THE RETURN OF SUPERSTITION

In the days of Galileo and Bacon, science began replacing mankind’s acceptance of magic with an understanding of cause and effect and a belief in a mechanistic universe. The scientist’s procedures have replaced the rituals of the priest or the king’s sorcerer.

But traditions and beliefs die hard. Perhaps the efforts of the learned to educate the superstitious were seen as arrogance. In any case, a substantial portion of the people never did give up their beliefs in magic—that effects can result from causes that appear completely unrelated—and now these people are having their say. They seem to take great delight in proclaiming that science is short-sighted, narrow-minded, with entrenched faulty ideas, and oblivious to the “obvious” truths of the universe. Those truths are, of course, those of astrology, witchcraft, the ancient eastern philosophies, and all the related occult “sciences.” Although many people are caught up in this antiscience backlash, we might ignore it all and go about our business of seeking and teaching truth, except that much of modern superstition is presented as pseudoscience, and now and again it might even include some unrecognized truth.

Consider a few reports from the botanical sciences (many are discussed in The Secret Life of Plants by Peter Tompkins and Christopher Bird. 1973. Harper and Row. 402 pp.). We are told that seeds will germinate and grow luxuriantly in response to prayer but wither when cursed, or the physical sciences (e.g., an "aura" that can be seen and photographed using suitable electronic equipment. But the really great "discovery" is that plants have emotions and are even capable of extrasensory perception (reading humans' minds—as if sensory perception in plants wouldn't be startling enough). "Lie detectors" attached to plants register violent motions of the pens in response to threats of death—or to the joys of lovemaking by the plant’s "master" who is 80 years old! Equally wild things are happening in other fields of biology (e.g., "faith healers" in the Philippines gently separate the muscles of their "patients" with their bare hands and remove ectoplasmic globs of the substance that caused the illness), or the physical sciences (e.g., an inventor demonstrates an electric motor that consumes virtually no power).

What can we do about all this? We can preach passionate sermons about what is absolutely impossible. That is, we can exactly live up to what the pseudoscientists, the mediums, the channels, the gurus, and all the other sorcerers say about us. We can prove that we know the answers before we’ve heard the questions or seen the evidence, that we really do believe that we have the universe all doped out—that we can categorically state what is possible and what is not, under any circumstances. We can show that our minds really are closed.

But that only intensifies the opposition and fails to seize the opportunity; worse yet, it misses the point. The issue concerns the relationship between the known and the unknown and how one searches for truth. When confronted with some wild tale, we must keep our cool and demonstrate what science really is. We must insist upon rigorous controls and truly objective data. We must never draw unwarranted conclusions; if we are unable to disprove conclusively some phenomenon, then we must not categorically state that it is impossible. We must stick to the facts and control our prejudices and feelings. But it is valid and essential for us to outline what is known and what can be inferred or even guessed about the unknown, although we must always be clear about what we are inferring or guessing. I can't yet prove, for example, that plants don't react to sound—one can imagine how sound waves might act on cellular organelles—and the "aura" seems to be a special case of corona discharge. That is the spirit of science. But the spirit of science is also an insistence upon proper controls, accurate and objective observations, and valid logic. And it's the lack of these things that characterizes pseudoscience or quackery.

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April 1974