Dear Graduates,

Ladies and Gentlemen,

When I arrived some days ago at Charlotte Airport, the Immigration officer asked me why I was visiting the US. My normal answer would be: “I am serving Virginia Bioinformatics Institute as chairman of the SAB”. But this time I said: “I will be speaking at VT’s Graduate School Commencement.” He looked at me, smiled a little bit and meant: “What a great honor!”

Indeed, it is a great honor and pleasure to be here and to congratulate you, dear Graduates! The ceremony is the final point of a most important period in your life. And for VT it is a moment of pride and academic satisfaction. Graduates are the core product of any ambitious university.

My speech is focused on universities’ autonomy – a very important institutional aspect of higher education.

**Success factors**

Research universities like VT depend on specific success factors:

- outstanding professors and post-docs,
- talented, hard working students like you were,
- modern infrastructure including libraries, labs, and High Performance Computing,
- efficient management.

The graduate school is the place where things happen. Here profiles are sharpened and higher education meets research. More and more leading European universities focus on a graduate school model as you do it here.

Some of the success factors may be bought, but a rich university is not automatically an excellent one. The situation resembles to that in sports or film business: a strong quarterback or a great actor can be hired. However, does he or she fit within an existing team?
A university is a very special social organism with its own governance, rules and a strong need for harmony. Often there are tensions between departments, research teams, professors, and other stake-holders. Mutual respect and active communication are important prerequisites for coherence.

But this is not enough. In the long run, institutional strength and excellence are highly depending on the concept of autonomy. Academia cannot flourish without it.

Financial bottlenecks

Let me first discuss a related question. Today, financing a university has become a very difficult job. Recession, growing federal budget deficits, tight finances at the state level, and diminishing R&D investments of industry hamper universities revenues. In addition, some universities (not VT) are directly touched by the banking crisis and lose parts of their wealth.

I am impressed by VT’s steady growth during the last ten years. Even more impressive is the battle that President Steger fights to compensate the falling share of state funding. From 2001 to 2010, the ranking of US universities has remarkably changed – including the distinguished Ivy League. VT is one of the winners.

This realignment is not only due to scientific competition, but also due to leadership and the ability to finance the growth with new money.

Changing conditions

The struggle for third party money and sponsoring is a global phenomenon. Insofar, universities in the US and in the rest of the world are in a very similar situation. They compete partly for identical industrial funds. International universities try to direct their knowledge towards start-ups; they sell their intellectual property as a commodity. Innovation policy is no longer a comparative advantage of some few US institutions, but a global battlefield.

In such an environment, government makes the difference. Especially its ability to back basic research. No discussion, the US-type of Research University is still an unbeatable model for organizing higher education. But I clearly realize additional governmental strategies abroad:

- In Europe, the difference between private and public universities becomes smaller due to use of similar financing models for both types. At the same time a new, broader understanding of autonomy takes place.
- Focused research programs in Europe and Asia try to close the gap between basic and applied research; concepts of “oriented research” and even programs of the NIH and NSF are copied.
Finally, European governments and the EU Commission create mixed platforms for expensive long-term public and industrial research, especially in the fields of energy, public transport, and health. Universities are directly linked with such networks.

The content of autonomy

Let’s get down to cases. Autonomy is a theoretical concept, yes, but there are far-reaching practical consequences. I see three different aspects of autonomy that must be assured:

- Firstly, universities need autonomy to compete, nationally and internationally. In a global context, universities as “knowledge enterprises” should be able to behave like international firms. I am not suggesting that universities are simple vendors, but there are fields where they must use business instruments and bear risks.
- Secondly, universities have to protect the single knowledge producer: professors, post-docs, and all kinds of internal inventors. This is the case for the classical legal protection and up-to-date intellectual property strategies.
- Thirdly, universities must create an atmosphere that respects and promotes strong individuals. Universities are neither industrial plants nor consulting firms where people may be replaced easily.

Evidently, these aspects are interdependent. If one is missing, the whole concept of autonomy gets under pressure. The lack of autonomy may affect internal flexibility and motivation.

The most critical obstacle is bureaucracy. Public administration, funders, and universities themselves do produce it. Bureaucratic rules, procedures, and codes reduce the autonomy directly. I know many academic institutions that are suffering under this burden.

Balancing internal tasks

So today’s universities face a fundamental dilemma: Is there a reasonable combination of scientific excellence and efficient management? Should students choose a college that is well administrated but scientifically flat?

You cannot run a university against academia. On the other hand, it is impossible to control an institution with thirty thousand students in the same way as it has been done a hundred years ago. University management is not an “all-or-nothing” problem – you need a specific mixture of modern management tools and traditional participation.

Autonomy means creating space for self-organization and collective learning. And intelligent administration means not imposing “Best Practices” to the rest of the university, but developing them jointly.

With autonomy comes responsibility. Of course, such an attitude demands an adequate commitment of the faculty. Scientists must be ready to manage large projects, to head a difficult
department for more than one year, or to chair a strategic committee in a way that the President may use its recommendations.

A new paradigm

There are ways to foster universities’ autonomy and to reduce bureaucracy by internal means. But in the long run a university president cannot shift more competences than his funder gives him. I know that I am on sensitive ground now, but my experiences make it very clear: legislators, governments, and funders must play the autonomy card too. Universities need a new, liberal framework: less regulation – more output-oriented control.

One key-instrument is the “Performance Mandate” – a four to five years strategic anchor for an entire institution - combined with a “Global Budget”. In Switzerland Federal Government is steering the Federal Institutes of Technology, a national university system, in such a way. The annual budget of more than two billion USD is transferred to the ETH Board as one single sum, and then the six institutions are getting their parts again as one unconditional sum.

Maybe for some US State Universities the “Global Budget” would be quite a good idea. The smaller the amount of public financing is, the more appropriate this instrument will be.

Let me close. Universities must be autonomous to compete efficiently. Overregulation and bureaucracy are the main problems to solve. There is no real accountability without scientific and administrative autonomy. This message must be communicated to the public by those knowing the scientific sector. You, the Graduates, can play a crucial role in the process: as professionals, as future faculty, as government and private researchers.

I wish you all the best for your future. And a pleasant time after the ceremony.