

The hymn we just sang was about building bridges between our divisions. It seems an appropriate song for these times.

I was trained as a scientist, in biochemistry and molecular biology to be specific, and I believe in science. I also believe in spirituality and think the two are not mutually exclusive. Like many, I am disturbed by what appears to be a widening gap between those who believe in science, and those who are science deniers.

I'd like to explain why I think that spirituality and science can not only co-exist peacefully, but can actually be related.

When I was a child, being among nature with beautiful trees around me made me feel as if I was close to a great living spirit of the world. My inspiration to study science started in high school when I learned how DNA has the same basic chemical structure in all living things ranging from bacteria to trees to humans. I felt wonder and awe when I read about how there were only four basic building blocks of DNA and yet these coded for instructions for making whole, self-sustaining organisms. Learning more about the details underlying nature heightened for me the miraculous-ness of life. To me, this is evidence of a mysterious, powerful, and intelligent force in the universe. Recently, I went to a free lecture at UC Berkeley where an astrophysicist told us that heavier elements are created when massive neutron stars collide. The heavy elements are spewed out into space where they mix with lighter elements into gaseous clouds that eventually condense and become planets. That's why every cell in our bodies contains a few gold atoms. "We are made of star-stuff," as Carl Sagan put it. The more science tells me, the deeper the mystery about the universe becomes, and the more awe-struck, lifted up, and yet humbled I feel.

I find it disturbing when I hear phrases today like "I don't want a high-phalootin' scientist to tell me what to do or think." Science, like religion, can be used for good or ill. But statements denying science don't come from knowledge or spirituality but seem rooted in pride. We live in a culture where self-worth is often based on monetary and social status. People have been known to kill to get fancy sneakers. And the effects of this culture extends further. People may use their vote to spite a snotty politician who thinks they are better than us. A culture of pride leads to bloated and fragile egos, and this is dangerous because it makes us easy prey for politicians or marketers to manipulate us into voting against our own interests or getting material things no matter the cost.

In contrast to this, Ahmed Salah, an Egyptian peaceful activist who spoke here recently, told me the Koran says that all people are equal before God. Race, gender, money is not important. He said that what matters to God is that you strive to become a better person by practicing humility, kindness, and compassion. How beautiful is this, and what a contrast to a society that bases self-worth on fancy sneakers.

I'd like to tell you now one of my favorite stories about *Star Trek*, a show that celebrates science.

Creator Gene Roddenberry envisioned using *Star Trek* to explore social issues such as sexism, racism, nationalism, and global war. He cast actors of different genders and races in roles of officers. Nichelle Nichols was cast as Lt. Uhura, chief communications officer. She was one of the first black women in a major television series where her role was not that of a servant. After the first year, though, Nichols wanted to resign to pursue a Broadway career. But then she met Dr. Martin Luther King, Jr. He told her he was her biggest fan and that *Star Trek* was the only TV show that he and his wife Coretta allowed their three little children to watch. When Nichols told MLK, Jr. that she planned to leave the show, he said, "You can't. You're part of history." He said she "could not give up" because she was playing a vital role model for black children and young women across the country, as well as for others who would see blacks appearing as equals. When she told Roddenberry what MLK, Jr. had said, he cried because it meant so much to him. Obviously, she didn't quit the show. Mae Jemison, who was an avid Trekkie, has said that Lt. Uhura was her inspiration to become an astronaut in real life.

And I have say that Lt. Sulu made a big impression on me.

Role models on TV and in real life that promote equality. Celebrating science that does good. Such things are important. As are efforts to promote other spiritual qualities such as humility, kindness, compassion, and doing good for each other. I see no reason why these can't be compatible with science.