

Michael Starbird '70

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I just realized that I arrived at Pomona 47 years ago—when 47 had just recently been discovered (or invented). If it weren't for that, I would have to say that I came here more than 46 years ago, but less than 48, but the mystery would remain.

In any case, my role here is to deliver life advice, which I will proceed to do. I learned several things at Pomona College. One occurred when I was a senior in a class on Medieval Art History. This class was taught by an extremely scholarly and extremely old professor. She knew everything about Gothic cathedrals, and we thought it was because she was there when they were built. I would sit in the back of the room, because you were not allowed to sit in the hall. One day she showed a Byzantine picture in class and the dreaded question came from this mobile fossil. She asked, "Mr. Starbird, what do you see in this picture?"

The picture just seemed weird—the hands were too long, the head was too small, and there was a bright gold halo shining on top. I was a math major. Obviously, nothing was coming to my mind. But I had been in art history classes, so I knew that art has "meaning." I tried to imitate the art analysis that I had heard and replied, "I think the halo represents the circle of life—emerging from the darkness of the primeval void, arcing into the glory of shining heaven, and descending again to the abyss of eternity." I assure you, it was ripe. She said, "Cut out the bull and tell us what you see."

And that's the moral of the story. Be honest about what you know and what you don't know. Instead of guessing what you think someone else wants to hear, concentrate on what you actually understand. This is a transformative habit. Adopting it will completely change your life. Unfortunately, that advice has some difficulties, because what we actually understand is extremely limited and what you now revere as core truths will often later reveal some disturbing nuance—such as later seeming completely wrong. In my generation's case, the attitude was that we should never trust someone over 30. In retrospect, that perspective may not have been an example of enduring wisdom that would stand the test of time. Do you really know why you support the collection of opinions that you hold dear—political opinions, religious views, social habits? The answer is that you probably don't know and neither do those passionate people who have opposite opinions. Acrimony ensues.

So I have a modest proposal that promotes civility and anchors us all in the reality of our own limited understanding. Here's what I propose. Every time you state an opinion, such as "I think the death penalty is not a great idea (except, of course, for a few people I could name)," along with the opinion, you state a percentage that expresses the level of confidence you have in your own opinion. So you might say, "I think the death penalty is a bad idea. And I believe it 80%." Then if someone presents you with some credible evidence about how the death penalty improves the world, you can say, "Good point. I still think the death penalty is a bad idea, but now only 68%." Anyone who says they are 100% certain on any opinion are saying that they are closed-minded and no amount of evidence will penetrate the concrete. Those people should simply be ignored. Just getting in the habit of realizing and acknowledging to yourself that you yourself really are not certain and that you might well adjust your opinions with evidence and experience is important. You are taking a huge step forward toward real personal understanding and wisdom. Doubt is good. I believe that the idea of embracing doubt is good advice—about 93%.

I do have one small complaint to make to President Oxtoby. When he called me and told me about this wonderful honor, I'm quite sure he said that I would have three to five hours to speak. That seemed about right. Only recently did I learn that it was three to five minutes. That was annoying. So I decided that the only way to handle this disappointment was to give you each a copy of my book, co-authored with Edward Burger, called *The 5 Elements of Effective Thinking*. It basically describes how to become more insightful, more innovative, and more creative. I hope you enjoy it.

Thank you, and best wishes for a constructive and happy life—100%.

About Michael Starbird '70

Michael Starbird '70, a University Distinguished Teaching Professor at UT Austin, has received more than a dozen teaching awards, including the Mathematical Association of America's 2007 national teaching award. Highly regarded for making sophisticated mathematics accessible to the public, he is the co-author, with Edward B. Burger, of *Coincidences, Chaos, and All That Math Jazz: Making Light of Weighty Ideas* (2005) and *The Heart of Mathematics: An Invitation to Effective Thinking*, which won a 2001 Robert W. Hamilton Book Award. With David Marshall and Edward Odell, he co-authored *Number Theory Through Inquiry*. Starbird's mathematical research is in the field of topology. He received his Ph.D. from the University of Wisconsin, Madison.