

## My departure from KTAL

This concludes my 34<sup>th</sup> weekly show, *Science: Let's take a look*, on KTAL LP FM here in Las Cruces, NM.

- An hour of science – news, my own syntheses, guest interviews

I'm ending the show, given the void in listener response. Maybe all of you are too busy to respond.

I've enjoyed it greatly

- Sharing science, my lifelong passion from age 8, when I decided to become a chemist...and did!
- Working with John Nelson, friend, engineer, guest; a wide range of other guests; Nan Rubin, host of her own show, *Café con Leche*; Tricia Quillin, who showed me the ropes of running a show; support from the board, esp. Corey Asbill, Peter Goodman, and Kevin Bixby

Why I was so happy to do this sharing of science, and what kind of a ride science is

All my life, science has rewarded me

- OK, with an almost always stable career, a paycheck, but that's the least of it
- The ability to develop ideas and present them to the world, in research – publications, meetings, public venues, in teaching from elementary school visits to LCA middle school to NMSU and Yale undergrads to graduate students at Caltech, Yale, and NMSU, to postdoctoral students at NMSU
- Giving me a worldview on almost every aspect of life, from how the natural world works its wonders (from the elegant biochemical reactions in a tiny leaf to the great forces of tectonics shaping the Earth to the cosmological origins of it all) – and all the fascinating evidence that ties it all together, and the minds average to great who have put it all together in an effort encompassing the globe and centuries of time.
  - I see the world in new ways every week or month or year – the natural world in a tree's photosynthetic leaves, toiling away silently as it were; the world of human society and the brilliant insights of evolutionary biologists, especially E. O. Wilson, on how we came to be what we are
- Yes, the opportunity to be of service to the field. I was on the founding panel for the NASA EOS project. I spent a year as program officer at NSF, reviewing 200 great research proposals and agonizing over which ones to fund. I've reviewed perhaps 350 manuscripts and additional grant proposals for 29 different international journals and 6 funding agencies, humbled by the scope and depth of what the great world community of scientists is doing.
- I've engaged with diverse and great people directly, in joint research – articles, books, meetings, workshops, thousands of personal conversations – even reaching into the past, reading and seeing what my scientific progenitors built as the intellectual edifice we call science. My wife, Dr. Lou Ellen Kay, is such a wonder to me, leading me into the corridors of biology from my start in chemical physics. I also had the great honor to take one of only 10 courses that Nobelist Richard Feynman taught in his life; he inspired me, and many others of my colleagues, to take our own bold paths, yet to stay humble before the great unknowns we explore. I've had the pleasure and enlightenment from encounters, short and long, with scientists in diverse fields from a great many nations on 6 continents, all of us in the world community of science.
- I thank the people who believed in me:
  - First of all, my parents, who spared money from their very modest income to send me to a solid parochial school and then a prep school, Fenwick, after which my earning of scholarships sustained my studies. My father, orphaned at age 2 months, had his own dreams of an engineering career cut short by his relatives raising him, but I found his books and his dreams and carried them on.

- Great teachers, not just in science: Mrs. McNichols, in 4<sup>th</sup>-grade geography, for a taste of the world; Raymond Sokoloff, in ancient world history; Jeremy Holzer, in high-school biology, who gave me my first independent research project; Emil T. Hofman at Notre Dame, who put me on a dizzying 3-year run through a B.S. in chemistry; Richard Feynman, of course; Marshall Fixman at Yale, whose engaging me in a statistical mechanics project saved me from a hiatus; George Bell and Walter Goad at Los Alamos, who hired me into their nascent Theoretical Biology group. There are many others, too numerous to name.
- So, yes, science isn't the only way to know the world – a sense of history and politics, and fascination with the cultures of the world, helped bring Lou Ellen, our son, David, his wife, Yi, and me to 40 nations

For young people who might be listening: science may reward you as richly as it has rewarded me

- Is it hard? Sure. If you haven't tried anything hard and failed, you haven't tried anything useful or rewarding; if athletes suffer through pain and loss and come out better, so do we scientists, with the great majority of our time entranced, happy, deep in thought or experiments.
- The big, big deal, that I came to appreciate slowly: we make our own careers. No assembly line job; no dead end jobs. Particularly with the ethos from Richard Feynman, I took leads wherever they led. It was never stale. I roamed, and productively so, from chemistry and physics to plant physiology, ecology, agronomy, remote sensing, meteorology, and more.
- To be sure: science is quantitative, in great measure, even biology now. Math is your friend. I listed about 30 fields of math I've studied, most of which I use. Math is even an amusement to me, even while, say, riding a bike and figuring out an equation or a way to measure the height of clouds from the shadows I see on the ground. Computing goes along with the math. I've used probably 30 different kinds of computers, from small dataloggers I built myself to huge mainframes. It was all engaging, if carrying its own frustrations (Microsoft, are you listening?!).

A number of my shows here on KTAL live on YouTube, on channel vince5305. A lot of my musings and findings are on my website, [science-technology-society.com](http://science-technology-society.com).

I've been happy to be with KTAL and its people. Happy to do the show, happy to work with Nan Rubin to garner a Space Grant award for the station.

I've been happy to have the show as outreach for our school, the Las Cruces Academy. Our school also donated the classis \$101.5 dollars to the station.

Thanks, now, to all of you who have been listening, and, I hope, visualizing what science offers us all.