

# The Quest for Truth

Dick Bagby, February 28, 2010

Every Sunday, we repeat a few phrases, one of which is “the quest for truth is our sacrament.” As we repeat our affirmation, we don’t necessarily think too much about what we’re saying, and perhaps those words don’t mean exactly what we think. For instance, it would be easy to get the idea that a reverence for the truth is one of our highest values. But that’s not the point at all. If we’re serious about the quest for truth, we must be prepared to challenge established truths, and we’re not likely to challenge what we revere.

History is full of examples where the quest for truth has entailed a significant risk. For example, consider one of our Unitarian forbears, Michael Servetus, who was one of the most brilliant and original thinkers of the 16<sup>th</sup> century. He was a physician, theologian, and humanist, among other pursuits; he is credited with being the first European to correctly describe the function of pulmonary circulation. He knew Latin, Greek, and Hebrew, and avidly studied the scripture in the earliest available manuscripts. He became convinced that the doctrine of the trinity was not based in the original scriptures, but had been added by Greek philosophers, and he saw it as a fundamental obstacle to bringing Jews and Muslims into the Catholic faith. He was living in Spain at the time, where the church and the monarchy were trying to stamp out religious pluralism, so he felt that he was really onto something important. He wrote a book, *On the Errors of the Trinity*, in which he made his case for the truth as he saw it. For his troubles, he was denounced as a heretic. Not content to merely upset the Catholic Church, he also took on John Calvin, and ridiculed his doctrine of predestination, which held that some lucky people were chosen by God to receive salvation through Christ, but the rest were condemned to hell, in spite of any virtues they might have. Calvin had him burned at the stake.

Another famous example of the risks of seeking the truth is the life of Galileo Galilei, who had the temerity to announce that he could prove that the earth orbited the sun, rather than vice versa. This contradicted church doctrine; the book of Genesis was thought to teach that the earth and man, as God’s highest creations, occupied the center of the universe. He was imprisoned and threatened with death unless he renounced his heresy. Under this heavy threat, he yielded. But according to legend, as he was recanting at his trial he muttered under his breath, “but it really does go around the sun.”

Today we’re somewhat more civilized, and in this country at least we are not generally threatened with death for challenging an accepted truth. But those who dare to do so may still pay a significant price; promising careers can be cut short when one dares to push a contrarian view. For example, “everyone” knows that AIDS is caused by the HIV virus. But a once-noted retrovirus expert, Dr. Peter Duesberg of the University of California at Berkeley, began arguing otherwise shortly after Dr. Robert Gallo announced his discovery of an association between AIDS and HIV. Duesberg said that no one had put forth a plausible mechanism by which HIV caused AIDS. He thought it more likely that AIDS resulted from the combination of recreational drug use, especially amyl nitrate, which was being combined with risky sexual behavior. He later asserted that a significant portion of the ravages of AIDS was a side effect of the antiviral medications used to suppress HIV. His views did gain the support of the Nobel Prize-winning chemist Kary Mullis, but not of the broader scientific community. Mullis had won the prize for his creation of a process used in the study of DNA; it is one of the chief tools used track the evolution of various strains of HIV. Whether or not Duesberg is onto

something, it remains true that some who are infected with HIV never develop AIDS, and it used to be true that some who developed AIDS were in fact HIV negative. The diagnosis of AIDS no longer results the mere presence of opportunistic infections; it now requires an HIV infection. Thus there is no medical data keeping track of apparent AIDS cases in the HIV-negative population, making it much harder to challenge the established truth, and you don't hear much about Duesberg anymore, except for his being accused of contributing to thousands of deaths by convincing at least one African country to forgo the use of antiviral drugs for a few years.

More recently, there was an article, *Shots in the Dark*, in the November 2009 issue of *The Atlantic* that questioned the value of flu vaccinations. One scientist, Dr. Lisa Jackson, did an exhaustive examination of clinical data on flu and mortality. She reached the startling conclusion that virtually all of the benefits observed in the studies proving the benefits of vaccination could be attributed to bias in the methodology used. Here's what she observed. In any flu outbreak, some catch it and some don't, and many of those who get it don't develop a serious problem from it. This is true of both the vaccinated and unvaccinated populations, so that makes the effectiveness of the vaccines hard to test directly. Moreover, among those who get very sick from the flu and die, the proximate cause of death may be something else, like pneumonia, bronchitis, or heart problems that develop as a complication of the flu. So what the studies have done is to calculate the death rate from all causes for the vaccinated and unvaccinated populations during a flu outbreak; studies consistently show that the overall death rate is about 50% higher in the unvaccinated population. Proof enough; the vaccine is clearly saving lives. Except it isn't quite that simple, because even during the most severe flu outbreaks only about 10% of deaths are of people who have had the flu, so why is the death rate in the unvaccinated population so much higher? That elevated death rate for the unvaccinated population persists even for periods when there is no flu outbreak. Could it be that the higher death rate reflects nothing more than worse general health or less access to health care for the unvaccinated group?

There's another reason to question the usefulness of flu vaccines. They work by provoking an immune response to an antigen. They provoke such a response very well in healthy individuals with strong immune systems, but significantly less well in the elderly and infirm, whose immune systems are relatively compromised. Which group do you think is more in need of protection from influenza? Might there be a better use for the massive funding required to develop, produce, and administer the flu vaccines, and is the risk of adverse reactions from the vaccine worth taking?

These seem like questions that ought to be investigated, but the researchers asking these questions aren't finding many sympathetic ears in the medical community, and they're not able to pursue the testing needed to answer those questions definitively. They have become more or less pariahs. Apart from the difficulties in getting a favorable peer review for a project based on an unfashionable opinion, or in getting funding from the drug companies who have a financial interest in the status quo, a definitive test would involve a double-blind study with half of those tested receiving a placebo instead of a vaccine. But since the vaccines are known to save lives, such a test is considered unethical; the medical research canon forbids deliberately withholding a lifesaving treatment for research purposes. It's a real catch-22.

That's not to say that all contrarian scientists are heroes selflessly pursuing their search for truth, often to

the detriment of their careers. Some are outright frauds, some are operating under delusions, and some just have a plausible theory that doesn't capture enough of the truth to be worthwhile. I can't say which camps the scientists I've been talking about will wind up in, and maybe their advocacy of their views is indeed a distraction rather than a contribution. But sometimes the contrarians are right. Not too many years ago, the conventional wisdom was that breast cancer was best treated with an aggressive combination of surgery, radiation, and chemotherapy, even though these produced plenty of adverse consequences. But this program was known to save lives, so a controlled study to compare it to less aggressive treatments was out of the question. Eventually it was determined that the aggressive course of treatment should not be followed routinely; more conservative treatments were just as effective and didn't kill as many people.

I think the lesson is to honor the efforts of those who really are searching for the truth, whether or not we support their positions. Since we believe in the inherent worth and dignity of every person, we should assume they are sincere in what they say, unless we have a good reason to believe otherwise. But keep in mind the difference between an honest search for truth and advocacy of a particular position. It's very hard to see what you're not looking for. Here's an interesting quote from *Wolf Hall*, a recent historical novel by Hilary Mantel in which the conflict between Oliver Cromwell and Thomas More is central. Describing Cromwell, she writes

He never sees More---a star in another firmament, who acknowledges him with a grim nod---without wanting to ask him, what's wrong with you? Or what's wrong with me? Why does everything you know, and everything you've learned, confirm you in what you've believed before? Whereas in my case, what I grew up with, and what I thought I believed, is chipped away a little and a little, a fragment then a piece and then a piece more. With every month that passes, the corners are knocked off the certainties of this world, and the next world too.

Indeed, many who claim to be pursuing the truth are only seeking confirmation of what they believe. For example, here's a stinging criticism of scientists advocating intelligent design over Darwinian evolution: they never propose or perform tests that could refute their views, only looking for examples from nature that appear difficult for evolution to explain, and then looking for new examples as evolutionists knock down those challenges. The narrow-minded pursuit of an agenda is not what we're thinking about when we say "the quest for truth is our sacrament."

You don't have to be a scientist or a theologian to get into trouble while searching for the truth. Many of us have had the experience of straining relationships with friends and family when our search for truth has led us to question or reject religious or political dogma. Even if nobody threatens to burn us at the stake, the experience is generally unpleasant. But we're here today because we did not turn back. How could we do so and remain true to ourselves? Our quest for truth may well involve some sacrifices, and that's part of the reason why we honor it.

Apart from these external obstacles to pursuing truth, it's often not easy to recognize the truth when you're lucky enough to find it. To paraphrase the blind seer in *O Brother Where Art Thou?*, the truth you seek may not be the truth you find.

How can you tell if what you've found is the truth? If it feels right to you, then there is probably an underlying element of truth. But we are generally limited in what we can experience or imagine, so we have to get pretty lucky to come upon the entire truth about a subject. When the subject has a significant level of complexity, the truth we find is likely incomplete. We have a lot more in common with the blind men studying the elephant than we would like to admit.

Consider the history of physics. Physics is the simplest of the sciences in that it studies things at their most basic level, even though it may seem incomprehensible to many outside the discipline. In a sense, everything in nature is physics. Chemistry is determined by the physics of atoms and molecules, but it studies problems too complex to be studied by the deterministic methods of physics. Biology is the result of chemical processes that take place in living organisms, but the problems it studies are too complex to be studied by the methods of chemistry. Behavior is largely driven by biology, but the questions studied by behaviorists are too complex to be studied by the methods of biology.

The Greek philosophers believed that the only valid way to answer questions about physics was to reduce them to pure thought. Aristotle produced the theory of jubilant motion, which explained that falling objects fell faster as they neared the earth because they were excited about getting closer to their natural home. Lighter objects contained more of air or fire, whose home was not the earth, so of course the heavier objects fell faster. Galileo made careful observations of falling objects, and showed that Aristotle was wrong, but there was much he left unexplained. Isaac Newton came up with a general model of motion and gravity that was consistent with Galileo's observations and his model was so natural and logically compelling that it had to be the truth. Except that Einstein realized Newton had overlooked another fundamental principle that also had to be right: Nature has no preferred coordinate system, so a correct statement of the laws of physics must be valid in all of them, not just the ones Newton had considered. That led to the theory of relativity, which, while still believed to be true on a macroscopic level, does not explain what happens on a submicroscopic level. Quantum mechanics provides a little more of the truth about physics, but it brings in a disturbing corollary: one cannot know the true nature of things, and some phenomena are not entirely observable; the best one can do is to make calculations about what can be observed. This uncertainty rests on the principle that every observation requires an interaction, and consequently has an effect on what is being observed. That's a truth that has often been brought home to anthropologists attempting to study primitive societies. So the search for truth may not only be impossible to complete, it may alter the truth you hope to find.

What's to be made of all this? The quest for truth may be difficult or hazardous, and not necessarily fruitful, but it is still of fundamental value to us as UUs. How else can we be true to ourselves? It may be easy to join our church, but it's not all that easy to live up to its principles.