Some people might wonder what motivates a physics teacher to get up and talk about religion and world issues. I am not a professional political scientist or sociologist or theologian. But I am a concerned citizen and a thinking person. To be a scientist does not mean you have to be a one-dimensional person out of touch with life beyond the lab. Physics used to be called natural philosophy. It is a branch of philosophy in that it is part of the quest for truth. The same thing that motivates me to ponder the true nature of the physical world leads me to explore other realms as well.

On another level, I am concerned with political and religious issues because science is not conducted in an ivory tower. I have to come to grips with the fact that one of the largest employers of scientists and engineers is the defense industry. There are social consequences to what we do. I feel it is my responsibility as a physics teacher to help you become not only technically proficient, but also a thinking, caring person who will not automatically sell your talents to the highest bidder.

Enough introduction. What I want to talk about today is the search for truth. First, I encourage you to think. Most people don't think. They listen to people they think they can trust and then they believe what they are told. That's why propaganda works so efficiently. When I encourage you to think I am being a subversive. Socrates encouraged his followers to think, and he was accused of corrupting the youth. The reason is pretty clear. When you think for yourself you may come out with answers that deviate from the accepted truths of society around you. It means a lot of people are going to be upset with you.

When it comes to thinking, there is a word you need to understand, and that is "Orthodoxy." This world is full of orthodoxies, both in religion and in other fields. Orthodoxy literally means "right thinking." Orthodoxy places a high premium on holding to the truth, and in that sense it is good. But there is a paradox here. Orthodoxy can intimidate or punish those who actually have the highest commitment to truth: the critical thinkers who risk falling into heresy by pushing the search for truth into new regions or critically analyzing, and possibly rejecting, the accepted truths of the past. True orthodoxy, if it really values truth, must prefer heretical ideas over unexamined ideas. One must not be afraid of heresy and error or one would never leave home base. Orthodoxy represents the accumulated wisdom of generations, and thus it is foolish to dismiss it lightly. But truth is not static. Our knowledge is partial and uncertain. Truth does not come handed to us on a platter.

Some people imagine they have an infallible book with the ultimate truth written in it. Even if this were so, the problem is, as soon as you read the book you pass that ultimate truth through the filter of a fallible mind. A fallible mind can't even recognize the ultimate truth when it is presented on a silver platter. For Christians, this is part of the meaning and symbolism of the crucifixion of Christ. God became man and we killed him. Those who were most certain in their knowledge of "The Truth" were the ones who lead the cheering section. I am not making scapegoats here. We crucify
God even today in a thousand ways. Salvation cannot consist in having correct ideas or no one would be saved.

We show up on this planet and look around and wonder who the heck we are and what the world is all about. Coming to the truth involves a search. Everyone out there you turn to for answers is a searcher as well. This is not to discourage you. Take it from me, a fellow searcher: I believe there are glimpses of the truth to be had out there.

Another key word is conservatism. What do people mean when they talk about conservatism? I am really a pretty conservative guy. I am married to the woman I live with, I work for a living, I don't have purple hair or wear an earring in my ear. Many of my ideas are pretty conservative too. I grew up in a Republican, family that attended a very conservative Protestant church. I never went through a massive teenage rebellion where I threw out all that my parents believed and started from scratch. A lot of my ideas are different now, but I got from there to here along an evolutionary path of small, incremental changes in my thinking as I was exposed to new ideas and new experiences.

Conservatism is most often associated with political ideas. I find it ironic that political conservatives seem to be the most prone to wave flags and indulge in the symbolism and rhetoric of the American Revolution, while putting down revolutions wherever they crop up in the world. It seems to me that true conservatism in America should mean retaining the spirit that inspired the revolution, not empire building around the world. I don't see true conservatism in America today; I see greed.

The basic idea behind conservatism is that it is good to stay connected to your roots. One area that is very conservative in its very nature is science. Isaac Newton would never have arrived at his law of gravitation if he had not built upon what Kepler and Copernicus and Galileo had achieved before him. He said that if he saw farther than other men it was because he stood on the shoulders of giants. In other words his ideas were rooted in the accumulated knowledge of his day. Science that has no roots is pseudo science.

There is another word that also deals with the concept of roots, and that is radicalism. "Radical" literally means to go to the root. Science also offers examples of radical changes in thought. Copernicus shifted the center of the universe from the earth to the sun. That's a pretty radical shift in thinking. Instead of two separate realms, the earth down here and the heavens up there, the earth became a heavenly body and the heavenly bodies became other worlds. Interestingly enough, the more scholars study the process by which Copernicus came up with this radical idea, the more they are impressed with the conservatism that lay behind it. The real reason Copernicus rejected the planetary theories of his day was that with all the complications added to improve the accuracy of computations, the theory was getting too far from the roots established by Aristotle. By cutting through all the frills, searching for the real fundamentals of planetary science, in the manner of a true conservative, he adjusted one of the foundation ideas and came to be seen as a radical thinker. The ideas he proposed spawned what has become known as the Copernican Revolution.

True conservatism and true radicalism have a lot in common. Neither is the province of shallow thinking. To find ones roots, whether to preserve them or to criticize them, requires one to cut
through all the underbrush of conventional ideas that hide them. Often, as in the case of Copernicus, the true conservative and the true radical are one in the same person.

There is one final word I want to call your attention to: Lies. People lie. People in power lie BIG. This sounds harsh, but it is real. People who lie believe they are justified in lying, otherwise lying would be very hard. They see lying as part of what they have to do to accomplish some worthy purpose. Most of us, with our limited ambitions, are comfortable only with small lies, but those who have the most sweeping and wonderful plans have learned to use the Big Lie.

I am very concerned about the times we are living in because people are more willing to listen to lies than to learn the truth. The biggest lies today, are committed in the name of the noblest purpose: "national security". The problem is that lies destroy human community and the prospect of true democracy. Lies may protect us, but they destroy us at the core leaving nothing worth protecting.

John Stockwell, a high ranking CIA officer who dropped out and went public because of his conscience, says 1/3 of the people working under him were "propagandists." They spent time fabricating outright lies to feed into the U.S. press and the briefings of political figures who would be quoted in the press. Most of us look for biases in the news, but we generally don't expect outright lies.

Look at the labels that are used to shape our thinking in the media. We may as well start at the top of the list with "Disinformation." Lies aren't disinformation, they are lies! Calling it disinformation is a pitiful attempt to avoid the truth; hence the term itself is a lie.

"Terrorism" is used by the administration and the media to apply to desperate violent acts of relatively powerless groups, often in response to a documented history of injustice. On the other hand, the reign of terror of a non-communist dictator, using disappearances and torture, resulting in the deaths of tens of thousands of people is referred to simply as counterinsurgency.

"Humanitarian Aid" is a lie in broad daylight for all who are willing to see, when it refers to money given to a mercenary army of our own making, administered by the CIA with little or no accountability for how it is spent.

We use the concept of "outlaw states" for countries like Libia, that support "terrorists". The system of international law, established through a long history of treaties and applied even to individuals at Nuremberg, is what gives meaning to the concept of an "outlaw state". All this is set aside, however, when we sponsor mercenaries to mine roads and harbors, destroy crops, assassinate civilian leaders, recruit an army by kidnapping civilians, with the intent of overthrowing a legitimate government not of our liking. When Nicaragua took its case to the World Court, we declared ourselves above the law, knowing that the verdict would come out against us.

We tell ourselves that we are the last bastion of human rights in an evil world, yet we refuse to vote for resolutions in the United Nations condemning the use of torture and genocide for fear they might be applied against us and our allies.
The biggest lie of all is nuclear defense. Nuclear weapons cannot defend us, or anyone else. At 12 Hiroshimas per second it would take 12 hours to use up the world's supply of nuclear weapons. The destruction of all life on earth outweighs the ephemeral interests of any modern nation state. The use or even the threatened use of nuclear weapons is an offense against creation and the God of creation. Sacrificing life on earth for any human purpose is the ultimate act of idolatry.

Is there hope for truth in a world where people are more concerned with orthodoxy than the search for truth, where laziness, greed and maintenance of power masquerade as conservatism, where radicalism is considered dangerous and subversive, where people in power lie boldly and the people of the world's largest democracy abdicate their power by remaining willfully ignorant?

Truth involves not only a search but also a struggle. What can I say? Is there hope? I hope so! I intend to maintain my hope and to act on it. I urge you to help bring our hope to fulfillment by not being seduced by laziness or lies, but by engaging in the struggle for truth.