

LETTERS

Today's Shrinking Science: Another Dream Deferred

While I was finishing up my PhD from the University of Washington, I spent one morning in a second-grade classroom fielding questions on astronomy. The enthusiasm of those seven-year-olds for all things cosmic was delightful. They loved astronomy and they loved science. For every question I asked them a thousand possibilities spilled out of their heads at once like loose M&Ms. They *had* to know if the Sun would blow up, where the end of the universe was and why we hadn't seen life on other planets yet. They laughed when I shrugged my shoulders and said, "I dunno." They were, however, ready for the challenge when I told them answering those questions was their responsibility as the next generation of scientists. I left intoxicated with their excitement. It was a sad counterpoint to the rest of my day.

That afternoon I sat in on a seminar called "How to Find a Job in Science," given by a senior professor in biology. When I arrived the small classroom was filled to capacity with graduate students from all fields of science who, like me, were close to finishing their PhDs. All of us had been raised in the late 1960s and '70s, when this nation's enthusiasm for science seemed limitless. We caught the fire from watching the Apollo missions on TV, seeing a dinosaur for the first time at a museum or reading about the undersea explorations of the deep-sea submersible Alvin. Now the mood in the room was gray. We were facing a bitter truth. After a lifetime of dreaming science, studying science and training technically in science, the odds were slim that we would ever find a secure job in science.

Today America's young researchers are, like so many others, watching as their expectations and hopes are diminished. Though our personal loss is merely part of the arithmetic of a larger dream deferred, it is strange for us to think that all of our training and enthusiasm will go homeless. I have always thought that science, like art, is our society's way of looking outward beyond the details of everyday commerce. The effort made in science seems a

measure of our culture's capacity for a wider vision of the world and its concern to forge links with a future it can barely imagine. When I was a child and dreamed of being a scientist I felt that my country was urging me to join in the adventure of building that future. Today I feel like my country has changed its mind. It is simultaneously sad and confusing.

I do not know what the solution is for scientists of my generation. In an era of tight budgets I do not know how or if many of us can survive. I would like to believe that as with so many problems, the issue revolves around resources and values. If budgets are tight then the need for huge projects like the Superconducting Super Collider and mapping the human genome may be questioned; the need to use the talent in science that America itself has nurtured, however, should not be. Most of us retain our enthusiasm for our fields of inquiry, but in the face of increasing pressures our ranks will diminish. Perhaps this has to happen; perhaps it is just another example of downsizing. If so, I can't help but wonder what will become of the next generation of American scientists. I can imagine myself in front of another group of second-graders, delighting in their excitement but reminding them: "I'm sorry you guys were born too late to join in. We are not in this business anymore."

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Atomic Parity Violation's Vaporous Beginnings

In his Reference Frame column "Some Small Big Science" (October, page 9) Daniel Kleppner is trying to say kind words about small science. But in jumping from some early (theoretical) proposals for parity violation in atoms to the present-day status of experiments he skips over the fascinating history of early experiments in this field. This is a pity, since the omitted history would

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