

# 'This is why I teach astronomy'

I recently gave my high school astronomy students their final exam. I wrote it myself, and I'm quite proud of it. The last part is an essay question: "Five years from now, what will you remember as being the most awesome thing you learned in your astronomy class?" I got a ton of really great answers that not only boosted my ego but also proved how much the students had learned over the past year.

This response, from Michael Joseph Rosenthal, was by far my favorite:

That our universe is the largest and greatest party you could ever imagine. For starters, all the "guests" arrived on time, and immediately began to mingle. Soon enough there were larger groups interacting with each other, stars from the Hydrogen. Eventually these groups of dancing particles began to dance with each other, in elaborate lines around ever-guiding heavy weights, Black Holes. If they make missteps it doesn't matter, because they can always form new, different groups. And from all these interactions and reactions, wonderfully fascinating things emerge. From supernovae come pulsing bombshells spewing charge into their region of space, and quiet little drifters that last an eternity, and element-rich planetary nebulae that can get together to form little children that scurry around their parents, clinging to them as they hurtle

through an ever-expanding universe. And one of these little rocks, through an equally intricate dance, came to life, and from that a race with intelligence enough to comprehend all of this and more. To see all that dances around them and recognize their connections and beauty, to look up and write History in the sky, so that even today we can look up and see the stars of Orion hunting Scorpio across the heavens. And that even as we are a part of this explosion of creation, destruction, expansion and reformation, the dance of every atom and particle in the universe, that we have not even begun to glimpse it at all. That steps on the Moon could lead to strides across galaxies, that a bit of math could find the song we dance to, and even other universes, and that through our work now, we could become a constellation on a distant planet, newly settled by man.

I think he got my message.

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## All due respect to scientists and PhDs

Over the past several years I have become increasingly aware of a trend I believe is harmful to our profession: a growing unwillingness by both the print and broadcast media to address or refer to PhD scientists appropriately. I was motivated to write this letter after recently experiencing several particularly blatant examples of the phenomenon.

During a National Public Radio interview, a K-9 police officer was always addressed as "Officer Jones" and his canine partner was frequently referred to as "Officer Fido," while the next guest, a PhD physicist, was always referred to simply as "Jim" or "Jim Smith"; never as "Dr. Smith" or even as "physicist Jim Smith." Listeners who

called to ask questions also referred to this PhD scientist by his first name, while they addressed the policeman as "Officer Jones."

A second example occurred during a television interview with a group of astronauts; several held PhD degrees and one had an MD degree. In virtually every case, an astronaut with a PhD was addressed by first name, while the physician astronaut was always addressed as "Dr."

As a general rule, the media will always refer to a policeman as "officer," a physician as "doctor," a soldier as "major," a cook as "chef," and even the individual in charge of an athletic team as "coach." Who can imagine an interviewer addressing General Petraeus as "Dave"?

Last year I was reading a newspaper editorial describing the magnificent work of a PhD scientist who had been awarded a Nobel Prize. Never once was he referred to as "Dr.," nor was his PhD status even mentioned. When I inquired about the apparent oversight, I was informed that the use of "Dr." for a PhD scientist violates the Associated Press naming convention. In fact, I was told that editors are taught to look for and remove such "errors."

Such treatment by the media sends a clear message that scientists who have earned the highest degree in their profession are less worthy of respect than soldiers, coaches, police officers, members of the clergy, and even cooks. It also conveys the message that science is somehow a less worthy endeavor than other professions.

As an educator for more than 40 years, I have spoken to many students about career choices; they are keenly aware of the low level of respect that is afforded scientists. If we want more of our brightest and most talented youth to pursue careers in science, there must be an increase in the esteem with which science and scientists are regarded.

Some simple actions can be taken to improve the situation. Scientists being interviewed by the media should require that they be introduced as "physicist John Jones," and PhD scientists should require that they be addressed

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