

Rose-Hulman Institute of Technology Commencement

Remarks by Governor Mitchell E. Daniels, Jr.

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Terre Haute, Indiana

Public speaking comes with my current job. There are speeches I'm eager to give, and some I give out of duty, but there are two kinds I try my best to duck: eulogies and commencements. On these occasions, the audience's thoughts are almost certainly elsewhere, and the chances of saying anything remotely memorable or original are, well, remote.

Today's an exception. There's no way to tell you why that won't sound ingratiating. I am just an unabashed, vocal admirer of this institution, its standards, its record of results, and the nature of its academic offerings; I just couldn't say no to Rose.

I love telling visitors about your ten straight years at the top of the U.S. News and World Report rankings. I love bumping into your students or recent grads, and being dazzled by what they know and the things they can do.

Amid grade inflation, dumbed-down SAT tests, and stagnant academic performance across most of American education, you chose the harder path. Your self-esteem was hard earned, not conferred as an exercise in social work. If any graduates in America today are ready for the tough world of a prolonged recession, you are.

I often pose to friends a trivia question: Name three mythical creatures never actually found in the natural world. To which the answer is Sasquatch, the Loch Ness monster, and an unemployed Rose-Hulman graduate.

My admiration for the graduates is matched by that I feel for you parents. Your own commitment to education, not to mention your personal sacrifices, is being rewarded this morning. Someone should give you a diploma, too.

In our effort to elevate appreciation for academic rigor, and for math and science specifically, I inaugurated two new awards. A friend once said in frustration, "Every Hoosier knows who Mr. Basketball is, but nobody knows who the best math student is." Two months later, we named the first Mr. Math, along with the first Ms. Science.

Backstage with the parents of Mr. Math, I learned that he was among seven all-star scholars that family had produced. When I remarked rather lamely that they must have truly valued education in their household, the father confided to me that in thirty-five years of marriage they had never owned a television. (I love to shock high school audiences with this story.) When I exclaimed that some of us thought we were big shot parents just for limiting TV time, the mom blushed and said "Well, now tell him the truth, dear. We did rent one a couple times for the Super Bowl."

I know there are graduates here today with enough God-given ability to have made it to and through Rose-Hulman from any background. But I am certain that many tassels will only switch sides today because on hundreds of nights you moms and dads said "No, you can't" or "Turn it

off" or "Not until your homework's done." God bless you for that. I'll bet you folks in the tassels agree.

I celebrate today not just the discipline you have demonstrated, but also the disciplines to which you have applied it. America has all the lawyers, and psychologists, and financial experts we can stand; it's engineers, and scientists, and mathematicians we desperately need. As recent events have reminded us, prosperity begins not with moving money around but with making things, and building things, which means someone has to be good at inventing and improving things.

The Marines once had a recruiting slogan: "No one wants to fight, but somebody better know how." Today as never before, winning the world economic combat depends on someone knowing how to do the hard work of innovating, enhancing, designing and redesigning new goods and services, creating the kind of value some purchaser is willing to pay for.

In India, in China, and elsewhere, engineers and technicians are being rigorously educated in numbers that dwarf those emerging from American campuses like this one. To maintain our national prosperity and leadership, you and those like you will have to be extraordinarily productive, person for person, pound for pound. Much as three hundred Spartans saved the world's first democratic society, or a few hundred young pilots saved Britain from the Nazis, the young scientists of the next generation will be the critical front-line protectors of our way of life and our national success.

In case that's not already too heavy a load to lay on you, here's more. Even while you're designing, devising, and deploying the innovations that make tomorrow better, I hope you will make time to be active, vocal citizens. Our nation can no longer afford the luxury of its best scientific minds tending to their technical knitting and leaving major public decisions to the lawyers and career politicians.

The U.S. Congress contains eight times as many lawyers as scientists and engineers. In the Indiana General Assembly, only five of one hundred fifty members have a technical background. There is an endearing, but risky tendency for people of science and engineering to concentrate so passionately on the work of invention that they absent themselves from major debates on which their expertise is sorely needed.

I had a dream. A revolution erupted and the mob took all the most talented people to the guillotine. They put a banker in the stocks, but the blade didn't drop and, under the prevailing custom, they had to let him go free. Then they put a star athlete under the blade, but the same thing happened. Then they brought a Rose-Hulman graduate to the scaffold, and as he put his head beneath the knife he looked upward and said "Wait! I think I see your problem!"

We have passed the time when our best scientific minds can devote themselves solely to their chosen work, or to solving huge, avoidable problems after others have caused them. The issues that now face our country often require a technical understanding, or a grasp of statistics, or cost-benefit analysis, or an appreciation of the scientific method with which the general public is not equipped, and which our politicians neither understand nor particularly want to. People like

those Rose-Hulman produces must increasingly challenge not just the design of the guillotine but the policies that would put it there in the first place.

Let's take just one example. A relentless project has inundated Americans for years with the demand that we must drastically reduce the carbon dioxide we emit as a society. It is asserted that the earth is warming; that this warming would have negative rather than positive consequences; that the warming is man-made rather than natural; that radical changes in the American economy can make a material difference in this phenomenon; and that utility bills in Indiana must double because no better, less expensive alternative to this policy is discussable.

Well. All these contentions may be correct. It may be that they will all be borne out over the coming decades. But the average citizen has no way to be sure of that for now. Although there are scientists, and scientific studies, that are deeply skeptical of all these claims, they are rarely heard in what passes for public debate. The debate, so far, has been dominated by "experts" from the University of Hollywood and the P.C. Institute of Technology.

Joining this discussion will require more than technical competence; it will take courage, too. In what has become less a scientific than a theological argument, anyone raising a contrary viewpoint or even a challenging question is often subjected to vicious personal criticism. Any dissident voice is likely to be the target of a fatwa issued by one Alatomallah or another of the climate change theocracy, branding the dissenter as a "denier" for refusing to bow down to the "scientific consensus."

The late author and scientist Michael Crichton spoke witheringly of this pattern in a speech at Cal Tech. He said, "I regard consensus science as an extremely pernicious development that should be stopped cold in its tracks. Historically, the claim of consensus has been the first refuge of scoundrels; it is a way to avoid debate by claiming that the matter is already settled....Let's be clear: The work of science has nothing whatever to do with consensus. Consensus is the business of politics. In science consensus is irrelevant. What is relevant is reproducible results. The greatest scientists in history are great precisely because they broke with the consensus." He's right, of course: Galileo was a denier. Darwin was a denier. Einstein denied virtually everything men "knew" at the time.

Crichton concluded by saying "There is no such thing as consensus science. If it's consensus, it isn't science. If it's science, it isn't consensus. Period." Defending the scientific method, and reaching scientifically sound public decisions, will require credible people to speak up. When I say these things, that's just one more politician spouting off. If a Rose-Hulman grad says them, people will have to listen.

Justice Louis Brandeis said that, in a democracy, the highest office is that of citizen. I ask you today to add the pursuit of that high office to your career to-do lists. I have enormous confidence in your professional success. You will be great chem e's, civil e's, mechanical e's, and all those other kind of e's. You will invent, innovate, and improve on the innovations of others. You will add value to society well beyond that added by all our society's lawyers, celebrities, or, of course, mere governors.

But to protect the prosperity, and the freedom, which made this school and your matchless education possible, I hope you will be vigorous citizens along the way. If it seems like a lot to ask, remember what you've just accomplished. After Rickert's math class, or Sauer's chemistry or Maloney's physics, being great engineers and great citizens will be like a stroll around Speed Lake.

I leave you with one of President Reagan's favorite stories. A man's friend was expanding his business, so he ordered a floral arrangement sent to the grand opening. On arrival at the ceremony, he was shocked to find his flowers with a card reading "Rest in peace." When he called to complain, the florist told him "Sir, calm down and think of it this way. Somewhere today a soul was buried under a sign that said "Good luck in your new location."

And that's what I wish you. Good luck in all your new locations, in all the places where I know you will practice both great engineering and great citizenship.