I've been doing the math, and I've been figuring out how many hours of brain-challenging tasks you guys have done in four years. And, I hate to tell you this, Carl, but it's more like 20,000 hours.

I mean, how many days do you really work less than 16 hours? Not many.

Of course, the reason I'm wrong in my calculation is that instead of just focusing on physics, you've done physics and chemistry and math and engineering and computer science and biology and humanities and social sciences and the arts and ballroom dancing and humans versus zombies and a few other things.

So, you probably are on the way to becoming an expert in about 10 different things.

Now, more seriously: Why do Harvey Mudd graduates do great things? The answer, of course, is because they can. But the important question is: Why are you capable of doing great things?

Perhaps it's because you have received the best undergraduate education on the face of the earth in science, engineering, mathematics, humanities, social sciences and the arts. Or, perhaps, it's because you know how to work really hard—really, really hard—and have kept at it for several years, four, at least. Or, perhaps, it's because you have internalized our mission statement and care deeply about the impact of your work on society.

I think it's mostly because you have developed a set of values and attitudes that allow you to take on major challenges and succeed. So, let me mention a few of these values and attitudes that I think are particularly important in equipping you to do great things.

The first is lack of fear of failure. The second is a commitment to everyone's success. The third is excellence without arrogance. The fourth is a delight in learning. And, the fifth, which you are not expecting me to say, is a delight in challenging “authority”.

I had authority in quotes. Maybe I should have said, "a delight in challenging the administration."

Let me say a couple of words about each of these.

_Fear of failure_ is what stops many people from trying to do great things. But at Mudd, everyone gets many opportunities to fail—and to learn from those failures—to learn to ask for help and to learn to give help. And, they know that when you start learning something or start trying to solve a problem that seems over-the-top impossible, you are going to stick with it, you're going to work with others, you're going to ask people questions, you're going to go on the Internet, you're going to do whatever it takes. But, you know that you will get through it. And, the most important part of that, as Dr. Wieman said, is not that you're solving a problem; it's that you're pushing your brain so hard that you are developing new cognitive capabilities.
I don't know of another institution that pushes its students to do so much hard thinking over a four-year period.

Commitment to everyone's success: Sometimes, when I tell people about what it's like at Mudd—a place where there's no such thing as competition between students for grades, where students know it's their responsibility to make sure that everyone succeeds—they just look at me like, "What planet do you live on?"

Well, I live on planet Harvey Mudd.

Understanding that helping others succeed and being part of a group that succeeds together is probably the most valuable thing you will take with you for the rest of your life, because people who make others successful are sought after. That's one of the big reasons our graduates are some of the most sought-after in the world, whether it's for Ph.D. programs at elite institutions or positions at top companies.

Now, let me talk about excellence without arrogance. I have been at places that were arrogant. I don't want to mention any single place in particular. I've actually only been at one place that was arrogant. No, I was at two. I was at IBM Research early in my career.

The thing I love about Mudd is, every single person, every student, every staff member, every faculty member and every one of our alumni strives to do well every day. But, we also deeply value humility.

We were showing some of our alumni a branding presentation, and Tim Hussey, our AVP for communications and marketing, said, "We want you to be proud of Mudd." And, one of our alumni, Class of 1965 or 1966, said, "But, we're not supposed to be proud; we are humble. That's one of the things we take with us into life."

I think that combination of striving for excellence every day while maintaining humility is, again, one of the things that enables you to be very successful.

Now, let me talk about delight in learning. I understand that delight is not always the word used to describe how our students feel about learning. At various times, words such as exhaustion, frustration or angst might be more appropriate. But the reality about each of you is that you have an incredible curiosity and desire to learn just about everything, and you bring that desire to unicycling, freeline skating, quantum mechanics, geometry, chemistry, lizards, algorithms, music, video games, ballroom dancing and a ton of other things I didn't mention. You love to learn.

Now let me talk about the last value: delight in challenging authority. There are times when I'm reading the community-l listerv—yes, I do read it but, fortunately, I do not have access to any of the dorm chat lists. I also occasionally get e-mail from a student who says, "President Klawe, I just want to tell you that not every student thinks you're out to destroy us."

Yes, this was a tough year with the discussions about growing the size of the College, and I felt like I went from being the coolest president ever to the worst person in the universe overnight by raising that topic.

But even though I might feel that way at times, I really don't have much cause to complain, because I was once a student activist who held a sit-in at the president's office when I was a first-year student at the University of Alberta. So I have an enormous amount of respect for students who challenge authority.

I'm not telling you this to say that it's good for you to give the president or the dean of students a hard time; I'm telling you this because the people who do great things are the people who challenge accepted ideas and wisdom. They're people who are willing to say, "Yes, but couldn't you do this?" or "Isn't it possible to—?" or "Why do you believe that?" You all are really good at that. Really, really good.

I have absolutely no doubt you are going forward to do great things. You will do them in unbelievably different ways. But, I know that you will do it. I've had four years to watch you grow. I am so proud of every single one of you. You have become quite different human beings, even though you were totally wonderful when you arrived. We all know how much we love our first-year students when they get here. But you have grown in unbelievably wonderful ways, and I'm not the only person who says this. Our faculty say it and, over and over again, I hear your parents say it. They say, "My son or daughter," describing something about
you when you arrived, and then they tell me how different you are now, and how you have grown in such wonderful ways. They, too, are so proud of you.

Like everyone else at Mudd, I will miss you enormously. I hope you will send me email and return for Alumni Weekend every year, and I wish you the very best for the future.

Congratulations on graduating from Harvey Mudd College, the best science and engineering undergraduate education on the face of the earth—the best, partly because of all of the humanities, social sciences and the arts courses you have also taken.

Ladies and gentlemen, the 55th Annual Commencement ceremony of Harvey Mudd College is now concluded.