientists has a legitimate claim to trustworthiness that other social institutions, such as religions and political movements, lack. The structure of scientific inquiry involves procedures, such as experiments and open debate, that are strikingly successful at revealing truths about the world. All other things being equal, one is wise to trust a geologist about the age of the earth rather than a priest or a politician. One way to combat resistance to science, then, is to persuade children and adults that the institute of science is, for the most part, worthy of trust.

In sum, people will resist scientific claims when these claims clash with early emerging, intuitive expectations about the way the world works, and when these claims are contested within a society by people who are trusted. This is the current situation in the United States with regard to the central tenets of neuroscientific and unproven medical practices. People who are trained to detect fraud are more likely to be persuaded by trusted religious and political authorities. Hence these are among the domains where resistance to science is the strongest.

Deena Skolnick Weisberg
is a doctoral candidate in psychology at Yale University
deeana.wisberg@yale.edu

Dr Paul Bloom
is a Professor of psychology at Yale University
Paul.bloom@yale.edu